Wissen und Glauben | Knowledge and Belief

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Papers

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26

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Knowledge and Belief

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Winfried Löffler
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Sense and Substance in Wittgenstein's *Tractatus*

Maija Aalto, Joenssu

1. Substance

In the early pages of his *Tractatus*, Wittgenstein says that the *substance* of the world consists of unalterable, simple objects (*Gegenstände*) (2.021, 2.027). Substance is connected to the *Sinn* of a proposition in the following cryptic way:

> "If the world had no substance, then whether a proposition had sense [*Sinn*] would depend on whether another proposition was true." (2.0211)"

> "In that case we could not sketch any picture of the world (true or false)." (2.0212)

How can the sense of a proposition depend on the existence of simple, unalterable objects? No connection between *Sinn* and substance is evident on the basis of these short remarks. Furthermore, the remarks sound strange because elsewhere in the *Tractatus* Wittgenstein makes it clear that we can understand the sense of a proposition without knowing anything about how things actually stand in the world (see e.g. 4.024).

Let us begin by clarifying briefly the concept of 'substance'. In addition to being made up of simple objects, it is said to be that which "subsists independently of what is the case" (2.024). This independence means that the substance of the world provides the building-blocks of all possible facts (of all situations that can "be the case"), but it has nothing to do with how those blocks are actually arranged into facts. In this light the tension between the demands that sense depends on substance and that sense is independent of facts resolves, since substance as such does not determine any particular facts, but provides merely the possibility of all situations (see TLP 2.014).

2. Simple objects and determinate sense

But why must the substance of the world be just like this? Why does it have to consist of objects that are *simple*? This demand flows from Wittgenstein's view of language. Meaningful propositions are, according to him, bipolar: that is, they are either true or false descriptions of the world (there are no further truth-values), and each proposition can be true and can be false. For Wittgenstein, to determine the sense of a proposition is just to determine under what conditions we call the proposition true and under what conditions false, i.e. by determining its truth-conditions. (See e.g. 2.21, 4.01, 4.023, 4.063, 4.2)

The bipolarity of propositions leads to the requirement of *determinate sense*. If a proposition is to "restrict reality to two alternatives: yes or no" (4.023), it must be settled in connection with every state of affairs whether it makes the proposition true or false (and a bipolar proposition cannot 'agree' nor 'disagree' with *all* states of affairs). But this division of all possible facts into two can happen only if the sense of a proposition is unambiguous, i.e. only if it is absolutely clear how things will have to stand if the proposition is true, and (thereby) how they will have to stand if it is false. In other words, it must be clear *which* situation the proposition depicts, and this is clear when in the proposition there are exactly as many distinguishable parts as in the situation – when the two "possess the same logical (mathematical) multiplicity" (4.04). The logico-mathematical complexity of the depicted situation is not usually visible on the surface of our ordinary propositions; it is revealed only when propositions are analysed into truth-functions of *elementary* propositions. These are fully analysed propositions which depict atomic states of affairs and consist of combinations of simple *names* (4.21, 4.22). A name in Tractarian terminology means an element in a proposition that refers to an object: "A name means [*bedeutet*] an object. The object is its meaning." (3.203) The requirement that such simple signs are possible is the demand that sense be determinate (3.23), and sense must be determinate if the proposition is to be truly bipolar.

Now if the fully analysed proposition consists of simple signs that refer to objects, then these referents must be logically simple as well. If they were complex in a way that characterised the sense of a proposition, then analysis would not be complete and the names would not be truly simple; the logico-mathematical complexity of the situation would not be clearly displayed in the proposition. On the other hand, the demand of bipolarity presupposes an end to analysis; for if the division of the world into simpler and simpler constituents went on infinitely, the truth-conditions of our propositions could never be settled. So if we want our propositions to be true or false descriptions of the world, the world must have a determinate structure which our (analysed) propositions has to reflect – that is, the substance of the world must consist of simple objects which are the referents of names in elementary propositions.

3. *Sinn* and *Bedeutung* in Frege and Wittgenstein

The demand of determinate sense explains why objects (the referents of names) have to be simple. But why should it be impossible to form any pictures at all if there were no substance of the world, as Wittgenstein claims in 2.0211-2? To make sense of this rather radical claim we need to turn to the obvious target behind Wittgenstein's remarks, namely, to Frege and his theory of *Sinn* and *Bedeutung*.

In Frege's *Über Sinn und Bedeutung* the sense of a proposition is not linked in the same way with truth and falsity as it is in Wittgenstein's theory (where the sense of a proposition and its two poles form a whole that cannot be conceptually separated). This is because for Frege, the *Sinn* of a proposition (the thought it expresses) is independent of the *Bedeutungen* of its component parts. Thus, a proposition can be meaningful even if it contains proper names that are 'empty', i.e. if it contains names that lack a referent in reality. This is to be regarded as an imperfection that is quite common in ordinary language: there we often encounter symbols (or combinations of symbols) that are *bedeutungslos* (Frege 1892a, 163). It is an imperfection because such empty symbols render the propositions in which they occur truth-valueless; they cannot be said to be either true or false. However, the important point for us is that in Frege's theory even truth-valueless propositions can have *Sinn*: they can express thoughts that can be grasped. According to Frege,

> "[i]f it were a question only of the sense of the sentence, the thought, it would be needless to bother with the *Bedeutung* of a part of a sentence; only the sense, not the *Bedeutung*, of the part is relevant to the sense of the whole sentence. The thought remains the same whether 'Odysseys' [in the sentence 'Odysseys was set ashore at Ithaca while sound asleep'] has a *Bedeutung* or not." (Frege 1892a, 157)

Disregard for the *Bedeutung* of a name is possible for Frege because in his theory names always have *senses*, even if they fail to refer to objects; thus, as long as all the names (and predicates) in a proposition have senses, the whole proposition has sense. Of course, Frege admits, when we want to find out the *truth* of some sentence, then "we also have to inquire after *Bedeutungen*; we have to throw aside proper names that do not designate or name an object, though they may have a sense" (Frege 1892b, 178). In other words, the question whether names have *Bedeutungen* or not becomes relevant when we are interested in the truth-values of our propositions, but it is not relevant when we are concerned with the senses or thoughts that our propositions express.

Now in logic and in science we *are*, according to Frege, concerned with the realm of truth rather than with the realm of sense; therefore in logic it should be guaranteed that all our names really refer to objects (so that we can avoid truth-valueless propositions). This means that in logic we cannot rely only on the *Sinn* of a proposition, for, as we saw, in Frege's theory the sense of a proposition is separated from the *Bedeutungen* of its constituent parts: even if a proposition as a whole has *Sinn*, its names may lack a reference. How can we guarantee that names always have a reference (and that propositions have a truth-value)? One way is to rely on the truths of *other* propositions which assert that the names we use really refer to objects. For example, to be sure that 'A is F' is either true or false, we presuppose first that the proposition 'A exists' is true. To use Frege's own example, it depends on the truth of the proposition 'There was someone who discovered the elliptic form of the planetary orbits' whether the expression 'whoever discovered the elliptic form of planetary orbits' refers to an object or only seems to do so (Frege 1892a, 163). If this expression is *bedeutungslos*, then the whole proposition in which it functions as a proper name – 'Whoever discovered the elliptic form of the planetary orbits died in misery'- is neither true nor false. The presupposition that the proper name designates something is just as much included in the positive as in the negative assertion ('Whoever discovered the elliptic form of planetary orbits did *not* die in misery') (see ibid.). We could capture Frege's position by saying that in order to connect the proposition to a truth-value he needs to rely on the truth of some other proposition. But from Wittgenstein's point of view this means that the *sense* of a proposition depends in such cases on the truth of another proposition; for to have sense *is* for Wittgenstein to be a true or a false picture of the world. Thus, it is reasonable to assume that Wittgenstein has Frege in mind in 2.0211 where he talks of the case where "whether a proposition had sense would depend on whether another proposition was true."

But if the sense of a proposition depends on the truth of another proposition, why should this make it impossible to "sketch any pictures of the world (true or false)" (TLP 2.0212)? This claim of Wittgenstein's starts to make sense if we take him to be reading Frege so that it is *always* possible that names lack referents. This logical possibility (which opens up when the *Sinn* of a proposition is separated from the *Bedeutungen* of its constituent parts) can, namely, lead to an infinite regress of propositions guaranteeing each others truth-values, which would indeed make it impossible to sketch true or false pictures of the world. Let us see how this can happen. We saw that if we want to be sure that the proposition 'Whoever discovered the elliptic form of planetary orbits died in misery' is unambiguously either true or false, we need to know first the truth of the proposition 'There was someone who discovered the elliptic form of planetary orbits'. But how can we be sure that this latter proposition is either true or false? Do we not need to know first the truth of a third proposition – such as 'Planets have orbits' or 'There are planets' or 'The Earth exists' – before we can decide whether the conditional proposition is true or false or rather has no truth-value at all? The problem, in short, is this: a proposition which asserts that some proper name has a referent itself contains names which might be empty, and we need new propositions to assert that these names have referents; but these new propositions, too, may contain names whose *Bedeutungen* must be secured by new propositions, etc. Now either this chain of 'back-up' propositions goes on infinitely (for each new proposition contains at least one name of which something is predicated, and this name has a *Sinn* but not necessarily a *Bedeutung*, which must be asserted by a new proposition) and we can never connect our propositions to reality, or we must forestall the regress by stipulating that at some point the *Sinn* and *Bedeutung* of a name coincide. This move would be no less undesirable for Frege since it seems to abolish the distinction between sense and reference of a name altogether.

These problems can be avoided if propositions containing empty names are not allowed to have *Sinn* at all. This is Wittgenstein's solution in the *Tractatus*: if some constituent part in a proposition lacks a *Bedeutung*, the whole proposition lacks *Sinn*. As he says, "if [a proposition] has no sense [*Sinn*], that can only be because we have failed to give a meaning [*Bedeutung*] to some of its constituents." (5.4733) The regress that threatens when the sense of a proposition is separated from the referents of names is thus blocked at the outset by demanding that all names in a meaningful (elementary) proposition must have objects as their *Bedeutungen*, and that these names simply stand for these objects without a mediating 'sense' (on whose mediation we can never count). This in its turn requires of the world that its substance consists of simple, unalterable objects: then our propositions can divide it uniquely into two (they can be truly bipolar) and the referents for our names are secured without any further conditions.

It should be noted that Wittgenstein's demand that all names must have simple and unalterable objects as their *Bedeutungen* does not mean that we cannot talk meaningfully about non-existent things or situations. In ordinary language we often use names that refer to things that do not exist. Nevertheless, we are able to understand many of the propositions in which such names occur, and their truth or falsity can be settled. This suggests that such names are in fact abbreviations of more complex descriptions which consist of simpler elements and which can be true or false. The real function of such a name is not, then, to 'stand for an object' but to describe a complex, and the 'emptiness' of the name means only that the elements of which the complex consists are not so combined as the analysed proposition presents them to be. Thus, "[a] proposition that mentions a complex will not be nonsensical, if the complex does not exists, but simply false" (3.24). But the parts of this complex must exist; in other words, the simple names into which the complex name is analysed must have the subsistent, unalterable objects as their *Bedeutungen*, if the proposition as a whole is to have *Sinn*. Here the influence of Russell's 'theory of descriptions' on Wittgenstein is clearly visible.

4. Concluding remarks

I have argued, after a brief clarification of the concept of 'substance', that Wittgenstein's radical claim that "if the world had no substance, then whether a proposition had sense would depend on whether another proposition was true" (2.0211), in which case "we could not sketch any picture of the world" (2.0212), is understandable against the background of Frege's theory of *Sinn* and *Bedeutung*. Granted that this is so, it is natural to ask: whose view of sense is preferable, Wittgenstein's or Frege's? I shall end by indicating briefly some factors which should be taken into account when deciding this question.

We saw that Frege's separation of sense from reference is problematic, since it makes possible the infinite regress of propositions guaranteeing other propositions' truth-value. Wittgenstein does not want to let the regress begin; therefore he connects the sense of a proposition to the substance of the world in the remarks I started with. Thus, it seems that if we demand that all meaningful propositions must have a truth-value (and, moreover, that each meaningful proposition must be capable of being true and capable of being false), then Wittgenstein's view of sense is to be chosen. Yet Frege's view has its attractions. For example, his view of propositions is closer to common sense than Wittgenstein's austere view, when it lets truth-value-less propositions, too, inside the realm of meaningful language. After all, didn't Wittgenstein himself teach us in his later writings that what we call a 'proposition' is a variety of more or less closely related things, and not just those linguistic entities which can be said to be true or false? However, before discarding the Tractarian view simply because it is foreign to common sense, we should see what led Wittgenstein to reject Frege's theory in the first place. As far as I can see, the initial reason is his dissatisfaction with the account of *logic* Frege advances, and the demand of the essential bipolarity of propositions is a consequence of this dissatisfaction. Thus, when deciding the question whose view of sense is preferable, Frege's or the early Wittgenstein's, one important task (which it is impossible to undertake here) is to compare the merits and faults of the views of logic Frege and Wittgenstein advance.

The second important task is to check whether Wittgenstein's reading of Frege can be sustained. Wittgenstein may not have studied Frege's texts as carefully as is often supposed, and his understanding of Frege's doctrines may have been affected by Russell's reading of Frege. Perhaps Wittgenstein did not have an accurate grasp of Frege's theory of sense and reference? This is an interesting issue which is currently much debated in commentary literature. However, my aim here has only been to view Frege's distinction of sense and reference through Tractarian glasses, whether the lenses distort reality or not.

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Facing up to Wittgenstein's Diaries of Cambridge and Skjolden: Notes on Self-knowledge and Belief

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His circles with language
reveal themselves ethically grounded,
his search for philosophical clarity
as a search for clarity about himself.
(Somavilla, 1997, p. 8)[1]

1. A Methodic Procedure: To see any problem from a religious point of view

This sentence was taken as a methodic procedure for investigating philosophical questions regarding scientific psychology. To accomplish such a proposal is a very hard task to our mentality dominated by a certain mechanical way of seeing and thinking the world, specially for psychologists because they do not usually consider their problems from a religious point of view, even those religiously oriented. They believe all matters are liable to be subject of scientific treatment and never think they are working with religious categories and they also do not realize that in their scientific theories religious beliefs are embedded. Good illustrations of it can be found in the ways they deal with both the problem of the self and of the self-knowledge; some of them appeal to neuro-physiology or psychopharmacology and try to explain exactly the immeasurable coordination between mind and brain involved, and others defend psycho-sociological theories.

The error made by those who research under the neuro-physiological perspective is the attempt of approaching scientifically something which is not a scientific but a philosophical problem, as was shown by Drury (1973). And those who try to understand the self by coordinating it to body and environment ascribe to these the responsibility for its settlement and growth. They think of the self as a material object whose nature must be discovered through the use of mental testing, questionnaires, attitude scales, interviews and a whole arsenal of psychological phenomena measurement instruments. Self-knowledge and the knowledge of other selves are for them a matter of mastering a technique, anyone an individual can choose among the so many existing in the market of psychotherapies, these social practices that, in the last resort, aim at the revelation and the reconstruction of the patient's self and the achievement of an ideal of self-knowledge.

All these techniques provided by applied science as commodities in the market of psychotherapy could be seen from the perspective of the *technologies of the self*, concept used by Foucault (1980) in his studies about the constitution of the subject and the modern concept of the self. Through his analysis of the experience of sexuality he came to the conclusion that in human societies, beyond the three major types of techniques he described before (techniques of production, techniques of signification and techniques of domination) there is in all societies another type of techniques that are created for permitting individuals to change themselves putting into effect *by their own means, a certain number of operations on their own bodies, on their own souls, on their own thoughts, on their own conduct, and this in a manner so as to transform themselves*. And all these modifications motivated by the desire of attaining *a certain state of perfection, of happiness, of purity, of supernatural power, and so on* (p. 162).

According to Foucault's definition, when we investigate the self and are in search for self-knowledge we accomplish an *ascese*, the exercise of a technology that requires the learning and mastering of certain proceedings of self care and which is guided by the ideal of looking for the Perfect. And, thanks to him, it seems to me that the study of those forms of understanding the subject creates about himself could restore in psychological research the interest for the original religious dimension of the self.

When I read Wittgenstein's Diaries of 1930-1932 (Cambridge) and of 1936-1937 (Skjolden) published under the title, *Denkbewegungen* (1997), I felt I had before me a document of his ascese for finding the way to the Perfect. I could do nothing but think of these diaries (together with the *Secret Diary*) as his form of spiritual exercises closely connected to his philosophical activity. His notes on the question of the self and self-knowledge related to his religious beliefs came out to me as an example of a religious way of seeing problems of contemporary psychology.

According to Foucault's description (1980), examination of conscience and confession are among the most important techniques of the self oriented towards the discovery and formulation of the truth concerning oneself. Their importance is in the fact that for the government of people in our societies obedience must not be enough and everyone is required also *to produce and publish the truth about oneself* (p. 163), in the way these two procedures were conceived by pagan philosophers.

2. The Self and the Perfect

Wittgenstein's Diaries (1997) are basically made out of these two self technologies. He begins the Diary of Cambridge by declaring that one need a bit of courage in order *to write a reasonable observation about himself* (p. 19). And later on, in the Diary of Skjolden he writes: *How hard is to know oneself, to confess honestly what one is* (p. 94).

The search for perfection can be read in the notes of 15.3.1937:

> *Knowing one's own self is dreadful because one knows at the same time the living demands, &, and one knows he is not satisfying it. However, there is no better way of knowing oneself than to look for the Perfect. Therefore, the Perfect should awaken in men a tempest of resentment; if they do not want to feel completely humiliated. I believe the words Blessed, the one that is not angry with me means: Blessed the one who withstands the vision of the Perfect* (p. 95).

If writing about one own self is a hard task that asks for courage and honesty, and if it produces resentment in men because they discover before the Perfect that they can not satisfy the life demand, however, it is possible to learn about one own self and that exists a best way of accomplishing this task which is to know the Perfect; being *God*

[1] This and other quotations from *Denkbewegungen* here repeated in English are a free translation of mine from German. And the number of pages refers to the normalized text of the Diaries.

the coordinated idea. In the development of this thought, Wittgenstein (1997) distinguishes two meanings of Perfect: in the first meaning it is something entirely other (*ganz anderes*), and in the second, he is a human being; and they would correspond to the two different images of God: the *world creator* and the one *present in the creature, the human being*. So, he writes that we hear the sentences: *God created the world* and *This man is – God*, but we do not hear somebody saying that *this man created the world* (p. 95).

These two meanings of the Perfect are united in Christ's ethics. Because he existed in this world as God's son and as the verb that emanates from God, the entirely other whose name is unspeakable, his word is the real ethics. And Wittgenstein points out that the use of the expression "Christ, the Redeemer" shows he is also understood as God. Jesus Christ is a man that is God because he is the Redeemer. However, he affirms that it is not possible to call him this way *without calling him God, because a man can not redeem* (21.11.1936). Bouwsma (1986) reports that in conversations with him Wittgenstein defended that Jesus Christ was the only man who could teach ethics, that means, give advice to his disciples, because he was in *some way higher than those he teaches* and because he suffered with them in respect to those sufferings he was to give counsel. And the taught, stresses Bouwsma, *must confess to him the innermost secrets of his life, holding nothing back. This would be the teaching in ethics* (p. 46).

Christ offers the way for searching the Perfect, the possibility given to man for showing himself also as a son of God; and the practice of Christian ethics will put him in this path. The love of the Perfect appeared to Wittgenstein as the summary of Christian doctrine and in the notes of 6th. April, 1937, he exposes an interpretation of it:

Awake perfectly! By writing this command he begins his interpretation showing firstly the consequences of following it: *If you do this you will recognize you are not good to anybody; & this will cease to you the joy you have in this world. And it can also no more return if you stay awake.* After such a terrifying sentence he affirms that a man in this condition needs redemption because otherwise he would get lost. Since he should stay in life living in a world which is dead to him, he would need to live under *a new light coming from some other place*. A light in which *can not have any intelligence or any wisdom; because to this world* that man is dead. If a man considers himself as dead, he has to welcome the idea of living in *another life*, because on the contrary his life would become pure despair. This other life is described by Wittgenstein as having the task of maintaining that man *almost suspended above this Earth*, which means that he walks on the Earth but he does *not rest more on the Earth* and is *hung in Heaven and not hold up by the Earth*. And he concludes the note identifying this other life with love and faith: *But this life is love, the human love, the love of perfection. And faith is* this *love*.

To follow Christian doctrine according to his interpretation is entering the way for living the life of a saint, the man who lives in this life suspended between our world and heaven. And Wittgenstein (1997) writes about the many doubts and fears he had concerning his capacity of carrying out Christian ethics in such a radical way he interpreted it. The most intense inner battle he engaged himself is referred to the question of what should command belief: consciousness or the *Scriptures*. So, in 27th. January, 1937 he wrote that primacy should be given to consciousness because being a book, a document, the *Bible* could not obligate him to believe in the lessons it concentrates, and he argues that: *The belief begins with the very fact of believing. One should begin with belief: from words it does not follow any faith* (p. 98).

3. The Resistances of a *Pure Heart*

Wittgenstein (1997) discussed the resistances he had to follow religious commandments. Some of his observations in this sense appear out of a reflection about the meaning of the liberation through death doctrine. Liberation by sacrifice, he argues, could consist in the fact that Christ made what all of us want to but can not, and that in faith we identify ourselves with him, by the fact we pay the fault under a more modest way of acknowledgement.

During Easter 1937, Wittgenstein (1997) analyzed a sentence about the confrontation between acting by faith that comes from a pure heart and acting by obedience to religious commandments: *I want to do it if this will come to me from the heart & not because I received a command*. If the acting comes from the heart, he says, it is not obedience and not also self-immolation, it is *only what comes to someone's heart*. This kind of action would not lead to death but obedience yes: *You will not die. On the contrary, you die exactly by obeying an order by pure obedience.* And acting by pure obedience *is an agony that can and must be a pious agony*. Wittgenstein concludes these notes by declaring he understood acting in obedience to religious commandments that way and by a confession: *But I myself! – I confess I do not want to perish, even if I understand what is the highest* (p. 99).

After this analysis, Wittgenstein (1997) records that by having had these thoughts he slept badly the preceding nights, that he felt himself as dead, that he could not work, that he had the thoughts confused, and that he was depressed *in a sinister way*. All of this meant for him that he *was afraid of certain religious thoughts* (p. 99). In another entry (28.1.1937), he defends that fear participates as a foundation of the psychological meaning of God, because it is a basic instinctive reaction. He writes he understood what people means when they say that faith brings men the blessedness. They mean that faith (and bliss) *freed from the fear caused by men since it puts them immediately into God's service. Man finds himself, let's say, in the vicinity of the Kingdom* (p. 73). Being so, fear caused by humans would lead people to surrender to the protecting superior force of God.

Wittgenstein (1997) saw in the investigation of the self a form of consolation. So, he reports an anxiety that usually disturbed his consciousness and that became severe that day (13.02.1937) due to the reading of some Kierkegaard's writings. He confess the motive of disturbance was that he did not want to suffer, he did not want to renounce to any comfort and to enjoyments. For example, he writes, *I will not fast and I will not also damage myself by eating. To this I have added in myself the existence of a lack of humbleness impossible of being rooted out*. And after such a sort of confessions he concludes that this investigation of himself was his only way of having consolation. *It is as if I could do nothing but only find consolation through the knowledge of my deplorable nature* (p. 77).

4. After Putting a Good Face on Wittgenstein's Diaries

These thoughts when presented to psychologists provoke in them reactions of uneasiness and it is, in fact, a terrific experience the confrontation with our logical and linguistic

alienation woke up by reading Wittgenstein's philosophy. However, the use of the sentence about seeing all problems from a religious point of view as a methodic procedure has shown itself useful for revealing realities psychologists do not pay much attention.

Through the use of this procedure it emerged clearly to me, from one side, the idea of an existing unconscious network of religious concepts operating as foundations of scientific psychological notions that the majority of psychologists have resistance to become aware of and analyze. From another side, considering we are used to see everything not only liable to be subject of scientific treatment but also as merchandise (even the most immaterial productions of spiritual life, health care, or well-being), the reading of Wittgenstein's notes on the self and self-knowledge developed to me a portray of a certain form of knowledge (the religious-philosophical) that can not be bought as if it were a commodity. And by this movement another unconscious formation appears and we tread on the ground of the political economy that rules the market of symbolic wealth exchanges where psychotherapies and other technologies of the self circulate.

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Two Notions of Justification in Science

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The sciences are not only the most sophisticated human enterprise of knowledge gathering, they are at the same time epistemically self-conscious to a considerable degree. Assessments of the epistemic status of data, inferences and theories play an important role in the very practice of science, which therefore includes a wealth of epistemic notions, norms and considerations. In one sense of the expression "epistemology of science", some sort of an epistemology is thus included in scientific practice. This epistemology is usually captured under the heading of methodology, and its explication – e.g. concerning the standards of confirmation or theory choice – has also been a central business of the philosophy of science. Still, there are further epistemological questions about scientific knowledge claims that are typically not addressed within scientific practice. These include topics such as the underdetermination of theories by all evidence, the no-miracle argument, or the theory-dependence of observations. In the present paper, I will discuss the notion of justification that is operative in science and thus try to shed some light on the relation between the two epistemologies.

1. Two notions of justification

A central activity of any epistemic practice is the assessment of knowledge claims as justified or not justified (viz. as epistemically acceptable or not acceptable)[1]. In general epistemology, two notions of justification are often distinguished. First, for a cogniser to be justified in her beliefs, she has to be rational with respect to her beliefs. This means that she has to possess good reasons for holding them and to be able to respond adequately to challenges. This notion of justification is often taken to capture what it is to be epistemically responsible, viz. to fulfil the duties one has concerning one's believing. Therefore I will call it the deontological notion of justification. Second, on the alethic notion, a cogniser is justified if her beliefs are likely to be true, e.g. if her methods of belief formation are reliable and thus generally truth-conducive. Justification in this sense is conceptually tied to indicating likely truth. But this opposition of notions does not mean that deontological justification has nothing to do with truth, since a reason for a belief is something that can be *taken* to speak for the belief's truth. Still, the assumption behind the distinction is that, in deviation from a long tradition in epistemology, it is not conceptually or metaphysically necessary that what is rational to believe is therefore also likely to be true (or the other way round). In a world ruled by a Cartesian demon, one can be fully rational and fulfil the epistemic duties without the beliefs being likely to be true. And for someone with a rare but reliable faculty of clairvoyance, the thus formed beliefs can always be true without the subject being rationally entitled to hold them (Cp. Alston 1998). The deontological and alethic notions are therefore distinct.

In the light of the two notions of justification, scientific justification seems to be largely deontological. Scientific claims in general count as justified or challenged to the extent that specific reasons can be adduced. A choice between alternative theories, for instance, is scientifically acceptable if it balances conditions like empirical accuracy, internal and external consistency, broad scope, simplicity, and fruitfulness (Kuhn 1977, 321-322). It is not made to depend conceptually on the actual truth-conduciveness of this set of standards. On reflection, this does not come as a great surprise. Deontological justification, by definition, has to be one that can be followed by cognisers, and that can thus be operative in an epistemic practice. In contrast to this, alethic justification refers to the actual likelihood for truth, which is not what is in general transparent to cognisers. It therefore typically cannot be followed in a straightforward way in one's believing, and hence cannot be directly implemented in an epistemic practice.

Still, the scientific notion of justification is special in at least two respects. First, deontological conceptions of justification in general epistemology often go with internalism. Since a cogniser can only have the epistemic duties that she can fulfil, the reasons for or against believing that she might have to adduce have to be accessible to her. In line with the strong individualist emphasis of traditional epistemology, this condition of accessibility has typically been spelt out in terms of privileged access by the individual subject of cognition. The prototypical states and processes that are, in this sense, accessible include the subject's perceptual experiences, her memory and her inferences. In contrast to this, the scientific notion of justification pays tribute to the fact that science is a communal project of knowledge gathering. For a theory to be acceptable for a scientist, not only the reasons accessible to her by introspection, but any reasons accessible to the scientific community have to be taken into account. She can be blamed e.g. for ignoring published evidence that contradicts the theory. Since only the extensive division of labour between scientists across history, different subdisciplines and different specialisations (as experimenters, theorists etc.) makes today's scientific findings humanly achievable, scientists in their believing have to rely on results the scientific assessment of which they cannot entirely redo by themselves. This mutual dependence leads to some form of externalism: Scientific results count as accessible to a believer even though they cannot be comprehensively checked by her on the basis of what she has privileged access to.

Second, the question whether processes of producing results are reliable is regularly posed. This applies in particular to observations and the generation of empirical results. Since standard alethic accounts of justification also refer to the reliability of processes of belief formation, one might wonder whether scientific practice does not incorporate here the alethic notion. I will address this issue by looking more closely at the scientific standards for assessing the reliability of observation results.

2. Assessing the reliability of observation results

Observational data come in a wide variety in the sciences. At one end of the spectrum (or better at one end of a multi-dimensional continuum), there are empirical results that are obtained by highly complex, extensive experiments. One such result is the finding that solar neutrinos change

[1] Since I am here only interested in the structure of the scientific epistemic assessment, I will not distinguish between justification and acceptance, even though one can argue that the epistemic attitudes that are licensed either by acceptability or justification – namely acceptance or belief – are different.

their 'flavour' on their way to the earth, which has been shown by data gained at the Sudbury Neutrino Observatory in Canada (Ahmad et al. 2002). The data are obtained from a detector that is situated in a copper mine 2000 metres below the surface. About 1000 tons of heavy water were deposited there, with sparks occurring in it being registered by photomultiplier tubes. In order to assess the data as reliable, a wide range of considerations and provisions had to be made. For example, the detector is placed in the mine in order to shield off cosmic rays, and it is additionally surrounded by 7000 tons of ordinary water to absorb neutrons and gamma rays from the rock. The data have been collected over a period of more than a year, and have considerably been processed and analysed. For instance, the neutron background had to be subtracted, which had before been determined by calibrating the detector with an artificial neutron source. Altogether, from the more than 300 million initially triggered events, about 1000 have been selected as relevant data base (Ahmad et al. 2001).

In cases like this, a large number of both empirical and theoretical considerations about the process of data generation and selection is altogether adduced to assess the final results.[2] This shows that science is epistemically self-conscious: What one knows scientifically about the reliability of the generation of scientific findings enters into the epistemic assessment of these findings. But this does not mean that science is here committed to the alethic notion of justification. While the reasons concern the truth-conduciveness of the observation processes, it is only reasons insofar as they are accessible to the scientific community that matter. For example, the theoretical understanding of the different processes of neutrino interaction are of central importance for gaining the result. But it is the standard theories that enter here as conditions of justification, not the real processes that take place. If the two came apart, i.e. if, in retrospect, we would find that physicists were in error about the neutrino interactions, we would still think that they were scientifically justified in drawing their conclusions, if the error is not of their fault. But this is to say that the deontological notion of justification is dominant.

The deontological notion makes one expect that justification is defeasible. An observation that is acceptable at some point of time might be judged to be unreliable as further knowledge on its generation is acquired. Observations from the other end of the above mentioned spectrum can illustrate this defeasibility.

This end is occupied by simple direct perceptions of scientifically interesting phenomena (the intermediate continuum being filled with, among others, perceptions made with instruments and results from measuring instruments or imaging techniques)[3]. Results from direct perception are usually accepted without further reasons being given for their reliability. When scientists report that they have seen, in their laboratory, a litmus paper turn pink, they are not asked to give reasons for assuming that their sensory experiences are in general good indicators as to the colour changes that occur or that the conditions for the observation have been favourable. Instead, the results are taken at face value.

Still, the acceptance is defeasible and can be undermined by specific reasons that question the reliability of particular perceptions. This can be illustrated by Galileo's discussion of the tower-experiment. A stone falling from the top of a tower is perceived to fall in a straight line. However, according to Copernicus' theory, the earth and with it the stone also revolve. Therefore, the stone is taken really to move mixed straight and circular. The direct perception, taken at face value, contradicts this consequence of Copernicus' theory. Following Copernicus, Galileo however argues that with respect to real motion, direct perceptions are unreliable. This is supported by assumptions about the perception of motion. Galileo assumes that an object appears to be moving only if, in order to keep track of the object, the observer has to move her eyes. But insofar as observer and object move uniformly, the eyes do not have to be moved to follow the object. Therefore, only the motion of the object relative to the observer, not the common motion is perceived, and the direct impression of the falling stone does not reliably indicate the stone's real motion (Galileo 1632, 248-250).

The scientific policy concerning direct perceptions then seems to be that they count as *prima facie* acceptable, but the acceptance can be undermined by specific reasons as to them being unreliable. Again, it would be wrong to count these standards as alethic. Justification is not made to depend on direct perception actually being reliable, but on the scientific availability of specific reasons against the reliability. Also in this case, the scientific standards of justification are deontological and refer to all scientifically accessible reasons.

At the same time, some pertinent epistemological questions are not addressed within this scientific practice. Why is it advisable to accept direct perceptions at face value unless specific reasons speak against their reliability, while more elaborate observation results are in need of substantial empirical and theoretical underpinning? I take it that an answer would have to refer to the different roles that the relative dependence and independence of observations from theories play for the empirical basis of science. While the – arguably – largely theory-independent direct perceptions allow for a neutral input to science, the empirical basis of science is enormously extended when theories guide and validate more sophisticated observational results (see Adam 2002). But the details of this answer notwithstanding, an answer of this type would address the question whether the scientific enterprise, proceeding as specified by its internal methodological rules, is on the whole likely to find the truth. In other words, it would assess scientific claims according to the alethic notion of justification.

3. Conclusions

All in all, the scientific epistemic practice on the one hand includes a deontological notion of justification. Yet the notion is not internalist, since reasons that are communally accessible and also concern the reliability of the worldly generation of scientific findings are relevant. On the other hand, the discussion of observational results has shown that a number of epistemological issues are not addressed within science. These can be subsumed under the question whether the scientific practice as characterised by its internal epistemic rules is on the whole likely to lead to true claims. It seems to me that established discussions on topics such as the underdetermination of theories by empirical evidence, the no-miracle argument or the theory-dependence of observation are best viewed as working largely on this question. But to ask for the truth-conduciveness of the scientific method is to ask whether scientific claims are justified in the alethic sense.

[2] Cp. Shapere 1982 and Galison 1987, Chap. 4 for cases with a similar role for theoretical and empirical considerations.

[3] For a discussion of the scientific standards for assessing the reliability of such observational results, see Adam (2002), chapt. 5.

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Toward Saving Nozick from Kripke

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1. Historical Prelude

Tracking theories[1] of knowledge, though quite popular have been under attack from their inception. Specifically, we have in mind the attacks of Saul Kripke.[2] We don't think these attacks on tracking theories work. In this paper, we take a step towards rescuing Nozick's version of the tracking theories of knowledge from the attacks of Kripke.

2. The Kripke Examples[3]

The Red Barn

Peg is looking at a red barn. Red barns cannot be faked though barns of other color can be faked. Peg has perfect eyesight and is observing the barn under standard lighted viewing conditions. According to Nozick's conditions, Peg knows there is a *red barn*, but Kripke claims that it is a consequence of Nozick's theory that Peg does not know there is a *barn*. Peg does not know there is a barn because she fails' Nozick's tracking condition that if there were not a barn, Peg would not believe there were. She would believe of a white fake barn that it was a barn.

Nozick is very clear that his tracking conditions must be relativized to methods. For example, otherwise only God could satisfy the condition that if p were true, one would believe it. When we specify the method of belief formation that yields Peg's knowledge that there is a red barn, we see that the same method yields her knowledge that there is a *barn*.

Let's look at a related example.[4] Suppose Pam never confuses Volkswagen Beetles with Saabs. However, Pam thinks Saabs are the luxury version of the Volkswagen and that Beetles are the economy version. When Pam sees a Beetle under ideal viewing conditions she knows that it is a Volkswagen Beetle. Her method of knowing is to look at the shape and size of the Volkswagen Beetle. The visual experience of the shape and size of the Beetle carries the information both that the car is a Beetle and that it is a Volkswagen. Not only does she know that it is a Beetle, but she also knows that it is a Volkswagen. Pam satisfies Nozick's tracking condition that if it were not a Beetle and she used the VW-Beetle method, she would not believe that it was a Beetle. It is also true that if it were not a Volkswagen and she used the VW-Beetle method, she would not believe it was a Volkswagen.[5] So contrary to Kripke, we maintain that this is a case where Pam knows both that it is a Beetle and that it is a Volkswagen because she is using the same reliable method to detect both.

Returning to the red barn example, since Peg is using the reddish barnish look to form the belief that there is a red barn, she satisfies Nozick's tracking condition that it if there were not a red barn, she would not believe there were. And if there were not a red barn present and peg were to believe there were a barn, she would not be using the same red barn look method. This leads us to believe that when Peg believes there is a red barn, she believes there is a barn in part employing the red barn method. This method insures that Peg knows of this structure that it is both red and a barn. Hence, Peg indeed does know of the red barn *that it is a barn*, contrary to Kripke's claim. Essentially, Kripke's example only appears to be problematic if one violates Nozick's strictures on method.

Someone may object that we slicing methods too thinly or without principle merely to rescue Nozick. Maybe there will be some sympathy for the notion of a VW-Beetle method of belief formation, but we suspect people will balk at the notion of a red-barn method of belief formation. Our reply is that in the wild, even the Stickleback fish has to solve the red dot detection method of rivals during mating season. If fish can solve this epistemic detection problem, yielding knowledge of their rivals, then surely we can solve it and there are real live models of this abstract method of knowing.

The Deceased Dictator

The strongman dictator of a totalitarian country dies. The state-run newspaper prints that the dictator is dead (p). Later, fearing a coup, the newspaper prints a retraction saying that there was a mistake. They show pictures of the dictator alive and well. Ken returns from a long trip out of the country. He reads the first newspaper, but then goes to sleep due to jetlag. The rest of the country read and believes the retraction. Ken, like others, would believe the retraction, if he were to read the second newspaper. So while Ken sleeps he loses his knowledge that the dictator is dead because he fails Nozick's condition that if the dictator were dead, Ken would believe it. Ken would not believe it, if he read the retraction[6].

Kripke's modification of this original example by Harman is to add the proposition (q) that "I have read an uncontradicted report of the dictator's death." Kripke maintains that on Nozick's conditions Ken knows p&q but not p (as we've seen above, Ken fails to know p). Supposedly, Ken knows p&q because his belief that p&q does satisfy the condition that if p&q, Ken would believe p&q. This is true because for Ken to believe that he had read an uncontradicted report of the dictator's death, he would have to have read an uncontradicted report. So Ken would have not to have read the second newspaper (keeping q true).

In reply, this example fails because Ken knows neither p nor p&q, on Nozick's own conditions. Ken will either be savvy and not believe something merely because it appears in the state controlled newspaper or gullible, and he will believe everything that appears there. So suppose Ken is savvy. Then Ken does not know p&q, because he fails

[1] We include among the tracking theorists Armstrong (1973), Dretske (1971, 1981) and Nozick (1981), but we will focus only on Nozick here.
[2] Why just this attack? Without doubt it has been the most influential and is widely believed to succeed in defeating the tracking theories.
[3] Kripke gave these examples at a session of the APA in the 1980s, but the paper was never published. It has been widely circulated and almost everyone we meet thinks the examples work, but they do not work – as we shall now begin to show for a subset of them.
[4] This example was based on one by Goldman and appeared in Dretske's (1975) review of Armstrong.
[5] It is true that if she used the "looks like a Saab" method, she might believe a non-Volkswagen to be a Volkswagen. But this is irrelevant to whether she knows it is a Volkswagen when using the VW-Beetle method.
[6] This example turns on Nozick's fourth condition only. So we will focus attention on that condition in presenting the example.

the fourth condition. It is not true of Ken that if p&q then he would believe it. A savvy Ken rejects many things that he reads in the state run newspaper. So, suppose that Ken is gullible. Then he believes everything that appears in the state run newspaper. In that case Ken fails condition three, viz. that if p&q were not true, Ken would not believe p&q. A gullible Ken believes falsehoods that are printed in the newspaper. In that case, Ken cannot (without independent confirmation) learn anything from a state run newspaper that is highly unreliable. So on Nozick's own conditions, the dictator example is not a case where Ken knows p&q but does not know p (as intended by Kripke).

For good measure, we will discuss one more of Kripke's purported counterexamples to tracking theories. We will not attempt to exhaustively cover them here, but we maintain that each fails. We hope to have demonstrated that we could go on and demonstrate the ineffectiveness of the rest.

The Sloppy Scientist

Steve is looking for a cure for a particular disease. Steve selects a drug D for several trials of treatment. The trials are effective in curing the disease and Steve comes to believe that drug D will cure this disease (p). Unfortunately, Steve is a sloppy scientist. He forgets to run a control using a placebo. As it turns out, had he used the controls, the placebos would have been negative.

Kripke maintains that this is a counterexample to Nozick because it satisfies Nozick's conditions for knowing, but that Steve does not know that p. Steve does not know because Steve's procedure is irrational. Steve is ignoring standard control procedures for sound experimental design. Despite this, Steve satisfies Nozick's tracking conditions. Specifically, if p were not true Steve would not believe that p, and if p were true, Steve would believe that p (given his sloppiness).

Kripke's example is exploiting the intuition that one cannot learn something from an unreliable method or procedure: due to sloppiness, Steve's experimental procedure is unreliable. Kripke is also suggesting that Steve's procedure is somewhat irrational and that one cannot know something if one is being somewhat irrational. This latter claim concerning irrationality is reminiscent of Bonjour's attack on externalist theories, which we also reject in a longer paper. Here we will focus our comments on the suggestion that Steve does not know that p because Steve's procedure is unreliable because Steve is sloppy. We maintain that being sloppy does not preclude latching onto knowledge or a reliable method.

There are at least two kinds of sloppiness. One kind would exist if Steve were sloppy in screening patients for the disease or in the experimental set up where he administered the drug. Call this primary process sloppiness. If Steve didn't control for variables and background conditions in the administering of the drug itself, then we would agree that Steve does not know that p. But in this kind of case, the sloppiness would cause Steve to fail Nozick's conditions. There could be false positives or false negatives in the administering of drug D and collecting the results. In Kripke's example, Steve was not sloppy in this primary way.

Another kind of sloppiness is secondary process sloppiness. Here Steve fails to provide an independent check on his results. We see this as a failure of confirmation not of information. Steve is at fault for not attempting to verify his information. His primary process procedure of administering the drug and controlling for variables, is impeccable. He is sloppy in his neglect of secondary process controls. We maintain that, perhaps surprisingly, Steve does know that p because he satisfies Nozick's tracking conditions. Steve does receive the information that drug D cures the disease. What he does not do is gather sound confirmation that he has received that very information.

We suspect that dissenters will say that scientific knowledge only comes into existence after the secondary process controls are in place. Isn't that what double blind experiments are all about? But we maintain that this is what confirmation is all about. It is part and parcel of attempting to confirm a hypothesis that says that a particular theory or claim is true. In cross-examining a witness, prior to the cross-examination, a witness may be telling the truth and be perfectly reliable. The jury won't know that or suspect it until *after the cross-examination,* but this does not mean that the witness was not reliable until after the cross-examination.

3. Conclusion

This concludes our brief survey of what we take to be the best of the attempts to kill off the tracking theories of knowledge. We maintain that none of them succeed. We maintain that the tracking theories remain viable accounts of knowledge.

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The Error of Thinking that the Picture of Actual Dreams can be Used in only one Way

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In 1914, the Spanish novelist, dramatist, poet and philosopher Miguel de Unamuno published one of his well-known works, *Niebla*. Unamuno allows that his characters speak and speak although they say nothing at all: in this way the author begins believing he takes his characters by the hand, but in the end becomes his characters´ fiction. And not only does Unamuno give free rein to his characters´ dialogues but describes thoughts and feelings in great detail too; as a matter of fact, he uses expressions of the kind of (Unamuno 1996, 180) *"si Augusto hubiera podido leer en el espíritu de Rosario"* (`if Augusto could have read in Rosario´s spirit´), or (ib, 204) *"¡Oh, si pudiesen verme por dentro, Víctor, te aseguro que no dirían tal cosa!"* (`Oh Victor, if they could see inside me, I am sure they would not say such a thing!´). Up to this point there is nothing special about *Niebla*, but before committing suicide, Augusto decides to consult Unamuno: that is, the main character has a meeting with the author. But as soon as Augusto begins to tell his life and misfortune, Unamuno invites his character to save himself such a work because *"de las vicisitudes de su vida sabía yo tanto como él"* (`I [Unamuno] knew the ups and downs of his life as well as Augusto himself´). Unamuno proves his words quoting Augusto´s secrets; so the character, absolutely terrified, trembling and as if he were in front of an unbelievable being, murmurs: *"puesto que usted parece saber sobre mí tanto como sé yo mismo, acaso adivine mi propósito"* (`since you seem to know about my life as much as I do know, maybe you should guess my intention´).

One of the most appealing qualities in this novel is that its author stresses time and time again the fact that he can read his characters´ minds as if they were open books. It certainly seems Unamuno knows everything we could expect to know about Augusto´s mind; however, it is a mistake to say Unamuno `knows´ what is crossing his character´s mind: since the author is the one who dictates such contents, his testimony is the last court of appeal, so there is not room for ignorance, doubt, or error. Although it could be said Unamuno has no interests beyond individual immortality and transcendence, I think we can take *Niebla* out of its original context to exemplify something which at first sight seems to be only a scientific fantasy: seeing inside other minds in order to get a first-hand picture of people´s thoughts. At the very best those scientists could try to guess other people´s thoughts, but they could try to know other minds even better than the individuals themselves: I am referring to peculiar mental events of the kind of dreams, so scientists would look for pictures of actual dreams. If researchers knew some day the functions (if any) and the neurological patterns of dreams, we can expect one of their next aims would be to guess the contents of dreams: if science could get such a thing and were beyond a mere guess, that is, if it gave an account even of the dreams or the parts of dreams we forget or misremember, it would make sense to wonder if our memory deceives us when we report a dream after waking.

Anybody can write a novel telling a character´s whole dream for adding later the contents this character remembers upon waking: such a thing might be an interesting resource for a novelist in the psychoanalytic style who tried to show how repressions condition our lives, but although this is a suitable literary resource, it lies outside the scope of science because we cannot know in principle whether someone had a dream he cannot remember at all. Anyway, and bearing in mind that Daniel Dennett (Dennett 1977, 233) even pointed out the possibility that researchers could be able in the future to obliterate the "veridical" dream memory and substitute for it an undreamed narrative, we might imagine a tribe where people should say upon waking "I have dreamt A", but after having visited the witch doctor´s tent, they should specify "I know I have dreamt B because the witch doctor has told me so". Of course A might fit in with B, but only `might´: it goes without saying this does not mean that the witch doctor´s account would be pointless unless it serve some particular purpose, e.g. natives might think a sin is forgiven if and only if the witch doctor says the sinner has dreamt a deed which pays for his mistake. It is true such a believe could explain why witch doctor´s accounts are appreciated, nevertheless there is no reason why this `objective´ report (I mean `objective´ inasmuch as it is taken as the unquestionable reference) has to be necessarily justified: since this custom or ritual belongs to the view of the world and the way of life shared by the tribe in question, there is no room to say it is a useful or a pointless ritual just as there is no room to say it is a right or a wrong ritual either. It is only a different one and nothing more.

Those dreams written by the novelist and the ones told by the witch doctor are good examples of what I call `actual dreams´, that is, dreams which will probably not sound familiar to dreamers themselves although the existence of such dreams has been certified by an individual who is an unquestionable authority on the corresponding context. This picture of actual dreams may look something of a literary or even surrealistic resource very distant from our use of language; in fact, I think Norman Malcolm tried to eradicate the influence of this picture when he wrote *Dreaming*, his well-known monograph. This author (Malcolm 1967, 79) denounced the erroneous picture of the concept of dreaming which emerges from "the subjective report of the dreamer", the phrase William Dement and Nathaniel Kleitman (Dement and Kleitman 1957, 339) chose to show the contrast between the subjective recall of dreams and the objective measurement of dreaming provided by rapid eye movements: Malcolm remarked Dement and Kleitman took for granted that the distinction `subjective-objective´ applies to dreams, but as I shall comment later, Malcolm thought it makes no sense (in the sense of impossibility of verification) to consider "a `subjective´ report which may or may not agree with `objective´ fact".

Trying to guess the contents of other people´s dreams, some researchers considered sleep-talking as a window to actual dreams: in a sense whoever listens such a talk would be witnessing other people´s dream at the same time. So if we find some individual puts his arms up to shield his face and shouts "No!! No!! No!!" while he is asleep, we immediately think this individual dreams that he is being attacked by someone or something; in the same way, if we hear somebody in the next room is having a telephone talk and we find he is not on the phone but asleep, we conclude the person in question is dreaming

his talk at that precise moment. Leaving aside the fact that sometimes it is not at all clear how we can distinguish a mere movement or noise from a genuine case of sleep-talking, we should not forget that those soldiers with combat neuroses who relive battle scenes in sleep mentation shouting and showing other psychomotor accompaniments of fighting recount battle dreams of the night before in the morning on awakening; however, as Arthur Arkin (Arkin 1981, 108) points out, the possibility nevertheless remains that the battle dreams and battle speeches could have occurred at separate times (just as an actual enuretic episode and a dream about accumulating moisture or water are now known to occur at two different times of the same night). Be that as it may, since there is someone who states the existence of another person´s dream, sleep-talking allows the possibility of speaking in terms of `forgetting a dream´, but only "allows": after all, what sleep-talkers say while sleeping is often completely gone out of their mind when awakening. If we remember that from time to time we are not able to distinguish if a certain event happened or was dreamt, doubts regarding whether we have really dreamt should not surprise us. So I may wake up sad in the morning because my neighbour told me his mother has lung cancer, but as soon as I get up, I might begin to doubt whether it was only a dream: I remember vaguely a brief chance meeting with him last night and nothing more. My neighbour could state whether he talked me about his mother´s cancer, but if my neighbours suddenly move, I shall probably doubt indefinitely whether I dreamt a certain thing. But if my neighbour denies that he said such a thing, I might convince myself (or not) to `accept´ I dreamt it; however, Malcolm (Malcolm 1967, 51) holds that if this incident did not occur, it necessarily follows that I dreamt it.

In my opinion, narrative consistency is one of the necessary characteristics whoever is hold captive by the picture of actual dreams may wait to find in dream reports: we should not forget that many people fill those parts of the dreams they cannot remember with additions they consider coherent. It goes without saying that in this point psychoanalysts would bring up Freudian repression: in fact, the `repression hypothesis´ is considered by David Cohen (Cohen 1979, 158) as one of the three general hypotheses regarding access to the dream via the dream report. As everybody knows, this hypothesis holds that defensiveness with respect to inner experience interacts with the content of dreams, and this may affect dream recall and/or reporting. On the other hand, the `salience hypothesis´ states that dream recall is positively correlated with neurophysiological arousal during REM, imagery, ability, emotional impact of the experience, i.e., factors that are more likely to heighten consciousness and attract attention during the dream. Finally, the `interference hypothesis´ holds that dream recall will be inversely correlated with events during dreaming, during awakening and after awakening which interfere with the consolidation or retrieval of memories associated with the dreaming experience. As we can see, these three hypotheses presuppose in a sense the picture of actual dreams we hardly remember due to different factors.

The fact that the use of the three general hypotheses commented by Cohen is so widespread shows that the picture of actual dreams influences not only the ordinary man but scientists too. However, I believe Malcolm (Malcolm 1967, 122) tried to eradicate the influence of this picture pointing out that "dreaming is not to be conceived of as something logically independent of dream reports": he thought our primary concept of dreaming has for its criterion not the behaviour of a sleeping person but his subsequent testimony. In fact, Malcolm ends *Dreaming* remembering Harry Stack Sullivan (Sullivan 1953, 332) remarked it is impossible to deal directly with dreams: this author added we deal only with recollections pertaining to dreams, so how closely these recollections approximate the actual dream is an insolluble problem because "there is no way to develop a reasonable conviction of one-to-one correspondence between recollections of dreams and dreams themselves". Since there is not correspondence with waking life, Malcolm states that a truthful report of a dream would be the criterion of the occurrence of that dream, but we should not forget sleep-talkers may or may not accept having had a dream by another person´s testimony. The sleep-talker who either listens to the report made by someone who witnessed his gestures and words, or watches his own behaviour and monologue in a video recording, may reject to have dreamt such a thing because the characters, events, places, etc., quoted in the testimony do not sound familiar to him; nevertheless the sleep-talker may decide he had that dream and besides, he may regard that testimony as a part of an actual dream.

When Ludwig Wittgenstein (PI, 184) wonders whether a dream really took place during sleep, he points out that it depends on the use of the question, i.e., on what we intend; so if we want to understand the sense of this picture we must explore how it is to be used: it will be then that we will understand the sense of what we are saying. Since the picture already points to a particular use, it seems to spare us this work, but Wittgenstein warns us "this is how it takes us in": this means pictures can be used in different ways, so I agree with Sybe Terwee when this author remarks (Terwee 1985, 412) Malcolm´s *Dreaming* is not an exercise in Wittgensteinian philosophy because "Wittgenstein never gave prescriptions of any kind in his analysis of the dreaming". By the way, if Freud had considered the variety of situations on which the expression `dreaming´ occurs and gets a meaning, I think Wittgenstein (LC, 48) would not have criticized him for his desire to find the essence of dreaming in such a way that the father of psychoanalysis "would have rejected any suggestion that he might be partly right but not altogether so".

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The Metaphysical Subject as Background to the Early Wittgenstein's Epistemology

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Proposition 4.1121 of the *Tractatus* states that epistemology is the philosophy of psychology. What should we take this to mean? Philosophy, on Tractarian terms, is an activity by which thoughts are clarified. This activity ranges from checking terms to see if they have meaning to investigating a network for its regularity. Epistemology, then, would be the philosophical analysis and clarification of any possible psychology, although it is not clear what a psychology on Tractarian terms would be. Understanding what such a psychology might be is necessary if we are to understand better what this epistemology would demand of us; however, to approach such an understanding, we will need to attend to the notion of subjectivity at work in the *Tractatus* and to the way it is related to thought and logic.

According to the *Tractatus*, thought is able to picture a possible world because both world and thought always have something in common: they have a shared logical form. However, this logical form is not itself a thing in the world that can be pictured. Instead, it can only be shown. This simple metaphysics sets up two pressing questions, both of which have epistemological implications. The first question is: what insures the unidirectional nature of this logically grounded thought-world relation? Presumably, this insurance is not an empirical matter; however, it would nevertheless give us the parameters within which any possible psychology would have to be developed. It would put constraints on what an empirical agent could be. The second is: what, exactly, is the ontological status of something that can only be shown (such as logical form)? The epistemological implication would be found in the need for any possible psychology of the actual empirical agents in this world to deal with how we have 'access' (if that proves to be the right word) to something shown.

With respect to the first question, the problem is that the picture that presents a state of affairs is a fact, while the state of affairs presented is also a fact. Thus, in picturing, we have a fact-fact relation. However, if left as it is, there is nothing in this relation to tell us which fact is the picture and which fact is the state of affairs. The absurd possibility of taking the world as a picture of the thought arises. This cannot be so, but how does the *Tractatus* avoid this absurdity? Two responses are possible: one is that there is something in the thought itself that insures this unidirectional relation; the other is that this is the function of the metaphysical subject.

If thoughts were to have something in them that insured this unidirectional relation, it is not clear what it would be. The thought must have the same mathematical multiplicity as the state of affairs that it pictures, and so there could be nothing additional in the picture that provided or insured this relation. There is, of course, the logical form of the thought, which is not a part of the thought's multiplicity, but this form is a matter of the *internal* relation of the members of this multiplicity. This form gives the thought its sense, but this sense is "independent of the facts" (4.061). It is only put into relation with the facts through "the method of projection," which is "the thinking of the sense of the proposition" (3.11). The thought then becomes, via the propositional sign through which it is expressed, the proposition, which is "the propositional sign in its projective relation to the world" (3.12). It is this projection, which is not itself part of the thought, that puts the thought into relation with reality. The thought itself is independent of the facts and cannot put itself into relation with them.

So who, or what, engages in the activity of projection? Without this 'who,' thought will not be put into a relation with the world that is to be thought. This 'who' is thus necessary not just to insure the unidirectional relation of thought and world; it is necessary if there is to be any meaningful relation between them at all. It would seem that the only candidate for the 'who' is the metaphysical subject, since "there is no such thing as the soul – the subject, etc. – as it is conceived in contemporary superficial psychology" (5.5421) and "there is no such thing as the thinking, presenting subject" (5.631). There is no such thing because there are no propositional attitudes, and so it makes no sense to speak in terms of someone who thinks that such and such is the case (5.541).

But how do we make sense of the fact that Wittgenstein then seems to qualify this 'there is no such thing' by saying that "there is therefore really a sense in which in philosophy we can talk of a non-psychological I" (5.641)? This philosophical I is the metaphysical subject, which "does not belong to the world but is a limit of the world" (5.632). We have here something that is, ontologically speaking, quite odd: we have something about which we can talk and yet which is not. The subject is, in this oddness, similar to logic, which also limits the world. It is here that the question of how the unidirectional relation is insured dovetails with the question of the ontological status of logic: it would seem that the metaphysical subject is what must insure this relation, and this subject raises the same ontological perplexity raised by logic itself.

However, before we deal with this ontological perplexity, I still need to address the way in which the metaphysical subject could be thought to insure the unidirectional relation. One common approach is to treat the metaphysical subject as an entity of some kind, such as a transcendental ego, and to attribute some kind of activity to it. Wittgenstein himself never attributes any activity to this subject, and it is difficult to think of a limit that does not belong to the world as engaging in an activity. The main reason for this attribution of activity to the metaphysical subject stems, I suggest, from the contiguity of the propositions in which he discusses these things. The idea is that, although there is no thinking, presenting subject in the world, there must be one that does not belong to the world. Thus, the subject that does not belong to the world – the metaphysical subject – is the very thinking, presenting subject that is not, with 'is not' being read as 'is not something in the world.'

This reading of the metaphysical subject as an active entity that does the thinking that we experience seems to raise the very problems that are supposed to vanish as a result of the *Tractatus*. For if the metaphysical subject does in fact do the thinking that we experience, we must explain how this metaphysical entity is related to the empirical agents who are subject to this activity. It seems to raise the specter of Cartesian dualism: how is this thinking

thing related to the bodies that give us the very things about which we think? But, again, this seems to be the type of thing that Wittgenstein sees his logical atomism and picture theory of meaning as solving: it solves such problems by showing them to be nonsense. They are not problems at all.

If this is the case – if the metaphysical subject understood in this way leads to a troubling dualism – then what other way is there to understand the metaphysical subject? The answer seems to be that it is a condition for the possibility of determinate meaning. One such condition must be that pictures are pictures of the world, and this is insured through the necessary orientation that takes place in any thinking: thinking thinks its world. Since neither world nor thought insures this relation, there must be something else that does, and this is the subject. And since this subject cannot be a part of the world, it must, like logic, be something transcendental. It does not do the thinking, but it somehow speaks to a necessity that takes place in thinking.

But then who does the thinking, and how, exactly, does the metaphysical subject provide a condition for such thinking without being reified as an ego of some kind? The answer is, I think, that psychological agents do the thinking. However, they do not do it *as* subjects. In other words, there *is* thinking in the world, there is just no thinking subject. Wittgenstein is rejecting subjectivity as a philosophical problem in which philosophers try to get at the conditions for any possible thinking by speaking of an entity that is pure and that is beyond the world. On the terms of the *Tractatus*, there is no possibility of such an entity or of access to it. There is only the world that thought can give. The only condition for my thinking *this* world (*my* world) is that I must do so through some medium in which thoughts can be expressed. Thinking must take place in a language, and this will be the language of the one who thinks: it will be *my* language (and I cannot have a language that is not mine). Thought will then be limited by what it is possible to express within my language, and so the notion of the metaphysical subject seems to mark our subjection to expression as well as to the thinking of a world.

This leads us to our second question: what is the ontological status of these limits (the metaphysical subject and logic) that make thought possible? They are not features of the physical universe: although they are limits of it, they do not belong to it. Nor are they features of the internal experience of human agents; such internality does not in fact stand as a separate realm (from the physical universe) for the early Wittgenstein. Nor do they exist in some platonic 'third realm' as timeless, non-mental, non-material entities. How, then, are we to think the nature of that which has no substance?

As long as we think in terms of some kind of entity – a thing or substance that stands in relation to other things or substances – we will continuously fall prey to metaphysical temptations. Instead, we must attempt to think the notion of limit differently. For instance, if we strip away everything in the proposition that is its perceptible cloak, we would be left with nothing. Yet we cannot think without some medium through which to express the thoughts, and we cannot think without some possible world that is thought. This medium – language – will only enable me to say a limited number of things (I can only say what is possible within it), and so any possible world will be delimited by it. I simply will not be able to think a thought that I cannot somehow express. In this sense, the subject limits the world: it designates our subjection to what our language enables. Further, this limit can only be sensed, as it were, from the inside: only by actually putting propositions out before ourselves can we see if they'll make sense, just as we must actually put them up against a world to see if they are true. The limit is thus encountered only in investigation.

In our investigation of what we say, we are not dealing with the appearance of something hidden that exists apart from the appearances. There is, so to speak, nothing but appearances and nothing can be extracted from them except more appearances, i.e. more description. The notion of appearance thus ceases to be useful. Such a notion suggests that there might be some transcendental rails that we follow in our investigations and that make these investigations possible, but Wittgenstein rejects the notion of something noumenal that exists *behind* what is said. There aren't tracks that we follow but limits that we come up against. These limits aren't transcendental in the sense of being beyond the world. The point is that there is no world beyond the limits of thought.

Whatever we gather up from this and set aside will not capture the essence of logic or the subject; it will only better enable us to describe the world. We could never think this logic or subject, but there would be no need. Instead, the *Tractatus* would require that the problem of the ontology of logic and subject vanish: it cannot make sense, and so there can be no answer to it. However, if we trust to the necessity of logic and to its assumption that "names have a meaning, and that elementary propositions have sense" (6.124), then we can get down to the important business of exploring the world that happens to be the case. This exploration will depend on our physiological and psychological capacities, and one important task will be to have as accurate a sense of these capacities as possible.

It is here that we begin to see the impact these considerations have for epistemology. They are twofold. The first is that epistemology, which is the philosophy of psychology, will have to deal with thinking and how it empirically takes place. How the psychological theory itself comes about is not important; it will most likely rest on inductive means that have no logical foundation (6.3631). But its task will be to account for the causal means by which we make pictures to ourselves and then test them against the actual world we picture. However, in doing so, such a theory will not be able – logically – to rely upon the notion of subjectivity. This would then be one of the tasks for philosophy (which, as Wittgenstein stresses, is an activity and not a matter of doctrine) with respect to psychology: it would have to correct any possible psychology when it attempted to speak of such a subject. Second, epistemology will be in large part a matter of the investigation of language, since the world that I attempt to know is given to me as knowable in thought. This even points to a positive dimension for philosophy: by analyzing the language with which we think the world, we can come to see its inadequacies (if there are any, which at present there certainly are) and be moved to find better means of expression.

Learning to Speak

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Rush Rhees's *Wittgenstein and the Possibility of Discourse* constitutes both an extension and a critique of Wittgenstein's later philosophy. The theme of the book is the question that Rhees argues was central to Wittgenstein throughout his career: what it means to say something. While working through this problem, Rhees argues that the *Investigations* picture of acquiring language through training is misleading. To my knowledge, this discussion has so far received no serious attention from Wittgenstein scholars. In this paper I shall bring together Rhees's various remarks into a coherent critique in an effort to make clear its importance.

The concept of "training" is central to the conception of language-acquisition found in Wittgenstein's middle and later philosophy. In the *Brown Book*, Wittgenstein writes that the training of a child to speak is comparable to training an animal. He asks us to "imagine a society" in which "the only system of language" involves requesting and delivering building materials (77). On the question of language-acquisition, Wittgenstein writes:

> The child learns this language from the grown-ups by being trained to its use. I am using the word "trained" in a way strictly analogous to that in which we talk of an animal being trained to do certain things. It is done by means of example, reward, punishment, and suchlike (77).

Wittgenstein does not say that an animal could learn language, but that the child learns language in a way that is "strictly analogous" to the way that an animal is trained. We gain insight into human language-acquisition by reflecting on the system of reward and punishment used to modify animal behavior.

Rhees criticizes the *Brown Book* view. First, animal training does not seem analogous to human language-acquisition, for an animal cannot say anything. For example, we can train a "very intelligent parrot," but unlike a child, it will never be able to do anything other than imitate sounds that it has heard. Rhees's point "is that if [the language learner] can speak he has got something tell you or ask you" (187). Not only is an animal unable to say something, but there is a sense in which the animal does not understand commands, either. Rhees imagines a ploughman training a horse to respond to orders. The horse may stop when its master says "whoa" and go when he says "gee-up," but the horse does not know what "going" or "stopping" mean. Why not? Because "to know that, he would have to be able to use the language himself" (132). For example, the horse should know what its master is talking about even when he is not shouting orders, know what an order is even when not being directed to the horse, and distinguish going from stopping in the case of other horses (132-3). Furthermore, if a child is trained to speak, then it can train others when it grows up just as it was trained. If a person trains an animal, however, then the animal cannot grow up to train other animals. The difference between a trained animal and a child who can say something is so great as to render the analogy unhelpful.

Second, Wittgenstein's analogy suggests that learning to speak is something like learning a highly complicated form of animal behavior. The difference between human beings and animals cannot be accounted for in a sublimed concept of behaviorial complexity. For example, Rhees discusses the importance of "and so on" for learning rules, and says that if we make it central for an account of learning to speak then "[i]t is not even like *Abrichtung*, in the sense that when it is learning to ask questions and answer them, you cannot be brought to this by being trained to it, as a dog might be trained to obey orders or do complicated tricks" (242). The point is that if speaking were a complex animal behavior, then saying or asking something would become a matter of "complicated tricks," which would raise the question why dogs could *not* learn to do it. Is it because they are not intelligent enough? The difference shows in the asymmetry between human and animal ways of living, in the fact that speech is internal to human society but not to associations of animals. It is within the context of a community of speakers that the concept "behavior" has its sense. Speech is not added to behavior; rather, what we mean by behavior is shown in our speech. Because the animal way of living does not involve speaking, it does not make sense to train an individual animal to do it.

Unlike in the *Brown Book*, one of Wittgenstein's principal goals in the *Investigations* is to reveal the temptations and inadequacy of the Augustinian picture of language. One aspect of this picture is thinking that learning language presupposes understanding an explanation of words given within language.[1] In contrast, Wittgenstein depicts language-acquisition as training in the of use expressions. The explicit comparison between animal and human training found in the *Brown Book* is now absent, which is not to say that it does not subtly inform Wittgenstein's view. Speaking of the examples in § 1, Wittgenstein writes: "A child uses such primitive forms of language when it learns to talk. Here the teaching of language is not explanation, but training" (§ 5). An important aspect of this training is the ostensive teaching of words (§ 6). Wittgenstein goes on to give examples of being trained to ask what something is called (§ 27), read a table in response to a command (§ 86), manipulate equations (§ 189), react to signposts (§ 198), and generally follow rules and obey orders (§ 206). Rhees writes:

> We bring in the idea of *Abrichtung* (training) in order to show how it is possible to teach people to understand what is said: without explaining what it means: in order to get over the difficulty that we cannot teach them the meanings of words by explaining the meanings of words: or teach them how to use words, by explaining to them how words are used (51).

It is also important to show, as Wittgenstein does, that learning language involves learning rules. We learn the rules when we learn the expressions. Rhees writes:

> If you ask what we learn when we learn the language, the easiest answer seems to be, "the rules"; just as that seems to be the easiest answer when you ask what we learn when we learn the meaning of a word (241).

The idea of the rules brings out the importance of "and so on," of knowing how to go on, as well as the notion of

[1] For a recent example of a philosopher who falls into this very confusion, refer to my *Anonymous Skeptics*, p. 99.

correct and incorrect. For Rhees, the problem comes when training and "learning the rules" dominates an account of learning language. But why should it not dominate the account, and if it should not dominate, then what should we emphasize in its place?

First, Rhees argues that learning to speak is not learning the meanings of expressions, nor is it learning the expressions themselves. The problem is that "a creature might learn to react correctly to a number of words without ever learning to speak with people" (51). It then looks as if an animal could learn to do it. The notion of "reacting correctly" is a way to get around the problem that learning the meaning of a word seems to be a more advanced type of language-acquisition. Rhees writes: "'What is it you teach him when you teach him the meaning of the word "pain"?' is not like 'What is it you teach him when you teach him to speak?'" (64). It seems that learning to speak could not be learning the meanings of expressions, as if it were like learning an additional language, so it must be something else: learning the use of expressions. The problem is that teaching the use of expressions would only be helpful to someone who could speak already (50, 62). In other words, learning expressions is a higher order of language-acquisition: a child can understand an explanation of expressions only if she can already use some expressions, but a child can only be taught expressions – in the sense that she can learn from an adult what to do with them or how to use them – if she can already say something and understand what is said.

In Rhees's view, Wittgenstein did not want to say that when we teaching someone to speak "we teach him the *meanings* of various expressions," but at the same time "he still clung to the idea that we teach him particular expressions" (62). Certainly, it is confused to say that teaching someone to speak is like teaching them a *particular* skill analogous to learning to use a particular expression (65). Rhees assumes the role of interlocutor:

> What is the objection to saying that the learning of these various expressions is learning to speak? There is not any single thing which is learning to speak, comparable to learning the use of any of these expressions. But knowing the use of various such expressions – being able to use them on the occasions in which they arise in connection with other people – that is speaking (74).

The problem with the view that speaking is "knowing the use of various such expressions" is that "if [someone] can speak, he can go on to say and ask other things" (74). What can Rhees mean here? Suppose that we compare expressions to tools. I may give a child a box full of tools and show him how to use them, but we cannot infer from this fact that he will learn how to use tools that are not in the box. Rhees is pointing to the fact that learning to speak involves learning new expressions and saying new things. The view of language-acquisition as learning the use of expressions makes it difficult to see how the child can go on in this way.

A second problem with training is that it construes learning to speak as a systematic activity. The model is a classroom exercise, e.g., teaching a child the names of objects (191). The teacher writes or says something, the pupil imitates her, and then the pupil is able to continue on his own. But does it make sense to suggest that children learn to speak in this way? Rhees writes: "Learning to speak is not learning 'how people do it': as though one might be guided through the motions of a drill until one was able to go on with it alone" (70). How could a conversation, for example, be something that a child could go on with alone? We may answer that a child could be drilled in how to talk with people. In a discussion of "the difference between a jumble of meaningful sentences and a sensible discourse," Rhees says that the difference is

> something that [the child] learns, although it is not something you can teach him by any sort of drill, as you might teach him the names of objects. I think he gets it chiefly from the way in which the members of his family speak to him and answer him. In this way he gets an idea of how remarks may be connected, and of how what people say to one another makes sense (191).

Why not teach a child "how to carry on a conversation"? It is absurd to imagine teaching a child a *specific* conversation, for example, teaching a child a particular set of responses about the weather. "I will say that it is raining outside, and you will respond that you want to go outside anyway, and then tomorrow we will have this conversation." If we cannot train a child to carry on a particular conversation, however, then perhaps can we train a child to understand what a conversation about the weather is, what a conversation about chores is, etc. On this suggestion, we can train the child how to conduct various types of conversations. This view runs into the problem of logical reversal: we can train a child in what it makes sense to say in a given type of conversation only if the child already knows what a conversation of this sort is.[2] For example, we could not teach a child how to conduct a conversation about the weather unless a child already knew what it was to *have* a conversation about the weather; but if the child knows this, then what would we teach him? We can say more generally that it is not drills and exercises that make speech possible, but speech that makes drills and exercises possible.

Third, the idea of training suggests that we learn to speak through imitation. For example, a child hears her brother asking "Is dinner ready?" and then asks this question herself. She hears her brother say "Yes" when asked whether he is hungry, and so learns to say "Yes" when asked the same question. Could we learn to speak by imitating what is said by others? Rhees writes:

> [I]s there something misleading in the suggestion that learning to ask questions and to answer them is something like learning how the game is played? For if it were like this then you ought to be able to show a person how to ask questions and to answer them. Can I show you what you have to learn? I do not deny that imitation does play a role; that if the child did not watch and listen to other people speaking and asking questions, he would never have learned to do that himself. All the same, there is a difference between his imitating the questions which they are asking, and his asking a question himself when he really wants to know something (243).

His point is that it must make sense to ask a child in certain circumstances, "Do you really mean that or are you just imitating what your brother said?" An imitated question is logically parasitic on a genuine question, and it is the genuine question that the child must learn to make as he learns to speak. Rhees writes: "If someone learns to speak, he does not just learn to make sentences and utter them, nor to react to orders either. He learns to say something" (49). Hence, it is not as if the child can observe

[2] The interloctur does suggest at one point that we could describe different sorts of conversations and say of one who has learned to speak that "he has learned to do that sort of thing" (64). Rhees says that this remark is all right so long as we do not think of it as going through the motions, i.e., learning to respond in appropriate ways. "The difference between going through the motions and really speaking is like the difference between going through the motions and really suffering" (64).

the adults speaking, and then say the same things that they do and in this way be speaking himself. It is not like picking up the rules of a game by watching what the players do and then imitating them. Rhees writes: "The child may learn to play 'Pat-a-cake, pat-a-cake, baker's man' with its hands, and so forth, joining in with the adults; but learning to speak with them is something different from that" (177).

Fourth, the notion of training implies a distinction between the training period and subsequent time when the pupil is able to use his training. For example, a worker is trained to run a metal working machine, and then goes on to use the machine to fabricate parts after the training is complete. Against this view of language-acquisition, Rhees writes:

> Learning the language is not what enables you to speak. ('Before he can speak he must learn the language.') (47)

Rhees's point is that an internal relation exists between learning to speak and speaking, whereas an external relation exists between being trained to run a machine and making something with it. In the latter case, we can imagine that the worker receives the training, i.e., learns to use the machine, but never gets the chance to fabricate parts with it: perhaps he is assigned to a different job. We could imagine him lamenting, "Why did you train me if you did not want me to *make* anything?" In contrast, it would not make sense to say that a child learned to speak, but never got the chance to say anything. The child could not say, "Why did you train me to speak if you did not want me to *say* anything?" The child learns to speak as its speaks. The criteria for a child's having learned to speak is telling someone something, asking a question, replying to a question, and so forth.

Fifth, the notion of training implies that we could learn to understand what is said, but renders it mysterious how misunderstandings are possible. Rhees remarks that different "ways of speaking" go with different practices such as law or construction. When we learn how to talk in these contexts, then

> we learn what it makes sense to say. And the sense in which I may misunderstand what you say – not just fail to understand it. [A person] learns to speak when he is able to do *this*. And this is not like learning a technique.
>
> Wittgenstein seems to think you could learn to *understand* by *Abrichtung*, and understand in a way that does not yet allow for misunderstanding. In that case, I do not think it is understanding what is said (77).

Assume the example of a child's misunderstanding. A child goes trick-or-treating at Halloween and is greeted at the door by an adult holding a plastic pumpkin filled with candy. The adult says "Here is your treat," and the child grabs the handle and tries to pull the whole container away rather than an individual candy. The child did not completely fail to understand what was said in the way that it would had the adult asked for the child's interpretation of the *Tractatus*; rather, the adult's remark could be understood in more than one way, and the child took it the wrong way. Rhees's point is that learning to understand allows for misunderstanding a particular remark, but training in a technique does not allow for misunderstanding how it is applied – the pupil either masters the technique or not. Of course, we may be trained to do something, and can say that we understand what we have been trained to do; but it is nonsense to say that we have been trained to understand speech, since understanding speech involves understanding, misunderstanding, and half-understanding what is said. Could we be *trained* to half-understand what is said?

It is impossible in this brief space to do justice to the depth and subtlety of Rhees's critique, for to do so I would have to set his remarks within the broader context of his criticisms of Wittgenstein's analogies of games and institutions. Nevertheless, I hope to have given an accurate account of Rhees's discussion, and made clear why I think that it is important.

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Von der Unaussprechbarkeit zur ontischen Reduktion

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1. Skizze der Arbeit

Wittgenstein hat bekanntlich über das Wesen des unaussprechbaren Gegenstandes formuliert: „Wovon man nicht sprechen kann, darüber muss man schweigen“ (Wittgenstein, L. *Tractatus logico-philosophicus* <*TLP*>, 7.). Eine Aussage stimmt mit ihrem semantischen Sachverhalt überein, wenn die Formulierung für einen unaussagbaren Gegenstand gilt. Der Begründer der modernen Wahrheitstheorie, Tarski, erleichtert die Schwierigkeit dieser Sachlage durch die Unterscheidung zwischen Objektsprache und Metasprache. Z. B., wenn man sagt, ‚diese Kuh ist schwarz’, dann ist die Aussage wahr, wenn die Eigenschaft schwarz tatsächlich auf das gegebene Objekt zutrifft. Hier ist es selbstverständlich, dass der Sprechakt auf den vorhandenen Gegenstand abzielt, während sein aussagenlogischer Wahrheitsgehalt von der Prädizierbarkeit des Objektes abhängt. Damit wird der formalisierte Wahrheitsbegriff bei dem Übergang von der Objektsprache auf die metasprachliche Stufe sichtbar, weil sich der Sprechakt auch auf formale Struktur, bzw. die logische Form der Objektsprache bezieht.

Normalerweise braucht man die Aussage über einen Gegenstand nicht mit ‚nicht zu sagen’ zu begründen, dann nämlich, wenn er evident bzw. nicht evident ist. Auf diesen Sachverhalt bezieht sich das ursprüngliche Schweigen im Sinne des wittgensteinschen Wortes in *TLP* selbstverständlich nicht. Das Schweigen kann jedoch ein Mittel sein, um sich auf eine höhere Stufe als die der direkten Objektsprache zu begeben, wenn ein kompetenter Sprecher die Sachlage so bewertet, wie es z. B. bei Zen buddistischem Argumentieren der Fall ist.

Deswegen ist es sehr interessant, diesen unaussprechbaren Gegenstand einmal mithilfe des cartesischen Ego Gedankens neu zu ergründen. Ich sehe eine Parallele zwischen dem wittgensteinschen 7. Satz in *TLP* und dem cartesischen philosophischen Prinzip des ‚cogito, ergo sum’ gerade darin, dass sie sich auf ein und denselben Gegenstand beziehen. Descartes hat tatsächlich als erster versucht, ‚sum’ mit ‚cogito’ auf so eine Art und Weise zu begründen, dass sich das ‚sum’ aus dem ‚cogito’ ableiten lässt, während Wittgenstin aber nichts darüber sagt, was Nichtsagen oder ein Schweigen über diesen unaussprechbaren Sachverhalt bedeuten könnte.

Wenn ich z. B. während des ‚cogito’ nichts sage, könnte ich dann etwa nicht existieren? Das kann ich nicht annehmen, solange ich daran *denke*, dass ich *bin*. Oder, gibt es noch ein anderes ‚cogito’, das mch zum Schweigen führt. Damit wird Nichtsagen in einer Situation angeraten, in der man zwar schweigen kann, aber *nicht* schweigen muss.

2. Zum Problem

Die materielle Formulierung ‚Nicht Sagen ist Schweigen’ trifft zunächst auf die semantische Sachlage unaussagbarer Tatbestände zu, wobei sich das grammatische Subjekt auf den Vordersatz in witgensteinschem 7. Satz in *TLP* bezieht, während das Prädikat auf den Nachsatz zutrifft. In dieser sprachlichen Formulierung steht das Subjekt für einen Sachverhat des Prädikates und das Prädikat für den umgekehrten Sachverhalt. Nach dem Verstandnis der modernen Prädikationstheorie ist die Subjektstelle immer leer, und die Prädikatsstelle ungesättigt. Um einen Gegenstand zu prädizieren, greift man eine logische Form zu, in der die Leerstelle die logische Funktion ausübt, durch die Argumente der Prädikatsstelle gemäss Wahrheitswerten für das Subjekt erfüllt werden. So gesehen, kommt zu der semantischen Rüstung des oben genannten Satzes nur die materielle Bedeutung hinzu. D. h. der Satz bezieht sich auf sich selbst, wie es in der mittelalterlichen Sprachtheorie der Fall ist. Damit ist die Erläuterung der ursprünglichen wittgensteinschen Intention zum Problem eines unaussprechbaren Gegenstandes allerdings noch nicht erledigt.

Der Parallelismus zwischen Descartes und Wittgenstein beginnt erst damit, dass das cartesische Ich die Funktion ausübt, einen gedachten oder gesprochenen Gegenstand ontologisch in ‚sum’ zu begründen. Das logische Subjekt ‚cogito’ ist dann immer mit einer Subjekt-Prädikat Form verbunden, so dass der Denkende in ‚cogito’ mit dem Träger des logischen Namens in ‚sum’ identifiziert. Es gibt nämlich hier zwei grammatische Subjekte. Das erste Ich hat sein Fundament in ‚cogito’, während sich das zweite Ich auf ‚sum’ bezieht.

Der Parallelismus endet aber mit ontischen Gegebenheiten, bei einem Bestehen eines Sachverhaltens, über dessen Existenz man ‘nichts zu sagen’ braucht. Nach Bochenski gibt es zwei Denkwege zur Begründung über den unaussprechbaren Gegenstand. Sie sind nach ihren Hypothesen entweder deduktiv oder reduktiv. In ‚cogito, ergo sum’ ist ‚sum’ dann deduktiv, wenn dann ‚sum’ fortgesetzt wird, wenn ‚sum’ aus ‚cogito’ folgt, und ‚cogito’ wieder beginnt: $((p \supset q) \wedge p) \supset q$. Ein reduktiver Weg heisst, wenn dann ‚cogito’ wieder neu anfängt, wenn ‚sum’ aus ‚cogito’ folgt, und ‚sum’: $((p \supset q) \wedge q) \supset p$. Jenes Verfahren gilt für die deduktive Wissenschaft, dieses wird für die Verifikation des Denkens in der empirischen Wissenschaft verwendet.

Das Problem liegt in dem reduktiven Denkwege, nach dem die beiden ‚Ego’ auf unterschiedliche Objekte hinweisen, wobei der Gegenstand des cartesischen zweiten ‚cogito’ mit dem prädizerbaren Objekt des Nachsatzes ‚darüber muss man schweigen’ von 7. Satz in *TLP* im Zusammenhang steht. Das erste ‚cogito’ ist im zweiten ‚cogito’ auf dem reduktiven Wege anders geworden. In dem zweiten ‚cogito’ wird die Aussage ‚Diese Kuh ist schwarz’ alnders betrachtet, weil ihre objektsprachliche Bezugnahme in der Nicht Existenz liegt, deren Auftritt wohl in ‚cogito’, aber auch in ‚sum’ als Gegenstand problematisch zu rechtfertigen ist. Also, wenn ich an einen Gegenstand wie die Kuh nicht denke, brauche ich ihre Nicht Existenz in ‚sum’ eigens mit ‚zu sagen’ zu begründen.

Mein Beweggrund besteht darin, noch eine neue semantische Bedeutung des unaussprechbaren Gegenstandes durch eine Analyse der Leerstelle der cartesischen Prädikate ‚cogito' und ‚sum' herauszufinden. Zu zeigen ist, das ‚cogito' aufgrund seiner auf Objekte bezogenen Eigenschaft des unaussprechbaren Gegenstandes unauffällig auf ontische Reduktion zu stellen. Festzustellen ist, dass man zwar schweigen kann, aber *nicht über das schweigen muss*, wovon man nichts sagen kann.

3. Der Gegenstand in Namenkalkülen

Frege hat sich mit einem unaussprechbaren Gegenstand auseinandergesetzt. Zur Bezeichnung eines solchen Gegenstandes hat er eine Zeichensprache in einem Namenkalkül aufgebaut. Zwei Namen werden durch die Gleichhung ***'ist'*** gegenständlich prädiziert. In der Aussage „Morgenstern ist Abendstern" kommen nämlich zwei Namen vor, wobei sie immer für ein und denselben Gegenstand genau wie ‚Venus' stehen. Der Sinn der Wörter ‚Morgenstern' und ‚Abendstern' ist verschieden, aber die Bedeutung beider Worter ist gleich. Stehen zwei Namen in der Subjekt-Prädikat Form immer für ein und dasselbe Objekt zusammen, wird die Kopula ‚*ist*' immer eine gleiche logische Form angezeigt. Mit dieser logischen Form wird ein und derselbe Gegenstand prädiziert. Es ist jedoch unvermeidlich, gerade dort ein ontologisches Rätsel aufzulösen, wo eine sprachliche Grenze auftritt wie bei dem cartesischen ‚Ego' in ‚cogito, ergo sum'. Bei der konjunktiven Verknüpfungsform des cartesischen ‚Ego' handelt es sich darum, dass jedem Namenträger aus semantischen Aspekten sowohl für ‚cogitio' als auch für ‚sum' eine reale Bedeutung hinzukommen muss. In der Konjunktionsform des cartesischen ‚Ego', so setze ich an, wird sowohl Denken als auch Existenz zugleich von zwei ‚Ego' , i. e. einem logischen, bzw. philosophischen Ich und einem anderen ontologischen Ich, abgeleitet. Um das Prinzip der cartesischen Philosophie aufrecht zu erhalten, muss man voraussetzen, dass sich das Pronomen 'Ich' auf seinen Namenträger qualitativ einbezieht. Das sprechende Ich vereinigt sich mit dem denkenden Ich bei diesen konjunktiven Verknüpfungsformen nicht immer einwandfrei. Deswegen hat Leibniz in der Abweichung von dem cartesischen konjunktiven ‚Ego' ein disjunktives ‚Ego' vorgeschlagen. Ein disjunktives ‚Ego' befasst sich mit alternativen Zeitpunkten, nach den es mit anderen disjunktiven ‚Ego' in ‚sum' gemäss freier Wahl die Identität ein und desselben Gegenstandes verwirklicht.

Frege hat wohl bewusst im Anschluss an Leibniz und im Gegensatz zu der aus Port Royal stammenden Semantik anscheinend ein anderes ontologisches Umfeld aufgebaut. Nach ihm bringen logische Gedanken ein augenscheinliches Bild ontischer Tatbestände zum Ausdruck. Sie sind ganz unabhängig von Tatsachenwahrheiten ewig als wahr bestimmt. Diesen ontischen Tatbestehen stehen die beiden positiven oder negativen Möglichkeiten offen. Z. B. schliesst eine Aussage ‚Ich kam nach Kirchberg' jedoch eine andere Aussage ‚Ich kam nicht nach Kirchberg' zugleich ja gegenseitig nicht aus. In den logischen Gedanken sind sie schon enthalten. Dieser Fregesche Gedanke ist sicher vergleichbar mit ein und derselben wittgensteinschen Wirklichkeit. Denn das Modell der Wirklichkeit entspricht für Wittgenstein gerade dem Bild der Tatsache über das Bestehen oder Nichtbestehen von Sachverhalten. Aus den Sachverhalten entsteht dort der logische Raum, zu dem die beiden konträren Attribute gemeinsam zur Prädikationsform gebracht werden. Was aber aus dieser Wirklichkeit hervorgehoben wird, ist der aus allen möglichen Sachlagen herausgetretene Gegenstand, den Wittgenstein *einfach* genannt hat.

4. Die Zeichensprache von Bochenski

Bochenski hat in seiner *Logik der Religion* eine prädikatenlogische Theorie uber den Sachverhalt ein und desselben Gegenstandes aufgestellt. In dieser Logik hat er das unaussprechbare cartesische Objekt, aus dem der Wittgensteinsche Gegenstand kommt, jeweils in die zwei Prädikate ‚meinen' und ‚gebrauchen' verteilt. Wenn auch das unaussprechbare Objekt sowohl in dem Prädikat ‚meinen' als auch in dem Prädikat ‚gebrauchen' ausgedrückt wird, dann steht die semantische Bedeutung dieses Objektes für ein und denselben Gegenstand. Aber, das Objekt selber ist in seiner Sprache nicht mitteilbar, weil es widersprüchlich ist. D. h. ein Unaussprechbares kann nur widersprüchlich ausgedrückt werden, weil sich Sprache auf einen *aus*sprechbaren Gegenstand bezieht. Deswegen braucht man die Zeichensprache zur Mitteilung dieses Objektes, das von einer Sprache zur anderen Sprache mit verschiedenen Prädikaten prädiziert wird.

Über einen Gegenstand ist nach Wittgenstein zu schweigen, wenn es der Fall ist, dass nichts über ihn gesagt werden kann. In der *Logik der Religion* hat Bochenski ihn als unaussagbar interpretiert, weil die semantische Bedeutung dieses Gegenstandes nur noch in einer höchst komplizierten objektiven Struktur dargelegt werden kann (Vgl. I. M. Bochenski, *Logik der Religion*, Köln 1968). So wie der Satz in *TLP* 4.121 die logische Form der Wirklichkeit zeigt und aufweist, wird diese Unaussprechbarkeit in einem ikonisierenden Zeichen angezeigt, das *signum instrumentale* ist, und sogar emotional erscheint. Ein unaussprechbares Objekt(OR) ist dann nach logischer Theorie R widerprechend, wenn es keine Sprache für es gibt. Wenn es in einer Sprache Selbstbezug hat, kann von ihm nicht ausgesagt werden, was es ist.

1) $\exists x, l\ Un(x, l)$

Es gibt ‚x' und ‚l', wobei das Objekt ‚x' in der Sprache ‚l' unaussprechbar ist. Es wird nun angenommen, dass das Objekt ‚x' z. B. als eine Kuh bezeichnet wird. Ein solcher Fall lässt sich am Beipiel eines Schachspiels verdeutlichen. Will ich mich während des Schachspiels bzw. des ‚cogito' über das Objekt ‚x' einer Sprache bedienen, die Züge von ‚x' in Bewegung zu setzen, dann gibt es dort kein Mittel, innerhalb des Sachspiels ‚x' auszudrücken. Es gibt ‚x' nur noch ausserhalb des Spiels. Nach Bochenski liegt diese sprachliche Schwierigkeit in OR, weil es selbst auf die objektsprachliche Eigenschaft reduziert wird, d.i. OR in keiner Sprache einen Selbstbezug hat. OR wird dann weder in einer Sprache noch in allen Sprachen ausgedrückt. So kann ein objektsprachlicher Gegenstand auf metasprachlicher Stufe mit All-Quantor quantifiziert werden. Die objektsprachliche Formel 1) ist dann in 2) metasprachlich umzuformen.

2) $\forall x\ \forall l\ Un(x, l)$

Es gibt 'x' und ‚l', wobei das Objekt ‚x' in jeder Sprache ‚l' unaussagbar ist. Wenn ‚x' für einen Gegenstand 'gebraucht' wird, wird es gleicherweise für denselben Gegenstand 'gemeint'. So wird eine analoge Struktur zwischen beiden Prädikatoren wie folgt abgebildet.

3) $G(x, y, z) \equiv M(y, z, x)$

Das Prädikat G enthält x, y und z. Von diesem drei-stelligen Prädikat liest man ‚x gebraucht den Ausdruck y im Sinne von z'. In dem Prädikat M wird der Ausdruck y im Sinn von z für x gemeint, oder ‚x meint den Ausdruck y im Sinne von z'. So führt Bochenski,

4) $\forall\ x, y, z\ G(x, y, z) \rightarrow \forall t, M(y, z, t) \rightarrow t \equiv x.$

Man kann diese aussagenlogische Formel so interpretieren, *wenn A nicht versteht, was B bedeutet, dann versteht B auch nicht, was A bedeutet*, oder *wenn A nicht B, dann B auch nicht A*. Es handel sich um einen ununterscheidbaren ontischen Gegenstand in zwei Namenkalkülen, d.h. Identität zwischen dem denkenden ‚Ego' und dem existierenden ‚Ego', d.h. Sinn und Bedeutung bei Frege, insofern es t≡x in dem Bereich von OR gibt.

5. Zur ontischen Reduktion der cartesischen ‚Ego'

Obwohl hier OR auf das cartesische ‚cogito' reduziert wird, bleibt doch das Problem der erkenntnistheoretischen Einsicht in das ‚sum' ungelöst. Bochenski führt diese semantische Lage auf ein autoritäres Sprechen zurück, unabhängig von welchen Umständen die ontischen Entitäten zugelassen werden. Eine Mutter sagt, *es gebe eine Stadt mit Namen New York*. Die Tochter glaubt, dass es *so eine* gibt. Die reale Bedeutung des Gegenstandes *Stadt New York* wird nach der autoritären Aussage der Mutter im Glaubensakt vollständig aufgelöst. An diesem Beispiel scheint es, Bochenski im Vergleich zu dem cartesischen Prinzip einen anderen philosophischen Weg geschlagen zu haben. Bochenski hat zwar eine Aussage über den unaussprechbaren Gegenstand aus der Eigenschaft des Prädikates von ‚cogito', das gerade das Denken zum Sein in ‚sum' geführt hätte, abegeleitet. Für Bochenski ist ein von ‚cogito' Prädizierbares aber immer darauf angewiesen, wie es für ‚sum' ständig verstanden werden muss. Zwischen ‚cogito' und ‚sum' sollte sich nur noch eine Analogiebildung fortschreiten, nach der sich diese ‚Ego' mit den ausgedehnten ontischen Entitäten auseinandersetzen. Soweit die metaphysisch unaussagbare Differenz bei diesen ununterscheidbaren besteht, ist der Auftritt der ontischen Rätseln zwischen Denken und Existenz unvermeidlich. Bochenski hat in dieser Situation religiöse Hypothese aufgestellt, um alles andere aus einem Axiom ausserhalb dem Lager von ‚cogito' und ‚sum' deduzieren zu können. Nach religiöser Hypothese begegnet man zwei Phänomenen, in den man einerseits von ihrer Wahrheit zu überzeugen versucht, anderseits die Schwierigkeit durch Falsifizierung zu überwinden. Das erste Phänomen erklärt sich daraus, das niemals zwei ‚Ego' die gleichen Entitäten besitzen. So erscheint die religiöse Hypothese dem einem plausibel, dem anderen nicht. In dem zweiten Phänomen breiten sich diese Entitäten vertikal aus, wobei sie durch Falsifikation überwunden werden können. Je mehr das denkende Ich klar und distinkt ist, desto weniger bleibt das existierende Ich bemerkbar.

Man identifiziert sich dann hier mit seinen Namenträger in dem zweiten cartesischen ‚cogito', ohne dass man ‚sum' aus ‚cogito' abzuleiten brauchte. Denn der Ausdruck „Es hatte Descartes gegeben" ist weder wahr noch falsch, wenn auch man den Namen ‚Descartes' aus seiner Aussage ‚cogito, ergo sum' kennt. Der Ausdruck „Es hatte einen Mann mit Namen ‚Descartes' gegeben" hat hiergegen einen Sinn, wenn man seinen Namenträger kraft des identischen Zeichens *‚ist*', i.e. kraft der Kopula, nichts anders als Descartes selbst betrachtet. Hier geht die wittgensteinsche Wurzel des unaussprechbaren Gegenstandes von dem cartesischen ‚cogito, ergo sum' ab, weil dem Namenträger in ‚cogito' gar keine substanzielle Bedeutung von ‚sum' zukommt. In der Tat befinden sich hier zwei Personalpronomina, einerseits in ‚cogito' subjektiv, andererseits in ‚sum' objektiv aufeinander bezogen. Ein Ich vertritt die Existenzform, während sich ein anderes Ich auf die Nicht-Existenz bezieht. In diesem Kontext wird die wittgensteinsche Kritik an Frege rechtfertigt, dass Frege Argumente mit Indices verwechselt habe, weil der Namenträger in ‚cogito' keinen Teil des Gegenstandes von ‚sum' haben kann. In dem Namen ‚Jullius Cäsar' ist ‚Julius' ein Index, der immer ein Teil des Gegenstandes ausmacht. Dagegen ist die Zeichensprache X kein Index in ~ X, sondern ein Argument von ~ X. So ist ‚Diese Kuh ist nicht schwarz' in der Aussage ‚Diese Kuh ist schwarz' kein Index, sondern ein Argument in dem zweiten cartesischen ‚cogito'.

6. Zusammenfassung

Wie ich schon gezeigt habe, liegt das ontologische Paradox des unaussprechbaren Gegenstandes in dem logischen Namen, dem einmal eine positive Eigenschaft, ein anderesmal eine negative Eigenschaft zugewiesen wird. Wozu aber Wittgenstein nichts zu sagen hat, ist die Zuweisung des logischen Namens zu dem Gegenstand, dessen ‚cogito' zu seinem Teil des Gegenstandes in ‚sum' wird. Soweit sich sein Schweigen aber hier auf eine metasprachliche Instanz beruft, tritt das reduktive Ich des ersten ‚cogito' aus seinem objektsprachlichen Selbstbezug heraus. Hier wird die aussagenlogische Prädikation auf neu bestimmte ontischen Entitäten reduziert. Und es gelangt zum zweiten ‚cogito'. Bricht jedoch der ontologische Parallelismus des unaussprechbaren ontischen Gegenstandes zwischen dem cartesischen ‚cogito, ergo sum' und dem wittgensteinschen 7. Satz in *TLP* bei dem reduktiven Denkwege ab, dann kann man nach *reduktio ad absurdum* schweigen, aber muss ja nicht.

Justifications, Exculpations, Causes: Epistemology and Our Image of Nature

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1. There is a way of thinking about epistemic justification that holds that it dwells solely in beliefs. According to this view, any relation between what is believed and any item different from beliefs – maybe even if it is an item that *could* be a belief – is at most a causal relation. This view, commonly associated to Davidson's take on coherentism, can be stimulated by some of Wittgenstein's remarks concerning the irrelevance of interpretations when we follow rules (1953).

This view on justification can make one feel challenged to explain how the contents of our beliefs relate to the world; how, for instance, they acquire their empirical significance. At first sight, beliefs could either have their content acquired through a merely causal interaction with relevant items of the world or could be left so that their content is not hooked to any item of the world other than beliefs. The former is the route that Quine often seemed to have favored as he assumed experience could be described in terms of stimuli in our nerve endings. The latter would amount to an image – with a distinguishable Davidsonian flavour to it – where states with content are somehow confined out of the reach of nature. If we want to gloss this last alternative in a Kantian framework, we can say that judgments are taken to be composed by assembling concepts that are themselves disconnected to intuitions, and therefore are empty – they could be at most formally valid. The world gets lost. It follows from all this that if justification is an affair of beliefs we can either hope to get an (intentional) connection to the world through causal relations or give up such connection altogether.

In what follows I try to examine several questions around this issue in order to point at how our conception of nature matters for how we think of justification. I start out considering the ways in which we can make either of those two alternatives tolerable; this will lead me to question of what could be behind this apparent dilemma. This will then lead me to deal directly with the influence our thinking about nature makes on how we conceive of justification.

2. The idea that causes can provide content to our beliefs depends on the assumption that our senses – or our nerve-ending stimuli – relate causally to elements of our thought. The connection would provide content if it enables us to point at a reliable correlation. Davidson, among others, has challenged the idea by pointing out that causal connections could fail to be describable in terms of natural laws (1970). In fact, Davidson's rejection of a scheme-content dualism (1974) can be seen as entailing a rejection of the idea that empirical contents could be in a law-like relation with anything else. If content always presents itself within a conceptual scheme, a law connecting contents and items of the world would have to guide our concept application and therefore this would respond to laws, rather than to our rational practices. This consequence of the rejection of the scheme-content dualism – or of what has been called the Given or, in Kantian terms, exercises of receptivity devoid of spontaneity – not only shows a connection between two theses held by Davidson (i.e. the rejection of the dualism and the resistance to psychophysical laws) but also makes clear how causal links between nature and our thinking cannot provide us with content. The presence of (rule-guided) concepts in any of our empirical contents prevents psychophysical laws even though they don't render impossible for contents to be causally connected to items of nature.

If causes cannot provide content from nature to our beliefs, we seem to be left with the second, Davidsonian alternative: the realm of beliefs is epistemologically and intentionally confined. Justification, in this case, happens within the realm of beliefs and it is not about anything else. There is no intentional link between our thinking and nature; nature only causes some of our states. The idea of confinement follows from this conception of nature as constituted by a network of causes that cannot reach our thinking. Beliefs make sense only in the context of other beliefs and there is no special set of beliefs that would bring content to others by relating more closely with the rest of the world – the rest of the world is locked out. Since there is no belief that could be somehow closer to the rest of the world, there is little room for us to consider that some among our beliefs could be foundational. Hence, if the skeptic challenges the belief that I'm not a brain in a vat, there is nothing else that she is challenging – I can concede to be a brain in a vat and carry on holding my beliefs involving trees, tables and people. No doubting of a subset of my beliefs would force me to doubt all my beliefs. The skeptic is therefore exorcised as there is no strategy open to her other than carefully putting in question each of our beliefs. Such strategy for global doubt will in turn fail since in order to question some of beliefs she would have to hold, at least provisionally, some others. The cost of exorcising the skeptic, however, is high: we loose contact with nature and make a mystery out of our capacity to think about it. The sense of confinement follows not from our thinking not reaching anything other than thinkable contents but rather from a conception of nature according to which it stands outside our reach. Confinement makes justification belief-bound and beliefs indifferent to nature.

3. McDowell (1994) attempted to see a way out of this confinement by rethinking our notions of experience and nature. He insisted that nature, conceived as a realm of causal connections, and experience, understood as belonging to nature, could not provide us with justifications for our thoughts; they could at most provide us at most with exculpations. We can only rid ourselves from blame for what we think by pointing at items of the world.

It seems, however, that although exculpations fall short of constituting full-blown justifications they do play an intentional role. McCulloch (2002) claims that we don't need epistemological relations between thoughts and nature to assure us that the contents of our thoughts come from nature: exculpations could be enough. I suspect that if Wittgenstein is right about the way we follow rules, there could not be something like exculpations from nature for these would be already clues upon which we could build up interpretations. If I blame nature for my thinking of the tree in front of me – even though I don't assume my belief is justified merely by pointing at the tree – I could next present an interpretation of the rules of application of the concept of tree that would suffice to guide the application

of the concept. In fact, I can only exculpate myself for what I think if I can point at something in the form of *L*:

> (*L*) I think of a tree because there is a tree in front of me and whenever there is a tree in front of me (and a set of additional conditions hold) I think of a tree (maybe because anyone would).

I believe the argument above against psychophysical laws prevent not only causes acting as justifications but also as exculpations.

McDowell's position, however, can be still tempting. He claims that whatever causal connections could give us is not enough for our thinking to be rationally controlled by the world. If we are worried with constraints from what Kant called receptivity, we are likely to crave for a connection between our thinking and the world that is stronger than whatever causes can offer. McDowell labors to make intelligible the idea that in experience we open ourselves to the world. He holds that we gain conceptual content through exercises of receptivity. In order for conceptual content to be obtained from experience, nature itself has to be able to provide this content – McDowell then suggests on the need for a partial re-enchantment of nature where concepts and meanings as well as laws can be taken as natural. Re-enchantment, of course, is a remedy against the dualism of reason and nature and therefore alleviates the feeling of confinement by viewing us as capable to reach nature and be influenced by it in our own conceptual exercises. Nature is not something that is oblivious to the way we access it; quite the contrary, it can reveal itself only to those who have gone through a conceptual *Bildung*.

One could then ask how we should face causal connections within nature. The worry would plausibly show up, for example, when we look at law-like descriptions of our cognitive activities; it seems reasonable to suppose that laws can describe at least the mechanisms that enable our thinking practices. In Bensusan (2000) I presented a model where the laws governing these mechanisms are not only (at most) a starting point for a process of scrutiny and revision but also themselves subject to scrutiny and revision. McDowell, for example in his 1996, favors a model of second nature that he reads in Aristotle's virtue ethics. He takes a natural law to be incapable to rationally compel us to any action or thinking: it cannot produce a rational obligation. It has therefore to be somehow brought to the space of reasons in order to make a difference to our contents. When they are brought to the space of reasons, we can rationally relate to them and they become part of our second nature. The emerging image of nature is one where there are both first and second nature but we live within the scope of second nature.[1] Experience can therefore be described as (second) natural. Experience and nature are then rethought; we can gain contact with natural items that do not need to be devoid of anything that resembles concepts and thinkable contents to be objective.

Re-enchantment, however, could still sound like not much more than a vague idea. How exactly, we can ask, are we to put together first and second nature, conceptual judgments – of which we have experience – and causes? Bensusan & Pinedo Garcia (2003) have recommended the notion of soft facts to ground our conception of the objects of our knowledge and thought. In a world that is both objective and thinkable, there is room for natural laws as they can be content of our thought. But we are encouraged to take a somehow Humean approach to causes and see them as no more than what is expressed in laws instead of some sort of hard fact that would constitute the bedrock of what is natural. Causes would then be understood only within our understanding of laws and those would depend on our understanding without which we could not use them either to predict or explain anything.[2] If we give up the primacy of causes over our concepts and practices, we can accommodate them in nature and yet feel no urge to describe everything else in causal terms.

4. Michael Williams (1996) takes McDowell's re-enchantment of nature to be a sophisticated form of foundationalism. He takes McDowell's recipe against confinement to be a change in our image of nature so that experience could be a conceptual contact with thinkable objects and therefore provide a foundation for our world view. The basic structure of foundationalism concerning epistemic justification is preserved. In fact, some thinkable contents act as products of passive exercise of conceptual capacities and are the ones that give empirical support to our judgments. Furthermore, some beliefs are central to our intentional connection to the world; some beliefs – like the presence of objects to our thinking – glue the world to our judgments. Because of these somehow privileged beliefs, the Davidsonian strategy against the skeptic vat brain argument would not hold. Justification – and empirical content – is thought as coming from a privileged source and ultimately from how things are. A revised conception of nature enables us to make sense of justification as being something other than merely an affair of beliefs: a source of justification is brought from nature through experience. Williams' point is that McDowell's way out of confinement seems to involve being grounded by nature, with a revised notion of nature.

His revision in the notion of nature shows how much the way we think of justification and its relation to the world bears on how we take nature to be. McDowell's re-enchantment of nature intends to make experience capable to ground our empirical thinking. However, the emerging conception of nature – where it is not only a network of causes – could perhaps be assimilated to an architecture of justification less suspicious of foundationalism. We can find our way out of a belief confinement if we exorcise the idea that our reasons are surrounded by (unintelligible) causes; if thinkable contents are not strangers in a world of causes and justification can be thoroughly world-involving without appealing to a grounding experience. But if we want to hold on to a re-enchanted conception of nature while rejecting the remnants of foundationalism we will also need to add a perhaps less palatable qualification. We would have to accept that our justifications would not themselves depend on our conception of nature for if they did, a challenge to the conception would make our justifications collapse. Notice that this does not happen in Davidson's account: if nature turns out to be more than mere causes, most of our beliefs would still hold. Making that less palatable qualification makes our conception of justification less safe against the feeling of confinement. We can then feel compelled to conclude that a conception of nature that views it always from the point of view of our beliefs is maybe always on the brink of making us feel confined. Perhaps, then, we just have to make sure at all times that the world doesn't get lost.

[1] McDowell insists in calling himself a naturalist—adding quickly that he holds a naturalism of second nature. He resists any idea that could lead to some form of dualism where nature is not all. His position contrasts with a more Hegelian one that would understand nature as what we depart from through the achievements of spirit.

[2] Lack of space prevents a complete treatment of causal relations in these terms but I will briefly mention something that is sketched in Bensusan & Pinedo Garcia (2003). We could face laws as rules that could be grasped and used for prediction and explanation within our understanding practices.

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Rule-Following Made Easy

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I wish to argue that the problem of rule-following rests on semantic internalism and that semantic externalism makes the problem evaporate. Given that the rule-following problem is a version of the general problem that the reference of an intentional phenomenon is underdetermined by its meaning, semantic externalism solves the problem by reducing meaning to reference. Since both Kripke and Wittgenstein are proponents of semantic externalism, the problem of rule-following is not a problem for either Kripke or Wittgenstein, but only for Wittgenstein's internalist interlocutor.

1. The Problem of Rule-Following

In *Wittgenstein on Rules and Private Language*, Saul Kripke attributes a skeptical problem to Wittgenstein: given any symbol or word, there is nothing in one's past history, including one's past mental states, that would both explain and justify one's current application of the word or symbol. Kripke illustrates this problem by means of a thought experiment: imagine a person--let's call him Oscar--who learned the mathematical function '+' in elementary school but who never before used this function to calculate with numbers larger than 57. Suppose that Oscar is asked "How much is 68 + 57?". When Oscar follows the rules of addition, the answer is clearly '125'. Yet Kripke's point is that Oscar's past calculations can also be subsumed under a rule other than addition. There is no fact about his past history that determines that his expression '+' cannot be interpreted as standing for, say, the rule of *quaddition*, which is defined as follows:

x quus y = x + y, if x,y < 57

x quus y = 5 otherwise.

If Oscar's past calculations are interpreted according to the rule of quaddition, the correct answer to the question "How much is 68 + 57?" is not '125' but '5'. The problem of rule-following culminates in the question: what fact about Oscar's history determines whether '125' or '5' is the correct answer to the question "How much is 68 + 57?"? Is there a fact of the matter by virtue of which "Oscar means addition by '+'" is true or false?

A naive answer to the question "What about you makes it the case that by '+' you now mean plus and not quus?" runs something like this:

The reason I mean plus and not quus is because I have been trained to do arithmetic in a certain way, and as part of that training I learned to use the '+' sign for addition and not for some other function. According to that training, if I now compute '68 + 57' and get anything other but than '125', I have made a mistake.

Prima facie, this is a convincing answer to the question at hand. The reason it seems to be a convincing answer is that it provides a causal account of why Oscar gives the answer '125' as well as a normative account of why that answer is correct and other answers are not correct. Yet despite its intuitive appeal, Kripke rules the naive answer out of court.

What is Kripke's reason for dismissing the naive answer to the problem of rule-following? Why is Oscar not allowed to explain and justify his use of the '+' sign by citing his training in elementary school? Two explanations suggest themselves. Firstly, Kripke could justify the dismissal of the naive answer by pointing to the prevalence of memory failures. This, however, is not to the point. Kripke assumes that Oscar has perfect memories. We may even suppose that Oscar distinctly remembers his elementary school teacher having said "68 + 57 = 125". Does this piece of memory allow him to know that his use of '+' refers to the rules of addition rather than the rules of quaddition? No! For even if Oscar correctly remembers his teacher having said "68 + 57 = 125", and even if we assume that his teacher is known to be a reliable source of information, that piece of memory can be interpreted in a number of different ways. For how does Oscar know that the word 'plus' which his teacher used when he said "68 + 57 = 125" should be interpreted according to the rules of addition rather than, say, the rules of *gruddition*? 'Gruddition' is named after Nelson Goodman's favorite color 'grue'. Something is grue if it is examined before time t (where t is some time in the future) and green, or not examined before time t and blue. Given the definition of 'grue', the function of gruddition can be defined as follows:

x gruus y = x + y, on Monday morning, 17 September 1974

x gruus y = 5 otherwise

If Oscar cannot decide whether his elementary school teacher taught him the rules of addition or the rules of gruddition, he doesn't know whether the correct answer to the question "How much is 68 + 57?" is '125' or '5'.

The conclusion of Kripke's problem of rule-following is that there are no mental facts of the matter which constrain our uses of words and symbols. Any fact of the matter that we are able to introduce to answer the skeptical problem will always be subject to reinterpretation. Intentional phenomena (such as rules, words and beliefs), by themselves, are incapable of determinate representation in at least the following sense: they always permit a multiplicity of interpretations. The rule-following problem is a version of the general problem that meaning doesn't uniquely determine truth conditions. The reference of an intentional phenomenon is underdetermined by its meaning.

Assuming that the problem of rule-following is not just Kripke's invention but is in fact Wittgenstein's problem, and assuming that Wittgenstein attempts to solve the problem the question imposes itself: what does Wittgenstein's solution amount to? Since it is notoriously difficult to be confident about the views of the historical Wittgenstein, I will not attempt to do an exegesis of Wittgenstein. Rather than trying to say how Wittgenstein solves the problem of rule-following, I will focus on how, in my view, he *should* solve the problem of rule-following.

2. Semantic Externalism and Rule-Following

In this section I will argue that semantic externalism makes the problem of rule-following evaporate. In the following section I will show that if the later Wittgenstein can be categorized at all, he belongs in the externalist camp.

Semantic externalism is the thesis that psychological states are individuation-dependent on aspects of the environment of their subjects. The contents of an individual's mental states and the meanings of his words crucially depend on systematic relations that the individual bears to aspects of his physical and/or social environment. A mental state can bear different contents depending on its relation to factors in the environment. Semantic externalism stands opposed to internalism, which holds that the contents of our intentional states are determined independently of any particular object or property in the environment; they are determined 'in the head', to use Putnam's idiom.

When the meaning of an intentional phenomenon is independent of environmental conditions, a logical gap opens up between meaning and reference, intension and extension, or intentionality and representation. The gap between what an intentional phenomenon means and the affairs in the environment it denotes is a necessary presupposition of the rule-following problem. For, as was explained above, the rule-following problem is a version of the general problem that the reference of an intentional phenomenon is underdetermined by its meaning. Obviously, the thesis that meaning underdetermines reference rests on the internalist view that meaning and reference are logically distinct.

To drive home the point that the problem of rule-following presupposes semantic internalism, consider the following passage by Kripke:

> I feel confident that there is something in my mind--the meaning I attach to the 'plus' sign--that *instructs* me what I ought to do in all future cases. I do not predict what I will do [...] but instruct myself what I ought to do to conform to the meaning. [...] But when I concentrate on what is now in my mind, what instructions can be found there? [...] The infinitely many cases of the table are not in my mind for my future self to consult. [...] What can there be in my mind that I make use of when I act in the future? It seems that the entire idea of meaning vanishes into thin air (pp. 21-2).

Kripke's preoccupation with the idea that when I apply my words I consult something in my mind leads him to think that knowing the meaning of a term is a matter of being in a psychological state that determines the reference of the term. Meaning is thought to determine reference. And the point of the rule-following argument is that this assumption cannot be sustained since I may know the meaning of my word 'plus' and still not know which rule is picked out by this word.

Given that Kripke presupposes semantic internalism to get the problem of rule-following off the ground, a 'straight' solution to the problem of rule-following consists in the adoption of semantic externalism. Since externalism reduces meaning to reference, it makes the logical gap between meaning and reference disappear. The problem of rule-following disappears with this gap. For once meaning is identified with reference, it is impossible that reference should be underdetermined by meaning.

According to (social) externalism, it is the cooperative use of a term that determines its meaning. Once an individual knows how his language community uses a term, he knows what the term means. Analogously, when he knows the meaning of a word in his vocabulary, he knows what his language community uses the term to denote. By reducing meaning to reference and by connecting an individual to its language community, (social) externalism undermines the foundation of the rule-following problem.

If I am correct in claiming that semantic externalism makes the rule-following problem evaporate, then rule-following considerations could be used as an argument in favor of (social) externalism.

3. Wittgenstein and Semantic Externalism

If Wittgenstein can be categorized at all, he belongs in the externalist camp. His commitment to externalism comes out in his repeated attacks on those who think of reference as being determined by something in the speaker's head, something lying behind and giving life and meaning to otherwise meaningless sounds. One of the many places where Wittgenstein's rejection of semantic internalism surfaces is § 139 of the *Philosophical Investigations*. Wittgenstein confronts us with a picture of a man walking on a slope (Fig. 1).

Figure 1

What does the drawing represent? A man walking up a steep hill? Or a man sliding backwards downhill? Does it depict how a particular person walked on a particular occasion or how we ought to walk? Wittgenstein's point is that these questions are wrong-headed. The drawing can be *used* to represent any of these things. And whatever it is that the drawing represents, it doesn't represent it intrinsically. Its meaning depends on something extrinsic to it, such as its use by society.

One may suspect that the reason the drawing under consideration has to rely on contextual factors to determine satisfaction conditions is because its meaning, taken by itself, is ambiguous. Therefore one may want to add an arrow to indicate the direction of the man's travel (Fig. 2; both drawings are taken from Heil 1992, p. 27).

Figure 2

But adding an arrow will not help, for the arrow allows for a multitude of interpretations just as the initial drawing does. Does the arrow represent the direction in which the figure is moving, or the direction from which it has moved? Or does it mean something else altogether? Just as the drawing of the man, by itself, means nothing, so does the arrow, taken by itself. It must be given a meaning by some extrinsic feature. To insist that a sign or image can possess intrinsic meaning is to fall prey to what Hilary Putnam dubs a 'magical theory' of meaning.

What the discussion of the walking man illustrates is that representational items depend for their meaning neither on their own intrinsic properties nor on the intrinsic properties of other representational items. Rather than possessing meaning intrinsically, representational items and inten-

tional states owe their meaning to something outside themselves. They acquire meaning only by way of systematic relations they bear to states of affairs extrinsic to them. According to Wittgenstein, these states of affairs concern the function of representational items and intentional states in the lives of speakers and thinkers. The meaning of words and thoughts is determined by their use by a given community.

Given that the problem of rule-following rests on semantic internalism, and given that Wittgenstein is a proponent of semantic externalism, it follows that the problem of rule-following isn't a problem from Wittgenstein's own point of view but only from the standpoint of his internalist interlocutor. And since, in *Naming and Necessity*, Kripke too embraces a version of semantic externalism, the rule-following argument doesn't challenge his point of view either. We may conclude then that the problem of rule-following that Kripke attributes to Wittgenstein is not a problem for either Kripke or Wittgenstein.

4. Conclusion

Philosophical problems are rarely solved; usually the problems merely change their form. This is also the case here. For even if semantic externalism dissolves the rule-following problem, and even if there are convincing arguments in favor of semantic externalism, this solution of the rule-following problem gives rise to a new problem.

Given that the meaning of intentional states is determined 'in the head', there is the problem of knowing the reference of intentional states on the basis of knowledge of their meaning. This is the general structure of the rule-following problem. By reducing meaning to reference, semantic externalism solves the problem of rule-following, but only at the cost of giving rise to a new problem. For when the meanings of my words and the contents of my thoughts are determined by external affairs, knowledge of the meanings and contents seems to require information beyond what is available to reflection. Thus semantic externalism seems to come into straightforward conflict with the claim that knowledge of one's own intentional states is typically *direct*, since knowing what type an intentional state is seems to require knowing the factors that individuate that type from others.

My view is that semantic externalism *is* compatible with direct knowledge of one's thought contents. But that's not the point. Rather, the point is that while semantic internalism raises the question of how we can know the reference of an intentional state on the basis of knowledge of its content, semantic externalism raises the question of how we can directly know the contents of our intentional states. Essentially the same epistemological problem remains, only now it operates at another level.

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The Role of Social and Cultural Environment in the Determination of Faith in Islamic Theology

Ramazan Biçer, Sakarya

1. *Īmān* (Faith)

In Arabic the term *īmān* is derived from the root "a-m-n", it is in the "if'al" form and means, "to give confidence to others", "to be ensured", "to confirm and to accept". Verb form "āmana" means "removal of fear and replacing it with confidence[1].

In Islamic terminology the definition of *īmān* given in Gabriel hadith in which six principles of *īmān* is mentioned similarly the term *āmentu*, which forms knowledge of catechism, is symbolized to mean *īmān*. This is why definitions of *īmān* given in many books do not state what *īmān* is, instead tell about what to believe in[2].

Generally speaking, the definition of *īmān* is given as follows: "*īmān* is to confirm (approve)", "*īmān* is confirmation in heart", "*īmān* is the contrivance of the heart", "*īmān* is to confirm by heart and to confess by speech", "*īmān* is contrivance in heart and is confession through speech", "*īmān* is confirmation of heart, confession through speech, and performed by deeds", "*īmān* is speech and deeds"[3]. According to Paul **Tillich**, *īmān* is a total and centered act of the personal self, the act of unconditional, infinite and ultimate concern[4]. Briefly Faith is the state of being ultimately concerned.

According to the father of all modern Protestant Theology, **Schleiermacher**, *īmān* is the feeling of unconditional dependence. Of course, feeling so defined does not mean in religion what it means in popular psychology. It is not vague and changing, but has a definite content[5].

Because scholars of Kalām (Islamic theologians) recognize intelligence (reason) as a basic they discussed about a person's *īmān* who has a *taqlidī* (imitated, following the authority, imitation in legal matters) *īmān* as a result of observation (*nazar*) and proof (*istidlāl*/reason). Even so, the opinion of rejecting *taqlidī īmān* has become so extreme that common people who have no knowledge about logic and dialect are considered as non-believers, so this opinion has been symbolized with the concept *kufr al-āmmeh*. Scholars of **Mu'tazilite** sect claimed that a person having *taqlidī īmān* is a *fāsiq* (sinful) or a non-believer. The **Ash'arites**, among **Ahl al-Sunnah** (main stream orthodoxy) consider *taqlidī īmān* as something null and for this reason have been a doctrine which had been criticised[6]. According to their criticism, this person is not a Pagan and non-believer, but cannot be called a mu'min (true believer) absolutely.

Besides this, **Māturidī**, stated that the path leading to *Īmān* is proof (*istidlal*)[7] and that knowledge is a means leading to confirmation. He puts knowledge (*'ilm*) at the basic of *īmān* and states that a person having *taqlidī īmān* (imitated faith) cannot be excusable. But representatives following **Māturidī** in the later centuries have accepted that *taqlidī īmān* is acceptable[8].

The basic feature of *īmān* is described as believing in *ghayb* (unseen). Thus when the qualities of believers (mu'mins) are being stated in the Qur'an it has been emphasized that they have faith (*īmān*) in *ghayb*; "Who believe in (that) the unseen" (Q. 2:3). This acknowledgement influenced the famous Christian theologian St. Thomas (1224-1274). According to his opinion: "knowledge is related to objective-seen being, whereas, *īmān* is related to the unseen. This is why *īmān* cannot be mentioned where knowledge exists[9]. That's why it has been accepted that there is certainty within *īmān*. As a matter of fact, it has been stated in the Qur'an: "Only those are Believers who have believed in God and His Apostle, and have never since doubted" (Q. 49:15).

Generally *īmān* means a human attribution (homo credo faith). Because suggestion as regards *īmān* are suggestions which no man can refuse or ignore[10], besides being a human attribution, *īmān* is connected with man's soul. Thus, the Christian theologians described the word as mental acceptance, confidence of heart and submission of the will power[11] therefore, this is an explanation which shows that it is a concept to surround a person completely.

Paul Tillich (1886-1965) who describes *īmān* as the most exalted interest of mankind, he also accepts that it is a centered act. According to his opinion: "Faith is the state of being ultimately concerned". According to him, *īmān* is in the center of the person's private life, and it surrounds all aspects of life[12]. According to him, faith as ultimate concern is an act of the total personality. *Īmān* at the center unites all emotional, mental, spiritual, physical and even conscious and unconscious aspects of personal life. Just like how mankind is made up of the unity of these elements without separation and they form mankind's aspects, which cannot be separated, similarly *īmān*, which penetrates mankind's soul, has connections with and makes influence ever these elements[13]. Therefore, *īmān* can neither be created as a product of the mind, nor can it be considered as the effort of the will nor can it be regarded as the results of emotional acts. *Īmān* is an unknown phenomenon, which includes all of these elements[14].

[1] Ibn Manzūr, 1980 Lisan a'l-'Arab, "amn" art., Beirut.
[2] Smith, W. Cantwell, 1981 Religion and Reason Method and Theory in the Study and Interpretation of Religion On Understanding Islam, 141, Netherlands; Smith, 1979 "Faith as Tasdiq" Islamic Philosophical Theology, 99, ed. Parviz Morewedge, USA.
[3] Ash'ari, 1952 al-Luma', ed. Richard J. McCarty, 75, Beirut; Māturidī, 1970 Kitāb al-Tavhid, ed. Fath Allah Hulaif, 380, Beirut.
[4] Tillich, Paul, 1965 Dynamics of Faith, 4, New York.
[5] Tillich, ibid., 38.
[6] Izutsu, Toshihiko, 1984 Islam Dusuncesinde Îmān Kavrami, Tr. S. Ayaz, 148-149, Istanbul.
[7] Mātüridī, ibid., 287.
[8] Nasafi, 1993 *Tabsirat al-adilla*, I, 25, ed. Claude Salamé, Dımeşk; Ghazali, 1357 *Ihyā' 'ulum al-Din*, I, 162, Cairo.
[9] Swinburne, Richard, 1983 *Faith and Reason*, 106, New York.
[10] James, William, 1979 *The Will to Believe*, 14, New York; Maurer, Armand, 1987 *St. Thomas Aquinas, Faith, Reason and Theology*, Int. XVIII, Manitoba.
[11] Meagher, P.K., "faith", *New Catholic Encyclopedia,* V, 798.
[12] Tillich, *Dynamics of Faith,* 4.
[13] Tillich, ibid., 106.
[14] Tillich, *Systematic Theology*, III, 133, USA.

2. External Knowledge

Religion as a subject of belief has developed with humanity and has become an establishment, which exists with the existence of mankind. No community has existed living in total atheism in any era. Social factors are important in establishing faith, which forms the main essence of religion.

Traditions and customs are initiative in terms of these factors. Qur'an talks about the men who are against the faith; *they didn't hear of this from their ancestors*, "The chiefs of the Unbelievers among his people said: "He is no more than a man like yourselves: his wish is to assert his superiority over you: if God had wished (to send messengers), He could have sent down angels; never did we hear such a thing (as he says), among our ancestors of old." (Q. 23:24); *they shall follow the ways of their ancestors*, "When it is said to them: "Follow what God hath revealed:" They say: "Nay! We shall follow the ways of our fathers." What! Even though their fathers were void of wisdom and guidance? (Q. 2:170); or *enough for us are the ways we found our fathers following*, "When it is said to them: "Come to what God hath revealed; come to the Apostle": They say: "Enough for us are the ways we found our fathers following." what! Even though their fathers were void of knowledge and guidance?" (Q. 5:104) as revealed in Qur'an these were their excuses that explain the social effects they experience.

The communication systems are one of the effective exterior elements, which influence formation of faith. Some researchers say that these systems are the most effective to "influence to convince and to motivate people", others claim that these systems are limited[15]. According to the first opinion "likings and choices, beliefs and convictions of masses, interest and concerns, thoughts of people are under the control of communication systems[16]. This results in a considerable influence in the formation of people's faith. As a result of different a research it has been seen that, media besides motivating people towards certain ideas helps strengthening existing ideas of people[17].

Besides customs, traditions, and media there are other factors like school, family and close friends in terms of motivation which effects formation of faith. In fact, the prophetic hadith expressed the influence of family as follows: "Every new born baby borns within a natural creation. Father and mother of the baby makes him Jewish, Christian of fireworshipper. If the mother-father is a Moslem, then the child is a Moslem"[18]. **Ghazālī** (d. 505/1111), in connection with this hadith, writes that whichever faith is suggested to children from youth this the faith that will determine their future life[19].

Many scholars of Islam acknowledge this "natural creation" concept as "being created with ability to direct towards religion" or "ability to believe" (have faith)[20]. According to some researches, the most influential 3rd, element is close friends after the family and school. According to the inquiries made on 400 students attending different high schools in Ankara, it has been showed that the influence of friends followed family and school in terms of having faith in God or disbelief[21]. This result makes the hadith "The person follows the religion of his close friend. So be careful in selecting your friends"[22] more meaningful.

Ghazālī considered exterior information factor, which influence the formation of faith, and he said: "I saw that always children of Christians were raised up as Christians, children of Jews were raised up as Jewish, children Moslems were raised up as Moslems"[23]. J. J. **Rousseau** (1712-1778) who says that the faith of people are "like geographical books of knowledge"[24] and he states that everybody accepts the religion taught to them, that they are "circumcised, baptized, Jewish, Muhammadan, Christian"[25] according to the country they live in and that "God knows how many Christian Catholics live in Rome, who could have been good Moslems if they were born in Mecca. Similarly, the honourable and good Turkish living in Asia, could have been good Christians if they were living together with us"[26]. In this regard, the research made on students in America Berkeley University, which shows that their religious beliefs are the same with their neighbourhood, is very meaningful[27].

The observations of **Ghazālī** and **Rousseau** are emphasized by the following statements in the Qur'an "And Noah, said: "O my Lord! Leave not of the unbelievers, a single one on earth!, "For, if Thou dost leave (any of) them, they will but mislead Thy devotees, and they will breed none but wicked ungrateful ones" (Q. 71:26-27). This Qur'anic verse states that they raise up their children to the direction of their own religious beliefs.

In this point, the society has a considerable effect over changes of religion in other words changes in faith. The need for social support to protect religious beliefs and making influence over individual faith by using social pressure these expressions are because of this pressure of the society. In an investigation made on youngsters converting to different religions in the West, says that 42 % percent of them convert as a result of social pressure[28].

At the same time a person who is opponent of a religious sect does not attend meetings held by members of that sect or does not read articles supporting their doctrine[29]. With the expression of Qur'an "The unbelievers say: "Listen not to this Qur'an, but talk at random in the midst of its (reading), that ye may gain the upper hand!" (Q. 49:26) by talking with these expressions they wanted do prevent it from being read.

According to the news of Qur'an, the non-believers say: "They say: "Our hearts are under veils, (concealed) from that to which thou dost invite us, and in our ears in a deafness, and between us and thee is a screen: so do thou (what thou wilt); for us, we shall do (what we will!)" (Q. 49:5) in these above expressions there is a rebellious psychological nature. Besides trying to understand they do not even want to listen to. Whereas, to understand something, it is necessary to request it. As a matter of fact, the Qur'an emphasizes this matter as follows: "But people have cut off their affair (of unity), between them, into sects: each party rejoices in that which is with itself" (Q. 23:53).

Initially, a person cannot understand every event in his surroundings, he selects only appropriate ones among many objects and then he gets it. The perception of the

[15] Topcuoglu, M. Nur, 1996 *Basinda Reklam ve Tuketim Olgusu*, 16, Ankara.
[16] Topcuoglu, ibid., 219.
[17] Kaya, Mevlut, 1998 *Din Egitiminde Iletisim*, 220, Samsun.
[18] Bukhāri, "Janāiz", 80, 93; *Muslim*, "Qadar", 6.
[19] Ghazali, 1357 *Ihyā' 'ulum al-Din*, I, 162, Cairo; Cf. Brown, William Adams, 1930 *Pathways to Certanity*, 52 London.
[20] Cf. Akcay, Mustafa, 2000 *Cagdas Dunyada Insan ve Dini Sorumlulugu*, 68-72, Istanbul.
[21] Bilgin, B–Selcuk, M, 1991 *Din Ogretimi*, 201, Ankara.
[22] Abū Dāwud, "Adab", 16; Tirmidhi, "Zuhd", 45.
[23] Ghazali 1987 *al-Munqiz min al-Dalāl*, 25-26, Beirut.
[24] Rousseau, J. J., 1956 *Emil,* Tr. H.Ziya Ulken, 260, Istanbul.
[25] Rousseau , ibid., 303.
[26] Rousseau , ibid., 314.
[27] Ronald J.-Janet S. Schwartz, 1983 *Sociology*, 477, Canada.
[28] L.B. Brown–D. J. Pallant, 1973 "Religious Belief and Social Pressure", *Psychology and Religion*, 282, G. Britain.
[29] Krech-Crutchfield, 1980 *Sosyal Psikoloji*, tr. Gungor, Erol, 222, Istanbul.

world occurs beyond the senses of physical body depending on the society. People only listen to and read propagations of their own ideology and doctrines, or obey only leaders of their religious groups, societies. We support our world perspectives and insist that these opinions are correct[30].

Every individual accepts his own cultural and social values accordingly his behaviours as something logical or at least he believers in it[31]. The mind settled within faith is not an objective mind, it is a subjective mind, which protects and supports faith and serves for it. A faith, which looks like something illogical, is logical for the individual who has this faith[32]. This is why Qur'an accuses non-believers of being foolish, this means that they reduce their minds certain fields.

This explanation reminds the claim of **D.Z. Philips**, one of the followers of **Neo-Wittgensteinian**, who thinks that there is a rationality internal to the religion. Although we agree with **Philips** claim of internal rationality in religion, we do not accept their rejection of looking for external evidence for it. We sincerely believe that external evidences can contribute greatly to the formation of faith.[33]. Confirming such opinion is impossible in terms of the Qur'an. Because the Qur'an commands the believer to look at the earth and the heavens after then think wisely in remembrance of God (Q. 77:17-20).

This is why scholars who are members of Māturidī and Mu'tazilite sects oppose the Ash'arites and support the idea that if a person is not one who is addressed by the revelation, his mind is enough to discover God and an individual who has no chance to be illuminated by revelation. According to their opinion intellect is responsible for believing in God[34]. The Qur'an gave the example of prophet Abraham as evidence of discovering God by using the intellect. Again the Qur'an emphasized the importance of using the mind in various verses and it has been said that by using the mind an individual will be delivered from eternal hell fire (Q. 63:10).

Because the matter of faith is a complex form, to support the idea that *īmān* (faith) is only a matter of intelligence and ideas; means to put it in the limitation of narrow blocks. This is why the mental process of faith while being a part of every educated person's religious belief, still it should not be ignored that it is only a simple part[35].

Faith is consisting of strong emotions, but emotions are not the source of faith. With it's content it is subjective, so it is certain in it's focus, and therefore it claims truth, consequently, it demands submission. It has a tendency towards the one and only absolute, therefore it claims truth and commitment, it is directed toward the unconditional, and appears in a concrete reality that demands and justifies such commitment.

3. Conclusion

It is known that the cognitive form of *īmān* (faith) has complex features. In this regard it has a kind of mosaic nature. Ability and earnings made up the mosaic formation. Both categories (ability-earnings) have a special importance in existence and formation of faith[36]. *Īmān* is rejoicing feeling, consists of rational conscious, has a cognitive form of confirmation featured with a total acceptance and submission[37]. According to St. **Thomas**, in classical Roman Catholic theology "will to believe" is not an act which originates in man's striving, but it is given by grace to whose will is moved by God to accept the truth of what the church teaches. This kind of interpretation agrees with the authoritarian attitude of the Roman Church[38].

No command to believe and no will to believe can create *īmān* (faith). In this respect, the arguments of faith cannot form *īmān*[39]. This is explained as; one demands "obedience of faith", the term can mean the element of commitment, which is implied in the state of ultimate concern. Our oscillating will cannot produce the certainty, which belongs to faith.

"Commitment to the traditions of ancestors" emphasized in the Qur'anic verses and hadiths, and "attending groups of the same religion", "influence of family motivating the child's faith", "being careful in selecting friends" such explanations make clear that within the beginning of formation of faith, the exterior factors have initial effects. Deeds and thinking in remembrance of God (tadhakkur) which appears after acquiring faith, presents us the emotion, nature and will factors. The concept of increasing of faith, become conscious in faith and exception in faith according to Islamic theology (Kalām) shows considerable differences. In the Qur'an following verse "O ye who believe! Believe in God and His Apostle, and the Scripture which He hath sent to His Apostle and the Scripture which He sent to those before (him)" (Q. 4:136) addressed to the emotions of believers (mu'mins) through the will dimension.

In this regard, a person who has a tendency towards religious belief and faith in God having faith (*īmān*) a godsend gift –this will is called natural will- is a result of his surrounding. According to **Teftazānī**, faith is a divine light granted by Allah who "motivates his slave's will". After his stage, emotion and will interferes and directs the structure and dimension of faith. This is why there are conscious (muhaqqiq) religious and faithful people among Moslems, as well as Christians and Jews.

With rejoicing and emotions and perfect will these people within enthusiasm of their faith they form mental and physical state by using them to enrich their cognitive structure of faith. A hadith "The ones who were good in the era of ignorance (Jahiliyyah), are good also in the Islamic era"[40], expresses good quality of the individuals.

[30] Condon, J. C., 1995 *Kelimelerin Buyulu Dunyasi,* Tr. Ciftkaya, M., 34-35, Istanbul.
[31] Selim Aydin, 1994 *Bilgi Caginda İnsan*, 82, Izmir.
[32] Krech-Crutchfield, ibid., 196.
[33] Kellenberger, J., 1985 *The Cognitivity of Religion Three Perspectives*, 54, Hong Kong.
[34] Fakhr al-Din al-Razi, 1962, *Mafātih al-'Ghayb,* XIII, 41, Cairo.
[35] Clark, W.Houston, 1961 *The Psychology of Religion*, 219, USA.
[36] Alper, Hulya, 2000 *Bir Kelam Problemi Olarak İmanin Psikolojik Yapisi*, 230, Istanbul.
[37] Tillich, *Dynamics of Faith*, 6.
[38] Cf. Maurer, Armand, 1987 *St. Thomas Aquinas, Faith, Reason and Theology*, Int. XVI-XVII Manitoba.
[39] Tillich, ibid., 37.
[40] Bukhāri, "al-Anbiyā"; 8, 14, 19; "al-Manāqib", 25; Muslim, "al-Fadāil", 168.

For example, the attitude, which **Ghazālī** puts forward for this religion of Islam, can be found also in the ones that arise from other religions. This is why whichever position Ghazālī has among Moslems, Thomas has the same position among Christians. The Qur'an makes it clear with the following verse: "But people have cut off their affair (of unity), between them, into sects: each party rejoices in that which is with itself" (XXIII, 53)".

In this respect, when Ghazālī as a Kalām scholar, explains about his life story, he says that he wants to be free from traditional belief (taqlīd) that has been taught to him by his mother-father and teachers, and expresses this as a result of a natural habit, a godsend blessing. Again he emphasises that his striving is not a result of his will. Finally, -with his words- he recedes from "traditional belief" that has been given to him by his mother-father and teacher.

Ghazālī made a research on which of the knowledge he obtained "haqq" (righteous), and which of them was "batil" (perverted). The answer of it is that he obtained faith which he defined as a knowledge does not bring any doubt of a matter, a position of perfect faith[41]. In this context, a lot of the Qur'anic verses, which starts with "most people", ends in a negative way (Q. 2:243; 6:116).

Ash'arī and **Māturidī** representatives of the Ahl al-Sunnah (main stream orthodoxy) sect do not give excuse for those who have *taqlidī īmān* (imitated) because they aim to raise up informed and conscious believers.

In the cognitive structure of disbelief and faith when effects of physical and spiritual elements of moral are considered, universal dimension of faith becomes meaningful[42]. The Qur'an says: "Say: "True guidance is the Guidance of God: (Fear ye) lest a revelation be sent to someone (else)", "Say: "All bounties are in the hand of God: He granteth them to whom He pleaseth: And God careth for all, and He knoweth all things" (Q. 3: 73).

[41] Ghazali, 1987 *al-Munqiz min al-dalāl*, 25-26, Beirut.
[42] Cf. Guler, Ihami, 1988 "Îmān ve Inkarin Ahlaki ve Kognitif Temelleri", *Islāmiyāt* I, 24, Ankara.

Infinite Regresses, Infinite Beliefs

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One way of mapping part of the domain of epistemology is to represent various theories as responses to the following argument:

(I) A belief (strictly, a token state of belief) is justified only if a justified belief is a reason for it. (Premiss.)

(II) There are justified beliefs. (Premiss.)

(III) The proper ancestral of the reason-relation is irreflexive. (Premiss.)

(IV) There is an infinite sequence (strictly, a sequence with infinite range) of justified beliefs each of which is a reason for its predecessor, if any. (From (I) to (III).)

(V) There is no such sequence. (Premiss.)

(VI) There both is and is not such a sequence. (From (IV) and (V).)

(VII) Not-(I) / not-(II) / not-(III) / not-(V). (Reductio.)

The argument instantiates a schema for infinite regress arguments generally:

(i) $(\forall x_1)[Ax_1 \rightarrow (\exists x_2)(Ax_2 \,\&\, x_1Rx_2)]$. (Premiss of generation.)

(ii) $(\exists x_1)(Ax_1)$. (Premiss of existence.)

(iii) *R/R is irreflexive. (Premiss of linearity.)

(iv) $(\exists s)[\mathrm{Inf}(R(s)) \,\&\, (\forall i)(i \,\varepsilon\, D(s) \rightarrow As_i \,\&\, As_{i+1} \,\&\, s_iRs_{i+1})]$. (From (i)-(iii).)

(v) ~(iv). (Premiss of finitude.)

(vi) (iv) & ~(iv). (From (iv) and (v).)

(vii) ~(i) / ~(ii) / ~(iii) / ~(v). (RAA.)

The deduction of (iv) from (i) to (iii) is fairly straightforward (Black 1996, 102-103): first, an inductive procedure is specified, using the principle of dependent choice, for generating from (i)-(iii) a sequence that satisfies the second conjunct of (iv); second, the range of the sequence is proved to be infinite; third, (iv) is inferred with the rule for introducing the existential quantifier. Formerly I used two premisses in place of (iii), that (viii) R is irreflexive and (ix) R is transitive, to derive (iv) (Black 1987a, 404-405); the present formulation is more frugal because (iii) is true if, but not only if, (viii) and (ix) are true.

In these terms the problem of infinite regresses of justification is this: which premiss in the argument is false and hence should be rejected at (VII)? If (I) is false, a component of a form of foundationalism is true: i.e. there are beliefs that are basic in the strong sense that they are justified even if they do not have reasons (this claim is supported by certain theories of privileged access and certain externalist theories of justification); or in the weaker sense that they are justified even if they do not have reasons that are themselves beliefs (this is supported by the view that a sense-experience can be a reason for a belief); or in the still weaker sense that they are justified even if they do not have reasons that are beliefs that are in turn justified (this is supported by certain contextualist theories of justification). An unjustified belief might itself be called basic where it is a reason for some justified belief. These claims constitute only parts of foundationalist theories of justification; a full theory will also state that, and how, justified non-basic beliefs derive their justification from a relation to basic beliefs. The account is likely to be in recursive terms. Note that the *truth* of (I) is compatible with claims made by other forms of foundationalism, e.g. that some justified belief is basic in the sense that - contrary to (III) - it is a reason for itself. Note also that, if (I) is construed as a material conditional, (II) is true if (I) is false.

Arguments like this are often used to derive a foundationalist conclusion, but there are other possibilities. If (II) is false, a radical form of scepticism is true: there are no justified beliefs. If (III) is false, there are circles of reasons; i.e. there is either (a) a finite sequence of beliefs each of which is a reason for its predecessor, if any, and the first is a reason for the last or (b) - the limit case already noted - a belief that is a reason for itself. If in addition all the other premisses are true, a form of coherentism is true; i.e. a justified belief is justified by virtue of being one of a set of beliefs that form a circle of reasons.

If (V) is false, there is an infinite sequence of the kind whose existence it denies: call them J-sequences. Of the premisses (V) is the least likely to be rejected in the conclusion, first, because that would make the last three steps of the argument redundant - not-(V) is equivalent to (IV) - and second because (V) is highly plausible. I believe that (V) is true, but it has sometimes been defended by bad arguments. I shall discuss two such defences.

Assume that the reason-relation connects beliefs held by the same person (this follows from (DR) below). Then the discussion of (V) can be broken into three questions:

(Q1) Does there exist an infinite sequence of beliefs held by the same person?

(Q2) Supposing that such sequences exist, does any of them comprise only justified beliefs?

(Q3) If so, is any of them a J-sequence?

(V) is true iff the answer to any of these is no. The answer to (Q1) is yes, provided "beliefs" embraces dispositional as well as occurrent beliefs. Let S^P be the infinite sequence of propositions "2 > 1", "3 > 1" etc. I believe each of these, so there is a corresponding infinite sequence S^B such that each S^B_i is a belief of mine whose object is S^P_i. Clearly there are some elements of S^P that I never consider: the elements of S^B corresponding to these are dispositional.

To this it has been objected that at some stage in S^P there is a proposition S^P_n that cannot be the object of a belief, occurrent or dispositional, because the number it refers to is too large to consider (Williams 1981, 86). This objection is the first bad defence of (V). Let it be granted that a proposition cannot be believed if it refers to a number too large to consider: this cannot be used to show that I do not believe each element of S^P, for no proposition in S^P refers to such a number. All the numbers referred to by these propositions are natural numbers; but since

Cantor mathematicians have been considering numbers - the alephs - bigger than any natural number. If a number has been considered, it is not too large to consider; and, if a number is not too large to consider, no number smaller than it is too large to consider. So none of the numbers referred to by elements of S^P is too large to consider. Someone who thinks that transfinite arithmetic is misconceived may reply that, although mathematicians have performed operations with the symbols "$\aleph_0$", "$\aleph_1$" etc, they have not been considering numbers. But, even if that is right, the answer to (Q1) can be supported by an example that raises no qualms about the infinite: the sequence of propositions "1 ½ > 1", "1 ⅔ > 1", etc.

A second objection (implicit in Williams 1981, 86), which constitutes the second bad defence of (V), runs thus: (a) there are natural numbers too large to write down or express in any other way; (b) among the elements of S^P are propositions that refer to such numbers; (c) likewise, therefore, these propositions are inexpressible; (d) but a proposition is believed only if it can be expressed; so (e) no one believes all the elements of S^P. (d) is doubtful, but the argument anyway fails at (a). It is true that there are natural numbers that it is humanly impossible to write down in Arabic notation, but these can be expressed with abbreviations. It might be replied that, whatever list of abbreviations is employed, there will be natural numbers too large to express with them. But this can be conceded; for to reach (a) the quantifiers in the reply need to be reversed, yielding the implausible claim that there are natural numbers too large to express with any list of abbreviations.

The answer yes to (Q1) therefore stands. S^B also establishes that answer to (Q2). Distinguish between an actional and a statal sense of "justified": roughly, a belief is actionally justified iff the believer has applied a procedure that justifies it, and statally justified iff he *can* apply such a procedure. I can apply such a procedure to each S^B_i: it consists in an application of any standard set of axioms for number-theory. So S^B is an infinite sequence of justified beliefs held by the same person.

It follows that S^B establishes the answer yes to (Q3) iff each S^B_i is a reason for its predecessor if any. Whether this is so depends on the analysis of the reason-relation. There are various kinds of reason connected with beliefs: one strong definition is:

(DR) B1 is a reason for B2 iff there exist a person N and propositions P and Q such that (a) B1 is N's belief that-P, (b) B2 is N's belief that-Q, (c) P confirms Q and (d) B2 is based on B1.

The relation of basing in (d) can be roughly defined thus:

(DB) N's belief that-Q is based on his belief that-P iff the fact that N believes that-Q is explained by the fact that there is an appropriate causal chain from his belief that-P to his belief that-Q,

where "There is a causal chain from X to Y" means "X stands to Y in the proper ancestral of the relation ...causes...".

Given (DR), S^B is a J-sequence iff, first, each S^P_{i+1} confirms S^P_i and, second, S^B_i is based on S^B_{i+1}. It is implausible to hold that either of these requirements is met (Black 1987b, 178-181). I am unable to think of a better example of a J-sequence, and so conclude that there is no good case for the answer yes to (Q3). But nor is there a decisive case for the answer no. Someone might seek to establish that answer by invoking (DB) and arguing from the premiss that a dispositional belief cannot be a cause; or that an infinite sequence of causes is impossible, or would last too long; or that a sequence of causes and effects must include a first cause; or that there can be no infinite sequence of explanations. But no such argument seems to work (Black 1987b, 181-190; Black 1988, 436).

Since (V) is true iff the answer to any of (Q1)-(Q3) is no, and since the answer to (Q1) and (Q2) is yes, the intuitive plausibility of (V) tips the balance in favour of the answer no to (Q3); but that answer will have to be reversed if an example of a J-sequence can be found. Can you think of one?

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Foundationalism and Coherentism From a Contextualist Point of View

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1. Foundationalism

Here is the picture classical foundationalism draws of empirical justification: Our system of beliefs is structured like a pyramid, it consists of a broad foundation of perceptual beliefs, i.e. beliefs reporting the contents of our perceptual states, and a superstructure of worldly beliefs, i.e. beliefs reporting what is going on in the world around us. The beliefs building the foundation, the perceptual beliefs, are to be justified noninferentially, by direct appeal to our perceptual experiences, while the beliefs in the superstructure, beliefs about what is going on in the world around us, are to be justified inferentially, i.e. by appeal to other beliefs. Ultimately, our worldly beliefs thus rest on our perceptual beliefs, which in turn draw upon our perceptual experiences.

Now, according to a widespread view, this picture has two serious downsides: firstly, the objection goes, it is a mystery how perceptual experiences justify perceptual beliefs and, secondly, it is fairly doubtful whether worldly beliefs can validly be inferred from perceptual ones. Thus, Wilfried Sellars calls the foundationalist picture "The Myth of the Given" (Sellars 1956). But what exactly are the reasons for Sellars' well-known aversion to foundationalism?

According to Sellars, perceptual states cannot justify worldly beliefs for reasons relating to the nature of the contents of perceptual states. Notice that the contents of perceptual states are either conceptual or nonconceptual. No matter what they are, according to Sellars' objection they cannot justify our worldly beliefs. Here is why: Suppose that perceptual content is nonconceptual. In this case the relation between a perceptual state and a belief is obviously not logical or inferential. But if this relation is not logical or inferential, then – the argument goes – it cannot help in justifying a belief. As a consequence, if perceptual states have nonconceptual contents, then – pace the foundationalist – they cannot justify perceptual beliefs.

On the other hand, if the contents of perceptual states are conceptual, then they are fallible, for then they can misrepresent what they are a representation of. But if perceptual states are fallible, then – according to Sellars – they cannot justify our worldly beliefs: they are no secure foundation.[1] Hence, even if we would allow perceptual states to justify perceptual beliefs, it would still be a mystery how perceptual beliefs could justify worldly beliefs. Let me give an example: How could my appeal to my belief that it seems to me as if I have hands justify my belief that I actually do have hands, if, for all I know, I might be a handless brain in a vat? Thus, once we consider sceptical scenarios like the vat-scenario, an inference from perceptual beliefs to worldly beliefs seems out of the question: The foundationalist merely asserts that such inferences can justify worldly beliefs, but they actually cannot.

Let me sum up. According to what I have called the widespread view, even though perceptual experiences *cause* our worldly beliefs, nevertheless they are not apt to *justify* them.[2] Hence, the foundationalist is taken to be somebody, who gives an adequate description of the actual processes leading to worldly beliefs, while crucially failing in an epistemological respect: She cannot provide an argument to the effect that these processes are trustworthy. In a nutshell: the foundationalist owes us a reason to trust our senses.

2. Coherentism

Coherentism is most straightforwardly characterised by its opposition to foundationalism: it dispenses with the notion of justification by appeal to perceptual experience and takes the view that beliefs can be justified only inferentially. As Davidson (1986, 310) puts it, "[w]hat distinguishes a coherence theory is simply the claim that nothing can count as a reason for holding a belief except another belief."

How can we put more flesh onto the bones of this general idea? Fine-tuning aside, according to the coherentist, a belief is justified just in case it can be integrated into an appropriately structured, coherent and sufficiently comprehensive system of beliefs. My belief that I have hands, for instance, is justified just because it fits fairly naturally into my present system of beliefs, which is – the coherentist argues – largely coherent and sufficiently comprehensive. No doubt, this idea has some *prima facie* appeal: a belief's cohering with the rest of my beliefs seems to enhance the chances of its being true, and why, then, shouldn't we regard coherence as justificatory? To use Neurath's familiar metaphor, beliefs are justified because they mutually support each other just like the planks of a raft.

Now, there is obviously a great deal to be said about the notions of coherence and comprehensiveness at play here. However, setting fine-tuning aside once again, one of the standard objections to coherentist theories of justification can easily be put like this: Justified beliefs are, by all accounts, not only true by chance. But since at least some beliefs that coherently fit into our belief systems are, if true, true by chance only, coherence doesn't have any interesting relation to epistemic justification.

For an illustration of this argument it is worth reconsidering the possible situation in which I am a brain in a vat, freshly envatted just yesterday. Now, it is fairly obvious that my belief system in that situation is qualitatively identical with my belief system in the actual situation: in both situations do I believe that I've had scrambled eggs for breakfast, that I wanted to become a gym instructor when I was little, that Falco was the greatest pop star ever, etc. But now notice that if those two belief systems are indeed qualitatively identical, then every single belief I could possibly have must cohere with both systems to the very same degree. Thus, since my belief that I have hands coheres pretty well with my actual belief system, it also does so with my belief system in the vat-situation. But this leads to an unpleasant result for the coherentist: she must accept that my belief that I have hands is justified in both

[1] Cf. Sosa 1980, 24.

[2] See, for instance, Davidson 1986, 310, McDowell 1994, 7ff. and Rorty 1979, 178.

situations. As a consequence, at least some of my justified beliefs are, if true, true by accident only. Hence, a belief's coherently fitting into a belief system does not at all seem to have the required positive effects on its epistemic status: How can the coherentist affirm that I am justified in believing that I have hands, if, for all I know, I could just as well be a handless brain in vat?

3. Contextualism

According to contextualism about 'justification' the situational context determines the strength of the epistemic position a subject has to be in so as to fall into the extension of the predicate 'ξ is justified'.[3] This view is *prima facie* fairly natural, since epistemic standards are quite obviously lower in everyday discourse than they are in scientific contexts, for instance. And this is exactly the contextualist's point: somebody's evidence may be sufficient for being 'justified'[4] in one context, while it may fail to be so in another. Thus, contextualism can point to an apparent analogy between 'ξ is justified' and other gradable expressions like 'ξ is flat' or 'ξ is empty': just like what counts as 'flat' or 'empty' may vary from context to context, so what counts as 'justified' may vary from context to context. Hence, contextualism is the view that contextual factors like the speakers' goals, their intentions, expectations and the overall purpose of their conversation play a crucial role in the evaluation of 'justification'-ascriptions.

Now, how is this theory about the semantics of 'ξ is justified' supposed to help us out of the problems we encountered with regard to coherentism and foundationalism? Let us construe contextualism about 'justification' as follows: Suppose that a subject's belief that *p* is 'justified' in a context *C* just in case the subject has 'good reasons' for believing that *p* in *C*. Now, as the adjunct 'in *C*' suggests, what counts as a 'good reason' is itself heavily dependent on context. What is the benefit of this analysis of 'justification' in terms of 'good reasons'? Obviously, once we have accepted such an analysis, we can easily claim that perceptual experiences and coherent integrability into a belief system count as 'good reasons' for worldly beliefs in some contexts, while they fail to do so in others.

Let me give an example. I have perceptual experiences as of myself having hands. In an everyday context these experiences obviously count as 'good reasons' for my belief that I have hands, for they suffice to exclude those alternatives to my having hands that are relevant in everyday contexts: they suffice, for instance, to rule out that my hands were amputated, that I have lost them in a car accident, that I am a Thalidomide victim, etc. However, if you are a good story-teller, then you can easily generate a context in which my perceptual experiences no longer count as 'good reasons' for my belief that I have hands. In particular, if you can tell stories about handless brains in vats as colourful as Daniel Dennett (Dennett 1982) can, then I might pretty soon find myself in a context, in which my perceptual experiences as of myself having hands are not worth a penny with regard to my belief that I have hands. Thus, the foundationalist's view that experiences can 'justify' worldly beliefs is actually true in a great deal of contexts, even though it fails to be true in contexts with extraordinarily high standards.

What about coherentism? Obviously, the contextualist can say pretty much the same about coherent integrability into belief systems as I have just said about perceptual experience: There are contexts in which the fact that a belief coherently fits into a belief system counts as a 'good reason' for that belief. But again, there are contexts in which this is not so: If you or Dan Dennett tell stories about brains in vats, coherence with my background beliefs will no longer provide 'good reasons' for a pretty large range of my worldly beliefs.

Thus, according to contextualism, the question 'Can perceptual experience or coherent integrability into a belief system justify worldly beliefs?' is meaningful relative to a particular conversational context only. If we do not provide enough information about the beliefs, desires and conversational goals of the participants of some particular conversation, the question will simply fail to express a complete proposition. And how could we epistemologists answer such a question?

Moreover, note that contextualism has a neat explanation of why foundationalism and coherentism seem implausible to many philosophers: The epistemic standards prevalent in the contexts of philosophical discussions are typically exceedingly high. Indeed, they are typically so high that almost nothing counts as a 'good reason' in such a context. As a consequence, it is no wonder that philosophers insensitive to the context-sensitivity of 'ξ is justified' doubt the merits of foundationalism and coherentism. From a contextualist point of view, however, these doubts are not to be taken seriously. Quite to the contrary, once we take into account the context-sensitivity of 'ξ is justified', the problems of coherentism and foundationalism, and also the controversy between these two theories, can easily be resolved.[5]

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[3] See Cohen 1988 for a standard exposition of contextualism.

[4] For the sake of convenience I use scare quotes so as to indicate metalinguistic usage: instead of awkward formulations such as '*x* falls into the extension of the predicate 'ξ is justified' in context *C*' or '*x* satisfies the predicate 'ξ is justified' in *C*' I simply use expressions such as '*x* is 'justified' in *C*'.

[5] Thanks to Brain Ball for commenting on an earlier draft of this paper.

Metaphors and Metaphysics

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1. Cultural background in message understanding

Culture is a net of information exchange basing upon messages. To say anything about understanding within cultural communication one should study the very structure of a message. It seems that any message consists in at least five elements:

sending – a node within the culture net projects and constructs the information transfer

coding – the message is encoded in a specific language pattern

medium – material carrier of the information

decoding – the language of the message is identified and the content is read

receiving – understanding of the message

The process of understanding is engaged in the first and the last stage of communication and therefore the abilities of constructing and understanding a message are to be examined[1].

It is obvious that a message cannot contain all intentional content of information which is transferred. Only a part of it is encoded in a language leaving space for interpretation and evaluation of the message received. It is here where the problem of understanding starts. Leaving some otherwise important factors like control of understanding, ability to control the process of understanding etc. let us concentrate on the very important element of communication which is metaphor. One should underline that in natural language it is impossible to clearly distinguish primitive notions. One can only state that some concepts are more easily understood than others. This important fact results in the lack of formal definitions in natural language. Instead we meet more or less precise clarifications of concepts. Clarifications lie not in the structure of the language but in the structure of understanding of the message. The process of clarification ends not in defining the concepts but in the receivers acknowledgement that the content of the message has been understood. The clarification procedures can be various. Still one can easily notice that the smaller is the cultural distance between the sender and the receiver of the information the higher is the effectiveness of such clarification procedures. For instance, people of the same profession easily decode messages unreadable for those from the outside of the professional group. Similarly, people from the same cultural community share the same associations to the concepts used within such group. Such interpretational proximity is based upon sharing the metaphors. What is a metaphor then?

Concerning metaphors as a means of communication (informational perspective) is usually seen as a kind of semantic problem. Thus the question on ability to translate a metaphor to a more comprehensible language phrase is put forward within linguistic approach, while philosophers rather concentrate themselves on pointing out that metaphors should either be eliminated or are just meaningless. Nonetheless, metaphors are still present not only in ordinary (common) language but also in science.

A metaphor is a way of transferring large amount of information (not in the sense of quantitative Shannon formula, but rather author's corrected formula[2]). From this perspective one can see a metaphor as a way to transfer synthetic information, which otherwise would require much more words. Concise form is undoubtedly an advantage but it is not the most important aspect of metaphors.

A metaphor is a way to appeal to subjective impressions through objective structures – linguistic, metaphysical etc. It plays a function of instruction "Do it and see the results!" i.e. imply the received structure and you will get the proper "message". The quotation marks here are important as we would like to reserve the notion of a message to purely linguistic transfer while the essential role in a metaphor play not the words but the way they are organised – the structure. That is the reason why metaphors function at multiple levels:

poetic - transferring psychological feelings the structure transferred results in reproduction of the similar emotions in the receiver as were present in the sender),

comparative – which point out to similarities between structures of different concepts. focusing attention on the way the ideas can be organised (this lies beyond the pure linguistic level, as the original words used in a metaphoric phrase do not matter that much as the pure structure) – this can be used the point out to analogy for instance

metaphysical – which serve as structural patterns for building up concepts. These are especially interesting from the perspective of science study. As it was already mentioned there are no primitive notions in natural language although there are concepts with which no utterance construct would be possible. For instance, hardly any physical description lacking the concepts of time, space or cause is imaginable. These concepts not only are not defined but it is also impossible to explain them literally. Let us recall St. Augustine stating that whenever he is asked what time is he does not know, but when he is not asked than he knows. Such knowledge is of an intuitive character and when verbalised is unavoidably expressed metaphorically in statements like "time is a mobile image of eternity". Feebleness of such metaphor lies in the lack of analogy as the concept of time is in fact closer for us than the concept of eternity. The need for metaphoric expression is apparent nonetheless. Without a metaphor nothing could be said. It is easier to measure time than to express its meaning semantically.

[1] Płazowska Anna, Płazowski Jan, Suwara Marek, *Media*, DIALOGIKON XI ISBN 83-233-1077-7.

[2] Płazowski Jan, Suwara Marek *Measuring the Uncertain, Remarks on Entropy and Information*, Proceedings of 25 International Wittgenstein Symposium - Kirchberg 2002.

In any case, however, any purely semantic analysis does not and cannot reveal the meaning of a metaphor. The reasons are of two kinds:

first consist in the statement that informational content of a metaphor mostly lies in its structure not in the meanings of words used to build it,

second is bound to the way narrower structural objects function within wider ones.

The authors are especially interested in the problem of metaphysical metaphors as those which act in the widest culture context and decide not only on the feeling of community but also on the common picture of the world. One cannot avoid metaphysics when considering the origin of any scientific theory. Yet, many would disagree that metaphysics is necessarily an integral part of the scientific inquiry. It is, however impossible to present certain conjectures in a precisely definite and explicit way. Where some see just a vague, imprecise statement, a temporarily valuable mean of expression at best, others distinguish a well constructed metaphor. The metaphor helps to embrace what is at first incomprehensible, and with this ability it serves as a mean of expression of our metaphysical beliefs. In order to present metaphysical entanglement of scientific theories, it is useful to demonstrate their relation to the notion of *metaphor*.

2. Antique concept of metaphor

For a long time metaphor was considered as a genuinely uninventive and limited cognitively. One can distinguish two main reasons for this philosophical prejudice. On the one hand we still share the strong belief in Aristotelian philosophy, on the other, the glow of empirical positivism with its contempt for any metaphysical enterprise remained intensive in spite of time span. There are many ways to prove our sentiment for Aristotle, but hardly ever one experiences such a strong and direct appeal to his heritage, as one does in case of Aristotle's notion of metaphor. Nevertheless, it is not his definition of metaphor *per se* that earned metaphor its bad name. Aristotle categorized metaphor in the department of *Poetics* and characterised it as a supplement to a regular, descriptive language. The reception of the notion of metaphor for a long time was determined by this fact alone.

The crucial feature of the reception of Aristotle's *Poetics* was the emphasis on the essential limitations of metaphorical language. For it is Aristotle's opinion on poetical language that it should show clarity and lack of vulgarity[3]. The intended effect was to be obtained through the moderate use of elaborate vocabulary such as a metaphor. Equating the metaphor with the simile and ornament, alongside with the conviction that it has no bearing on meaning and is cognitively futile, has determined the concept of the metaphor for the Aristotle's heirs. The arising division between the language of science and language of poetry has only strengthen the exclusion of the metaphor from the former.

[3] Aryitotle, *Poetics*, Penguin Classics ,1997.

3. Metaphors in scientific understanding

Two separate factors have changed that state of affairs. First one is connected with the disenchantment with the picture of science as closed system of empirically verified sentences. Various fields of contemporary science provide theoretical predictions that cannot find empirical verification. Aiming at description of those regions of reality that one cannot hope to gain direct access to, requires use of a metaphor. Trying to abandon such metaphorical depiction for the sake of some fully rational representation, is not always possible. Heisenberg writes:

„ [This] picture[4] allows you to guess how other experiments might come out. And, of course, then you try to give this picture some definite form in words or in a mathematical formula. Then what frequently happens later on is that the mathematical formulation of the "picture" or the formulation of picture in words, turns out to be rather wrong. Still, the experimental guesses are rather right. That is, the actual "picture" which you had in mind was much better than the rationalization which you tried to put down in the publication. That is, of course, a quite normal situation, because the rationalization, as everybody knows, is always a later stage and not the first stage. So first one has what one might call an imprecision of how things are connected, and from this imprecision you may guess, and you have a good chance to guess the correct things."[5]

Second factor concerns with the development of the theories voicing the mutual dependence between the theoretical content of science and the nontheoretical context. These theories emphasize the influence of psycho-sociological factors upon the development of science. Here one finds the sociology of science that attempts to depict the relation of the contemporary picture of reality to science, and the influence the latter has upon the former. Such an interdependence does not infringe the quality of rationality of science, however it accepts as righteously scientific concepts that were traditionally excluded from its domain. It leads directly to major revision of significance of both metaphysics and metaphor in the development of science.

Many philosophers of science consider the acceptance of the above-mentioned thesis as ascription of the relativistic and irrational attributes to science. Thus, although they accept the importance of metaphysics in a process of constructing the general picture of reality, when involved in science, they consider it as a dispensable addition. A similar practice applies to metaphor. It is accepted that it serves well in a process of comprehension and that is useful in education, but still its value for science is judged inadequately.

The simile, thus the metaphor, have always been a useful tool in hands of scientists. Many theoretical models have found an adequate metaphorical formulation. It seems that the status of metaphor in science has changed alongside with the recognition and appreciation of its cognitive content. It lessened the still strong tradition of categorizing the metaphor together with simile.

[4] "Picture" is for Heisenberg some general idea (he even uses the word "feeling") which is a result of observation and which *instructs* us, in some general way, about an experimental situation.; quoted in: Radman Zdravko *How to Make Our Ideas Clear with Metaphors* in: *From a Metaphorical Point of View* ed. by Zdravko Radman, de Gruyter, 1995, p. 242.
[5] *op.cit.* p. 242.

„We need the metaphors in just those cases where there can be no question as yet of the precision of scientific statements. Metaphorical statement is not just a substitute for formal comparison or any other kind of literal statement but has its own distinctive capacities and achievements."[6]

Although it seems to be natural to ascribe the cognitive content to metaphor, the formal recognition of the fact appeared together with Max Black formulation of "interaction view" of metaphor. On Black's view the successful metaphors do not have to convey to the reader or hearer some quite definite respect of similarity or analogy, nor can analogy, however elaborate, capture the cognitive content of metaphor. Nevertheless, Black seems to guard a traditional stance when ascribing the function of metaphorical language to the pretheoretical stages of the development of discipline. The proposal of Richard Boyd appears to be more farsighted, when he discriminates the class of metaphors whose characteristics - the particular sort of open-endedness or inexplicitness, do not distinguish them from more typical cases of scientific terminology[7]. Boyd argues that their function is a sort of *catachresis*, that is, that they are used to introduce theoretical terminology where none previously existed. Noteworthy here is the fact that, whatever the theory, the same attributes that formerly excluded the metaphor from the scientific discourse, have now determined its indispensability in a process of comprehending the structure of the world. The notion of metaphor has evolved from the definition of abbreviated simile to the state where a quality of subject's creativity is acknowledged in a process of metaphor's construction. The ability to use the metaphor is no more an otiose activity. The very possibility of creating it, depends both on cognitive capacity of subject as well as on the character of the relation to the world. The metaphor equipped with such attributes as necessary inexplicitness, vagueness and ambiguity serves as a tool for comprehension of the complex and relentlessly changing reality.

4. Metaphors in language

The metaphorical expressions are so common in an everyday language that they are recognizable as a literal rather than figurative use of language. Only those expressions that violate the common use of language are treated as genuinely metaphorical. Certain expressions became so colloquial, that no one recognises their metaphorical character.

Regardless of specialization or opinion on status of science, one cannot avoid certain basic presuppositions or even mystical beliefs on nature of the world when beginning his scientific enquiry. As time goes by, what has served as a figurative expression of certain beliefs might turn out to be literal expression of basis of our scientific knowledge. The assumption that we are able to produce some true statements on structure of our world is grounded in a metaphysical belief that reality *is* a unity that can be a subject of description or cognition. The metaphor makes metaphysics an essential element of scientific depiction of the reality.

Metaphor is a part of language, which in authors' opinion is a system i.e. its parts are strongly related to each other, and therefore it is impossible to analyse a metaphor outside its context both linguistic and cultural. Leaving linguistic analysis to linguistic studies one has still remember that cultural background in understanding metaphors cannot be eliminated. The ways structures of our knowledge of the world are organised (distinguished and related to each other) is deeply embedded in metaphysical picture of the world characteristic to a given culture. Those embeddings usually called archetypes are different for different cultural "species" and thus the meaning of a particular metaphor can be easily lost in translation.

[6] Max Black, quoted in: Boyd Richard Metaphor and theory change in: Metaphor and Thought ed. by Andrew Ortony, Cambridge University Pres, 1993 ,, p.482

[7] Boyd Richard *Metaphor and theory change* in: *Metaphor and Thought* ed. by Andrew Ortony, Cambridge University Press, 1993 , p.482.

Two Conceptions of Logical Form

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1. The Picture Theory of Language

In this paper a brief presentation of Wittgenstein's picture theory of language is provided, as it is put forth in the *Tractatus Logico-Philosophicus*. Then some conclusions are drawn with reference to the notion of logical form; in particular, two different conceptions of logical form are expounded, and one of them is shown to be untenable.

Two are the features of the picture theory which interest us here. The first is the automatism of sense, i.e. the idea that, once the referents of the names occurring in a proposition are fixed, then the sense of the proposition is automatically determined. That also means that when we know what the names occurring in a proposition refer to, we automatically grasp the sense of the proposition itself: no other piece of information is required.

The other central tenet of Wittgenstein's picture theory is the idea that a picture and the fact which is pictured must share the same pictorial form. Let us consider the case of an elementary proposition and the fact that is pictured by it. In both the proposition and the fact we can distinguish a matter and a form. The matter of the proposition may be said to consist of the names occurring in it; the matter of the pictured fact consists of its objects. The form is the pictorial form, which in this case is the logical form. According to what Wittgenstein says, we must regard the two forms as being identical, i.e. literally the same form. As to matter, it is obvious that the matter of the proposition is not the same as the matter of the pictured fact (names *stand* for objects, but they are not the objects themselves): names and objects are correlated by the projective relation. We could say that according to the picture theory the form is common to propositions and pictured facts, while the matter, as it is different, must be correlated through a process of projection. All that does not concern only logical pictures. In every picture we can distinguish a matter (which is projected) and a form (which is identical). In the case of pictures whose pictorial form is not the logical one, the process of abstraction has been stopped before reaching its highest level, that is to say, some of the aspects which could be treated as matter (i.e. projected) are – on the contrary – included in form (which must be identical). That means taking advantage of some of the features of the picture which are identical to some of the features of the pictured fact. In spatial pictures, for instance, some of the spatial relations holding between the picture's elements are identical with the spatial relations holding between the objects of the spatial pictured fact.

The two features are closely connected. Since the matter of the proposition and that of the pictured fact are distinct, in order to understand the proposition we must know what the names occurring in the proposition refer to. But there is only one form, shared by the proposition and the pictured fact, so that we do not need any further piece of information concerning an analogous correlation between two distinct forms. The identity of the form guarantees the automatism of sense.

2. Poor and Rich Conception of Logical Form

Coming to the notion of logical form, two main conceptions are available, which I will call the "poor" conception and the "rich" conception. In the *Tractatus* an elementary fact consists of the combining of (simple) objects. According to the poor conception of logical form, only one mode of combination among objects is admitted: objects can only be combined or not combined; the logical form reduces to the possibility of being combined or not being combined of the objects. In fact the notion of logical form – or the form of reality – is introduced by Wittgenstein as the most abstract pictorial form of all, i.e. as the pictorial form which every picture must have in common with all facts. And since pictures themselves are facts, the logical form is what all facts have in common, i.e. their consisting in the being combined of some objects. A brief digression is necessary here with reference to the question of order. Given the objects *a*, *R* and *b* – where *R* is a non-symmetric relation –, they can give rise to two different facts: *aRb* and *bRa*. There is no explicit dealing with the question of order in the extremely abstract views of the *Tractatus*, and the whole issue will be left aside here. In what follows it will be assumed that no question of order arises, so that – if there is only one mode of combination –, given a list of objects, only one fact can be constructed.

According to the rich conception of logical form, given a list of simple objects, apart from questions of order, several modes of combination are available, so that different (elementary) facts can be constructed. Such modes of combination do not belong to the matter – they are something "additional" with respect to objects –, nor can they be resolved by further analysis into more complex structures of simpler objects, since by definition we are already at the level of simple objects. Thus the different modes of combination must somehow be absorbed into the form, and that is the reason why I speak of a "rich" conception of logical form. Those who hold such a "rich" conception usually admit that the form of reality is the mere possibility of being combined; yet they countenance different modes of combination. It seems to me that there are no alternatives: either the different modes of combination belong to the "matter" of reality, or they belong to its form. In the former case we have a "poor" conception of the form itself, in the latter we have a "rich" conception.

A good illustration of the whole question can be set forth by making reference to Sellars [1962], in which a comparison is made with Bergmann [1960] (cf. also Bergmann [1963]). In his paper Sellars compares two languages, which we will call "Sellars-language" and "Bergmann-language". Let us assume that the proposition "*a* is larger than *b*" is elementary, i.e. that the relation *larger than* does not arise out of complex configurations of objects, but it belongs to the form of reality – if a (rich) nominalistic view is adopted –, or it is an object – if a realistic view is adopted. In Sellars-language the proposition in question will be written, say, as "a b". The relation *larger than*, which belongs to the form of reality, is symbolized by the relative spatial positions of the names "a" and "b". In the Bergmann-language the same proposition will be written as "aLb" or "L (a, b)".

Now we have to compare the kinds of behaviour of the two languages with respect to the picture theory. The proposition "*a* is larger than *b*" is written in Bergmann-language as "aLb". If we know what the names "a", "b" and "L" stand for, we do not need to know anything else in order to understand the proposition. In fact the objects for which the names stand can be combined in only one way (they can be combined or not combined). The simple juxtaposition of the names in the proposition has enough expressive power to reproduce such a one-mode combination. The proposition and the pictured fact literally share the same form, which is the form of reality (the possibility of being combined or not). Let us now consider the case in which universals are not included among objects and the form of reality (which is also the logical form) is conceived of as being "rich". That is the case illustrated by Sellars-language. The proposition "*a* is larger than *b*" is written in Sellars-language as "a b". Here the only names are "a" and "b". According to the thesis of the automatism of sense, once we know what the two names refer to, we must automatically grasp the sense of the proposition. That should happen thanks to the identity of logical form: the relative spatial positions of "a" and "b" should somehow indicate that the objects referred to by "a" and "b" stands in the relation *larger than* to one another. Because of the richness of the form, simple juxtaposition is not enough: we must consider in what relations the symbols "a" and "b" stand to one another. In fact the propositions "*a* is redder than *b*" should be written in Sellars-language, say, as "b a", where the different spatial relation holding between "a" and "b" indicates that the objects referred to by these names are combind in a different way from that in which the objects of the previous proposition are combined. But now it does not seem that merely knowing what objects the names stand for is enough to grasp the sense of the proposition. Another piece of information is required, concerning the correlation between the modes of combination of the names in the propositions and the modes of combination of the objects to which they refer. In the case of Sellars-language many correlations are possible, and that makes it difficult to understand in what sense the relations between symbols could be regarded as identical with those between objects: a stipulation seems to be necessary, and we must know such a stipulation in order to grasp the sense of the proposition. Thus it seems that the automatism of sense cannot be preserved if we admit a rich form of reality.

3. Reasons Underlying the Two Interpretations

The difficulties met with by the rich conception of form may be regarded as deriving from a wrong delimitation between matter and form. If in order to grasp the sense of a proposition we must know what the correlation between the modes of combination of names and those of objects is, that means that these modes of combination do not really belong to the form, but to the matter, and that their correlation must be seen as a projection. Coming back to Sellars-language, if we draw a new delimitation between matter and form according to what has been said so far, the spatial relations holding between "a" and "b" in "a b" and "b a" should be regarded as being themselves names. At first sight that could seem rather odd, since it is difficult to imagine that a name may consist not of a linguistic expression, but of a relation between linguistic expressions (cf. Frascolla [2000]). Yet, if one considers what has just been said about the picture theory, there does not seem to be any reason not to regard these relations as names: since a correlation is required between them and what they stand for, they are on a par with "a" and "b" with regard to the need for a projection. Once the necessity of a projection is recognized, no piece of information is missing any more in order to grasp automatically the sense of the proposition. The new interpretation of Sellars-language makes it wholly equivalent to Bergmann-language: both in "aLb" and in "a b" we can discern three names (for similar considerations on Sellars-language cf. Hochberg [2001]).

It must be noticed that this interpretation is not necessarily realistic. It is true that names are assumed which stand for relations. Yet it must be considered that projection has directly to do only with what distinguishes the relation *larger than* from the relation *redder than*; their common formal aspects are still contained in the form. What has been said does not really concern the opposition between nominalism and realism, but rather that between poor and rich conception of logical form. The error lies in thinking that there may be a correlation of forms alongside the correlation of names to objects, so that what really depends on a projection between names and objects is relocated in forms. But thus forms are loaded with different modes of combination, and since the necessity of a projection between these modes and those of the objects belonging to the pictured fact is not explicitly recognized, a lack of information occurs, and the automatism of sense is not secured any more. All that is associated with a confusion between the functional notion of (pictorial) form, as opposed to matter, and the absolute notion of logical form (which is the form of reality). The existence of an ultimate level of analysis, where only absolutely simple objects and logical form are envisaged, is required – according to Wittgenstein – by the determinateness of sense. Now, thinking that the different modes of combination (what differentiates the different spatial relations between "a" and "b" in Sellars-language and the relations *larger than* and *redder than*) belong to the logical form seems to depend on the idea that, since they may belong to a pictorial form (which, however, is not the logical one!), they can never belong to the matter of representation; and if they can never belong to matter, at any level of representation, then they must belong to logical form. The same confusion may occur in the case of pictures whose pictorial form is not the logical one. Let us take the example of musical notation and music. Instead of identifying the pictorial form with the logical one (thus considering what differentiates the spatial structure of the picture and the pitch-structure of the pictured fact as belonging to the matter of representation), one could regard both structures as belonging to the form of representation. In that case a correspondence is substituted for the identity of form, and the automatism of sense breaks down. In this way, something which in certain cases of representation could belong to the pictorial form (functional notion) is regarded as always belonging to form, as if that did not depend on the particular circumstances.

It seems to me that one of the reasons underlying this approach is a nominalistic bias. Since in Wittgenstein's examples pictorial forms take advantage of identity between relations, or more generally between universals, then it is concluded that relations naturally belong to form, independently of the choice of the pictorial form. Thus universals are included in forms, and only particulars are regarded as being capable of occurring in matter. Of course what distinguishes universals from each other could be analyzed as emerging from configurations of objects, but this analysis demands a preliminary step, i.e. placing universals into matter. Since this step is not made, we are left with rich forms. But rich forms have some problems with the automatism of sense. The arbitrariness

of this approach may be shown by the fact that it is possible to imagine a "language" in which the form is made up by particulars, whereas the matter is made up by universals. In a picture of this "language", the fact that a certain particular *a* stands in a certain relation to the particular *b* would represent the fact that the very same object *a* stands in a different relation to the very same object *b*. Presumably such a language would not be very handy, but it is possible to imagine some examples: the fact that Smith makes a certain characteristic gesture with his hand near Jones' throat may mean that Smith cuts Jones' throat. Of course nothing like that is envisaged in the *Tractatus*. The example only shows that particulars and universals seem to be on a par with respect to the matter/form distinction of the picture theory.

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Pragmatic Epistemic Justification and F. Gonseth's Idoneism

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What is knowledge ? How can knowledge be distinguished from simple opinion or belief ? Are we able to insure ourselves against error ? This is the kind of questions that Socrates asks the young Theaitetes. During the dialogue, several successive definitions are proposed, the last one being that knowledge is true belief followed by its justification.

But this characterization leaves many questions unanswered.

1. Can knowledge be grounded on opinion, on belief ? Isn't belief subjective, when knowledge is supposed to be objective ? Obviousness itself doesn't provides any guarantee : it often happened that things that seemed obvious to anybody finally turned out to be false.

2. It is easy to give a sentence the truth value "true". But haven't I often been wrong ? Didn't I often believe that a sentence was true when it was false ? What insures that an opinion or a belief is true ? What are the criteria of truth ?

3. Is it enough, to protect oneself against error, to require that knowledge be justified ? Gettier's counter-example compels us to doubt that. When can a justification be considered sufficient ? Isn't justification also liable to error or deception ?

As the Swiss philosopher of science Ferdinand Gonseth (1890-1975) properly observes, these attempts to define knowledge suffer from a serious flaw : they remain on a purely discursive level. They are only words that don't properly involve an activity. They lack an essential feature, namely the sanction of experience.

In order to understand what knowledge is, Theaitetes' question "What is knowledge" doesn't go far enough. We ought to ask a more basic question, namely "What is knowledge used for ?" And the answer to that question is "Knowledge is used on the one hand to identify the circumstances we are in, on the other to determine, as a function of this state-of-affairs and the objective to be achieved, which decisions should be taken".

Can this characterization of the aim of knowledge smooth out the difficulties mentioned above ?

1. It avoids resorting to a subjective belief. Is my knowledge false or true ? It is the efficiency of the action that it allows me to guide that will decide : the chance of succeeding of actions based on good knowledge is better than that based on an erroneous estimation of the situation. And if one gets control of all factors, one almost certainly will succeed.

2. It assumes the risk of error. All my knowledge isn't equally reliable : I consider some data as possible, others as probable or as certain. And even knowledge that I consider today as certain can be tomorrow be questioned. This very thing happened with classical mechanics, whose reliability had nevertheless been amply and exactly verified during more of a century : it turned out to be inadequate for speeds close to that of light and in the microphysical domain..

As Gonseth says, we have to take decisions in a state of informational incompleteness, which means that we will sometimes be mistaken. But that does not prevent our knowledge to be, in many domains, extremely efficient. Knowledge doesn't need to be absolute and definitive to be efficient : even summary and partial knowledge can be already useful.

One could say : "You implicitly admit that there is false knowledge. Now a false knowledge is not properly a knowledge, since it leads to error and isn't efficient. Knowledge has to be necessarily true, otherwise it is not knowledge".

Unfortunately, our knowledge is fallible and we have today no means to distinguish between definitively established truths – supposing that there are some – and those that will be questioned tomorrow. To adopt so rigid a position regarding knowledge amounts to making it a fictitious notion, inaccessible to the human condition and therefore useless. It's wiser to admit that there is, hidden in the knowledge that we believe true, part of it that will possibly some day appear false.

3. Putting knowledge in such a pragmatic context necessarily has an impact on the notion of truth. If it is the efficiency of prediction that distinguishes a true theory from a false one, shouldn't one abandon the notion of truth for a weaker one ?

Gonseth defended a philosophy of knowledge that he called *idoneism* (from Latin *idoneus* : appropriate, suitable, sufficient). The French word *idoine* can be translated in English by *adequate* and the quality *idonéité* by *fitness* or *adequacy.* It is near to what van Fraassen calls *empirical adequacy.* Here the definition that Gonseth gives of it :

> Adequacy is the quality of the statements which, in a given situation, fit the circumstances, conditions, demands and means of investigation of the situation best.

For Gonseth, all knowledge is summary, approximate, schematic, revisable, open to future modifications. It is not true, it is only adequate.

What are the differences between adequacy and truth ?

1. Adequacy leaves some distance between reality and the model we build of it. The model is only a framework, it retains only the relevant elements for the problem as posed.This distance allows a critical attitude : it prevents us from taking our approaches for reality itself, or to believe that our models exhaust reality. However, it doesn't hinder the model from often capturing the main features of the real : the fact that the model is adequate presumes some structural analogy between it and what it schematizes.

2. One says : "Truth is one, error multiple". One could also say : "Truth is one, adequacy is pluralistic". Depending on the objective pursued or the required precision, the distance we have mentioned allows several different models to fit the same reality. During the inquiry, it may happen that a model that appeared until now perfectly adequate appears insufficient in other circumstances. What Gonseth calls a horizon of reality must make room for a deeper horizon.

2a. This multipicity of models has however to be nuanced. The outclassed model shouldn't be thrown away. It often remains partially valid, in circumstances where it had appeared adequate. Gonseth says that it has been "dialectized".

2b. There are degrees of adequacy : some models are more largely, more profoundly or more precisely adequate than others. The distance between the model and reality is variable.

2c. We have said that one could change models depending on the objective pursued. But it doesn't therefore mean that the same model could not be suitable for different purposes. Since the final action consists in choosing causes whose effects are the objectives sought, causes will not produce different effects because the objective has changed. A good knowledge of the relationships between causes and effects can be used for very different purposes.

3. A third and important difference that we have already mentioned above is that truth lies on a speculative, purely discursive, verbal level while on the contrary adequacy relates to the level of experience, of commitment to efficient practice.

Contrary to a false belief, that can remain unverified, inadequacy involves validation by experience: an inadequate model can lead to actions that don't achieve their purpose, while, by definition, an adequate model allows an efficient action. (Which of course doesn't guarantee that the desired result would be obtained : one doesn't always have the means of one's ambitions.)

I have said at the beginning that adequacy represents a weakening of the notion of truth. But what has been lost in discursive affirmation, is gained in operative reliability. One exchanges a proud paper truth for a more modest, but firmer anchoring in experience and the real. Because what is pure knowledge worth that won't guarantee an efficient action? And don't we qualify knowledge as true precisely because it has allowed and still permits efficient action ? In other words : isn't the only reliable and accessible criterion of truth of a judgement the practical efficiency that it permits, that is to say its adequacy ?

Here a summary comparison between truth and adequacy :

truth	**adequacy**
logically strong	logically weakened
identity between model and reality	distance between model and reality
oneness	plurality
absolute	degrees of adequacy
does not depend on the purpose	can depend on the purpose (but there are more universal models)
purely discursive	verified by and anchored in experience

Some will tell me : "Adequacy is not enough for me. It's truth, that I want, definitive and absolute truth".

But to require isn't sufficient. One has to have the means to realize one's demands. One must choose : either truth, but a purely verbal, metaphysical truth, disconnected from experience, or adequacy, less ambitious, but verifiable, efficient, anchored in experience. In our human condition, we sometimes have the means of improving the adequacy of our models, but we have no verifiable means to go beyond adequacy. And it is adequacy, not truth, that best guarantees the reliability of our knowledge.

Some people would say, further : "What you say is perhaps true for the natural sciences, but in the area of logic and mathematics, there are absolute truths". – Perhaps, but one must not forget that a pure formalism doesn't tell us anything about the world until it has been connected to it by correspondence rules. Once again, it is necessary to verify what formalism applies to what domain in what circumstances. For example, non-euclidean geometries are as coherent as euclidean geometry and only experience will allow to verify which applies to our space and in what conditions. (I know that all of them can fit if the curvature of space is weak and the area small enough, but non-euclidean geometry with strong curvature are not suitable for our space.)

Gonseth has emphasized this point by describing logic as the physics of common objects. He thus stressed the pragmatic anchoring of the formalism. To illustrate this idea, one can take another example, that of arithmetic. The laws of arithmetic are verified only if the elements that one manipulates are individualizable and conserved. If the elements can break up into several elements, or if they can disappear (for example by melting or by sublimating), it can happen that three elements and two elements give four or six elements. One can therefore say that arithmetic is a physics of individualizable and conserved objects.

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Wittgenstein on Knowledge (1949-1951)

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1. Introduction

In this paper, I want to characterize Wittgenstein's epistemology, namely his *contextualism*, presented in his notes published under the title *On Certainty*. This characterization will be made in terms of a comparison with four control points in order to put into light the peculiarities of Wittgenstein's epistemological position. The markers I will use for that purpose will give an indication of the level of conceptual commitment toward four important epistemological theses: holism, internalism, fallibilism, and egalitarianism. These markers have been chosen in function of the power of discrimination they provide regarding the two main trends in the past 40 years (or so) of debate in contemporary epistemology, i.e., foundationalism and coherentism. Using these conceptual markers, one can easily distinguish between strict foundationalism, which shows a low level of each markers, and strict coherentism, which shows a high level of each markers.

2. Holism

The first marker will enable us to evaluate the level of holism present in Wittgenstein's perspective. Holism will be taken here as a conceptual framework into which the properties of particular objects are determined by their belonging to a whole of some sort. In this case, the property of being an instance of knowledge for a given propositional belief will be determined by its relation to a background system of beliefs. About the necessity of such a relation, Wittgenstein is quite clear: "Our knowledge forms an enormous system. And only within this system has a particular bit the value we give it" (§ 410; § 432). Each token of knowledge (K-belief) is a point on this epistemic plan, and it is only in virtue of this holistic relation that one can make a difference between a mere belief and a K-belief. It makes no sense to assess the epistemic value of a propositional belief in isolation, since "what we believe is not a single proposition, it is a whole system of propositions. (Light dawns gradually over the whole.)" (§ 141; § 274)[1]. Each part is strongly connected to the whole, so that only on the basis of the latter is the former possible. Wittgenstein applies this analysis to the counterparts of K-beliefs, i.e., doubts (D-beliefs). Doubts are also parts of a system, outside which they are simply meaningless (§§ 115, 126, 247). The overall balance of a particular belief system is primarily determined by the mutual influence of K-beliefs and D-beliefs, and the quantity of conceptual tension emerging from it. But, as in the case of the expression of knowledge, the expression of doubt can only stem from a specific system, i.e., in the same way a belief that does not connect up with other beliefs (a fragment of a belief system) cannot be turned into a K-belief, such a belief cannot be turned into a D-belief either (§ 312; § 102).

This conception of a belief system suggests the idea that propositional beliefs can be differentiated in terms of their positioning within the propositional system or in terms of their epistemological function. Some beliefs stand in a special position, in that they escape doubt and act as *foundations* (§§ 89, 415, 449, 512). Wittgenstein sees such beliefs as "axis", "hinges", and even "axioms" (§§ 152, 341, 551). And, here, if the emphasis put by him on the systematic character of our beliefs might have pointed toward a coherentist position, now the insistence upon the necessity of basic beliefs tends to point toward foundationalism. Wittgenstein is at some extent in agreement with both positions, at least in what makes their respective specificity.

The epistemological function of these basic beliefs is to open a conceptual space for the deployment of a language-game and, by the same token, to provide a *world-picture*, as Wittgenstein calls it (§§ 95, 167). This conceptual opening is nothing but a semantic move, for the boundary of this space is set by the *truth* of the basic beliefs: "[my picture of the world] is the inherited background against which I distinguish between true and false" (§ 94). Basic beliefs serve as entry points for truth in the belief system (§ 83). They are methodologically immune to doubt, but if someone persists in extending his doubt to his basic beliefs, then he would simply lose his *epistemological yardstic*, as Wittgenstein underlines: "this statement appeared to me fundamental; if it is false, what are 'true' or 'false' any more?!" (§ 514). This is precisely where speakers of a language-game do meet: in their taking true a number of propositions. If they do not share that minimal requirement, they cannot take part to a common language-game[2] (§§ 80, 628).

How does one acknowledge the truth of these basic beliefs? In that regard, Wittgenstein does not follow the foundationalist line of thought. The truth of the basic beliefs cannot be grounded in the beliefs themselves (strict foundationalism) or in their cognitive source (reliabilism). These beliefs are declared true *for the sake of the game*; this is a methodological requirement. Their truth is what renders possible *action* in a language-game: "Giving grounds, however, justifying the evidence, comes to an end; – but the end is not certain propositions' striking us immediately as true, i.e. it is not a kind of *seeing* on our part; it is our *acting*, which lies at the bottom of the language-game" (§ 204). Just like rules, these basic beliefs "form the basis for action" (§ 411) in permitting some moves and prohibiting others in a particular conceptual space (§ 95).

This mutual dependence between rules and games ties strongly the basic beliefs with the rest of the belief system itself, so that it is not possible to conceive them (and their truth) outside the (vague) boundaries set by the corresponding language-game. The basic beliefs are not only supporting the belief system, but they are supported by it as well: "And one might almost say that these foundation-walls are carried by the whole house" (§ 248). This bi-directional relation of support is characteristic of a holistic system and remains incompatible with standard foundationalism[3]. For Wittgenstein, even in a paradigm of a foundationalist system (unidirectional) as an axiomatic system can one observe this mutual support that connects

[1] "It isn't a proposition which I put against reality as a yardstick, it's a system of propositions" (*Philosophical Remarks*, § 82).

[2] The Davidsonian program of a theory of interpretation based on a theory of truth finds here an additional justification.

[3] For a non-strict foundationalist perspective on mutual support, see S. Haack (1993) and her crossword puzzle analogy.

axioms and theorems (§ 142)[4]. As a result, the Wittgensteinian analysis of the properties of a belief system exhibits a high level of holism.

3. Internalism

Another bone of contention between coherentism and foundationalism is the location of the source of epistemic normativity. And if the Wittgensteinian perspective had given the impression in the previous section to be more in line with the coherentist position – while not being reducible to it –, with respect to the internalist issue it shows more of a foundationalist trait. For Wittgenstein, the source of epistemic justification, namely the basis for the use of the K-predicate in a given context, cannot lie only inside one's own belief system: "When I ask 'Do I know or do I only believe that I am called...?' it is no use to look within myself" (§ 490). And the reason is that: "An inner experience cannot shew me that I *know* something"(§ 569). The notion of context puts into light the *environment* of the epistemic agent – as opposed to the notion of system within a strict coherentist framework –, and that involves not only a plurality of epistemic agents but also something that is partially shared by each and everyone of them. The use of the K-predicate is well regimented by the contextual rules that govern any particular language-game and these *practices* are exactly what is shared by a *community* of participants. In that perspective, to know something and to be acknowledged as such is a community affair, as Wittgenstein points out: "If someone says he *knows* something, it must be something that, by general consent, he is in a position to know" (§ 555). One cannot know alone[5]. Epistemic normativity, like linguistic normativity, can only take place, or emerge, within a common sphere of practices (§ 298). In that regard, the position of Wittgenstein shows a low level of internalism.

4. Fallibilism

Concerning the possibility of being wrong when using the K-predicate, Wittgenstein is affirmative: "It might surely happen that whenever I said 'I know' it turned out to be wrong" (§ 580). The main difficulty here consists in overcoming the apparent incompatibility between the meaning of the K-predicate and the acceptance of fallibilism. In order to see how the two claims are combined, we need to consider two distinct aspects involved in the problem: the factual one and the practical one. These aspects require a distinction between falsity and misuse. It is possible for a statement to be true and still to be result of a misapplication. For instance, "I believe my name is Y.B." is true – in fact, both the metastatement and the statement are true –, but the use of "I believe" instead of "I know" is incorrect in the language-game with people's name *under normal circumstances* (§§ 425, 622). And, of course, a statement may be the result of a correct use while still being false – only the statement in this case (§§ 12, 425). The use of the K-predicate does not ensure infallibility, but rather it allows a speaker to make the following inference: If Ks(*p*), then *p*. The inference may turn out to be invalid, and depending on the level of entrenchment of *p* in the system this could affect the boundaries of the language-game at stake.

Wittgenstein's position displays consequently a high level of fallibilism, which in turn entails a high level of revisability. It may be the case that *in principle* "no statement is immune to revision", to recall the Quinean adage, but *in practice*, some statements must be protected against revision (or doubt) in such a way that a context for a definite language-game may be set (§§ 492, 497, 620). Wittgenstein illustrates this subtle balance and interaction between what actually can and what cannot be revised by means of an analogy with the relative flux of waters and the relative stability of the river-bed: "The mythology may change back into a state of flux, the river-bed of thoughts may shift. But I distinguish between the movement of the waters on the river-bed and the shift of the bed itself; though there is not a sharp division of the one from the other. [...] And the bank of that river consists partly of hard rock, subject to no alteration or only to an imperceptible one, partly of sand, which now in one place now in another gets washed away, or deposited" (§§ 97-99). This phenomenon of erosion occurs within any language-game quite naturally as a part of its normal life. The relation between what fixes the boundaries of a conceptual space and what is moving within it is dynamic and subject to change: "It might be imagined that some propositions, of the form of empirical propositions, were hardened and functioned as channels for such empirical propositions as were not hardened but fluid; and that this relation altered with time, in that fluid propositions hardened, and hard ones became fluid" (§ 96). This important feature of Wittgenstein's contextualism enables him to escape the charge of relativism, because despite the acknowledgement of the relative process converting partially the stable into flux, and vice-versa, he claims that knowledge remains possible in as much the use of the K-predicate is conceived as being always contextualized.

5. Egalitarianism

The last control point will provide another perspective on the relation between propositional beliefs and a belief system. If the status of a propositional belief can be revised so that it can be at one point a "hardened proposition" and at another a "fluid proposition", does this imply that initially every proposition displays some kind of indifference to enter into one particular structure as opposed to another? One may approach this difficulty otherwise: can any proposition express something by its own semantic resources (conceived in isolation) about its own positioning in a given belief system[6]? Is the overall belief system initially an *egalitarian* system, where each particular belief has an equal epistemic status? Here again, the solution to this difficulty will indicate the relative position of Wittgenstein's perspective on a scale that goes from strict foundationalism to strict coherentism. It is no surprise that Wittgenstein expresses the need for restriction: "But if someone were to say 'So logic too is an empirical science' he would be wrong. Yet this is right: the same proposition may get treated at one time as something to test by experience, at another as a rule of testing" (§ 98). This stand suggests that propositions of one language-game cannot be exported to another without some epistemic alteration, but that within the same language-game a given proposition may be equally available to occupy different positions (or functions). And even considering the latter case, Wittgenstein shows some hesitation: "Isn't what I am saying: any empirical proposition can be transformed into a postulate – and then becomes a norm of description. But I am suspicious even of this. The sentence is too general. One almost wants to

[4] This is an interesting echo of a Tractarian intuition about the number of axioms required in a formal system (§§ 6.127, 6.1271).
[5] This parallels the private language argument (*Philosophical Investigations*, §§ 243-315).
[6] So, in that respect, no proposition would have any special epistemic status over the others. That is a Tractarian idea: "All propositions are of equal value" (§ 6.4).

say 'any empirical proposition can, theoretically, be transformed...', but what does 'theoretically' mean here? It sounds all too reminiscent of the *Tractatus*" (§ 321). This hesitation might be better understood as an implicit reiteration of the recognition that there is something wrong in thinking that a proposition can be conceived in isolation of a system in such a way that it could be seen as indifferent toward possible uses. This is an extrapolation we cannot make, a proposition (or a set of propositions) we cannot conceive, this is simply an illusion. The epistemic status (or function) of a given proposition is revisable but only within the limits of the context the proposition belongs to. As a consequence, Wittgenstein's conception displays finally a low level of egalitarianism.

6. Conclusion

Now, considering the results of the four conceptual markers, we end up with a high level of holism and fallibilism, and a low level of internalism and egalitarianism. This puts Wittgenstein's contextualism somewhere between a coherentist position and a foundationalist one. An interesting aspect of the Wittgensteinian analysis is that in a certain way it makes justice to the two apparent incompatible intuitions behind coherentism and foundationalism[7]: the intuition that the epistemic value of a propositional belief comes from its position (or function) within a belief system, and the intuition that some propositional beliefs have to assume a foundational function in order to make possible and to specify a particular belief system. This, as it stands, is an important contribution to contemporary epistemology.

Another aspect of this contribution consists in the rejection of some sort of Tractarian program extended to epistemology. In the same manner Wittgenstein had abandoned (1929) the project of finding the general form of a proposition, we are invited to abandon our quest for a general form of knowledge. There is no such a thing as a unique model of epistemic justification that would apply to each conceptual domain. And very much like the notion of language in the *Philosophical Investigations* has been approached by means of analogies with games, forms of life, family resemblances, the notion of knowledge should be approached with the aid of analogies with world-pictures, mythologies, and in particular contexts, as Wittgenstein remarks: "Only the accustomed context allows what is meant to come through clearly" (§ 237).

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[7] In a different manner than S. Haack (1993) does, for instance.

On Horgan's Causal Compatibilism

Janez Bregant, Maribor

Introduction

It is quite obvious why the antireductionist picture of mental causation, which rests on supervenience, is such an attractive theory. On one side it secures the mental a preservation of its unique and different nature; on the other side it tries to place the mental in our world in a way that is compatible with the physicalistic view.

But Kim's argument from supervenience reminds us that while trying to do so the antireductionists face the following dilemma: if mental properties have causal powers we risk a violation of the causal closure of the physics and threaten our physicalistic position; if they do not have them we adopt epiphenomenalism, which denies the mental causal powers of any sort. So, either we violate the causal closure of the physics or we adopt epiphenomenalism. We can write it as an argument in the form of a constructive dilemma and may call it *the causal dilemma*:

(1) Either mental properties have causal powers or they do not.

(2) If they have them we violate the causal closure of the physics.

(3) If they do not have them we adopt epiphenomenalism.

∴ (4) Either we violate the causal closure of the physics or adopt epiphenomenalism.

It is clear that for the anitreductionists who want to preserve physical monism and mental realism none of the horns represents a true alternative and that the causal dilemma should be avoided at all costs.

The first part of this article describes Horgan's antireductionist answer to the causal dilemma, the view that he calls causal compatibilism, which is supposed to save mental causation. The second part introduces my objection to Horgan's solution based on Kim's distinction between micro-properties and micro-based properties showing that causal compatibilism leads any antireductionist to unbearable consequences, which leaves the causal dilemma unsolved.

1. Horgan's Answer to the Causal Dilemma

Horgan's answer to the causal dilemma consists of three ideas that together represent a non-reductivist solution of mental causation. Let's explain the first one by the help of the following: suppose that my desire for water (event a_1) causes the drinking of it (event b_1). Such a causal explanation emphasises the dependence of the effect b_1, described as a token of type *b* events, on a cause a_1, described as a token of type *a* events. Usually such a dependence requires for a_1 and b_1 to be a part of a counterfactual dependence, that directly connects *a* types (desires for water) with *b* types (drinking of water) in the sense that if *a* appears *b* appears also and if *a* does not appear *b* does not appear either, which could be symbolised as $a \mathrel{\square\!\!\rightarrow} b$ and $\neg a \mathrel{\square\!\!\rightarrow} \neg b$. But in Horgan's opinion this is not enough for a causal explanation. He thinks that a similar but much more general counterfactual dependence connecting desires and drinking (or beliefs and drinking, or intentions and drinking, or sensations and drinking, in short, whole groups of mental phenomena and actions) must exist, and he calls it *a pattern of counterfactual dependence*. His first idea is then the claim that we must, when analysing the causal relevance of properties, take into account also their capacity for being part of such counterfactual relations.

The second idea constituting his picture of mental causation is hidden in the following passage: "Which kinds of dependence patterns are most typical will be a context-relative matter, governed largely by the interests of those doing the explaining and inquiring." (Horgan 2001) One crucial feature of context which must be taken into account, when ascribing the causal efficacy to properties is that it involves factors and standards. The former determines the latter in the sense that, for example, to say when it is cold outside depends on being Slovene or Eskimo. The choice of vocabulary with which we want to describe a causal chain is one of the factors affecting a change of a context. Horgan calls them *context parameters* and thinks that they have a crucial role in event causation because they determine at which level of causal explanations we are and what properties we mention as causes. He says: "If we pose our questions and offer our answers in psychological vocabulary, for instance, then normally the relevant patterns of counterfactual dependence will be ones involving psychological properties /…/." (Horgan 2001) His second idea is then the claim that the notion of causation depends on parameters; by changing them we change the context; and by changing the context we change a type of causal explanation

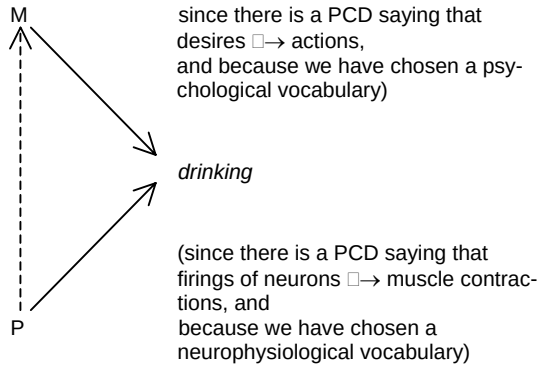
Horgan's third idea composing his solution of the causal dilemma is based on the belief that there are different patterns of counterfactual dependence describing the causal activity of the same phenomenon in different vocabularies. The vocabulary that we choose simply depends on the ontological level at which we are and on the needs that it has. A physical effect, drinking for example, could be explained in neurophysiological terms as a consequence of neuron firings, or in psychological terms as a consequence of thirst. It is more than interesting that in his opinion such different causal explanations do not exclude each other but are, since they represent robust patterns of counterfactual dependence at different ontological levels, compatible.

The three ideas combined give us a picture of causation according to which the same phenomena can be parts of different patterns of counterfactual dependence; they appear at different ontological levels and it is the context that determines which of them is the most appropriate for the causal explanation. But sometimes the same phenomenon can be described in terms of different ontological levels producing different causal explanations that do not exclude each other. Their compatibility in Horgan's opinon originates in supervenient relations presumably holding among *different* ontological levels. According to them psychological patterns depend on lower located physical patterns. He writes: "/…/ the mental properties that are causal properties at the psychological level have their causal efficacy via the causal efficacy of physical causal properties [that are causal properties at the physical level] that realize them." (Horgan 2001) Therefore causal powers

of mental properties are not over and above causal powers of physical properties, and this is why the causal closure of the physical domain is not violated.

Horgan's solution of mental causation could be illustrated by the following diagram (suppose again that my desire for water *M* causes *drinking*; note that *PCD* stands for the pattern of counterfactual dependence):

psychological explanation



physical explanation

(The broken arrow denotes a relation of supervenience; the solid arrows designate a relation of causation.)

This looks very much like a case of causal overdetermination but Horgan denies this by saying that it is true that "given the specific level of description that is contextually appropriate for causal explanation, several properties are co-instantiated, all at the relevant level of description, each of which is such that its instantiation is independently causally sufficient (in the circumstances) for the effect." (Horgan 2001) But since causal overdetermination is something that arises when two causes appear at the same time at the *same* level mental, properties and their realizers occurring in different patterns of counterfactual dependence holding at different ontological levels do not face this problem.

It seems that such a solution of mental causation, called *causal compatibilism*, secures the mental a causal status. It supposes the existence of real causation at different ontological levels and says that despite the causal closure principle, causal explanations of the physical level are not incompatible with causal explanations of the psychological level.

2. Objection to Horgan's Causal Compatibilism

Does Horgan's answer really avoid the dilemma posed by Kim? Fortunately, Horgan does not underestimate metaphysics, as some philosophers suggest; on the contrary, he believes that the compatibility of causal explanations at different levels rests on supervenience. However, the idea that supervenience can secure the mental the causal efficacy via the physical without the worry of causal overdetermination turns out to be highly problematic and makes his answer controversial. Why?

Horgan says that mental properties are causally efficacious via physical properties and therefore there is no danger that the mental, while causing the physical, violates the causal closure principle. But isn't this something that the supervenient model of causation supposes in the first place in order to be a real non-reductivist alternative to other solutions? Of course. The supervenient model of causation claims that a mental property (*M*) supervenes on a physical property (*P*) and that, for example, drinking supervenes on a muscle contraction; it further says that *M* causes drinking via *P*, which causes the relevant muscle contraction, and that this is enough to avoid a violation of the causal closure principle. But Horgan is aware that this is nothing new and that the real challenge is yet to come, namely, how to deal with the problems accompanying the supervenient model of causation: a critique that even on this model we must still deal with two different and sufficient causes of drinking, *M* and *P*. This makes the claim that the supervenient model of causation avoids the violation of the causal closure of the physics highly doubtful.

However, Horgan thinks that we can very well avoid causal overdetermination; his line of thought is represented by the following passage: "i.e., even after we contextually fix the operative score in the causal-explanation game in a way that restricts the relevant patterns of counterfactual dependence to those involving properties at a specific level in the hierarchy of the sciences, we still find several properties instantiated that each figure in the contextually relevant dependence patterns in a way that makes each property-instantiation an independently causally sufficient condition for the effect." (Horgan 2001) Again, the reason that we do not end up with causal overdetermination is, in his opinion, the fact that mental properties and their physical realizers appear in different patterns of counterfactual dependence at different ontological levels, whereas causal overdetermination always emerges when two causes occur at the same time, at the same level.

And why is this problematic? Well, one might say that Horgan's belief about the compatibility of such different causal explanations involving different causes, which rests on supervenient relations that presumably hold among properties of different levels, is simply false. This appeals thereby to Kim's distinction between microproperties and micro-based properties proving that supervenience is a relation that holds among properties of the same level and not among properties of different levels. But before we get to his idea, something else must be said. It is widely accepted that physical realization involves a claim which says that macro or second-order properties (a macroproperty is for example a colour) are realized by first-order or microproperties (a microproperty is for example a spinning of quarks). Morevoer, the understanding of the notion of a second-order property, to which we usually appeal states the following: "For something to have a second-order property is for it to have one or another of its realizers, that is, a first-order property satisfying the specification that defines the second-order property." (Kim 2001)

But this is bad news for Horgan since according to this we have, when going to the kitchen to get a glass of water, both properties: we are thirsty and the neurons that realize our thirst are firing. It seems that in the layered model of the world a second-order property and its realizer appear at the *same* level and that they are properties of the same object. Therefore, while speaking about second-order properties and their realizers we do not move either upward or downward but always stay at the same level. Kim says: "In general, supervenient properties and their base properties are instantiated by the same objects and hence are on the same level« and he continues »so microphysical, or mereological, supervenience does not track the micro-macro hierarchy." (Kim 2001)

The reason for the mistaken belief that higher-order properties supervene on microproperties, which may make us think that supervenience is a relation among properties of different levels, lies in a too strict understanding of supervenience. We become confused because realizers are usually described in terms of their microstructure, which leads us to the false belief that they are microproperties appearing at lower levels. But in fact realizers belong to higher levels, merely their description is different from those of other higher-order properties, and therefore also represent macroproperties. Transparancy, for instance, is a macroproperty which can be realized only by molecules having the right combination of atoms, i.e. water. But its realizer is, despite being described as H_2O, a macroproperty, or at best *micro-based property*, since it is a group of atoms that have a property being transparent only if formed in this special way.

We could speak about real microproperties realizing macroproperties and about changing levels *only* if transparancy were realized by its single atoms, or going even lower, by parts constituting them. But this can't happen since transparancy is a property that can be realized only by molecules with the right structure. It is a feature of molecules and not atoms or quarks and it can appear only at the molecular level, which makes it impossible for its realizer to belong to any other level but the molecular one. So, when we say that Peter's desire (*M*) supervenes on his microphysical properties (*P*) we think only of its dependence on his micro-based properties (*not* microproperties) and relations holding among them. *P* on which *M* supervenes is therefore "the property of having such-and-such proper parts that have such-and-such properties and are configurated by such-and-such relations." (Kim 2001) The property that they have as a whole, e.g. to be *P*, does not belong to any of its parts, just like the property that two atoms of hydrogen and one atom of oxygen have as a whole, e.g. to be H_2O, does not belong to any of its single atoms.

Supervenience is therefore a relation that holds at the *same* level and since causal overdetermination also emerges at the same level it looks like we are only a step away from excluding the mental from causal explanations.

The dilemma that Horgan faces now arguing for causal compatibilism is the following: either keep claiming that the compatibility of different causal explanations rests on supervenient relations that hold among them, which leads to causal overdetermination; or give up supervenient relations as something that can secure such compatibility and thereby risk having no metaphysical ground on which to base his solution of mental causation, regardless that this seems to be necessary for it. In the standard form, the dilemma could be written as follows:

(1) Either we accept supervenience as a relation securing the compatibility of different causal explanations or we give it up.

(2) If we accept it we end up with the causal exclusion of the mental (since supervenience as well as causal overdetermination are features of the same level supervenience can't make different causal explanations compatible with each other).

(3) If we give it up we threaten our physicalistic view (because we do not meet a required condition for physicalism).

∴ (4) Either we end up with the causal exclusion of the mental or threaten our physicalistic view.

Since none of the horns is acceptable for the antireductionist like Horgan we might conclude that his solution of mental causation which supposes the compatibility of different causal explanations of the same phenomenon on the basis of supervenient relations holding among properties of different levels, does not represent a real non-reductive alternative, which leaves Kim's causal dilemma, at least from the antireductionist point of view, still unsolved.

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Bewitched by the Word “Know”

William H. Brenner, Norfolk / VA

I

You ask me if our friend is in town, I say yes*;* you ask, “Are you sure?,” I reply, “I *know* it – I just installed him in our guest room!”—*What if you're mistaken?*—One can't be making a mistake about something like that!---*So you're claiming infallibility?*—Saying "I can't be making a mistake" was just a way of saying "I know ..."; I wasn't alleging a ridiculous “justification” for my claim!---*But only the infallible possession of truth really justifies a claim to knowledge*.—The “I know ...” is just an instrument with a limited, practical purpose -- a purpose which the following expansion of the “builder's language" helps to bring out:

> The number [of building stones] is sometimes estimated, sometimes established by counting. Then the question arises “Do you believe there are as many stones as that?,” and the answer “I know there are – I’ve just counted them.” But then the “I know” could be dropped. If, however, there are several ways of finding something out for sure, like counting, weighing, measuring the stack, then the statement “I know” can take the place of mentioning *how* I know. [Wittgenstein 1969, sec. 564]

---*I'm inclined to doubt that what you are saying is particularly relevant to the philosophical concept of knowledge*.—According to your philosophical concept, claiming to know (not merely believe) something entails a certain claim to infallibility – a claim that seems to me to conjure up the idea that whenever I make a knowledge-claim, I

> express a relation, not between me and the sense of a proposition (like ‘I believe’) but between me and a fact. So that the *fact* is taken into my consciousness. (Here is the reason why one wants to say that nothing that goes on in the outer world is really known, but only what happens in the domain of what are called sense data.) [*ibid*, sec. 90]

This, however, is a false and mischievous picture: false because it misrepresents the use of the word "know" in our language and the role of the concept in our lives; mischievous because "the problem of our knowledge of the external world" develops out of it. Behind that pseudo-problem is

> a picture of knowing as the perception of an outer event through visual rays which project it as it is into the eye and the consciousness. [Given this picture,] the question at once arises whether one can be *certain* of this projection. [*ibid*.]

Although the picture of knowing as "having the fact known *within one's mind*" is a wrong one, it does point to a use for sentences of the form "I *know* that such-and-such is so!," namely, that in which they mean: "It’s so -- or else I’ve lost my mind!" This is the kind of – unusual but philosophically striking -- use we can imagine for the sentences Moore brought to our attention.

"I *know* that I have two hands," said Moore in “Proof of an External World,” presenting this as a counterexample to the then-popular philosophical thesis that no empirical proposition is *known* to be true. Wittgenstein thought Moore's example important -- though not for the reason Moore presented:

> If I wanted to doubt whether this was my hand, how could I avoid doubting whether the word "hand" has any meaning? So that is something I seem to *know* after all.
>
> But more correctly: The fact that I use the word "hand" and all the other words in my sentences without a second thought ... shows that the absence of doubt belongs to the essence of the language game, that the question "How do I know ... “ drags out the language game, or else does away with it. [*ibid*, secs. 369-370]

“My name is Bill; I’m now using my two hands ... “: only if I am *mad* can I take anything else to be possible; for if I’m wrong here, I must mistrust all my judgments. Although such propositions “have the character of experiential propositions, ... [their] truth is unassailable for me. That is to say, if I assume that they are false, I must mistrust all my judgments” (Wittgenstein 1992, p. 79).—*“Propositions having the character of experiential propositions ... ”?* ---I take it that Wittgenstein wants to contrast them with those paradigmatically non-empirical propositions of the philosophical tradition sometimes called “analytic truths.” Now Wittgenstein clearly doesn’t go along with the common identification among philosophers of the “unassailable and certain” with that narrow range of propositions, nor with the common identification of the factual-empirical with the “falsifiable and merely probable.” In this, by the way, he is at one with Cardinal Newman, whom he mentions in the first section of *On Certainty*. “We are absolutely certain, beyond any possibility of doubt,“ remarked Newman in his *Grammar of Assent*,

> that Great Britain is an island.... There is no security on which we should be better content to stake our interests ... We are as little exposed to the misgiving, “Perhaps we are not on an island after all,” as to the question, “Is it quite certain that the angle in a semi-circle is a right angle.” ... [*Y*]et are the arguments producible for it in black and white commensurate with this overpowering certitude about it? [Newman 1955, p. 234]

While Wittgenstein would acknowledge that there are philosophers who say that it is just extremely probable that Great Britain is an island, he would also say that this makes little difference in their lives. Newman would have said that these philosophers give only “notional assent” to the view they assert, not “real assent.” Wittgenstein, however, would question whether they have really asserted anything at all, reasoning that when familiar words are abstracted from the familiar circumstances of their everyday employment, one can no longer be certain what, if anything, they’re supposed to mean.

II

Although words in a philosophical problem have the *look and sound* of words in an everyday question, they actually lack any clear sense -- or any clear sense the philosopher will want to avow. Recall the philosopher who explained the words “All empirical propositions are probable at best” by pointing out that every empirical proposition is logically contingent. Has he really done any more than stipulate a definition for “merely probable,” presenting a tautology to justify his stipulation? He will want to say *Yes!* And we will need to press him to explain *what* more. An important and

distinctive *leitmotiv* in Wittgenstein’s thinking, early and late, is that no clear answer to such a “*What* more? question” is going to satisfy the philosopher *qua* philosopher.

In Wittgenstein’s view, philosophical problems take us to “the limits of language” and are therefore completely soluble:

> If I say: here we are at the limits of language, then it always sounds as if resignation were necessary, whereas on the contrary complete satisfaction comes, since no question remains. The problems are dissolved in the actual sense of the word – like a lump of sugar in water. [Wittgenstein 1993, p. 183]

> The [true] aim of philosophy is to erect a wall at the point where language stops anyway. [*ibid*, p. 187]

Oriented toward that aim, philosophy must struggle with “the oldest images that are engraved into our language itself” *(ibid.*, pp. 183-184*).* For it is these images that generate and sustain the illusions of sense that lure thinkers over the edge of language. A notably seductive image, one Wittgenstein highlighted in *Philosophical Investigations* but struggles against in all his writings, is that of the meaning of a word as something we might “point to inwardly” and analyze without reference to what is going on “outwardly,” in the stream of human life and practice. For instance, in *On Certainty* we find him working against the notion that the objective certainty of Moore’s “Here is one hand” is something that might be understood in abstraction from what is going on outwardly, in one’s life:

> My life shows that I know or am certain that there is a chair over there, or a door, [or a hand] and so on—I tell a friend e.g. “Take that chair over there, “Shut the door,” [“Hand over the clicker”], etc. etc. [Wittgenstein *1969*, sec. 7]

When Moore insists he *knows* these things, however, “I know” gets misused:

> *I know I’ve two hands.*--- Nonsense! You’re holding them up and showing them to us.—*So I* don’t *know it, then?!*--- Neither the question nor the assertion makes sense. Any more than the assertion “I am here,” which I might yet use at any moment, if suitable occasion presented itself.... It is only in use that the proposition has its sense. And “I know that I have two hands,” used in an *unsuitable* situation, seems not to be nonsense ... only because one can fairly easily imagine a situation to fit it ... [*ibid*., sec. 10, modified]

And through that misuse “a queer and extremely important mental state seems to be revealed” (sec. 6) – one differing from ordinary beliefs in that the fact believed is “taken into my consciousness” and therefore indubitable. Thus Moore, in his philosophical use of “I know,” thought he was describing a state of affairs guaranteeing what is known. His mistake “really come down to this: that the concept ‘know’ is analogous to the concepts ‘believe’ ... in that the statement “I know ...” can’t be a mistake” (*ibid*., sec. 21).

In his notorious argument against external-world skeptics (“Here is one hand, etc.”), Moore’s mistake was to assume that they asking a real question, an assumption stemming from the fact that the words, “Do physical objects really exist?” look and sound like a (much more general) instance of a familiar sort of question -- “Do extra-terrestrial life forms really exist?,” for instance. This likeness led him to reply to the skeptic as if he were merely reminding him of something obviously true -- whereas, in fact:

> No such proposition as “There are physical objects” can be formulated because “physical object” is a logical concept (like color, quantity ...) [*ibid*, sec. 90].

A logical concept is an instrument of language having a purely grammatical function, that of helping to explain the meaning of a word by indicating “the post in the language where it is stationed” (*PI*, sec. 257). If, as in a well-known *Blue Book* example, I try to explain a new word, “TOVE” to you by pointing to something and saying, “This is called ‘TOVE,’” you may have to ask me what kind of name “TOVE” is supposed to be, what “post” I’m meant to hitch it to. Is it a physical-object word, a color word, etc.etc.?

In *Philosophical Remarks*, Wittgenstein explains that what he once called *simples* “were simply what I could refer to without running the risk of their possible non-existence” (p. 72). Demystifying this in *Philosophical Investigations*, he compares “simples” with the samples used in ostensive definition. “What looks like it *had* to exist,” he explains, “is .... a paradigm in our language game; something with which comparison is made” (sec. 50). What *On Certainty* adds to this can be summed up in the following dialogue, based (with stylistic and interpretative modifications) on secs. 477, 480, 4, 204, 18, and 402:

> *Mustn’t one know that the objects whose names one is learning by ostensive definition exist?*—Why should the language game rest on some kind of knowledge? Isn’t it enough that experience doesn’t later show the opposite?—*In teaching a child to use the common noun “door,” one might point to a door and say things like, “Big door!” Doesn’t he thereby come to know that a door exists?*—His behavior shows that he is certain there’s a door over there: he knows what to do when we ask him to close it, for example. What I want to deny is that this sureness in the child’s behavior, this “knowing what do,” *rests on* knowledge. For I can see no sense in saying that someone’s sureness in action rests on something he knows (or believes) to be true unless I believe that he’s learned how to ask and answer questions of the form, “How do you know?” And I’m assuming that at a small child’s stage of development, this will not be so -- so that, for him, knowledge that doors, etc. exist is never something *distinct from* the sureness he shows in action. It’s not a kind of *seeing* on our part but our *acting* that lies at the bottom of the language game.

“There are physical objects, colors, shapes, sensations, ...”: this sentence might function as a grammatical remark about the logical heterogeneity of words ordinary grammar lumps together as nouns. I think it important to see, however, that it does not function as do the “common-sense truisms” Wittgenstein used to describe our *Weltbild.* Although not in everyday use, such truisms (e.g., that the earth is very old) all seem to have an *imaginable* empirical use. “There are physical objects, etc.,” in contrast, has only the potentially-misleading *surface grammar* of an empirical statement, never its actual or imaginable employment as an empirical proposition.

The function in language of *physical object* is that of a variable. Just as “2" and “3" are values of the variable *number*, so “hand” and “book” are values of this variable. But in philosophy we tend to overlook the actual “variable” function of a words like *physical object* and to treat it as if it functioned as a value of some super-variable (“being”). As early as the *Tractatus* Wittgenstein was combating the illusion that it makes sense to say, “There are (or there aren’t) physical objects in the world” as one says (for instance), “There are (or are not) books in the locker.”

“Do physical objects exist?” That’s one of the problems Wittgenstein saw as distinctively philosophical. Such problems differ from others in that they “dissolve like lumps of sugar in water” once we carefully attend to actual use of the relevant words.— *But it never seems to turn out that one’s attention has been* careful enough *to dissolve every lump!*—Yes. Something always settles out that looks like a philosophical problem and calls for further investigation.

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Über erkenntnistheoretische Implikationen der algorithmischen Informationstheorie

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Seit den Unvollständigkeitssätzen Kurt Gödels ist wahrscheinlich kaum einem Resultat im Bereich der Logik so viel Aufmerksamkeit zuteil geworden wie den Ergebnissen Gregory J. Chaitins, welcher neben A. N. Kolmogorov und R. J. Solomonoff zu den Begründern der *algorithmischen Informationstheorie* zählt. Die für das Folgende relevanten Ergebnisse Chaitins beweisen wie Gödels Theoreme die Unvollständigkeit bestimmter formaler Systeme. Im Gegensatz zu Gödels Beweisen spielt bei denjenigen Chaitins allerdings der Begriff der *computational complexity* bzw. der Kolmogorov-Komplexität eine zentrale Rolle. Unbestritten haben Chaitins Ergebnisse viel zum Interesse an diesem Begriff und der auf ihm aufbauenden algorithmischen Informationstheorie beigetragen. Sehr wohl umstritten sind demgegenüber aber der tatsächliche mathematische Gehalt und die philosophische Bedeutung von Chaitins Theoremen.

Aus der Perspektive traditioneller philosophischer Fragestellungen besteht die interessanteste Behauptung Chaitins wohl darin, Fragen aufgeworfen zu haben, welche Grenzen des (mathematischen) Wissens aufzeigen: „These questions are completely beyond the power of human reasoning. Mathematics cannot deal with them“ (Chaitin 1987, 163). Ausgerechnet dieser Behauptung ist aber in den kritischen Repliken auf Chaitins Thesen so gut wie keine Beachtung zuteil geworden. Dies ist umso verwunderlicher, bedenkt man das gegenwärtige Interesse an der Frage nach etwaigen Begrenzungen unseres Wissens; vgl. etwa (Priest 2002) und (Williamson 2000). Das Folgende will daher der Frage nachgehen, ob erfolgreich für Chaitins erkenntnistheoretische These argumentiert werden kann oder nicht.

Argumentationsversuche für die Begrenztheit unseres Wissens sind selbstverständlich keine Seltenheit. Geht man etwa davon aus, dass alles, was wir wissen können, sprachlich formulierbar sein muss, zeigt etwa Patrick Grim mit einem einfachen Diagonalargument, dass es mehr Tatsachen geben muss als die, von denen wir wissen können (Grim 1991). Auch das *Paradox of Unknowability*, welches erstmals von Fitch veröffentlicht wurde (Fitch 1963), scheint prinzipielle Grenzen des Wissens aufzuzeigen, ohne dass Genaueres darüber gesagt werden könnte, wo diese Grenzen verlaufen; vgl. die ausführliche Diskussion in (Williamson 2000). Gemeinsam ist diesen Ansätzen, dass sie für die Begrenztheit von Wissen argumentieren, aber nicht spezifizieren können, *inwiefern* unser Wissen begrenzt sein sollte. Ein interessanter Beitrag zur Debatte bestünde nun darin, zumindest etwas genauer anzugeben, *wo genau* die besagten Grenzen verlaufen. Tatsächlich scheinen Chaitins Überlegungen in dieser Beziehung über die erwähnten Argumentationen hinauszuführen, insofern er eine Problematik namhaft machen kann, von der er dann zu zeigen versucht, dass sie letztlich unerforschlich ist. Chaitins Ansatz scheint somit durchaus spezifizieren zu können, *wo* (unter anderem) Grenzen unseres Wissens verlaufen.

Chaitins Idee, erkenntnistheoretisches Kapital aus seinen Unvollständigkeitsresultaten zu schlagen, liegt nicht so fern, berücksichtigt man die Vielzahl der Versuche, erkenntnistheoretische Konsequenzen aus Gödels Unvollständigkeitstheoremen zu ziehen. Insbesondere hinsichtlich der Grenzen unseres Erkenntnisvermögens wurde erst kürzlich ausgehend von Gödels Resultat ein solcher Versuch von Haim Gaifman unternommen (Gaifman 2000).

Das Theorem Chaitins, auf welches sich seine erkenntnistheoretischen Behauptungen stützen, hat die bemerkenswerte reelle Zahl Ω zum Gegenstand. Ω kann aufgefasst werden als Haltewahrscheinlichkeit eines universellen Computers. Im Folgenden legen wir uns auf einen universellen Computer U fest, welcher nur binäre präfixfreie Programme akzeptiert (eine (Programmier-)Sprache L wird *prefix-frei* genannt gdw. kein Wort von L ein Prefix eines anderen Wortes von L ist). $|p|$ bezeichne die Länge eines Programms p. Die *Haltewahrscheinlichkeit* von U ist nun

$$\Omega = \sum_{U(p)\,hält} 2^{-|p|}$$

Dieser Definition liegt die Intuition zugrunde, dass Ω die Wahrscheinlichkeit ist, dass U hält, wenn sein Programm durch eine Folge von Münzwürfen generiert wurde. Zentral hinsichtlich Ω ist, dass seine binäre Darstellung eine nicht komprimierbare Folge bildet; vgl. etwa (Li und Vitanyi 1997, 217–218). Ausgehend von dieser Tatsache kann das folgende Unvollständigkeitstheorem Chaitins bewiesen werden, welches als Ω-*Theorem* bezeichnet werden soll. Was hinsichtlich Ω gezeigt werden kann, ist, dass Ω eine reelle Zahl ist, so dass $0 < \Omega < 1$ gilt (der Einfachheit halber wird mit „Ω“ im Folgenden sowohl die reelle Zahl $0{,}a_1a_2a_3$ ... als auch die Folge $a_1a_2a_3$ ... bezeichnet). Chaitins Ω-Theorem zeigt jedoch, dass die Anzahl der Bits von Ω, welche wir im Rahmen einer Theorie bestimmen können, begrenzt ist:

> **Ω-Theorem.** Jede rekursiv axiomatisierbare formale Theorie erlaubt lediglich endlich viele (unzusammenhängende) Bits von Ω zu bestimmen.

Der Beweis findet sich etwa in (Chaitin 1987, 150–151) oder (Calude 1994, 195–196).

Chaitin argumentiert nicht explizit für die Unerforschlichkeit von Ω, sondern scheint Letztere auf die Zufälligkeit von Ω zurückführen zu wollen (wobei er die Zufälligkeit einer Folge mit deren Nicht-Komprimierbarkeit identifiziert) (Chaitin 1987, 164): „Ω is about as random, patternless, unpredictable and incomprehensible as possible; the pattern of its bit sequence defies understanding.“ Ein solcher Argumentationsansatz ist allerdings nicht unproblematisch, da eben fraglich ist, ob Chaitins Begriff eine gelungene Formalisierung des umgangssprachlichen Zufallsbegriffes ist. Dies ist nicht unumstritten, so dass van Lambalgen etwa gegen Chaitins informationstheoretische Charakterisierung von Zufälligkeit einwendet (van Lambalgen 1989, 1398):

> „The randomness of a quantum mechanical phenomenon such as electron spin does not disappear as soon as we decide to adopt a different definition of randomness, whereas in cases such as the above we seem to observe an artifact of the particular definition chosen.

> Of course other (arithmetical) definitions of random sequences would yield new examples of "randomness in mathematics" constructed with the help of a suitable basis theorem; but one looks in vain for examples which are stable under a change of definition. Hence the *robustness* which is present in the physical examples that Chaitin mentions is lacking here."

Selbst wenn also gezeigt werden könnte, dass Zufälligkeit im umgangssprachlichen Sinne Unerforschlichkeit impliziert, bliebe noch zu zeigen, dass Chaitins Definition der Zufälligkeit dem umgangssprachlichen Begriff entspricht (was, wie die zuletzt zitierte Passage vermuten lässt, nicht unproblematisch ist).

Im Folgenden soll daher ein alternativer Versuch unternommen werden, ein Argument für die Unerforschlichkeit von Ω auf der Grundlage von Chaitins Ω-Theorem zu rekonstruieren, ohne auf Chaitins umstrittene Explikation des Begriffes der Zufälligkeit zurückzugreifen. Vielmehr basiert der folgende Versuch auf der erwähnten Nicht-Komprimierbarkeit von Ω.

Wissen wir um die Beschaffenheit einer unendlichen Folge wie Ω, sollten wir in der Lage sein, den Wert von Ω an jeder beliebigen Stelle zu spezifizieren. Als endliche Wesen können wir natürlich nur um die Wahrheit endlich vieler Propositionen wissen, welche die Werte von Ω beschreiben. Daher kann unser Wissen um Ω bestenfalls in der Kenntnis eines Algorithmus bestehen oder zumindest in der Kenntnis einer Theorie, welche es (wenigstens prinzipiell) erlaubt, Theoreme herzuleiten, welche alle Stellen der Folge wahrheitsgemäß beschreiben. Aufgrund der algorithmischen Nicht-Komprimierbarkeit von Ω kann es allerdings keinen solchen Algorithmus geben und Chaitins Ω-Theorem zeigt zudem, dass es auch eine entsprechende Theorie im Falle von Ω nicht geben kann. Alle in Frage kommenden Theorien erlauben lediglich, endlich viele Stellen von Ω zu bestimmen; in jeder solchen Theorie werden demnach unendlich viele Sätze über die Beschaffenheit von Ω unentscheidbar sein.

Ist damit aber bereits gezeigt, dass unser Wissen um die Beschaffenheit von Ω notwendigerweise begrenzt ist? Eingewendet werden könnte etwa, dass wir um den Wahrheitswert von unentscheidbaren Propositionen wissen können (wie derjenigen, welche die Werte von Ω beschreiben). Tatsächlich ist die Unentscheidbarkeit eines Satzes in *einem* formalen System aus erkenntnistheoretischer Sicht nicht unbedingt problematisch. Insbesondere zeigt der Nachweis der Unentscheidbarkeit bestimmter Sätze nicht, dass es unmöglich ist, den Wahrheitswert der unentscheidbaren Sätze in Erfahrung zu bringen. Dies kann verdeutlicht werden durch den Vergleich mit dem erkenntnistheoretischen Status anderer unentscheidbarer Probleme bzw. Sätze wie etwa Gödels erstem Unvollständigkeitstheorem oder der durch Gödel und Cohen nachgewiesenen Unentscheidbarkeit der Kontinuumshypothese (CH) im Rahmen von ZFC. Zum Nachweis der Unvollständigkeit der Arithmetik konstruiert Gödel einen Satz *G*, der unentscheidbar in PA ist. Dennoch haben wir aufgrund von metatheoretischen Erwägungen gute Gründe, an die Wahrheit von *G* zu glauben, da *G* gerade besagt, dass *G* in PA nicht nachweisbar ist, und wir zudem gute Gründe haben daran zu glauben, dass aus den Axiomen von PA nichts Falsches herleitbar ist. Demgegenüber stellt die Frage nach Wahrheit oder Falschheit von CH ein wesentlich gravierenderes Problem dar. CH ist unentscheidbar in ZFC und damit unentscheidbar relativ zur stärksten weitestgehend anerkannten und gegenwärtig zur Verfügung stehenden mathematischen Theorie. Zudem helfen in diesem Fall nicht metatheoretische Erwägungen wie im Falle von Gödels Satz. Allerdings besteht die Möglichkeit, ZFC durch weitere Axiome zu ergänzen, so dass CH auf der Basis der somit erweiterten Theorie entscheidbar ist. Solche Erweiterungen einer Theorie um neue Axiome bzw. (im Falle von Gödels Satz) um metatheoretische Feststellungen stellen dabei bislang die einzigen kaum umstrittenen Möglichkeiten dar, den Wahrheitswert eines unentscheidbaren Satzes zu eruieren. Problematisch im Falle von Ω ist nun, dass keine der beiden Methoden signifikant weiterhilft, die Beschaffenheit von Ω zu bestimmen. Da es nach Chaitins Ω-Theorem in *jeder* Theorie unendlich viele unentscheidbare Sätze geben wird, welche die Beschaffenheit von Ω betreffen, kann auch der Übergang zu einer umfassenderen (rekursiv axiomatisierbaren) Theorie nicht zur Lösung des Problems führen. Weder das Hinzuziehen metatheoretischer Überlegungen (wie im Falle von *G*) noch das Hinzuziehen weiterer Axiome (wie eventuell im Fall von CH) helfen daher zur Bestimmung der Beschaffenheit von Ω deutlich weiter. Letztere stellt demnach ein Problem dar, welches in *keiner* von uns überschaubaren (d. h. rekursiv axiomatisierbaren) Theorie vollständig gelöst werden kann. Die Frage nach der Beschaffenheit von Ω scheint demnach von uns prinzipiell nicht beantwortet werden zu können – unabhängig davon, in welcher Theorie sich unsere fortschreitenden Bemühungen, unser mathematisches Wissen zu erweitern, auch niederschlagen mögen. Damit deuten Chaitins Ergebnisse hinsichtlich Ω zumindest auf die Existenz von Grenzen unseres (mathematischen) Wissens hin.

Allerdings sind auch einige einschränkende Bemerkungen zur Bedeutung von Chaitins Theorem zu erörtern. Zunächst sind die Voraussetzungen zu erwähnen, auf welchen Chaitins erkenntnistheoretische Deutung seiner Theoreme beruht. So besteht die vielleicht wesentlichste Voraussetzung für die obige Argumentation in einer realistischen Grundhaltung, zumindest im Festhalten an der These, mathematischen Aussagen käme *objektiv* ein Wahrheitswert zu. Wäre dies aber etwa bei unentscheidbaren Problemen wie im Falle der Bits von Ω nicht der Fall, gäbe es mathematische Fragen, die keine Antwort besitzen und demnach auch nicht beantwortet werden können. Demzufolge gäbe es aber auch keine Antworten, von denen wir wissen könnten, so dass hier nicht von Grenzen unseres Wissens gesprochen werden könnte. Eine realistische Haltung, derzufolge mathematischen Aussagen objektiv ein Wahrheitswert zukommt, ist natürlich keine Selbstverständlichkeit und wird selbst im Rahmen von Positionen abgelehnt, welche dem klassischen Platonismus nahe stehen wie etwa Fields *plenitudinous platonism* (Field 1998). Sicherlich auch aus einer intuitionistischen Perspektive ist der Glaube an die Objektivität mathematischer Aussagen nicht zu halten. Entsprechend weist van Lambalgen darauf hin, dass insbesondere Chaitins erstes Unvollständigkeitstheorem[1] wesentlich auf die Verwendung klassischer Logik (und die ihr zugrunde liegenden Annahmen) angewiesen ist und nicht etwa auf intuitionistische Systeme übertragen werden kann (van Lambalgen 1989, 1395). Und selbstverständlich kann auch Chaitins Ω-Theorem nicht auf der Grundlage einer beliebigen Alternative zur klassischen Logik hergeleitet werden. So berechtigt solche relativierenden Hinweise auch sein mögen, rütteln sie aufgrund der doch weitgehend unangefochtenen Stellung der klassischen Logik (und der ihr

[1] Chaitins erstes Unvollständigkeitstheorem, von welchem bislang nicht die Rede war, besagt dabei, dass es für jede formale Theorie *T* eine Konstante *m* gibt, so dass *T* nur dann wahre Sätze der Form „Die Komplexität der Folge *s* ist größer als *n*" beweist, wenn *n* kleiner als *m* ist. Ein Beweis findet sich etwa in (Chaitin 1987, 147–149).

zugrunde liegenden Annahmen) nicht unbedingt an dem erkenntnistheoretischen Interesse an Chaitins Theorem.

Des Weiteren ist festzuhalten, dass die obigen erkenntnistheoretischen Überlegungen auch an bereits bekannte limitative Theoreme von Church, Gödel und Turing anknüpfen könnten und nicht auf Chaitins Unvollständigkeitsresultat hinsichtlich Ω angewiesen sind. Zahlen mit einem Ω vergleichbaren erkenntnistheoretischen Status stellen etwa die von Turing erörterten *nicht-berechenbaren Zahlen* dar; siehe (Turing 1936–7). Um ein weiteres Beispiel anzuführen, betrachten wir zunächst eine vollständige Aufzählung aller Sätze der Sprache der Arithmetik S_1, S_2, S_3, ... Die Zahl A sei nun identisch mit $0{,}a_1a_2a_3$ ..., wobei $a_i = 1$, falls S_i wahr in der Standard-Interpretation der Arithmetik ist, sonst sei $a_i = 0$. Es kann leicht gezeigt werden, dass es uns wie im Falle von Ω nicht möglich ist, die Zahl A *vollständig* zu bestimmen. Allerdings zeigt Chaitins Resultat die Grenzen unserer Möglichkeiten drastischer auf, da im Falle von Ω – im Gegensatz zu A – nur endlich viele Stellen bestimmt werden können; eine ausführlichere Diskussion vergleichbarer reeller Zahlen wird vorgelegt in (Löwe und Bromand 200?).

Schließlich ist anzumerken, dass die obigen Überlegungen lediglich zeigen, dass wir über die genaue Beschaffenheit von Ω nichts in Erfahrung bringen können, sofern wir die bislang gebräuchlichen Methoden verwenden, um etwas über die Wahrheitswerte unentscheidbarer Sätze zu erfahren (wie diejenigen, welche die Bits von Ω betreffen). Demgegenüber könnte für Chaitins Behauptung erst dann lückenlos argumentiert werden, wenn ausgeschlossen werden könnte, dass es (neben dem Hinzuziehen metatheoretischer Erwägungen oder weiterer Axiome) alternative, bislang unbekannte Methoden gibt, durch welche wir Wissen über den Wahrheitswert formal unentscheidbarer Sätze erlangen könnten. Dieses Problem ist verwandt mit der Frage, ob sich die Gesamtheit unseres mathematischen Wissens in einer rekursiv axiomatisierbaren Theorie erschöpft. Gegenwärtig wird ZFC als eine solche Grundlagentheorie verstanden, in welcher nahezu alle mathematischen Argumentationen formalisiert werden können. Um ausgehend vom obigen Argumentationsansatz eine lückenlose Argumentation für Chaitins erkenntnistheoretische These zu erhalten, wäre es notwendig, zunächst zu zeigen, dass die Gesamtheit unseres mathematischen Wissens (zumindest unser Wissen von reellen Zahlen) stets in Form einer rekursiv axiomatisierbaren Theorie darstellbar ist (was selbstverständlich nicht unumstritten ist). Um dies zeigen oder widerlegen zu können, wissen wir allerdings längst noch nicht genug über den Begriff des mathematischen Wissens.

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'Mir ist, als wüßte ich, daß die Stadt dort liegt.' Unbegründete Überzeugungen und sekundäre Bedeutung

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> "Ich gehe mit einem Bekannten in der Umgebung der Stadt spazieren. Im Gespräch zeigt es sich, daß ich mir die Stadt zu unsrer Rechten liegend vorstelle. Für diese Annahme habe ich nicht nur *keinen* mir bewußten Grund, sondern eine ganz einfache Überlegung konnte mich davon überzeugen, daß die Stadt etwas links vor uns liegt. Gefragt, *warum* ich mir denn die Stadt in *dieser* Richtung vorstellte, kann ich zuerst keine Antwort geben. Ich hatte *keinen Grund*, das zu glauben." (PU IIxi, 1061; vgl. LS1, § 787)

Wittgenstein nennt diese "besondere Art der Täuschung" - denn, daß es sich um eine solche handelt, steht außer Frage - eine unbegründete Überzeugung. Unbegründet ist sie nicht in dem Sinn, daß jemand dafür schlechte oder falsche Gründe anführt. Er weiß vielmehr überhaupt keinen Grund anzugeben, sie ist also in diesem Sinn 'grundlos' ('Ich hatte keinen Grund, das zu glauben.'). Man sieht nachträglich seinen Irrtum ein und kann dafür nur Ursachen angeben. "Z.B. diese: Wir gingen nämlich einem Kanal entlang, und ich war früher einmal, unter ähnlichen Umständen, einem gefolgt, und die Stadt war damals rechts von uns." (Ebd.) Es handelt sich um "psychologische Ursachen", etwa um "gewisse Assoziationen und Erinnerungen", die der Sprecher zu sehen scheint oder "gleichsam psychoanalytisch zu finden trachten" könnte (PU IIxi, 1061f.; vgl. LS1, § 80). Bei diesen Erlebnissen beantwortet man die Frage 'warum glaubte ich es?' nicht mit der Angabe eines Grundes, sondern mit der Beschreibung eines kausalen Zusammenhangs, etwa mit einer psychoanalytischen Betrachtung über die eigene persönliche Geschichte.

Erlebnisse solcher Art, etwa wenn jemand am Samstag überzeugt ist, es sei Sonntag, mögen im Alltag öfter, aber wiederum nicht allzuoft vorkommen.[1] Sie sind "von andrer Art als diejenigen Erlebnisse, die wir als die fundamentalsten betrachten, die Sinneseindrücke etwa" (PU IIxi, 1062). Derlei unbegründete Überzeugungen sind gleichsam sekundäre Erlebnisse, und Wittgenstein will durch die Analogie mit ihnen Phänomene erhellen, die er zur 'sekundären Bedeutung' rechnet, sowie bestimmte gängige Verwendungsweisen des Wortes 'Bedeutung' selbst. "Man kann für eine *große* Klasse von Fällen der Benützung des Wortes 'Bedeutung' - wenn auch nicht für *alle* Fälle seiner Benützung - dieses Wort so erklären: Die Bedeutung eines Wortes ist sein Gebrauch in der Sprache." (PU 43) Ausnahmen zur Gleichsetzung von 'Gebrauch' und 'Bedeutung' sind hier durchaus vorgesehen. Dazu gehören die geläufigen Redeweisen, die mit dem Erleben von 'Bedeutung' zusammenhängen. Die Bedeutung, die das einzelne Wort in sich zu tragen scheint, diejenige, die einer erlebt, kann nicht der Gebrauch sein; "wenn Bedeutung der Gebrauch des Wortes ist", kann man eigentlich nicht wörtlich meinen, daß das beim ausdrucksvollen Lesen ausgesprochene Wort "ganz mit seiner Bedeutung angefüllt" ist (PU IIxi, 1060f.). Wittgensteins Lösung ist zuletzt, daß jene "*große* Klasse", in der die Bedeutung der Gebrauch ist, und diejenige, die mit der Rede vom 'Erleben' zusammenhängt, sich zueinander wie primäre und sekundäre Verwendungen von 'Bedeutung' verhalten. Auch im Fall dieses Wortes kann man nämlich zwischen 'primärer' und 'sekundärer' Bedeutung unterscheiden (genauer, im Plural, zwischen 'primären' und 'sekundären' Bedeutungen).

Wer etwa von 'Bedeutungserlebnis' redet, verwendet das Wort 'Bedeutung' in seiner sekundären Bedeutung. Solche Redeweisen haben Philosophen wie James zur Ansicht verleitet, den einzelnen Worten entsprächen bestimmte Erlebnisse (z. B. ein 'Wenn-Erlebnis', ein 'Und-Erlebnis' usw.). Bedeutungserlebnisse sind aber, wenn überhaupt, (nicht ständige, sondern mehr oder weniger) charakteristische Begleiterscheinungen des Gebrauchs. Sie sind weder Kriterien des korrekten Gebrauchs, noch erklären sie ihn. Das Wort 'Bedeutung' hat eigentlich keinen Träger, der Gegenstand des Erlebnisses sein könnte.

Der täuschende Anschein besteht darin, "daß ein Wort, isoliert und ohne Zweck ausgesprochen, eine bestimmte Bedeutung in sich zu tragen scheinen kann." (PU IIxi, 1061) Dieser Schein läßt sich zwar erklären, wenn man etwa an den Ausdruck 'das treffende Wort' denkt und "[w]enn mir [...] der Satz wie ein Wortgemälde vorkommen kann, ja das einzelne Wort im Satz wie ein Bild" (ebd.). Aber derlei Erklärungen liefern eigentlich keine Gründe.

Der Vergleich mit der eingangs zitierten Täuschung muß ein Licht auf sekundäre Bedeutung überhaupt und auf die sekundäre Bedeutung von 'Bedeutung' insbesondere werfen. Wittgenstein stellt folgende Analogie auf: "'Mir ist, als wüßte ich, daß die Stadt dort liegt.' - 'Mir ist als paßte der Name 'Schubert' zu Schuberts Werken und seinem Gesicht.'" (PU IIxi, 1062; LS1, § 791)[2] Den Personennamen 'Schubert' umgibt eine unauflösbare "Atmosphäre", er ist "von den Gesten seines Gesichts, seiner Werke" "umschattet" (vgl. LS2, 15). Man wäre versucht, von einem 'Schubertgefühl'[3] zu reden. Hier liegt aber "eine *Täuschung* vor, eine Spiegelung" (LS1, § 69): Der Personenname scheint zum Träger zu 'passen'. Aber der Begriff 'passen' läßt sich auf dieses Verhältnis nicht ausdehnen. Der Satz "Der Name 'Schubert' paßt doch vollkommen zum Schubert" "heißt nichts" (LS1, § 72), oder genauer: "Der Satz 'Der Name ... paßt auf ...' ist, wie wir ihn gebrauchen, keine Mitteilung über den Namen, oder seinen Träger. Er ist eine pathologische Mitteilung über den Mitteilenden." (LS1, § 73) Die Variante des Satzes, die in PU II Eingang gefunden hat, macht diesen Charakter explizit ("Mir ist, als wüßte ich, [...]"), und eine explizite Äußerung ist auch der Satz 'Mir ist, als wüßte ich, daß die Stadt dort liegt'. Als Äußerungen sind beide Sätze adäquat. Das Sprachspiel der Mitteilung wird hier gleichsam "gedreht" (LS2, 20). Der Sprecher bringt einfach zum Ausdruck, wie er den Namen erlebt, und zu diesem Zweck verwendet er das Wort 'passen' in einer sekundären Bedeutung. Er *sieht* jenen Namen *als* Bildnis, und seine Äußerung bringt diesen Aspekt zum Ausdruck. "Man sieht etwas unter dem Bild, unter dem Begriff des Passens"

[1] Eine ähnliche Sicherheit ohne "*Grund*" drückt der Satz aus "Ich bin sicher, es ist [5] Uhr" (PU 607), wenn jemand die Uhrzeit einfach so schätzt, ohne irgendwelche äußeren Anhaltspunkte (Uhr, Stand der Sonne, Helligkeit usw.).

[2] Wittgenstein denkt offenbar an den Satz "Schubert heiß ich, Schubert bin ich." (Vgl. Anm. zu BPP II, § 246.)

[3] Zum "Beethovengefühl" vgl. LS2, S. 14.

(LS1 § 70). Warum aber, wenn der Begriff eigentlich nicht auf jene Weise ausgedehnt werden kann? Sollten wir nicht besser "ein neues Wort" prägen? "Aber wie könnte Einer denn dies Wort lernen? Der *primitive* Ausdruck des Erlebnisses konnte es ja nicht enthalten." (LS1, § 789) Unsere Sprache ist keine Privatsprache: Wir sind in solchen Äußerungen auf die sekundäre Bedeutung eines vertrauten Wortes angewiesen. Wir sind sogar "unter einem Zwang, uns so auszudrücken" (LS1, § 69).

Was ist aber sekundäre Bedeutung überhaupt? Zuerst sei ein nicht minder kurioser Fall beschrieben, den Wittgenstein ebenfalls als analog zur unbegründeten Überzeugung betrachtet. "Gegeben die beiden Begriffe 'fett' und 'mager', würdest du eher geneigt sein, zu sagen, Mittwoch sei fett und Dienstag mager, oder das Umgekehrte? (Ich neige entschieden zum erstern.) Haben nun hier 'fett' und 'mager' eine andere, als ihre gewöhnliche Bedeutung? - Sie haben eine andere Verwendung. - Hätte ich also eigentlich andere Wörter gebrauchen sollen? Doch gewiß nicht. - Ich will diese Wörter (mit den mir geläufigen Bedeutungen) hier gebrauchen." (PU IIxi, 1063) Die sekundäre Bedeutung ist also eine neue Verwendung, aber eigentlich keine neue Bedeutung. Jene Worte haben in der Absicht des Sprechers weiterhin dieselbe Bedeutung, nur werden sie dort verwendet, "wo die normale Veranlassung fehlt" (LS1, § 77). "D. h. die sekundäre Verwendung besteht darin, daß ein Wort, mit *dieser* primären Verwendung, nun in dieser neuen Umgebung gebraucht wird." (Ebd.; vgl. LS1, § 61.) Der normale Sprachgebrauch steht zu dieser eigentümlichen Verwendung im Verhältnis einer primären Bedeutung zur sekundären. Nur wer die primäre Bedeutung(en) beherrscht, die mit einem Wort gewöhnlich verbundene(n) Technik(en), kann es auch in irgendeiner sekundären Bedeutung verwenden. "Nur der, für den das Wort jene Bedeutung hat, verwendet es in dieser." (PU IIxi, 1063) Direkt kann nur die primäre Bedeutung erklärt werden; die sekundäre Bedeutung ist einer direkten Erklärung nicht zugänglich. "Gefragt, 'Was meinst du hier eigentlich mit 'fett' und 'mager'?' - könnte ich die Bedeutungen nur auf die ganz gewöhnliche Weise erklären. Ich könnte sie nicht an den Beispielen von Dienstag und Mittwoch zeigen." (Ebd.) "Die Worterklärung ist beidemal die der primären Bedeutung." (LS1, § 797) Sofern Bedeutung das ist, was in der Erklärung der Bedeutung erklärt wird (vgl. PU 533), d. h. eben der Gebrauch, müssen den Bedeutungsunterschieden Unterschiede in der Erklärung entsprechen. Aber einem markanten Unterschied im Gebrauch entsprechen bei der sekundären Bedeutung keine Unterschiede in der Erklärung. Man kann also nur von einem Unterschied im Gebrauch und nicht von einem in der Bedeutung sprechen; denn auf die Frage, worin der Unterschied in der Bedeutung bzw. die neue Bedeutung bestehe, könnte man nichts antworten. Man könnte die vermeintliche neue Bedeutung nicht erläutern (vgl. Diamond 1991, 228). Bedeutung, Gebrauch und Erklärung der Bedeutung, die in der primären Bedeutung eng zusammengehören, scheinen in der sekundären Bedeutung auf merkwürdige Weise auseinanderzugehen: Einer neuen Verwendung entspricht weder eine neue Bedeutung noch eine neue Erklärung.

So grundlos der Sprachgebrauch, so unersetzlich kommt einem das jeweilige Wort vor. Das Wort, das sich in seiner sekundären Bedeutung aufdrängt, ist deshalb zwar "bildlich gemeint" (PU IIxi, 1060), aber nicht "in übertragener Bedeutung" (PU IIxi, 1063). Was man in übertragener Bedeutung sagt, könnte man nämlich (wenigstens theoretisch) auch mit anderen Worten ausdrücken. Die Relation zum Ausgedrückten ist im Fall der Metapher eine externe, nicht aber in dem der sekundären Bedeutung; zwischen primärer und sekundärer Bedeutung besteht eine interne Relation.

Mit jenem merkwürdigen Sprachgebrauch geht in Wittgensteins individuellem Fall eine entschiedene "Neigung" einher. Ihr entspricht jedoch keine Anwendungstechnik oder Verifikationsmethode und dementsprechend keine Kriterien, die zwischen richtig und falsch oder sogar zwischen Sinn und Unsinn zu unterscheiden gestatten. Der Sprecher kann seine Neigung vielleicht psychologisch erklären, aber nicht rechtfertigen: Er kann für sie hypothetische Ursachen angeben, etwa "Assoziationen aus [s]einen Kindheitstagen" (PU IIxi, 1063), aber keinen Grund. Die Kausalerklärung liefert keine Gründe, und das gilt ebenso für die unbegründete Überzeugung über die Lage der Stadt wie für die sekundäre Bedeutung von Farbwörtern in Sätzen wie 'der Buchstabe 'e' ist gelb'. "Die Erklärung läßt die Seltsamkeit bestehen. (Ebenso für das Phänomen Laute farbig zu sehen, etc.)" (LS1, § 80) Die Seltsamkeit besteht eben darin, daß Gründe fehlen.

Die Frage ist nun, ob die Analogie zu den unbegründeten Überzeugungen für sekundäre Bedeutung überhaupt gilt. Es läßt sich nämlich eine ziemlich heterogene Familie unterscheiden. Finden sich darunter nur Fälle, für die keine Begründung gegeben werden kann?

Man kann zwei entgegengesetzte Pole markieren, zwischen denen alle möglichen Zwischenstufen bestehen: Den einen Pol bilden Fälle wie die beschriebene Verwendung von 'fett' und 'mager'. Beim anderen Pol wiederum besteht einfach ein vertikales Verhältnis zwischen Begriffen oder Sprachspielen. Nicht alle Sprachspiele liegen nämlich auf derselben Ebene. Einige setzen andere voraus.[4] Was Kopfrechnen ist, kann man nur demjenigen erklären, der schon rechnen kann bzw. den Begriff des Rechnens hat.[5] Er muß mündlich oder schriftlich rechnen gelernt haben, und in diesem Sinn ist das Rechnen mit Bleistift und Papier o. ä. im Vergleich zum Kopfrechnen primär - ähnlich wie das laute Lesen im Vergleich zum lautlosen. Die "Unmöglichkeit", das letztere zu verstehen, ohne schon das erstere zu beherrschen, "ist eine logische" (LS1, § 803). In derlei Fällen ist die sekundäre Bedeutung selbst ein geläufiges Wort bzw. eine gängige Verwendungsweise eines Wortes, und diese geht mit mehr oder weniger bestimmten Kriterien einher. (Die Rechnung im Kopf muß das gleiche ergeben wie die mit Bleistift und Papier: Die Resultate sind hier Kriterien, daß überhaupt gerechnet wird.) Das lautlose Lesen gehört heutzutage selbstverständlich zum Begriff 'Lesen', und das Kopfrechnen kann als Grenzfall des Familienbegriffs 'Rechnen' betrachtet werden. Diese Klasse von Fällen bildet keine Ausnahme zur Gleichsetzung von Bedeutung und Gebrauch.

Das trifft wiederum beim zweiten Pol zu. Einem markanten Unterschied im Gebrauch entsprechen bei der sekundären Bedeutung von 'fett' und 'mager' weder Regeln noch Unterschiede in der Erklärung. Der Sprecher kann hier für seine Neigung hypothetische Ursachen angeben, aber keinen Grund. Der Neigung entspricht keine Anwendungstechnik oder Verifikationsmethode, und so entsprechen ihr auch keine Kriterien, die zwischen richtig und falsch oder sogar zwischen Sinn und Unsinn zu unterscheiden gestatten. In der Sprachgemeinschaft be-

[4] Zu "Horizontal and vertical language-games" vgl. Hark 1990, S. 33 ff.
[5] Vgl. PU IIxi, S. 1063; LS1, § 801 ff.; PU 385. Dasselbe wie für das 'Kopfrechnen' trifft für eine sehr große Klasse von Fällen zu, wenn, wie C. Diamond will, sogar 'traurige Musik' oder 'schüchternes Gesicht' Beispiele sekundärer Bedeutung sind (man muß zuerst die Anwendung von 'traurig' oder 'schüchtern' auf Menschen gelernt haben). Vgl. Diamond 1991, S. 228f., S. 241, Anm. 7. Vgl. auch ihren Hinweis auf die ähnliche Ambiguität von 'healthy' bei B. F. McGuinness.

steht keine Einigkeit über eine der zwei Optionen, und auch nicht über Sinn und Unsinn der Frage. Einigkeit wird wohl nur über den ungewohnten, ja schrulligen Charakter der Frage herrschen. Nichts scheint hier das Verstehen zwischen den Sprechern zu gewähren und zuletzt eine Unterscheidung zwischen Verstehen und Nicht-Verstehen zu rechtfertigen. Hier wird also fraglich, wie und ob man das Wort 'verstehen' anwenden soll. Das gehört aber zu derlei Sprachspielen und ist zuletzt einfach als deren charakteristisches Merkmal hinzunehmen. Mit einem Rückfall in eine privatsprachliche Auffassung hat es nichts zu tun.[6] In einer Privatsprache sind 'Erlebnisse' private Gegenstände, auf die sich innere hinweisende Erklärungen beziehen und die durch die Worte der Sprache benannt werden. Das Wort in seiner sekundären Bedeutung steht dagegen nicht für einen privaten, anderen unzugänglichen Gegenstand (etwa ein 'Erlebnis'). Es wird "nicht zur Bezeichnung für etwas Neues" gebraucht, sondern "in einer neuen Situation" (LS1, § 61; vgl. § 57), nicht als Bezeichnung eines Erlebnisses, sondern in einem Erlebnisausdruck, in einer Äußerung.

Die Fälle, die Wittgenstein mit unbegründeten Überzeugungen vergleicht, wie die sekundäre Bedeutung von 'gelb' beim Vokal 'e' oder von 'passen' beim Namen 'Schubert', sind mit dem von 'fett' und 'mager' verwandt: Die Worte werden in so merkwürdigen Umständen verwendet, daß die Kriterien der primären Verwendung gänzlich abhanden kommen. Diese Erlebnisse gehören ebenso wenig zu den fundamentalen wie die Täuschung über die Lage der Stadt, mit der Wittgenstein sie vergleicht. Damit ist aber über die anderen Fälle noch nicht gesprochen. Sekundäre Sprachspiele sind nicht unbedingt marginal. Schon bei vielen einfachen Sprachspielen, etwa beim Suchen nach dem treffenden Wort, würden wir sagen, daß wer sie spielt, Bedeutung erlebt. Wittgensteins fiktiver Bedeutungsblinder könnte sie nicht spielen.[7]

Der Vergleich zwischen den zwei Polen zeigt, wie sehr das idiosynkratische Moment variiert: Zwischen einem absolut idiosynkratischen Fall wie dem der Wochentage, in dem weder Anwendungsregeln noch entsprechende Kriterien bestehen, und einem Fall wie dem 'Kopfrechnen', in dem auch der sekundären Bedeutung eine Technik und besondere Kriterien entsprechen, kann man sich eine ganze Familie morphologischer Zwischenglieder denken.

Wer nach dem 'richtigen' Wort sucht und es endlich findet, "muß nicht immer beurteilen, erklären", warum es das treffende sei. Charakteristisch für dieses Sprachspiel ist, daß man zwar nicht durchgängig Gründe angeben kann, aber immer wieder. "*Manchmal* kann ich sagen, warum." (PU IIxi, 1067) Z. B., wenn ich "das *Feld* eines Wortes" berücksichtige. Manchmal gibt es Kriterien, manchmal fehlen sie, allerdings nicht prinzipiell. Sie sind zumeist weit weniger klar als beim Kopfrechnen.

Wie sieht es also bei der sekundären Bedeutung von 'Bedeutung' aus? Es handelt sich um eingebürgerte Verwendungen, deren Umstände gehören zum vertrauten Sprachgebrauch. Auch hier stellt sich jedoch die Frage: "Warum nennt man dies 'meinen' und 'bedeuten', wenn es sich nicht um meinen und bedeuten handelt?" (LS1, § 63) Wir sagen etwa, daß wir ein Wort "in *der* Bedeutung ausgesprochen" haben. Die Antwort auf "die Frage, warum wir denn bei diesem Spiel des Worterlebens auch von 'Bedeutung' und 'Meinen' sprechen", ist nun, daß wir den Ausdruck 'Bedeutung' "aus jenem andern Sprachspiel herübernehmen" (PU IIxi, 1062), d. h., aus dem Sprachspiel, in dem 'Bedeutung' so viel heißt wie 'Gebrauch'. Wir beherrschen die Technik dieses primären Sprachspiels, und das sekundäre Sprachspiel des Worterlebens setzt sie voraus. Wittgenstein hat so diese besonderen Verwendungsweisen des Wortes 'Bedeutung' zugleich als Ausnahmen anerkannt und zu jener großen Klasse in Beziehung gesetzt. Die Idee ist aber nicht, daß sie zusammengenommen 'Bedeutung' erschöpfen. Vor allem: Inwieweit ist jene Beziehung eine Erklärung? Warum nehmen wir Worte wie 'Bedeutung' und 'Meinen' aus dem primären Sprachspiel ins andere herüber? Weshalb werden sie in beiden Kontexten gebraucht? Auf diese Fragen gibt es zuletzt keine Antwort. Eine Erklärung würde lediglich Ursachen anführen und keine Gründe. Die Gründe sind hier zu Ende. Das sekundäre Sprachspiel - bzw. dessen Beziehung zum primären - ist wie jedes Sprachspiel als Gegebenheit hinzunehmen (vgl. LS1, § 78). "Nenne es einen Traum. Es ändert nichts." (PU IIxi, 1062)

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[6] K. Neumer kritisiert bei Wittgenstein einen solchen Rückfall (Neumer 2000).

[7] Es geht nicht um eine externe Relation zwischen als geheimnisvolle mentale Vorgänge mißverstandenen Bedeutungserlebnissen und etwa dem Lachen über Wortwitze, also nicht um Bedeutungserlebnisse als psychologische Voraussetzungen letzterer, sondern um eine interne Relation, eine grammatische. Jenes Lachen gehört zu den (zahlreichen) *Kriterien*, daß man Bedeutung erlebt: "Man lacht über solche Witze: und insofern (z.B.) könnte man sagen, man erlebe die Bedeutung." (LS1, § 711) Dementsprechend sind zugleich mentalistische Auffassungen abwegig und Bedeutungsblindheit 'schlimm'. O. R. Scholz betont zu Recht das erstere, ist über das letztere jedoch anderer Meinung ("Wie schlimm ist Bedeutungsblindheit? Zur Kernfrage von PU IIxi", in: Savigny, Scholz 1996, S. 213-232).

Non-epistemic Values and Scientific Knowledge

Paul Burger, Basel

In *Science, Truth, and Democracy* Philip Kitcher presents arguments to the effect that scientific inquiry is value-dependent in so far as "scientific significance" is crucial to understanding the scientific enterprise and is analysable only in terms of human interests. He proposes a marriage between value dependence and moderate scientific realism, challenging thus a long-standing tradition of radically separating non-epistemic values and scientific knowledge. In my paper I want to make the rationale of that marriage more comprehensible and interpret it as a step towards a naturalized philosophy of science. In my first section I will make clear what I understand as "naturalizing" and what I take to be the substantial problem, i.e. the steering function of non-epistemic values in cognitive processes. The second section will identify the assumptions on which the separation of non-epistemic values and knowledge are based. In the third section Kitcher's arguments in favour of a marriage will be presented and evaluated. Finally, I will sketch a positive account how non-epistemic values steer cognitive processes.

I

Quine wanted us to naturalize epistemology by reducing it to descriptive psychology. Because, however, scientific knowledge production is so obviously normatively steered, only a few philosophers have been willing to follow Quine's radical strategy. On the other hand, Quine's second naturalistic claim that epistemology should study human knowledge as it is in our actual world has not lost its power. Kitcher places himself along this line of reasoning and characterises naturalized epistemology by four principles (Kitcher 1992):

(a) Epistemology aims to understand the epistemic quality of human cognitive performance.

(b) The epistemic status of a cognitive state is dependent upon the process that generates it.

(c) Epistemology must make understandable those processes, which are reliable, i.e. lead to truths.

(d) There is no a priori knowledge.

Kitcher's effort to convince us of his marriage position is based upon the assumption that the knowledge generating processes have been regrettably simplified especially within philosophy of science. What is missing is an analysis of the motivations for actions as an essential part within the scientific processes of knowledge production. As human actions and the values, which steer them, have an important function in cognitive processes the intended meaning of "naturalized philosophy of science" would be that scientific knowledge production has to be seen as embedded not only in theoretical but also in those practical activities that characterize human life.

In regard of human actions as a component in epistemic processes we face a rather strange situation. The internalists do not hesitate to take actions into consideration. By reducing cognitive processes to the fulfillement of epistemic duties, however, only cognitive actions are accepted. Science as an organised human endeavour for truth finding is value dependent insofar the goal of cognitive actions is truth and truth can be seen as an epistemic value. Unfortunately, this line of reasoning about actions displays at least three shortcomings. First, the interesting debate focuses on non-epistemic values not on epistemic. Second, the internalist's reduction to epistemic values will be undermined by two well-known disadvantages of any purely internalistic account, namely that fulfilling one's epistemic duties is neither necessary nor sufficient for knowledge because it does not guarantee truth-conducivity, and that it faces Cartesian scepticism (Plantinga 1993). Third, the internalist analyses action in purely rational (ideal) not in procedural terms eliminating thereby any relevance of the context of discovery. If, however, non-epistemic values play a role within science then it will be within discovery processes.

If we want philosophers to look at actions in epistemic processes then externalism, not internalism, seems to be the right place to look. By allowing causal processes to play a warranting function externalism radically undermines the traditional separation between context of discovery and context of justification. Externalists, however, are mainly concerned with dispositions, capacities and causal processes (in an adequate environment) in order to avoid the shortcomings of internalism. They do not pay much attention to action in cognitive processes. The rationale for excluding actions from externalist's theories is not difficult to identify. First, because actions are not fully analysable from a third-person-perspective, externalists have tried to avoid any commitment to them. Second, they are often not only sceptic to subjective factors but also to attributor factors within the truth condition for 'A knows that p'. Eventually, realists tend to take a Humean stand towards values and to treat them in a fully subjective manner (cf. "Canberra Plan"-philosophers). Within science, however, knowledge attribution (whether or not standards are fulfilled) is as important as non-epistemic background conditions such as funding, problem-solving etc. And both, meeting standards for knowledge attribution as well as non-epistemic background conditions, are "action-laden".

Nobody who is aware on how research programs are normally set up can reasonably deny the relevance of non-epistemic values (interests) in science policy. More questionable is the epistemic role of these values. The strange situation we have vis-à-vis them within epistemology can be summarized as follows: Values steer human actions, i.e. our interaction with our environment. Those who are willing to consider actions in epistemology – internalists – treat them in a reductive manner by allowing only epistemic values. Those who are willing to consider human cognitive power in our actual world – externalists – often treat epistemic processes reductively too by not permitting any "subjective" components such as actions.

II

The ban on non-epistemic values in epistemology and philosophy of science has a long tradition. Science itself has given us enough reasons to be very careful regarding them. There have been many cases illustrating the problem of cultural, gender or economic bias in research. The critical and normative epistemological attitude towards non-epistemic values vis-à-vis knowledge is based on good reasons: if an acquired belief is to become accepted

as knowledge, then non-epistemic values are not allowed to play a justifying role. There is no point in challenging that.

There is, however, epistemologically more to the function of non-epistemic values in knowledge production. The ban against them is based upon four assumptions. The first is to look upon knowledge as basically mapping the natural world objectively whereas values are treated as subjective. The second amounts to the claim that the context of discovery and the context of justification can successfully become separated. The third – interestingly enough shared by both, instrumentalists and realists – is that value-dependence leads to instrumentalism. The fourth denies that non-epistemic values can be truth-conducive in whatever sense.

If you want - like Kitcher - to marry non-epistemic values with scientific realism you can do that in a weak or strong form. You can look upon their function within knowledge production either simply as compatible with realism or stronger as truth-conducive in some sense. Kitcher seems to favour the weaker form. He especially challenges assumption three without thinking about truth-conducivity. Kitcher's strategy to undermine assumption three aims at critically analysing the force of the instrumentalist's darling, the underdetermination-thesis. Because he sees no point in claiming that we always have to choose between equally well supported rival hypotheses, he concludes that "there is no basis for believing that value judgments inevitably enter into our appraisal of which of a set of rival hypotheses […] is approximately correct" (2001, 41). I fully agree with him.

Unfortunately, the argument does not establish a positive epistemic function of non-epistemic-values. But if values are relevant because they help to "divide things into kinds to suit our purposes" (49) and that function is compatible with scientific realism, then a positive epistemic function must be demonstrated. Kitcher also implicitly rejects assumption two on the basis of his reliabilism. Because, however, the standard naturalistic arguments are causal and not axiological this will not add evidence in favour of the marriage-position.

III

As a positive argument in favour of his weak "compatible-position" Kitcher presents what I call "the success argument". It has two components. The first is that much of scientific research is obviously interest-oriented (biotechnology, environmental science). It can simply not be denied that scientific knowledge production is dependent upon value-decisions and directed to value-laden human actions. The second component is that hypotheses and theories nevertheless lead to successful application in our interaction with the world. That argument relies on the hidden premise that success implies truth (Kitcher: "accuracy").

Kitcher's paradigm case for demonstrating the relation between interests (values) and success is the "motivational analogy" between science and cartography (chap. 5), since, in his view, maps are like belief-systems or theories and they potentially represent reality accurately and completely - relative to certain standards. A hundred philosophers meet each other in Kirchberg every year. Why are they successful in meeting there? They follow maps and timetables announcing when planes will depart at Y and will arrive in Vienna, which train one should catch at which station etc. Given normal circumstances (and a properly functioning cognitive apparatus) philosophers succeed in reading the given information. Maps are more or less reliable within their domain. Why are they reliable? Because, Kitcher answers, they are designed to serve our purposes first of all. They are, however, not reliable because of the purposes. They are reliable, because they are produced with adequate methods and allow successful prediction based actions.

According to Kitcher, the "motivational analogy" should not be taken as an argument. The problem, however, is that the analogy makes even his weak position doubtful. He starts with the metaphor that nature is like a block of marble (p. 44), which is shapeable by a sculptor in infinitely many ways. The analogy then amounts to the following claim: because nature is like this (and is not, as realists usually claim, structured in itself) values can steer our cognitive interests such that it directs our epistemic focus in picking relevant parts out of a complex marble-like nature. Instrumentalism lurks behind such a picture. If we epistemically shape nature the way a sculptor shapes a piece of marble then, strictly according to the analogy, knowledge will be nothing more than an artefact - which is not what a moderate realist wants to be committed to.

With the alleged "marble ontology" instrumentalism will inevitable come back in through the back door. Even a moderate scientific realism needs the ontological presumption of a structured world because otherwise there would be no definite truthmakers (occurring states of affairs) available. Values can only have a positive epistemic function if they direct our epistemic focus to structured components of the world. Let us therefore use a structure-ontology and assume it to be true that all entities are composite and structured (systems). A system is constituted by its individuals (with their qualities), its structure (the relations holding between its individuals) and its environment (the interacting relations between the individuals within and outside the system). Suppose further that our world is a complex system of systems. The interesting epistemological question then will be how we draw the distinctions such that the truth-conditions for "A knows that p" become fulfilled where p is made true by a system (e.g. a tree), i.e. how the boundaries of that system should be drawn. Like Kitcher I believe that values can steer our cognitive processes by directing our epistemic focus in picking relevant parts.

What remains to be demonstrated is the positive epistemic function of non-epistemic values, I claim to exist. Apart from the weakness of his marble-ontology, Kitcher's "success-argument", won't be good enough to do the epistemologically demanded job. Newton's theory can still be successfully applied within its restricted domain. Nevertheless, it is not true. Success is an indication, can add evidence, but it can also display truth by pure chance – what no epistemology can accept.

IV

As a prerequisite for my demonstration I need an account of values. Values, the old Humean story goes, have nothing to do with the structure of nature. Like Kantian categories they are looked upon as a part of our subjectivist clothes we dress nature with. And because values steer our actions, and actions should always be judged morally, values are not only treated subjectively (psychologically) but also morally. However, both treatments are overtly one-sided. On the one hand, the subjectivists ignore the qualities of entities as a material basis for the goods that values are directed to. As a consequence,

values become deprived from their objective component. On the other hand, the adherents of an exclusively moral understanding of goods ignore that there are moral as well as non-moral goods. The ability to write German according to the new rules for example may or may not be a good. If it is a good, then it will not be a moral but an instrumental good. If there are limited resources of clean air and fresh water, that could become morally relevant. Clean air and fresh water are goods but not per se moral goods. Accordingly, I take the following definition of values to be adequate:

For all Z, Z is a value iff

(1) Z is an intentional object for an individual A,

(2) Z refers to a state of affairs X and

(3) it is the case

a) that X has certain qualities such that it is a good, and

b) X counts for A as a good (whether X occurs or does not occur).

There is certainly more to say about that proposal (cf. Lemos 1995). For the sake of the argument I will take it for granted and will base my analysis on it.

It is a reliability-account I have in mind. Some non-epistemic values steer some cognitive processes such that the conditional probability that these processes lead to truth is higher than it would be without such values. Although many believe that reliability asks for a third-person-perspective a semantic (deflationary) understanding of the truth-predicate will block much of what could be threatening for reliabilism here. Therefore and again for the sake of the argument, I will take it for granted that reliability is a worthy component within an epistemic theory.

Furthermore, there is the notion of scientific significance. Non-epistemic values can help to build what Kitcher calls "significance graphs" (chap. 6). "Scientific significance" has a double meaning, pointing to inner-scientific epistemic relevance and to relevance for human practice. My present concern is on the former. "Epistemic relevance" has a double meaning once again. It can mean "significant truths" or "something, which influences the contingent pathways of scientifically interesting questions". Unlike Kitcher, however, I have argued that the latter does not entail the former from a realist point of view. The marriage will only become comprehensible if some truth-conducive function of non-epistemic values in their influence on scientifically interesting questions is demonstrated.

My claim is then that non-epistemic values steer cognitive processes in three fundamental ways: (a) by co-determining the selection of objects for knowledge production, (b) by co-determining the selection of causal information; (c) by motivating individuals and groups to proceed according to epistemic norms and even to improve them inductively.

Imagine the following situation. A group of environmentalists wants us to protect a species *A* in a region *B*. They look upon *A* as an indicator for a healthy environment, presupposing that the latter is an important good for us. The hunters in *B*, however, reject the attempt to protect *A*. They point to their hunting rights and understand hunting *A* as an essential part of their social identity. Moreover, they can see no threat for the population *A* because of its reproduction rate.

Suppose now that region *B* is a complex system, constituted by a sum of individuals, the latter standing in structuring relations between them and between individuals from the systemic environment. Suppose *B* is a large forest and deer are the species in question. Within the large forest there are also regions of agricultural production and small villages. Where do we draw the boundary of the system? What is part of *B* or part of the environment of *B*? What consequences do we face accordingly for the truth-conditions of statements like "B is such-and-such"?

Non-epistemic values can have a steering function in such cases. From the point of view of the environmentalists *A* is an instrumental good regarding the more general good "healthy environment", for the hunters *A* is an instrumental good for " social identity". Furthermore, the valuing is based upon different hypotheses regarding the population of A (reproduction rate allows hunting – calls for protection). Let us now bring scientists (e.g. biologists and sociologists) into our picture.

Firstly, how do they get their research objects within the system *B*? There is likeley some scientific state of the art regarding the subject matter. The value dispute, however can steer a cognitive selection process towards picking *A* as research object out of number of alternatives (deer not mice etc). The important point here is that the value-dispute together with the underlying hypotheses brings in possible defeaters and there is quite a good agreement on their epistemic function.

Secondly, the value dispute can steer the selection process towards causal information in at least two ways. We want to understand the relevant causal interaction between *A*, the system *B* and its environment in order to decide between the competing hypotheses implied by the value-dispute. And it is causal relevance, which will normally enter into the truth conditions for "B is such and such". Moreover, given the account of values I propose the scientists will also be directed towards an inquiry on the role of the goods in question. What qualities make a region a healthy environment? What causal impact can values have on a system like *B*? Non-epistemic values can, therefore, co-determine the selection of causal information because values itself are based upon (causal) qualities and have causal consequences by steering our actions.

Thirdly, the disputing values may have a steering function towards methods. Because possible defeaters are involved, scientists can become motivated to think about adequate methods (cf. the case of forest deaths). Moreover, where a public debate on competing values takes place the public decisions to be made may be dependent upon the methodological reliability of the research processes in question. The public controversy on climate models for example has forced the scientists to improve such models.

These things considered we can say that the conditional probability that these value-steered processes lead to truths about *A* within *B* is higher than it would be without non-epistemic values. I do not claim that non-epistemic values steer human knowledge production in all possible cases or that they exclusively determine knowledge production. I rather defend the moderate claim that non-epistemic values can play an important role in scientific knowledge production. And because their truth-conducivity is based upon the purported (and defeasible) qualities of the goods values are directed to the steering function of values and moderate realism are authorized to celebrate their marriage. Moreover, the given defence of the marriage displays a much more adequate picture of science than the rationalists still offer us.

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Symptome, Eigenschaften und Teile: Wissen in der Medizin

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1. Einleitung

Abhandlungen zur Philosophie der Medizin konzentrieren sich meist auf Verfahren und Methoden, die in der Medizin vorkommen oder vorkommen sollen, manchmal auch auf medizinisches Handeln, d.h. auf ärztliche Kunst und Ethik. Es fehlen Untersuchungen zur Ontologie der Medizin, die von der Struktur des gesunden und kranken Menschen ausgehen und aufgrund dieser Struktur das ärztliche Wissen und Handeln bestimmen. In diesem Beitrag wird versucht, ausgehend vom medizinischen Begriff des Symptoms, eine geeignete Ontologie zu entwerfen und auf deren Grundlage medizinisches Wissen zu analysieren und zu charakterisieren.

2. Die Phänomenologie der Symptome

Unter Symptomen verstehen wir Zeichen, die der Patient zeigt und die den fünf Sinnen des Arztes zugänglich und damit gegenwärtig sind. Der Arzt sieht die rote, blaue oder gelbe Färbung der Haut oder ihrer Teile, die geschwollene Nase, das schmerzverzerrte Gesicht, den gebeugten Rücken, den schleppenden Gang, er hört das Husten, das pfeifende Atmen, die verwaschene Sprache, er riecht den Mundgeruch oder den Schweiß, er kann die Temperatur der Haut, ihre Rauheit, den Tumor unter der Haut, die geschwollene Leber oder die abdominale Hernie tasten und in früheren Zeiten hat er sogar den Urin abgeschmeckt um seine Süße zu testen

Heute verfügen wir über viele Methoden wie Röntgenstrahlen, Ultraschall, Computertomographie, Kernspintomographie und die Anwendung endoskopischer Instrumente für verschiedene Organe und Organsysteme. Alle die Methoden liefern Bilder, die wir sehen können und die der Arzt qualitativ und quantitativ beurteilen kann. Diese Methoden werden *bild gebende Verfahren* genannt. Sie sind nichts anderes als eine Überführung verborgener oder unsichtbarer Teile unseres Körpers in sichtbare Bilder durch komplizierte Methoden von hohem technischem Standard. Seit mehr als hundert Jahren benützen wir das Stethoskop, das Otoskop und das Laryngoskop, die nichts anderes darstellen als eine Erweiterung unseres Gesichtssinns oder Gehörs.

Symptome sind Zeichen, und sie stehen als solche nicht für sich selbst, sondern für etwas anderes. Für unsere Zwecke gehen wir davon aus, dass sie Zeichen für den Zustand des Organismus im Hinblick auf Gesundheit oder Krankheit sind, d.h. sie sind Zeichen für physiologische und pathologische Prozesse und damit spezielle Zeichen für Krankheiten oder Gebrechen.

Das deutsche Wort *Krankheitsbild* beschreibt sehr gut den Ausgangspunkt und das Ziel des epistemischen Prozesses, mit dem der Arzt die sich ihm darbietenden Symptome zu einer Einheit machen will, die ihn letztlich zu einer Diagnose wie Lungenentzündung oder Diabetes mellitus führt. Er kennt verschiedene Krankheitsbilder und er muss entscheiden ob der gegenwärtige Fall unter eines dieser Krankheitsbilder fällt oder nicht. Wenn dies nicht der Fall ist, dann gibt es zwei Möglichkeiten: entweder er kennt ein wohl definiertes Krankheitsbild nicht oder er hat ein neues entdeckt.

Das ontologische Gegenbild dieser Krankheitsbilder sind natürliche Arten von Krankheiten, d.h. wirkliche und wohl definierte Krankheiten, deren Ursachen wohlbekannt sind.

3. Symptome und Akzidenzien

Offensichtlich gibt es verschiedene Arten von Symptomen. Symptome sind gewöhnlich keine Artefakte, sondern Teile unserer Natur und sie haben als solche einen ontologischen Status. Wir haben zwischen qualitativen, quantitativen und relationalen Symptomen unterschieden und wenn wir uns die Tafel der aristotelischen Kategorien anschauen, dann finden wir quantitative, qualitative und relationale Akzidenzien und darüber hinaus auch Akzidenzien, die mit Tun und Leiden zu tun haben.

Qualitative Symptome sind z.B. das Gelbsein der Haut oder der Augen im Falle von Leberkrankheiten, die Röte der Haut im Falle von Exanthemen, Ekzemen und Entzündungen, verursacht durch Infektionen, allergische Reaktionen, Sonnenstiche oder Schläge. Quantitative Symptome sind Gewichtsverlust oder Größenverlust entweder des ganzen Körpers oder seiner Teile, so z.B. der Muskeln oder der Knochen bei Muskel- oder Knochenschwund oder das Wachsen von Kinn und Nase. Pathologische Symptome, die die Beziehung zwischen dem Organismus, der Außenwelt und anderen Individuen stören sind

der Verlust der Sehfähigkeit

der Verlust der Hörfähigkeit

der Verlust des Gedächtnisses

der Verlust der Sprechfähigkeit

der Verlust der Handlungsfähigkeit (apraxia)

All diese Akzidenzien sind individuell, d.h. es ist Peters gelbe Haut und nicht Marys, Es ist Peters geschwollene Nase und nicht Marys, es ist Peters kurzes Bein und nicht Marys, es ist Peters Blindsein und nicht Marys, es ist Peters Gedächtnisverlust und nicht Marys. Alle diese individuellen Akzidenzien, wie sie von Aristoteles, den Scholastikern, Suárez und Leibniz beschrieben wurden und von Husserl `Momente` genannt wurden, fallen unter universelle Akzidenzien wie Gelbsein, Farbe, Schwellung, Verkürzung, Defekt und sie haben die Fähigkeit in jeder Kategorie Bäume zu bilden in Analogie zur *Arbor Porphyriana* für Substanzen.

Diese individuellen Akzidenzien inhärieren individuellen Substanzen, in unserem Fall menschlichen Individuen. Inhärenz ist eine einseitige Relation, die auch mithilfe einer einseitigen existentieller Dependenz und einseitigen Abtrennbarkeit ausgedrückt werden kann. Individuelle Akzidenzien sind existentiell von ihren Substanzen abhängig, d.h. wenn sie von ihren Substanzen getrennt würden, würden sie aufhören zu existieren, weil es so etwas wie ein frei umherschwebendes individuelles Akzidens nicht gibt. Sie können nur in einer Substanz inhärieren (Einzigkeit der Inhärenz) und sie können auch nicht von einer Substanz zur anderen wandern (Prinzip der *non-migratio*). Die Individualität der Akzidenzien stammt von ihrer Substanz. Sie haben kein eigenes Individuati-

onsprinzip sondern verfügen nur über eine geborgte Individualität.

Einige der Symptome beziehen sich nicht auf die aristotelischen Kategorien, sondern auf die Teile des menschlichen Organismus. Symptome dieser Art sind der Verlust der Beine, Arme oder ihrer Teile, der Verlust der Augen, Ohren oder ihrer Teile, der Verlust innerer Organe durch Infektionen, Gefäßkrankheiten, Unfälle oder chirurgischer Eingriffe.

Es gibt außerdem spezifische und nicht-spezifische Symptome. Spezifische Symptome sind z.B. eine bestimmte Röte der Haut im Falle einer Borreliose, einer bestimmten Art von Fieber im Falle von Malaria. In diesen Fällen haben die Symptome sogar die Funktion eines *propriums*, d.h. sie identifizieren eine Krankheit. Nichtspezifische Symptome, die vielen Krankheiten gemeinsam sind, sind Fieber, Schwäche, Müdigkeit, reduzierte Aktivität und Ruhelosigkeit.

4. Endurants and Perdurants

Grundlegend für medizinische Ontologie ist der Unterschied zwischen Dingen und Prozessen (enduring and perduring entities, continuants and occurents, scholastisch: ens permanens, entia successiva). Entscheidend für den Unterschied ist das Verhältnis zur Zeit. Enduring entities wie Substanzen, Farben, Rollen und Funktionen existieren in der Zeit, während perduring entities wie Prozesse, Ereignisse, happenings und ihre Teile durch die Zeit existieren. Vom mereologischen Standpunkt aus ist die Zeit echter Teil von perduring entities doch nicht von enduring entities. So ist z.B. eine lebende Substanz in jeder Phase ihrer Lebens eine Substanz, d.h. sie ist eine Entität, die ihre Identität durch die Zeit hindurch bewahrt, während enduring entities an Zeit gebunden sind und, wenn sie über die Zeit hinweg bestehen, dies durch ihre zeitlichen Teile bewerkstelligen.

Darüber hinaus: ein Schlag oder ein Kuss werden erst zu einem Schlag oder Kuss, wenn sie ihr Ziel erreicht haben. Gilt dies für alle Bewegungen? Sicher ist jede Bewegung eine Bewegung vom ersten Moment an. Doch das gilt nicht für alle ihre Unterarten. Nehmen wir z.B. eine Dyskinesie, d.h. eine nicht koordinierte pathologische körperliche Bewegung ohne irgendein Ziel. Es scheint, dass sie von Anfang an eine dyskinetische Bewegung ist. Doch das ist nicht der Fall, denn auch die Dyskinesie hat eine bestimmte Gestalt, die diese Art von nicht koordinierter pathologischer körperlicher Bewegung von gut koordinierten oder normalen körperlichen Bewegungen unterscheidet und diese Gestalt entfaltet sich erst im Verlauf des Prozesses und ist im ersten Moment nicht präsent und deshalb auch nicht beobachtbar. Deshalb gibt es zwei Kriterien für Prozesse: entweder hat der Prozess ein bestimmtes Ziel, wie z.B. ein Schlag oder ein Kuss, oder er hat eine bestimmte Gestalt wie z.B. eine kinesia oder dyskinesia. Man kann also sagen, dass ein Schlag oder ein Kuss zwar vom ersten Augenblick an eine Bewegung oder ein Prozess ist, doch nicht vor der letzten Bewegung ein Schlag oder Kuss

Im Falle von endurants konnen einige Teile fehlen, im Falle von perdurants darf kein Teil fehlen, jeder Teil eines Prozesses ist wesentlich. In diesem Sinne haben wir eine Art von Superessentialismus, den wir in anderer Form von Leibniz kennen. Es scheint, dass uns eine mereologische Zeitstruktur erlaubt zwischen endurants und perdurants zu unterscheiden.

Es gibt Relationen innerhalb dieser Kategorien, die wir innere oder intrakategoriale nennen können, so z.B. die Teil-Ganzes Relation oder die Relation der Inhärenz. Sowohl endurants als auch perdurants haben Teile und Qualitäten inhärieren Substanzen. Typisch für diese innere Relation ist, dass sie zusätzlich keine Relationen brauchen im Gegensatz zu äußeren Relationen wie z.B. Schläge oder Küsse, die zusätzlicher Relationen wie Nähe, Sympathie oder Abneigung bedürfen.

Gibt es so etwa wie eine transkategoriale Relation zwischen diesen zwei Arten von Entitäten, die für diese Art von zweisortiger Ontologie ausreichend ist. Die Vertreter dieser Ontologie brauchen eine solche Relation und sie nennen sie *Partizipation*. Eine enduring entity wie eine Substanz partizipiert an Prozessen, so partizipieren z.B. alle Lebewesen am Prozess Leben, alle nicht lebenden Substanzen wie Steine, Tische und Kirchen partizipieren am Prozess der Veränderung. Aristotelische Ontologen würden diese Relation *Subsistenz* nennen, die Konverse zur Inhärenz. Prozesse inhärieren individuellen Substanzen und individuelle Substanzen subsistieren sowohl enduring entities wie Farben als auch perduring entities wie Prozessen, wie z.B. Gehen, Schlagen, Küssen. Die Relation der Subsistenz ist irreflexiv, asymmetrisch und intransitiv.

Welche Konzeption von Zeit liegt diesem ontologischen Kontext zugrunde? Es scheint klar zu sein, dass alle Entitäten irgendeine Beziehung zur Zeit haben müssen. Manche Entitäten wie perdurants sind an Zeit gebunden, zeitabhängig und haben echte zeitliche Teile. Sie verfügen über eine direkte Beziehung zur Zeit. Andere Entitäten wie endurants sind nicht an Zeit gebunden oder zeitabhängig und sie haben auch keine echten zeitlichen Teile. Sie verfügen nur über eine indirekte Beziehung zur Zeit, nämlich via perdurants. In diesem Sinne haben sie nur eine geborgte Beziehung zur Zeit, nämlich über Partizipation an perdurants oder Subsistenz für perdurants.

5. Symptome und Teile

Die Teil-Ganzes Relation wurde von St. Lesniewski *Mereologie* genannt. Diese Relation ist irreflexiv, asymmetrisch und transitiv. Die sogenannte naive Mereologie enthält einige wichtige Unterscheidungen. Die erste ist die zwischen homogenen und heterogenen Ganzen. Beispiele für homogene Ganze, bei denen die Position der Teile unerheblich ist, sind Wasser, Luft oder Butter. Heute nennt man sie mass terms. Heterogene Ganze sind z.B. Tiere wie Kühe oder Kaninchen oder Artefakte wie Tische oder Autos. Bei dieser Art von Ganzen ist die Position der Teile wichtig und deshalb spielt nicht nur die Relation Teil-Ganzes eine Rolle sondern auch die Relation Teil-Teil. Eine andere wichtige Unterscheidung ist die zwischen qualitativen und quantitativen Ganzen. Im ersten Fall muss nicht jeder Teil die Qualität des Ganzen haben, so muss nicht jeder Teil eines schönen Gesichtes wiederum schön sein. Im zweiten Fall, beim quantitativen Ganzen, muss jeder Teil die Eigenschaften des Ganzen haben, so ist in der Euklidischen Geometrie jeder Teil der kürzesten Strecke selbst wiederum die kürzeste Strecke. Nelson Goodman hat die Wanderung von Eigenschaften vom Ganzen zu den Teilen *dissective* und die Wanderung in die umgekehrte Richtung *expansive* genannt.

Teilabhängige Symptome beziehen sich einerseits auf echte Teile des Organismus wie z.B. auf Organe wie Augen, Ohren, Zunge, Tastsinn oder auf die Teile dieser Teile wie Cornea, Linse, Retina, nervus opticus, als Teile des Auges. Wichtige Teil des Organismus sind die Gene

oder das Genom. In bestimmten, bisher nur einigen wenigen Fällen, wie z.B. beim Darmkrebs kennen wir die pathologischen Konsequenzen fehlender Gene oder der Störung der Interaktion zwischen verschiedenen Genen. Andrerseits gibt es teilabhängige Symptome, die sich auf Teile beziehen, die in den Organismus eingedrungen sind. Diese Teile können lebendig sein wie Viren oder Bakterien, oder Parasiten wie Würmer oder Milben. Nicht lebende Teile, die in den Organismus eingedrungen sind, werden Fremdkörper genannt und sind z.B. Metall-, Holz- oder Kunststoffsplitter, die in den Körper durch Unfälle oder durch Eingriffe oder Manipulationen von Chirurgen und Zahnärzten gelangen.

Ein komplexes Symptom ist Blindsein. Es kann durch die Dysfunktion oder Zerstörung wichtiger Teile des Auges oder des Gehirns entstehen, so z.B. durch Verletzung oder Zerstörung der Cornea, der Linse oder der Retina, des nervus opticus oder des Sehzentrums im Gehirn. Augenkrankheiten, die durch Zerstörung der Retina entstehen, werden durch hohen Blutdruck, durch Diabetes mellitus, durch hohen inneren Augendruck z.B. im Falle des Glaukoms oder durch einen Ablösungsprozess der Retina ausgelöst. In diesem Falle wird die Blindheit durch die Zerstörung wesentlicher funktionaler Teile des optischen Systems einschließlich verbindender Organe, wie des nervus opticus, der für die Verbindung zwischen dem Auge und dem Gehirn und dem optischen Zentrum im Gehirn selbst verantwortlich ist, verursacht.

Lebende aber fremde Teile im Organismus sind z.B. Bakterien und Viren, die für Infektionen verschiedener Art verantwortlich sind. In diesem Falle kann nur die Vernichtung der eingedrungenen Teile durch das Immunsystem oder durch Medikamente das Problem lösen. Eine sekundäre Reaktion des Organismus auf diese Infektionen kann Immunkrankheiten wie Allergien und Rheuma hervorrufen.

Wenn wir die hierarchischen Strukturen betrachten, angefangen vom ganzen Organismus bis zu seiner untersten oder subatomaren Ebene, dann sollten wir betonen, dass es sich beim Organismus um ein qualitatives Ganzes handelt, bei dem sich die Eigenschaften des Ganzen nicht automatisch auf alle Teile vererben und umgekehrt auch nicht von den Teilen auf das Ganze. Die Teile können sogar eine höhere Komplexität aufweisen als das Ganze. In diesem Falle ist die Eigenschaft `komplexer sein` nicht expansive, d.h. sie wird nicht von den Teilen auf das Ganze vererbt. Ein Beispiel ist das Artefakt Auto, bei dem der Motor eine höhere Komplexität aufweist als das Auto selbst.

6. Symptome und die Identität von Krankheiten

Keine Entität ohne Identität. Medizinische Erfahrung zeigt, dass in vielen Fällen nicht alle Symptome einer Krankheit vorhanden und damit auch beobachtbar sind. So finden wir im Falle einer Pneumonie nicht immer Fieber, obwohl die Röntgenaufnahme die typischen pneumonischen Strukturen der Lunge zeigt. Deshalb ist es besser nicht die logische Konjunktion zwischen den verschiedenen Symptomen, die eine bestimmte Krankheit charakterisieren, zu benützen, sondern die logische Disjunktion. Im Falle der Konjunktion ist die Kombination falsch, wenn eines der Glieder fehlt, im Falle der Disjunktion nicht.

Das deutsche Wort *Leitsymptom* bezeichnet einen epistemischen Aspekt in einem doppelten Sinne. Einerseits können bestimmte Symptome, die für den Beginn einer Krankheit typisch sind den Arzt zum richtigen Krankheitsbild und damit zur richtigen Diagnose führen, andrerseits ist das Leitsymptom eine *conditio sine qua non*, eine notwendige Bedingung für ein bestimmtes Krankheitsbild und folglich auch für eine bestimmte Krankheit. Der ontologische Aspekt besteht darin, dass das Leitsymptom nicht einfach ein *ens rationis*, sondern ein *ens rationis cum fundamento in re* ist, d.h. eine mentale Entität mit einem Fundament in der Realität.

Ein nicht so bekanntes methodisches Instrument ist das *Sperrsymptom.* In diesem Falle hat das Fehlen eines notwendigen Symptoms eine exklusive Funktion. So schließt z.B. eine normale Lungenaufnahme Pneumonie oder ein normales Blutbild Leukämie aus. In einigen Fällen charakterisiert oder definiert genau ein Symptom eine Krankheit. So charakterisiert z.B. ein bestimmtes Fieber Malaria. In anderen Fällen ist es nicht ein Symptom, sondern eine bestimmte Ursache einer Krankheit. Dies ist der Fall bei Infektionen wie Borreliose oder Tuberkulose. Daraus folgt, dass nicht nur ein Symptom, sondern auch eine Ursache eine Krankheit identifizieren kann. Dies gilt für manche Infektionen, jedoch nicht für alle.

Es gibt Fälle, in denen die Einheit der Krankheit nicht klar ist. In diesen Fällen sprechen wir von einem *Syndrom* oder von einem Zusammenlaufen von Symptomen, d.h. wir beobachten ein gewisses Zusammenkommen oder eine Kombination von Symptomen, ohne sicher zu sein, dass sie wirklich eine Krankheit charakterisieren und, wenn dies der Fall sein sollte, eine oder mehrere Krankheiten. Unter den Begriff Syndrom wird ein großer Bereich pathologischer Phänomene zusammengefasst.

Syndrome, die wohl definierte Krankheiten werden.

Syndrome, die die Aussicht haben eine wohl definierte Krankheit zu werden.

Syndrome, die keine Aussicht haben eine wohl definierte Krankheit zu werden

Ad 1) Es handelt sich z.B. um Krankheiten wie die Borreliose, deren Ursache, die Infektion durch die Spirochäte borrelia Burgdorferi, bis 1972 unbekannt war und deren Hauptsymptom eine bestimmte wandernde Röte, die Dermatologen dazu führte dieses Syndrom als dermatologische Erkrankung anzusehen und sie *erythema migrans*, also `wandernde Röte` zu taufen. Heute handelt es sich um eine wohl definierte Krankheit, deren Ursache bekannt ist und deren Erreger serologisch identifiziert und isoliert werden kann.

Ad 2) Ein Syndrom dieser Kategorie ist das *restless leg* Syndrom, das eine Unterklasse der Parkinson Erkrankung zu sein scheint und das selbst wiederum eine Reihe von subspecies aufweist. Die Symptome des *restless leg* Syndroms waren seit langer Zeit bekannt, doch sie wurden nicht als pathologische Einheit angesehen. Dieses Syndrom ist bisher noch keine wohl definierte Krankheit, doch es hat eine gute Chance eine solche Krankheit zu werden.

Ad 3) Es gibt andere Syndrome, deren Ursachen von sehr heterogener Art sind wie das *Burnout Syndrom* mit wechselnden Symptomen, die körperliches, psychisches und soziales Verhalten betreffen. Es gibt soziale Einflüsse, die dem Patienten bekannt sind und andere, die ihm unbekannt sind. Andere Arten von Syndromen wie z.B. das *Lazarus Syndrom* und das *Münchhausen Syndrom* schließen sogar eine Mischung von Artefakten, d.h. Symptome, die der Patient bewusst produziert und echten Ursachen oder Symptomen.

Aus diesen Analysen kann man ersehen, dass natürliche Arten grundlegend für eine Ontologie der Medizin

sind. Offensichtlich gibt es auch natürliche Arten von Krankheiten. Daraus folgt, dass es im Falle von Syndromen entweder gar keine natürliche Art gibt oder es gibt sie und sie ist noch unbekannt, oder sie ist bekannt, aber die Symptome sind falsch geordnet oder eingeordnet.

Eine interessante Frage besteht darin, ob das Prinzip der *migration resistence*, d.h. die Unmöglichkeit eines Individuums seine Art zu wechseln auch für Krankheiten gilt. Wenn Krankheiten natürliche Arten sind, dann muss dieses Prinzip gelten, d.h. eine Krankheit kann zwar Ursache für eine andere Krankheit sein, kann aber selbst nicht in eine andere Krankheit übergehen, d.h. Krankheiten müssen artstabil sein.

7. Zusammenfassung

Als Grundlage medizinischen Wissens wird eine Ontologie der Symptome angenommen, Die dabei verwendete Ontologie ist aristotelisch in einem weiteren Sinne mit individuellen Substanzen und Akzidenzien, den Relationen der Inhärenz und Subsistenz und natürlichen Arten. Außer diesen beiden Relationen wird als weitere innere oder ontologische Grundrelation die Teil-Ganzes Beziehung verwendet und Bezug auf eine naive Mereologie genommen. Kausale Beziehungen werden nur angedeutet und nicht weiter analysiert. Symptome sind Akzidenzien verschiedener Kategorien. Sie charakterisieren entweder eine wohl definierte Krankheit oder ein Syndrom, d.h. eine Kombination von Symptomen, die entweder in eine wohl definierte Krankheit mündet, oder deren Einheit immer unklar bleiben wird. Der Begriff der natürlichen Art ist grundlegend für den Krankheitsbegriff. Auch für Krankheiten gilt die *migration resistence*, d.h. eine Krankheit kann wohl die Ursache für eine andere sein, jedoch kann sie nicht in eine andere übergehen.

Krankheitsbilder, Leitsymptome, Sperrsymptome, bildgebende Verfahren, Krankheiten im Wartestand sind epistemische Grundbegriffe. Diese Grundbegriffe sind nur mithilfe einer geeigneten Ontologie erklärbar.

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Chomsky, Knowledge of Language and the Rule-Following Considerations

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1. Introduction

According to Noam Chomsky, speakers of a language have a substantial body of propositional knowledge of that language that they draw upon in language production and comprehension. Since the late 1950s Chomsky's project has been to characterise that knowledge and give an account of its acquisition. Arguably, one of the most powerful philosophical challenges to Chomsky's output is generated by the rule following considerations of *Philosophical Investigations* §§ 138-242. My aim in this paper is to characterise the nature of this challenge, a topic that, rather surprisingly, has received relatively little attention in the philosophical literature.

2. Chomsky and the problem of rule-following

Despite significant changes in his position over the last forty years, Chomsky's core ideas have remained constant. His central idea is that we have a body of knowledge of language, a body of knowledge that we draw upon in producing and comprehending sentences and which allows us to routinely produce novel sentences and understand sentences that we have never encountered before. This is a species of propositional knowledge rather than a skill or ability. The particular body of knowledge that an individual has of her language will be rich and multifaceted. It will include lexical, phonological and syntactic knowledge. Chomsky has been primarily concerned with our knowledge of syntax and I will focus on his views of syntax in what follows. This syntactic knowledge includes rules for constructing phrases and sentences and rules for transforming sentences (for example, passives into actives and declarative sentences into questions). Prominent examples of rules that Chomsky has claimed are known by speakers of English include the following: (a) the head of a phrase comes before its complement (Chomsky, 1986); (b) an anaphor is bound in a local domain (Chomsky, 1986); and (c) a question can be derived from a declarative sentence by moving the auxiliary immediately following the subject to the front of the sentence (Chomsky, 1988). An important point about such rules is that our knowledge of them is conceived as being unconscious or tacit so that a typical speaker is unable to state the rules that underlie her linguistic behaviour. Moreover, there is an important distinction between competence and performance (Chomsky, 1965). An individual's competence is her knowledge of language. Her linguistic performance will not perfectly reflect this competence. For example, due to time or memory limitations she might reject as ungrammatical a perfectly legitimate sentence of her language or be unable to make any firm judgement as to the grammaticality of such a sentence.

In the rule-following considerations Wittgenstein's attention focuses on what might be called the problem of rule-following. This problem is constituted by the following questions. How is it possible to grasp a rule or for one's activities to be governed by a particular rule? What determines the demands of the rules governing an individual's activities or, alternatively, what determines the identity of those rules? Given Chomsky's commitment to our having knowledge of syntactic rules, he is faced with versions of these very questions. How can an individual know or grasp a particular syntactic rule or be governed by that rule especially when the demands of the rule will far outstrip her linguistic performance? What determines which syntactic rules belong to an individual's language or what those rules demand?

The existence of the problem of rule-following need not in itself cause the Chomskian any great worries. The problem only becomes a genuine cause for concern if there is reason for thinking that the Chomskian is distinguished from advocates of alternative visions of language in not having access to the resources needed to solve the problem. So the question that arises is this: are there reasons to think that the Chomskian is peculiarly ill-equipped to solve the problem, so ill-equipped as to imply that it is impossible for the rules that Chomsky identifies to belong to an individual's language, or be known by her? My claim is that the rule-following considerations contains an explicit line of thought that does indeed threaten to deliver an affirmative answer to this question.

3. The challenge of the rule-following considerations

Mentalism is the view that the mind is an inner theatre within which mental phenomena reside. Mental phenomena are thus set apart from the world beyond the individual's outer surfaces and lie behind her observable behaviour, typically causing that behaviour. Chomsky is explicit in his commitment to mentalism. For him, to describe the mind is to describe the brain at a higher level of abstraction and the rules of an individual's language are encoded or represented in her mind-brain and have no existence outside of that system. Thus, what an individual knows about her language is a matter of what is represented in her mind-brain. (See Chomsky, 2000, for a recent statement of this point of view.)

A hostility to mentalism is one of the major themes of Wittgenstein's later work. A significant part of the rule-following considerations comprises of an attack on mentalist attempts to solve the problem of rule-following. One such attempt involves an appeal to interpretations and this attempt resembles Chomsky's view of the rules of language in such a way as to imply that Wittgenstein's critique of it directly impacts upon Chomsky. In order to substantiate this claim I shall begin by rehearsing Wittgenstein's critique of the appeal to interpretations.

In *Philosophical Investigations* § 201 Wittgenstein writes 'we ought to restrict the term "interpretation" to the substitution of one expression of the rule for another.' Hence, when an individual interprets a rule she entertains some expression of that rule in her mind. Now consider the familiar example of an individual being instructed to continue the numerical series 2, 4, 6, 8 according to the rule '+2'. There are any number of different ways in which the rule that the individual is instructed to follow could be interpreted. However the series is continued there is some way of interpreting the rule such that that continuation is

correct or in accord with the rule. For example, there is a way of interpreting the rule so that 1002 immediately follows 1000 and, equally, there is a way of interpreting it so that 1004 immediately follows 1000. Interpretations mediate the link between a rule and its correct applications. Without such a mediating link anything and everything, and therefore nothing, would be in accord with the rule. Suppose that the individual interprets the rule such that 1004 immediately follows 1000 and, acting on that interpretation, she writes '1004' immediately after '1000.' Then she has continued the series correctly on her interpretation of the rule. Insofar as she has made a mistake this is because her interpretation is not in line with that of the individual who laid down the instruction to continue the series in accord with the rule '+2' in which case she has failed to grasp the relevant rule. All this suggests the following answer to the problem of rule-following. Grasping a rule is a matter of providing an interpretation of the target rule; no interpretation, no grasping. What determines the demands of the rules that govern an individual's behaviour or the identity of those rules are her interpretations of them. In short, what connects an individual to a rule that makes determinate demands on how she behaves in circumstances that she might encounter is an interpretation of the rule, an expression of that rule existing in her mind.

Wittgenstein's objection to this appeal to interpretations echoes a complaint he frequently directs at mentalistic moves: the appeal gets us nowhere as it is either circular or threatens infinite regress. What determines the demands of an individual's interpretation of a rule or the rule under that interpretation? Given that when an individual interprets a rule she provides an expression of that rule, that expression, or what she does in interpreting the rule, is as open to interpretation and as much in need of interpretation as the rule itself. If there is a problem that interpretations are needed to solve then precisely that problem arises in connection with interpretations. For anything is in accord with a rule under a given interpretation on some interpretation of that interpretation. All this is brought out in *Philosophical Investigations* § 201 when Wittgenstein writes:

> This was our paradox: no course of action could be determined by a rule, because every course of action can be made out to accord with the rule. The answer was: if everything can be made out to accord with the rule, then it can also be made out to conflict with it. And so there would be neither accord nor conflict here.

It can be seen that there is a misunderstanding here from the mere fact that in the course of our argument we give one interpretation after another; as if each contented us at least for a moment, until we thought of yet another standing behind it. What this shews is that there is a way of grasping a rule that is *not* an *interpretation*, but which is exhibited in what we call "obeying the rule" and "going against it" in actual cases.

Wittgenstein's point here is that we get the paradoxical conclusion that there is no such thing as rule-following if we invoke interpretations to solve the problem of rule-following. For, interpretations alone cannot connect us to rules that place determinate demands on us as their significance is as up in the air and in need of interpretation as that of the rules that they are invoked to interpret.

Chomsky isn't explicitly concerned with solving Wittgenstein's problem of rule-following and he doesn't invoke the term 'interpretation' in accounting for our knowledge of language. Nevertheless, I think there are close enough parallels between the appeal to interpretations in attempting to solve the problem of rule-following and Chomsky's core claims to imply that Wittgenstein's attack on the former equally applies to the latter. To see why, consider the following.

Chomsky is an unabashed mentalist who believes that the identity of the rules belonging to an individual's language is determined by how things are in her mind-brain. Thus, his implied answer to the question of how it is possible for an individual to grasp a linguistic rule and that of what determines the demands of the rules of her language or the identity of those rules involves an appeal to the state or contents of her mind-brain. More precisely, Chomsky holds that the rules of an individual's language are encoded or represented in her mind-brain in a manner analogous to that in which information is encoded in a computer and the rules have no existence independent of that representation. Such representations are causally implicated in language comprehension and production. (Chomsky offers one of the most explicit statements of this line of thought in his 1980.)

It should be clear that Chomsky's representations of rules are analogous to the interpretations that Wittgenstein discuses. Both exist in the mind, constitute an individual's grasp of the rules that she grasps and serve to determine the demands or the identity of those rules. Consequently, Chomsky is faced with a version of the challenge that Wittgenstein directs at the advocate of interpretations. That challenge can be characterised in the following terms. Mental representations of linguistic rules are invoked to explain how it is possible for an individual to grasp or know the rules of her language. These mental entities are conceived as being such as to determine the demands or the identity of those rules. For example, they are supposed to be such as to determine which collections of words are grammatical (and so can legitimately be produced by the individual when engaged in linguistic activity) and which are not (and so ought not be produced and ought be rejected as ungrammatical). But how can these mental representations play that role? For, the very questions that they were invoked to answer arise in connection with them. What determines the demands or the identity of the rules represented in the individual's mind-brain as those representations can be interpreted in many disparate ways. Suppose that a representation of a rule is causally implicated in the individual's producing a particular collection of words in a linguistic interchange. Did she produce a sentence of her language, did she apply the rule as represented in her head correctly? Just as the representation can be interpreted so as to deliver an affirmative answer to this question, it can equally be interpreted to deliver a negative answer. What Chomsky needs to do is provide some principled reason for preferring one of the competing interpretations of the representation over all the others and that reason had better not give rise to the same problem all over again one step further down the line.

4. Conclusion

Wittgenstein's attack on the appeal to interpretations generates an analogous challenge to Chomsky's attribution to speakers of mentally represented rules. Meeting that challenge involves explaining in such a way as to avoid circularity or infinite regress, how an individual's linguistic behaviour could be governed by determinate linguistic rules and how she could know such rules in virtue of the state of her mind-brain. Despite the power of this challenge, I am optimistic that it can be met by developing the following idea. What rules are represented in an

individual's mind-brain is a matter of the nature of the causal structures underlying her linguistic behaviour and the generalisations concerning linguistic behaviour that they ground. Developing this idea is a project for another day and one that faces several prominent obstacles. For example, there are the objections that Kripke (1982) directs at dispositionalism and the problem of squaring the idea with the competence-performance distinction.

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Wittgenstein on the Structure of Justification: Breaking New Epistemological Ground

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I shall investigate Wittgenstein's view of the structure of justification comparing it to Foundationalism, Holistic Coherentism, and Contextualism. Remarks in *On Certainty* (1969) appear to commit Wittgenstein to each of these theories, and scholars have attributed each theory to him. I argue that Wittgenstein's remarks fit neither these theories, nor a sort of combination theory. Wittgenstein breaks new epistemological ground.

The issue of the structure of justification arises from the regress problem. An inferential belief gets its justification from other beliefs, producing a belief chain. This chain, or regress, either continues indefinitely or ends. If it continues indefinitely, then it either goes on forever (Infinitism) or circles back upon itself (Linear Coherentism)--two problematic positions I will not discuss. If the regress ends, it ends in beliefs that are directly or non-inferentially justified. The regress problem thus delineates three possible structures, and four possible theories, of justification: an infinite chain of beliefs (Infinitism), a circular chain of beliefs (Linear Coherentism), and a finite chain of beliefs (Foundationalism and Contextualism).

1. Foundationalism

For Foundationalists, justification is asymmetrical: basic beliefs justify inferential beliefs, but not vice versa. Foundationalists argue that only a finite chain that ends in a basic belief can justify an inferential belief. Every alternative leads to skepticism.

Wittgenstein has an asymmetrical theory of justification. Like contemporary Foundationalists and Contextualists, Wittgenstein distinguishes between two different types of beliefs, making one the foundation for the other. Avrum Stroll (2002 & 1994) and Roger Shiner (1980) argue that Wittgenstein is a kind of Foundationalist. David Annis (1978, foot note 3), Paul Moser (1985, chapter 2), and Louis Pojman (1999, p. 188) consider Wittgenstein a Contextualist.

Like Foundationalists and Contextualists, Wittgenstein believes the regress of justification ends in basic beliefs. The activities of science require that certain things go unquestioned or "stand fast." As Stroll points out (1994, p. 142), Wittgenstein uses explicitly foundational language in more than sixty passages (1969, 87-88, 94, 103, 110, 112, 162, 166, 167, 204-205, 211, 225, 234, 245-46, 248, 253, 295-96, 307-08, 337, 341, 343, 347-48, 353, 358-59, 370-71, 380, 403, 411, 414-45, 449, 474, 475, 477, 492, 509, 512, 514, 519, 558-60, 614, 670), all of which contain variations of the German words "Grund" ("ground", "base", "bottom", "foundation"), "Fundament" ("foundation", "basis"), or "Boden" ("ground", "soil"). These include:

> "Giving grounds, however, justifying the evidence, comes to an end" (OC 204).
>
> "One cannot make experiments if there are not some things that one does not doubt… If I make an experiment I do not doubt the existence of the apparatus before my eyes. I have plenty of doubts, but not that" (OC 337).
>
> "The *questions* that we raise and our *doubts* depend on the fact that some propositions are exempt from doubt, are as it were like hinges on which those turn. That is to say, it belongs to the logic of our scientific investigations that certain things are *in deed* not doubted" (OC 342).
>
> "If I want the door to turn, the hinges must stay put" (OC 343).

Foundationalists see basic beliefs as self-sufficient: each stands on its own without support from others. These basic beliefs support a large and complex structure of inferential beliefs much as the foundation of a building supports the superstructure.

Both critics (Stroll, 1994) and advocates of Foundationalism (Alston, 1976) argue that Foundationalism's primary problem is that there are too few basic beliefs to support the large, complex superstructure. Instead of a pyramid, Foundationalism actually has the structure of an inverted pyramid (Stroll 1994, p. 144) liable to topple over at any moment. Wittgenstein avoids this problem because his "basic beliefs" are numerous and interconnected, forming a strong, ample groundwork for our inferential beliefs.

2. Holistic Coherentism

Holistic Coherentists, such as Quine (1953), BonJour (1985), and Nelson (1993), reject both the distinction between basic and inferential beliefs and the linear notion of justification presupposed by the regress problem. They maintain that all beliefs are epistemically equal and derive their justification from their place in our belief system. They also argue that while justification may appear linear in a particular case, this appearance is misleading. It overlooks the essential role of the entire belief system in justification.

Wittgenstein often refers to our system of beliefs.

> "All testing, all confirmation and disconfirmation of a hypothesis takes place within a system. And this system is ... not so much the point of departure as the element in which arguments have their life" (OC 105).
>
> "When we first learn to believe anything, what we believe is not a single proposition, it is a whole system of propositions, (Light dawns gradually over the whole.)" (OC 141)
>
> "It is not single axioms that strike me as obvious, it is a system in which consequences and premises give one another mutual support. (OC 142)
>
> "The child learns to believe a host of things. I.e. it learns to act according to these beliefs. Bit by bit there forms a system of what is believed…" (OC 144)
>
> "Experience can be said to teach us these propositions. However, it does not teach us them in isolation; rather, it teaches us a host of interdependent propositions." (OC 274)

Were it not for the more than sixty foundational passages in *On Certainty*, scholars might take these holistic passages as evidence that Wittgenstein is a Holistic Coher-

entist. When considered in combination with the foundational passages, these holistic passages suggest that Wittgenstein has a sort of mixed theory. The problem of interpreting this combination of foundational and holistic passages has been discussed by a number of scholars, including Michael Williams (2001, p. 383) and Roger Shiner (1980).

What is not clear from such passages is the extent and nature of the system. For while the Holistic Coherentists maintain that all of our beliefs form a giant network, Wittgenstein maintains that our "foundational beliefs" form a system of their own that supports our inferential beliefs. Thus, Wittgenstein both maintains the hierarchy of beliefs characteristic of Foundationalism (and Contextualism) and characterizes basic beliefs as interdependent and mutually supporting rather than as epistemically self-sufficient. This sets Wittgenstein's theory apart from Foundationalism, Holistic Coherentism, and combinations of the two, such as Susan Haack's *Foundherentism* (1999).

3. Contextualism

Because Wittgenstein stresses the importance of context, scholars such as David Annis (1978), Paul Moser (1985), Laurence BonJour (1985), and Louis Pojman (1999) have seen Wittgenstein as a Contextualist who maintains that our inferential beliefs are supported by contextually basic beliefs, i.e., beliefs that are basic in some contexts, but not in others--a position which seems to open the door to relativism. Annis, for example, argues that a belief is contextually basic for a person relative to an appropriate objector group at a specific time if that group lets the person hold the belief without supplying reasons. In different contexts, different beliefs are basic, but there is no general epistemic criterion for justifying beliefs independent of those arising from social practices and social approval (1978). I maintain that Wittgenstein is not a Contextualist and therefore not subject to the charge of relativism.

The one passage most frequently cited as evidence of Wittgenstein's Contextualism is OC 235: "At the foundation of well-founded belief lies belief that is not founded." (See also OC 10, 27, 155, 250, 255, 334-35, 348, 423, 553, 554, & 622.)

Such remarks may seem to leave Wittgenstein open to the charge of relativism, for a proposition that is certain in one context may be uncertain in another. Nonetheless, Wittgenstein is not a Contextualist because unlike Annis, Wittgenstein has not only a notion of particular contexts, but also a notion of a very general context. Wittgenstein maintains that criteria function only given certain very general facts of nature (including facts about human behavior) and certain human customs or general practices. He calls this general background context "our inherited background" or "world picture" (OC 167) and insists that it is necessary for inquiry. Moore's propositions in "A Defence of Common Sense" belong to this world picture (1959). At this level of generality, certainty is absolute. There is room for fluctuation, but not for doubt.

4. Wittgenstein's River Analogy

In *On Certainty* 94-99, Wittgenstein compares our system of beliefs to a river. The flowing waters represent our empirical inquiries. These involve forming hypotheses, making predictions, gathering data, performing experiments, doubting, checking, and giving grounds. In contrast to the flowing water are the hard banks and sandy bottom of the river. These are necessary for its existence. Without the hard banks guiding the course of the water, there would be no river.

The river's bed and banks represent our foundational beliefs, which Wittgenstein calls our "picture of the world" and "the inherited background against which I distinguish between true and false" (OC 94). Foundational beliefs have the "form of empirical propositions" (OC 96), but their function is logical. Unlike fluid empirical beliefs, basic beliefs have become hardened and function as channels guiding the flow of empirical beliefs (OC 96). One advantage of this metaphor over others, such as the pyramid, is that it is essentially dynamic: the water is constantly flowing. Change is an integral part of the metaphor. The relationship between the water and the bank also changes over time. Fluid beliefs harden, and hard beliefs become fluid (OC 96). This does not mean that all beliefs are equally revisable; however, for some basic beliefs are more solid than others.

> "And the bank of the river consists partly of hard rock, subject to no alteration or only to an imperceptible one, partly of sand, which now in one place now in another gets washed away, or deposited" (OC 99).

Let us consider one example of a belief that changes its status: Wittgenstein example "I have never been on the moon". In 1951, this was certain within their system of beliefs; a human going to the moon was considered physically impossible. Since 1951, that once solid belief has become fluid. Humans have been to, and walked on, the moon. Consequently, asking whether someone has been to, or walked on, the moon today in 2003 makes sense in a way it did not in 1951. This belief seems to have shifted from being part of the riverbank to being part of the sand of the riverbed that has been carried along by the water.

Wittgenstein's account is beginning to sound like Quine's view that all beliefs are in principle revisable. I think Wittgenstein would reject this comparison, for while he allows some basic beliefs to become empirical and vice versa, he insists that at any given time both types of beliefs are necessary for the river to exist.

> "But I distinguish between the movement of the waters on the river-bed and the shift of the bed itself; though there is not a sharp division of one from the other" (OC 97).

The movement of the water represents everyday science: formulating hypotheses, making predictions, gathering data, testing hypotheses, and correcting mistakes. A shift of the riverbed itself represents a truly dramatic change, perhaps a paradigm shift.

5. Conclusion

I have argued that Wittgenstein's views on the structure of justification cannot be categorized as Foundationalist, Holistic Coherentist, or Contextualist. Wittgenstein's remarks fit none of these theories, nor can they be seen as an attempt to develop some sort of combination theory. Consequently, Wittgenstein has given us a novel model of the structure of our belief system.

Finally, I want to mention a point for which I have argued elsewhere (2002). Wittgenstein's view differs from the three individualist theories discussed here in that his theory is communal. The traditional theories maintain that the belief system of the individual is primary. Whatever beliefs the community may have are secondary to those of its individual members. Wittgenstein, like many contemporary feminist epistemologists (Nelson, 1993 & Longino, 1993), maintains that the belief system of the community is primary.

> "'We are quite sure of it does not mean just that every single person is certain of it, but that we belong to a community which is bound together by science and education" (OC 298).

Before we can be trained in science, we must be trained in the more basic practices of language use, inquiry, etc. Through this more basic training, children unconsciously absorb the inherited background beliefs of their community, which function as the "matter of course foundation" for scientific inquiry (OC 167).

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Wittgenstein on Believing that p

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1. Introduction

The outlines of Wittgenstein's conception of propositions can be sketched by means of the following four or five points. First, in 1913 Wittgenstein focuses on whatever it is that judgments have in common that allows them to depict a sense and express a thought. In so doing Wittgenstein is pressing to find a sense or proposition – what is believed *in* -- of concern to logic and independent of psychological conditions like judging, asserting, and negating. In his 1913 "Notes on Logic" Wittgenstein says (von Wright 1979, 96):

> Judgment, question, and command are all on the same level. What interests logic in them is only the unasserted proposition.

He writes, also:

> There are only unasserted propositions. Assertion is merely psychological. In *not-p*, *p* has exactly the same sense as if it stands alone; this point is absolutely fundamental. (von Wright 1979, 95)

Second, to contend that assertion (etc.) is merely psychological and of no concern to the logician means that a proposition seeming to occur in assertion as though in another proposition does not, in fact, do so. That is, only truth-functional contexts provide a means for a proposition to genuinely occur in another proposition. Wittgenstein alludes to this contention when he writes that "at first sight it appears as if there were also a different way in which one proposition could occur in another" (von Wright 1979, 143.)

Third, it is essential to logic that when we concern ourselves with propositions we take into consideration not merely the truth value that they have (true, false), but the truth value (true or false) they may possibly have. That is, logic highlights propositional bivalence. We can represent the false value by "~" or some other way, but what matters is not that we say "p is false" by (e.g.) ~p, but that we grasp that what matters to logic is both truth values. In English (once we settle that ~ p means "p is false") we express that a proposition has two truth values by saying (or writing on a truth table) *both p and ~ p*. As our language indicates, propositions are intrinsically linked to logical connectives, for as just noted, *both/and*, and *not* come into view simply by understanding the nature of propositions in terms of possible truth-values. About this bipolar view of the proposition Wittgenstein writes (Ogden 1922, 95):

> In 'a judges *p*' *p* cannot be replaced by a proper name. This appears if we substitute "a judges that p is true and not-p is false." The proposition "a judges p" consists of the proper name *a*, the proposition *p* with its two poles, and *a* being related to both of these poles in a certain way. This is obviously not a relation in the ordinary sense.

Wittgenstein is aware that language misleads us in our analyses of belief. The appearance noted above of our possessing more than one way of forming larger propositions out of smaller ones is one case; another is our tendency to mistake "A judges p" as a relation between an experiencing subject and the proposition (Ogden 1922, 119).

Fourth, Wittgenstein views the meaning of a proposition as a fact – its "objective" in Russell's later language – that is, what makes it true. In particular, he insists that a true negative proposition (e.g. "Socrates is not a handsome man") must be true because of some fact as to fail to do would leave our use of true negative propositions without meaning:

> However, for instance, "not-p" may be explained, the question of what is negated must have a meaning (von Wright 1979, 94).

These items are surely not exhaustive of Wittgenstein's conception of propositions and belief, but they will help us see more clearly into the development of Wittgenstein's ideas to have them before us.

2. A problem and a turning point

Recall Wittgenstein's point cited above:

> However, for instance, "not-p" may be explained, the question of what is negated must have a meaning. (von Wright 1979, 94)

We can see some of the motivation behind this remark if we turn to an often ignored source, Russell's chapter in *Theory of Knowledge* on the dual forms of belief and disbelief. Russell's multiple relation analysis, given in his chapter on understanding, has captured the attention many interpreters and tended to eclipse this chapter which is my concern, though it is here, I think, that we gain entry into Wittgenstein's views (as well as their affect on Russell). The relevant doctrine can be explained quite briefly. In the *Theory of Knowledge* Russell reduces belief that not-aRb to the form, *dis*belief that aRb (Eames 1984, 142). On this view (new to the text) what verifies (belief in) the negative proposition ~aRb is the truth of (a belief in) the positive proposition aRb. The purpose behind Russell's introducing disbelief as a new form is to be able to assert that in belief and disbelief the same content, the same proposition, occurs.

In taking this position on disbelief and belief, he may therefore be attempting, unsuccessfully, to address Wittgenstein's demand for something common to various cognitive forms. But my present point is that Wittgenstein's demand that there must be some fact of the matter is not satisfied by this reduction of negation to disbelief. In the *Theory of Knowledge* chapter under discussion Russell seems uncertain of the doctrine, and I think we can discern why, and what Wittgenstein may have said, from Russell's own comments in 1918. In 1918, in the context of rejecting Demos' alternative to his own doctrine of negative facts, Russell agrees with Demos that the reduction of ~aRb to disbelief in aRb is unacceptable (Slater 1986, 187). A negative proposition, Russell says, must be defined in such a way that its truth depends on something "in the real world" and not on the subjective event of experiencing disbelief; this is why, he suggests, there must be negative facts.

The fact that mere weeks after composing the 1913 dualist doctrine Russell replaces its account of true

negative beliefs with a theory of bipolar judgments and negative facts supports my contention that we witness in this transition a decisive stage in Wittgenstein's expression of the theory, which appears first, muffled and alien looking, in Russell's own writings. That is, I suspect that Russell's excessively psychological approach, his inability to handle the connection between propositions and possible truth values, and to supply a fact when a negative proposition is true, together lead Wittgenstein to demand bipolarity and Russell to adopt it. For clearly Wittgenstein sways Russell, in 1913, further away from a psychological account of propositions, towards a logical, bi-polar conception--that is, one which sees propositions in terms of their possible truth-values – and towards admission of some fact as the meaning of true negative propositions.

3. A rough solution and a new view

Turning to the notes, we see Wittgenstein's hand first in Russell's attempt to address the notion of possibility. Russell opens the notes asserting that what is the case may be either positive or negative; that "[t]hree objects x, R, y form one or other of two complexes xRy or ~xRy" (Eames 1984, 195). These negative and positive facts, as he thereafter calls them, are said to "contain nothing but x and R and y"; that is, despite the suggestion of the symbol "~xRy", a negative fact contains no object corresponding to the tilde. Yet they do contain a non-negative, non-positive neutral fact as a constituent. He explains:

> It *looks* as if there actually were always a relation of x and R and y whenever they form *either* of the two complexes, and as if this were perceived in understanding. If there is such a neutral [neither positive nor negative] fact, it ought to be a *constituent* of the positive or negative fact. It will provide a meaning for *possibility* (Eames 1984, 195).

A neutral fact is intended to do the work of propositional content, of what is common to the two poles of belief. Thus Russell situates the neutral fact in a polarized role in judging, introducing a radically new theory of judging which overturns that presented in the *Theory of Knowledge*. (Russell is explicit that the neutral fact replaces the notion of form treated as an element of belief on the earlier 1913 theory.) We read:

> Judgment involves the *neutral* fact, not the positive or negative fact. The neutral fact has a relation to a positive fact, or to a negative fact. Judgment asserts *one* of these. It [judgment] will still [when it asserts a neutral fact in one of these ways] be a neutral relation, but its terms will not be the same as in my old theory. The neutral fact replaces the *form*. Call [a] neutral fact "positively directed" when it corresponds to a positive fact", "negatively directed" when it corresponds to a negative fact (Eames 1984, 187).

In the passage just cited, Russell distinguishes between what a judgment *involves* and what it *asserts*. (These ideas develop eventually into his distinction in late 1918 between what a propositional symbol *expresses*--a thought, its meaning--and what it asserts or denies: a fact, its objective.) Wittgenstein's insistence that belief be construed neither as a relation to a fact (as it would be true) nor to a proposition (as there are none), and that a proposition must be true because of some fact, expresses itself here, I claim, in Russell's conceding a duality in facts (not in belief/disbelief pairs), as well as duality or polarity in the way that a proposition (a neutral fact) means.

That is, we should gather from the 1913 notes how decisively Wittgenstein insists on the need for a fact, not a subjective mental state, as the correlate of a proposition. For it is the point in time at which Russell replaces his *Theory of Knowledge* doctrine on which the negation of "aRb" is defined in terms of the occurrence of disbelief. Thus when Russell lays down what it means for a judgment to be positive or negative (in order to define the conditions under which a judgment is true) he writes:

> The negative of the positive or negative fact is the negative or positive fact. There is no negative of the neutral proposition or of the neutral fact. Call +J(xRy) the judgment *of* +xRy, etc. Then the negative of a judgment is the judgment *of* the negative (Eames 1984, 199).

Russell's earlier treatment of ~ p as disbelief in p, I suggested above, made truth and falsity overly psychological. On the basis of his new conviction that a proposition must be true or false due to some *fact*, Russell therefore presents his new theory of judging on which truth is defined in terms of the existence of a positive or negative fact. At the same time, he attempts to accommodate Wittgenstein and to provide *more* than just the objective or fact – i.e. more than just what makes the judgment true – by placing something like content, the neutral relation, in a bi-polar relation to the negative or positive fact. Many of these trends are brought by Russell to fruition only in the teens and twenties; as I have tried to show, they had a very long period of incubation and an intimate link to Wittgenstein.

4. A final word: looking back to the beginning

As many now know, on May 20, 1913 Wittgenstein visited Russell with a "refutation" of a theory of judgment which Russell, says, he "used to hold" (Eames 1984, xxvii). Since by that date Russell has already experimented with several versions of his (multiple relation) theory of judgment--versions of it date from 1906, 1910, and 1912 – we might well wonder which version Wittgenstein refuted on May 20th and why. It is often assumed that Wittgenstein is referring to Russell's 1910 theory of belief (Griffin 1985, 227- 228). Griffin, e.g., points out the parallels between Wittgenstein's remark in the *Notebooks* that the subordinate relation in the theory of judgment is not a substantive and Russell's 1918 admission that "the theory of judgment which I set forth in print some years ago was a little simple, because I then did treat the object verb as if one could put it as just an object like the terms..." (Slater 1986, 199). Griffin then links these remarks to Russell's 1917 note to his 1910 Theory (in "On the Nature of Truth and Falsehood") that "I have been persuaded by Mr. Wittgenstein that this theory is somewhat unduly simple".

I argue against Griffin that Wittgenstein probably objected especially to Russell's 1912 version. (Some external reasons can be adduced: On May 7, 1913, Wittgenstein expressed "shock" to discover that Russell is writing a book of epistemology, apparently assuming that any such text would be like the *Problems of Philosophy* "which" (according to Russell) "he hates." (Eames. 1984, xxvii). Given this fact, it is plausible that on May 20th Wittgenstein, who is already critical of Russell's theory of belief in the *Problems*, is again referring to it when he visits.) Why? On the 1910 theory a subordinate relation (such as *loves*) distinguishes, e.g., between "a loves b" and "b loves a", but on the 1912 theory *judging* is responsible for such differences of sense. Unlike the 1910 version, on the 1912 theory psychological "relations" organize and "cement" things of various types into a significant whole (Russell 1912, 128).

In light of Wittgenstein's insistence that whatever concerns the *fact* of believing is not relevant to the proposition (my point 1, above), I suggest that on May 20, Wittgenstein objected to the 1912 theory as too psychological, as not grasping that understanding a proposition (as true or false) precedes judgment and thus failing to bring in the whole proposition.

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Managing Dialogue in Terms of Belief and Acceptance

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We often consider dialogue an interaction between two individuals or groups with different opinions about something. In simple terms, the two parties in constructive dialogue engage in conversation so as to become more transparent to each other, and, through that very process, to themselves. If the difference of opinion is not resolved, or is not put aside as irrelevant, it can often be reduced to a set of statements that express a contradiction. After some time, it becomes obvious that one party holds that *P* while the other holds that ~*P*. From this simple observation, it follows that the usual attempt to establish harmony between the different parties in dialogue by insisting that each should include the other's point of view is unsatisfactory. The problem is that enlarging one's horizon to include the other's point of view very often results in an inconsistent set of beliefs, namely a set that includes both *P* and ~*P*. In any discussion on dialogue, therefore, it is crucial to be clear about the nature of contradictions in one's set of beliefs and to have some strategy about how to handle inconsistency. In this paper, I will proceed in two steps. In the first, I will indicate how some attempts at trying to manage contradictions in terms of ontology remain unsatisfactory. In the second step, I will introduce and evaluate another way in terms of belief and acceptance.

1. Managing Contradictions in Terms of Ontology

Standard logic cannot handle inconsistency. The major threat from admitting contradiction within a set of beliefs is that of explosion. As can be shown quite easily, when a set of propositions contains even one single proposition together with its negation, then it will be possible to deduce any proposition whatsoever.[1] This kind of explosion occurs not only in the case of sets of beliefs whose elements are distinct and clearly evident. It occurs also for sets of beliefs considered in conjunction with all the logical consequences of those beliefs. It is customary to call a set of axiomatic beliefs together with all their logical consequences a theory. So even a theory is prone to explosion because digging below the surface of the axioms will enable the deduction of practically any proposition whatsoever.

It is interesting to recall Aristotle's discussion on contradiction, in *Metaphysics* Book Γ, which contains the famous line: 'A thing cannot at the same time be and not be' (Aristotle 1941, 996b30). This formulation is related to the being of a thing, rather than to what one can say about the thing. Following Aristotle, many have considered the principle of contradiction as valid for all being. In Aristotelian metaphysics, it is considered a primary principle, an indispensable tool, because it allows the apprehension of being in its intrinsic intelligibility. Since it excludes its own negation, it cannot be denied, but neither can it be derived. This means that, for a standard ontology, such as the one assumed by many philosophers in the course of history ranging from Aristotle to the early Wittgenstein, there are two laws. The first, the law of excluded middle, holds that, of a pair of propositions *P* and ~*P*, *at least* one obtains. This fact is classically expressed by the phrase *tertium non datur*. The second law, that of contradiction holds that, of a pair of propositions *P* and ~*P*, *at most* one obtains. Moreover, there are indications that Aristotle wasn't ignorant of the explosive nature of even a single inconsistency in one's belief system. For instance, he claims that 'if words have no meaning, our reasoning with one another, and indeed with ourselves, has been annihilated; for it is impossible to think of anything if we do not think of one thing' (Aristotle 1941, 1006b 8-10; cf.: Thomas Aquinas 1964-1981, 1a 2ae, Q 94, art. 2; Dancy 1975).

The upshot is that standard logic is explosive in the presence of inconsistency. In other words, inconsistency is not a matter of degree. You cannot have some of it, or more of it. One instance of inconsistency within a theory contaminates and destabilises the system completely.

This observation, however, does not help much in my project of giving an account of the dialogue situation in its complexity. In normal practice, an individual often seems capable of endorsing a set of beliefs that is rendered inconsistent because of that individual's inclusion of another individual's beliefs. Normal people are somewhat immune to logical explosion. They seem capable of containing various kinds of inconsistency within their belief systems. Their rationality seems to have a certain flexibility that helps them put such inconsistencies on hold, as it were, until further information is available.

It was probably such everyday skills that gave rise to some peculiar remarks in the writings of the later Wittgenstein. For instance, during one of his early discussions with members of the Vienna Circle, he is claimed to have made the following prediction: 'I am prepared to predict that there will be mathematical investigations of calculi containing contradictions and people will pride themselves on having emancipated themselves from consistency too.' (Goldstein 1989, 540). In his *Remarks on the Foundations of Mathematics*, he writes: 'But you can't allow a contradiction to stand: Why not? We do sometimes use this form in our talk, of course not often – but one could imagine a technique of language in which it was a regular instrument. It might for example be said of an object in motion that it existed and did not exist in this place; change might be expressed by means of a contradiction' (Wittgenstein 1967, V 8).[2]

Following Wittgenstein's suggestion, some have tried to manage inconsistency by constructing what may be called a hyper-ontology (Rescher *et al.* 1980). The basic idea is to have an ontology that is perforated at some points. This means that, as regards these points, one can neither hold that *P* nor that ~*P*. Such an artificial world can also have another feature. It could also be superimposed, in the sense that it contains points about which one can hold both that *P* and that ~*P*. This is an ontological way of ensuring that contradictions do not contaminate the entire system. Although interesting and perhaps applicable in

[1] Starting from the premise P that A & ~A, one can see how any other proposition follows because of the following simple argument. For all A, A $\Rightarrow$ (A or B). From P, however, we hold also that ~A. (A or B) & ~A $\Rightarrow$ B. Therefore we can conclude that B, for any B whatsoever.

[2] Wittgenstein's remarks bearing on contradiction are scattered in a number places. For example Wittgenstein 1967, II 78, 81, 82; III 56-60; III 87; V 12, 13, 21, 26, 28. For further details, see Priest *et al.* 1989; Priest *et al*. 1993; Priest 1998.

some areas of modern science, it leaves a lot to be desired in the way of practical usefulness. The hyper-ontology it depends on seems to be completely *ad hoc*.[3]

A better way of examining how to deal with inconsistency is in terms of propositional attitudes. Are there various ways in which we endorse a proposition?

2. Managing Contradictions in Terms of Belief and Acceptance

My proposal is to see whether drawing a distinction between belief and acceptance can be useful in understanding dialogue situations that boil down to a contradiction. One of the best studies of belief and acceptance to my knowledge is that of L. Jonathan Cohen (1992). He starts by situating René Descartes and David Hume as the two opposite extreme positions, the former holding that we acquire knowledge ultimately by a voluntary judgement, the latter, on the contrary, holding that knowledge is acquired by involuntary growth of cognitive feeling. The correct distinction between belief and acceptance must take into consideration the complexity of the issue sliding neither to one side nor the other. The essential difference occurs because belief needs to be seen as a disposition to feel that a proposition is true. for instance, I may have a disposition to feel that eating too many peanuts will cause me heartburn. Another way of talking about this state of affairs is to say that I believe peanuts cause me heartburn, and I show this in my behaviour. On the contrary, acceptance needs to be seen as a deliberate act, or a policy for reasoning, for example the policy of considering a given proposition a premise for further reasoning. '"Belief" carries no conceptual implications about reasoning, "acceptance" carries none about feelings' (Cohen 1992, 5).

According to this distinction, since belief is a disposition, it may be invisible until the appropriate moment comes when it becomes evident. My disposition to feel that a given proposition is true or false is only evident when my attention is turned to that proposition. For instance, when faced with something I never directly thought of before, say when faced with the proposition 'the world contains a lot of evil but ultimately truth and goodness will prevail', then I will discover where my disposition leads me. It may lead me to realise that I believe it, or it may lead me to realise that I don't. Acceptance is different. It is a deliberate and conscious operation of choosing a proposition as a starting point. This deliberate act can even go against my personal feelings. Accepting that *P* means taking *P* as a premise; in other words, taking *P* as true for the sake of the argument, whether one feels that *P* is true or not.

In a few paragraphs of Cohen's chapter one § 6, there is a mention of the problem of inconsistency in terms of belief and acceptance. It is this part that interests me most. In a nutshell, Cohen claims that belief that *P* and belief that ~*P* can co-exist within the same individual as a turmoil of feelings or inclinations. This is only human, given our considerable variety of natural tendencies fixed upon us by previous educational conditioning. On the contrary, acceptance that *P* and acceptance that ~*P* can co-exist within the same individual only when that person is manifestly lacking in rationality. Since acceptance is voluntary, such a person will come across as someone annoyingly absurd. In Cohen's own words: 'Because belief is not deductively closed, it is not necessarily an intellectual disaster if a person does have an inconsistency between some of his beliefs. But for acceptance the analogous situation may be disastrous' (Cohen, 1992, 36).

Consider now a simple case of dialogue, say, between her and me. We disagree on the truth-value of *P*. I take *P* to be true. She, as far as I can see, takes *P* to be false. My basic proposal is to uncover the subtle but important difference between the two situations:

(S1) I accept that she *believes* that ~*P*

(S2) I accept that she *accepts* that ~*P*

These are just two of the many possible combinations. For each protagonist of the dialogue, there are two possible options, made available by the introduction of the distinction between belief and acceptance. Of all the permutations possible, the most significant pair is the one represented by S1 and S2.

S1 is practically saying that I accept that her disagreement with me issues from a belief. It issues, therefore, from her disposition to feel that *P* is false. Describing my situation as S1 enables me to hold that she holds that ~*P* not because she deliberately considers it a premise for her reasoning, but because of the way she is conditioned by her upbringing. S1 offers me, therefore, the possibility of thinking how she endorses ~*P* without being directly and consciously responsible of doing so.

The appearance of a clear contradiction threatening my endorsing what she holds is not there any longer. Such a naked contradiction emerges only when the situation is described as S2. It emerges because both my propositional attitude towards *P* and hers about ~*P* are on the same level, namely that of acceptance. Accepting both *P* and ~*P* will result in clear inconsistency. As distinct from this, the possibility described by S1 implies that dialogue may still continue.

What are the merits of this proposal? There are at least two. Firstly, it does away with the worry of how to contain a contradiction within a set of beliefs. *A fortiori*, it does not need to understand dialogue in terms of a hyper-ontology designed specifically to show how one and the same rational person may hold both that *P* and that ~*P*. Secondly, it introduces a new level of dialogue, namely the level of self-examination. One is encouraged to be see whether one's contribution to a dialogue is made up of propositions one believes or of propositions one accepts. In other words, it highlights the possibility that some aspects of a dialogue situation may be better understood on the level of feelings. Other aspects may be better understood on the level of strategies in reasoning. In the example above, as described by S1, I may hope that she realises that her believing that ~*P* should be overcome. In a parallel but opposite fashion, the same thing may be hoped by her about my realising that some of my beliefs should be overcome, if and when I become more aware of what I should rationally accept as a good starting point for correct reasoning.

This account of a dialogue situation is richer than the one I started with. It is thus more responsible to real-life situations. It certainly does not tell us how to resolve a given conflict of opinions. It nevertheless allows interesting, non-explosive ways of managing such a conflict.

[3] I discuss the prospects of their proposal with respect to Wittgenstein's project in Caruana *forthcoming*.

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Social Ethic Behavior Simulation Project

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1. Is ethics a part of personal knowledge and can there be an objective knowledge of ethical rules?

Ethics has usually been considered as the domain of the intrinsic personal belief. Some even claimed that no objective knowledge of ethics is possible [1]. We propose a quite new way of approaching the problem. Although ethics as a part of the personal belief cannot be examined scientifically, the claim that it is not possible to study ethical rules as means of strategy choice is false. The model we bring forward handles the role of ethical rules from the perspective of evolutionary fitness [2].

Individuals act within a certain society, which is influenced rather by cultural "memes" than by individually gained experience. Psychologists would claim that an individual is a necessary source of any changes in culture, because of his/her creative capabilities. From evolutionary perspective such creations are, however, merely mutations in the memotype of the culture. These mutations are subject to selection processes, which do not depend on personal characteristics of individuals but rather on the fitness to the widely understood environment. This environment includes the material world, for which fitness of a cultural "meme" means "empirical truth", as well as the cultural environment, for which the term fitness of a cultural "meme" refers to logical coherence with other "memes".

Evolutionary approach provides a researcher with several advantages:

- it is possible to abstract from individual psychological aspects
- it is possible to observe objective development of a social system
- it is possible to study the influence of ethical criteria of choice on the social behavior
- it is possible to ask the question concerning what objective aspects of ethics can be studied
- prospectively it is possible to study how different ethical rules evolve and the way they result from the state of the "world" and the way they influence on it.

Such evolutionary approach seems to be the only rational way to evaluate intersubjective rules of ethics.

2. Distributed Artificial Intelligence (DAI)

From philosophical perspective DAI is a cognitive system in which knowledge is possession of a whole system (population of individuals in the case of MAS – Multi Agent Systems). An individual is merely a carrier of such knowledge (or a part of it). Such approach lets us treat the agents in the way similar to biological individuals, which are subject to natural selection. Only two possibilities are open to an agent: it may die or survive in confrontation with its environment, which consists of two components: the "social" (other agents) and the "material" (the world, in which the agent acts). The real influence of selection rules on knowledge is seen only on the level of the population, where strategies are made temporarily stable. On this level advantageous features are strengthened and disadvantageous mutations are eliminated. Such evolutionary game takes place between the whole society (population) and the environment. Thus the way the population acts is more important than the fate of an individual. Intelligence as the adaptive means should reveal this feature. As Weiß [3], one of the prominent persons in DAI research, points out: "intelligence is deeply and inevitably connected with interaction".

The practical realization of computer simulation of MAS looks as follows:

An agent is a part of computer code (program), which is able to act individually within its environment. There is no general definition of an agent but it is assumed that it has to possess learning capability, ability to create an internal model of its environment and the ability to choose the strategy of acting within its environment, based upon a certain (for the time being, a priori given, in the future perhaps self-modifiable) system of goals.

An agent may act socially, creating temporal or stable structures of cooperation with other agents, which may result in specialization in certain actions. This may lead to more complex structures – aggregates of agents – for which the question of self-organization arises. This is not, however, the case of suggested simulation, although the problem of emerging of such structures is interesting in itself.

The agent has two fundamental goals: to survive and to reproduce. The process of agent's reproduction may be enriched by the *crossing-over* mechanism which allows for faster changes and thus increases the population's flexibility.

The agent has to be able to recognize other agents especially those which belong to his own population as potential partners for cooperation.

The selection mechanisms act on individual agents through mechanisms of strengthening and elimination of "unsuccessful" agents. The observations, however, are concentrated on the whole population rather than on individual agents. The intelligence of the system is analyzed in the light of effectiveness of the population in performing the desired actions. This is independent of the goals of individual agents, which are written into agents' "profiles".

One thing concerning the observations is also important. The suggested simulation lets us avoid a certain question about the position of the observer, who in the case of human societies is just a member of the society it examines. In the simulated population the place of the observer is external and, in a way, God-like. He/she is maybe not almighty but able to posses the complete knowledge of the system.

The more detailed discussion of the agent's profile is presented in the parts 4, 5 and 6 of the present paper. Let us only state here that suggested by some authors

(Tuomela [4]) *joint intentions* or any other attempts to implement intentionality or self-consciousness into the agent's profile lie far beyond the scope of our interest. There are two fundamental reasons. Firstly, we are not interested in getting the "human-like" society – with all psychological colorfulness of its participants – but rather the society that acts according to clear rules resulting from what philosophers are able to say about scientific cognition and ethics. Secondly, the evolutionary approach allows for treatment of psychological factors as irrelevant to the knowledge and the rules of acting, which are gained by the whole population.

3. Methodology – why simulate ethical behaviors?

The motivation for simulating ethics in computer environment comes from two reasons. The first lies in computer practice where safety of a computer network depends upon the ability to meet the challenge produced by various negative actions taken by the users (like hackers) and the programs (viruses for instance). The other is purely cognitive. Computer simulations offer a clean (fully controlled) environment, in which it is possible to test certain philosophical concepts in their formal "unpolluted" (for instance by psychological factors) form. Of course one would claim that purely formal, logical analysis should be enough in such cases. This, however, is not true for the concepts based upon evolutionary approach, where purely deterministic predictions are not possible. The world of culture evolution is complex. Studying evolution requires observing multiple generations, which in the case of real (human) society is impossible for purely biological reasons. This, however, does not apply to the societies simulated in computer environment.

Simulation requires simplification. The agents are able to learn and observe their environment and produce the world view. They possess knowledge, or being more precise, their beliefs are identical to the available information about the objects. This knowledge is personal but objective and it is a basis for decision taking. However, until now, the agents used to possess only intellectual capability (intellectual profile) – the ability to rationally analyze the situation. We suggest implementing two additional "profiles" – social and ethical – the former being responsible for the observations of the social environment, the latter corresponding to the rules governing evaluation of what is good or bad. Let us, notice that the core evaluation of being good or bad refers to the observable internal states of an "agent". Those states determine the agent's fitness to the environment thus deciding on the agent's chance to survive.

4. Ethically-social approach to behavior estimation of an autonomic agent on the ground of M-agent architecture

The proposed way to develop intelligent machines by creating "social" machines is the closest to reality if one assumes that intelligence resulted from the evolution and not by miraculous act of creation. The concept is based on the socio-biological theory that primate intelligence first evolved because of the need to deal with social interactions. The model is based on M-agent architecture introduced in [5], [6].

The main idea of the ethically-social estimation of an autonomic agent's behavior is to provide the agent with two additional profiles: the ethical and the social. The ethical profile would cover operations that aim at:

- construction of „notion" about oneself on basis of one's ethical rules,
- fulfillment of one's ethical rules,
- updating and learning the ethical rules on the basis of the environment observation, particularly of those environment elements which are agents.

The group of goals, decisions, operations and knowledge relating to social live mechanisms is named the social profile. This will perform the operations that aim at:

- fulfillment of living together rules in society,
- observation of environment, especially agents,
- „punishing" the agents, that do not fulfill rules of living together.

The motto, which inspired formulating of such a solution is taken from [7]: "There is no society without morality". Any human being taking decision about his/her action is also influenced by the ethical rules he/she knows. The effects of this action are, however, observed through other individuals in society, who suitably, according to the social norms known to them, react on such behavior. The human being obviously watches those reactions and, if the reactions indicate his „bad" behavior, he changes his own ethical norms. Society has an indirect impact on the ethical system of such individual.

The social and ethical profiles are inseparable and mutually supplementary. Social profiles of agents from the environment are an indirect influence on the ethical profile of the agent concerned, as it was shown in the last paragraph. Only thanks to these two profiles it is available to keep social and moral order in open systems, and thus to create mechanisms similar in safety to the ones well functioning in known societies.

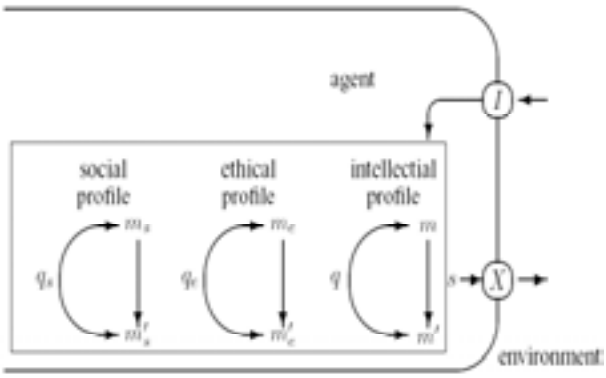


Figure 1. Concept of social, ethical and intellectual profiles in M-agent architecture.

5. Social profile

The social profile forms the class of the agent's activity, which as its goal has the observation of other agents in the society and of other elements of the environment. Those observations should be done in order to distinguish individuals, which do not fulfill social and ethical rules and whose behavior is unfavorable, incorrect or bad according to the observer. The „bad" individuals should be ade-

quately treated (e.g. convicted, avoided) which should be performed by the social profile.

6. Ethical profile

The ethical profile is the class of agent activity, which as its goal has the fulfillment of one's ethical rules and updating or learning the ethical rules on the basis of the environment observation, particularly of those environment elements which are agents.

The operator of agent's ethical learning enables to change the ethical norms in order to be „better" treated in the society.

7. What can be simulated?

Let us first sketch the general scheme of relations between the agent's profiles [see Figure 2]

Here:

The input is firstly dispersed into ethical, rational (intellectual) and social streams.

Ethical, rational (intellectual) and social profiles could be interrelated.

The output is a decision based upon a function of ethical, rational and social worldviews.

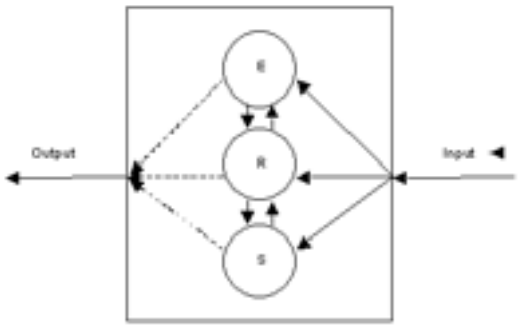
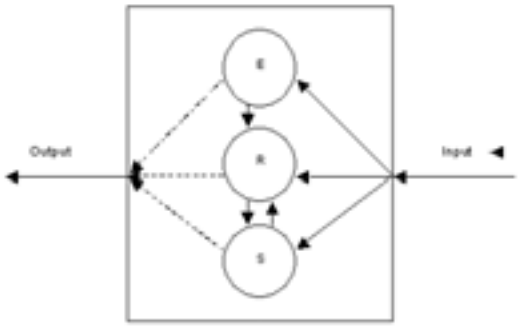


Figure 2. General scheme of relations between agent's profiles

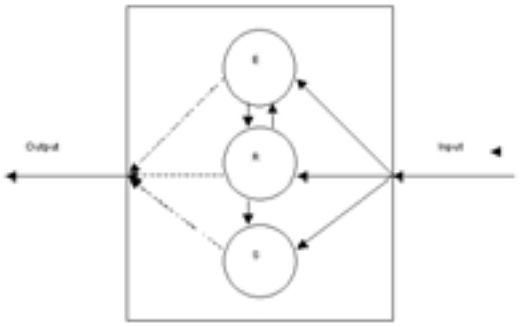
The above scheme must be filled with certain realistic assumptions on various ethical models present in cultural tradition:

7.1 Ethics of moral law



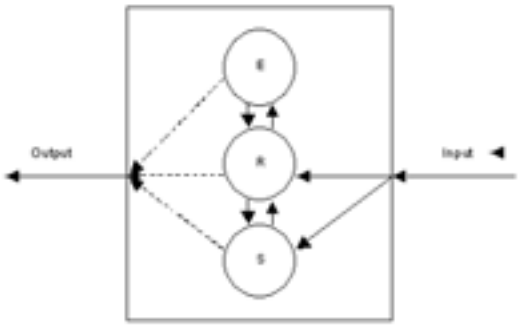
Ethics of moral law is externally given and implemented in the E profile by the programmer and unmodifiable during the evolution. This would correspond to the ethics of natural law. The feedbacks go only from the ethical profile. Let us notice that it allows for simulating the behavior according to various sets of natural laws posing the programmer in God's place.

7.2 Ethics of prize and punishment



Feedbacks here go bilaterally. They let the agent to modify its ethical worldview according to benefits achieved. Possibility of interaction between the social and ethical profiles is noteworthy here. This is, however restricted to the individual fitness of an agent.

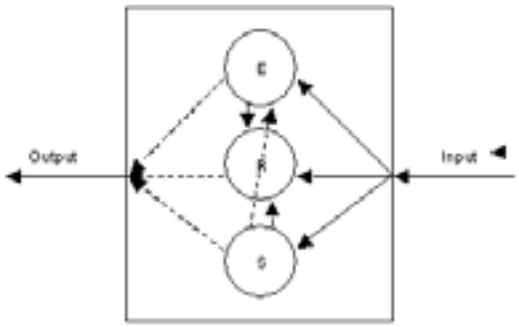
7.3 "Cynics" ethics



The ethical profile is subdued to other profiles, which is realized by implementing the null starting profile. Ethical

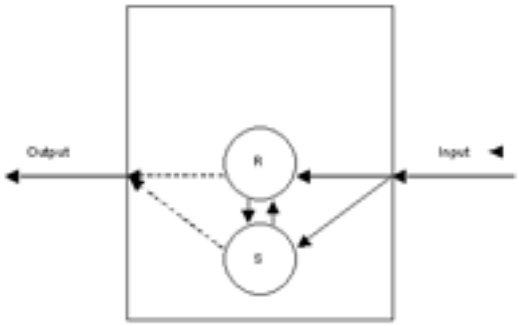
rules are constructed upon the changeable information coming from social and rational profile

7.4 Moral duty ethics



The feedback from the social profile dominates over the one from the ethical profile. The social rules form the shape of the ethical picture of the world, which is independent from rational evaluation

7.5 Null ethics



No ethical profile is implemented or allowed in future.

It is possible to perform simulation of a single model or combine different models in a single simulation, which allows to compare the influence of several or even all profiles on fitness, which gives a competitive situation.

8. What can we learn from such simulations

It is obvious that one should not expect learning anything about actually existing societies[8]. The purity and controllable characteristics of the simulation allows, however, investigating:

the impact of ethics on fitness of social groups,

the differences between the fitness of different models of ethics

the time dependent development of ethics in its social aspect

Concluding one can have the first “empirical” means to study social states in their theoretically (philosophically) constructed forms.

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Language as a Geometry in Wittgenstein's *Tractatus*

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1. Die Bildhaftigkeit

In TLP 4.011, while admitting that propositions expressed by the phonetic notation, or the alphabet, just like the written notes of a piece of music, do not seem at first sight to be pictures of what they represent, the *Tractatus* insists that those 'sign-languages' (that is, the phonetic notation and the written musical notes) prove to be pictures of what they represent (that is, our speech and the piece of music, respectively) 'even in the ordinary sense'. (TLP 4.016 also says that 'alphabetic script developed out of [hieroglyphic script] without losing what was essential to depiction'.) So, contrary to the view of some commentators (e.g. Pears 1987, 115-121), instead of making an analogy here, the *Tractatus* holds that a proposition is a picture *literally*. How can a proposition be a picture literally?

The *Tractatus* explains in TLP 4.012 that '…a proposition of the form *'aRb'* strikes us as a picture. In this case the sign is obviously a likeness of what is signified'. The likeness between propositions and their senses is constituted by what is called the '*Bildhaftigkeit*' or pictorial character (TLP 4.013). The *Tractatus* goes on to characterize the *Bildhaftigkeit* via the internal relation of depiction, as well as the inner similarity, between different sign-languages (or different expressions) of a piece of music, which is also claimed to be holding between language and the world:

> A gramophone record, the musical idea, the written notes, and the sound-waves all stand to one another in the same internal relation of depicting that holds between language and the world…
>
> There is a general rule by means of which the musician can obtain the symphony from the score, and which makes it possible to derive the symphony from the groove on the gramophone record, and, using the first rule, to derive the score again. That is what constitutes the inner similarity between these things which seem to be constructed in such entirely different ways. And that rule is the law of projection which projects the symphony into the language of musical notation. It is the rule for translating this language into the language of gramophone records. (TLP 4.014-4.0141)

Note that the general rule is also called 'the law of projection'. What by means of which, say, the symphony can be derived from the score is presumably a method of projection or a specific rule determined by the general rule. In general, the *Bildhaftigkeit* of all our modes of expression consists in the logic of depiction (TLP 4.015). Therefore, for the *Tractatus*, the followings are equivalent:

> [a] A thing can be a picture of another thing.
>
> [b] There is a specific rule of depiction (determined by the general rule of depiction), or a method of projection, by means of which one thing can be derived from another thing.
>
> [c] There is an inner similarity between two things (or one thing is a likeness of another thing).

2. The Possibility of a Generalization

The *Tractatus* also takes the *Bildhaftigkeit* as an agreement in form. For in order for a picture to be able to depict, it must have a form – its pictorial form – in common with reality (TLP 2.17-2.174 and 2.18-2.182). That is, a thing can be a picture of another thing if and only if they have a form in common. But it is not clear why there must be an agreement in form if one is a picture of another and vice versa. Wittgenstein says later in *Philosophical Grammar* that such move is misleading, and what he is in effect doing in the *Tractatus* is extending or generalizing the concept of 'having in common' and taking it equivalent to the concept of projection:

> …what I said really boils down to this: that every projection must have something in common with what is projected no matter what is the method of projection. But that only means that I am only here extending the concept of 'having in common' and am taking it equivalent to the general concept of projection. So I am only drawing attention to the possibility of a generalization (which is of course can be very important). (PG, p.163)

In addition, he told Friedrich Waismann in 1931 that the *Tractatus* inherited the concept of a picture 'from two sides: first from a drawn picture, second from the picture of a mathematician, which already is a general concept' (LWVC, p.185). Actually, the connection of the notion of a picture to projective geometry is already indicated in the *Tractatus*. For example, as already mentioned, the general rule in TLP 4.0141 is also called 'the law of projection'. In TLP 3.1-3.13, Wittgenstein regards the perceptible sign of a proposition as a projection of a possible situation and talks about the method of projection. All these suggest an illuminating way of reading the account of a picture which reflects what Wittgenstein is *in effect* doing in the *Tractatus*.

Two points can be drawn here. First, instead of taking the *Bildhaftigkeit* as an *agreement* in form, the *Tractatus* should be read as taking the concept of having a form in common equivalent to that of projection. This means that the following is also equivalent to any of [a]-[c]:

> [d] Two things have the same (pictorial) form in common.

In order to understand the Tractarian notion of a picture, an independent characterization of one of the key notions in [a]-[d] is needed. Fortunately, such characterization can be found in the next point.

The second point is that the Tractarian notion of a picture is a generalization of the mathematical concept of a picture, as exemplified in the case of projective geometry (cf., Rhees 1996, 4). The key is that the move of making the concept of having in common equivalent to that of projection consists in adopting 'that every projection must have something in common with what is projected no matter what is the method of projection', and that the something here is a form of projection. A form of projection is an invariant under whatever method of projection (or under all specific rules of projection). The concept of projective geometry adopted by the *Tractatus* is then as follows: Projective geometry is constituted by the specific

rules of projection and the invariants (forms of projection), subject to this constraint:

Two figures have the same invariant (form of projection) in common if and only if there is a specific rule of projection according to which one figure can be projected onto another.

The constraint, as one will see, is what guarantees the consistency of the notion of, and thus the possibility of, those invariants. In the case of depiction or [d], *a (pictorial) form can be characterized as an invariant under all specific rules of depiction*. In the particular case of language, a propositional form is to be characterized as an invariant under all specific rules of language. The mutual equivalence of [a]-[d] can then be formulated as follows:

There is a specific rule of depiction according to which one thing can be derived from another thing (or one thing is a likeness of another, or one thing is a picture of another) if and only if the two things have the same invariant (pictorial form) in common.

What conditions must language satisfy such that the above characterization makes sense and is consistent?

3. Language, Geometry and the Erlanger Programm

The *Tractatus*, of course, does not identify language with projective geometry but rather holds that language is, just like projective geometry, a geometry. How can language be a geometry? To see this, suppose that X is a set, and G is a set of rules (hereafter 'G-rules), each of which sends, or maps, members of X to members of X. A G-invariant, or a G-form, may be defined as what is invariant under the application of all G-rules. The pair <G, X> is said to determine a geometry if:

[*] Two members of X have the same G-form (G-invariants) in common if and only if there is a rule in G according to which one member is mapped to another member.

What are the conditions that <G, X> must satisfy in order for the notions in [*] to be well-defined and consistent? Define the relation ~ as follows: A~B if and only if there is a G-rule according to which A is mapped to B. It is easy to prove that the condition [*] is satisfied if and only if ~ is an equivalence relation. In the latter case, a G-invariant (G-form) can be identified with the equivalence classes which partition X, and this would guarantee that the notion of a G-form is well-defined. Moreover, it can also be proven that ~ is an equivalence relation if and only if G equipped with the composition operation constitutes a (mathematical) group. (For details, see any good textbook on Algebra or Yaglom 1988, 112-116.) Let me explain the notion of a group here. G is equipped with the composition operation if:

For any members A, B and C of X, if there is a G-rule α mapping A to B and a G-rule β mapping B to C, then there is a G-rule mapping A to C.

In this case, the G-rule mapping A to C may be denoted by '$\beta^{\circ}\alpha$', or simply '$\beta\alpha$'. The operation $^{\circ}$ here is called 'composition'. G equipped with the composition operation is called 'a group' if these four conditions are satisfied:

(1) For any G-rules α and β, $\beta\alpha$ is a G-rule.

(2) For any G-rules α, β and γ, $(\alpha\beta)\gamma = \alpha(\beta\gamma)$.

(3) There is a G-rule, denoted by 'ε', such that $\alpha\varepsilon = \varepsilon\alpha = \alpha$, for any G-rule α.
ε is said to be the unit of G.
In this case, ε is the G-rule mapping an member of X to the same member.

(4) For any G-rule α, there is a G-rule β such that $\beta\alpha = \alpha\beta = \varepsilon$.
In this case, ψ is said to be the inverse of α and may be denoted by 'α^{-1}'.

To employ popular mathematical terms, a G-rule is a transformation from X to X, and G is a transformation group if it satisfies the above four conditions. A geometry can then be defined as *what is determined by a transformation group with the invariants (forms) under all the transformations of the group as its objects.* Projective geometry is a particular case here, where G is the set of all specific rules of projection and the forms of projection are the G-invariants. So is language, the *Tractatus* would say.

Language is another specific case with X being the set of all facts (TLP 2.141 and 3.14), G the set of all specific rules of language and pictorial forms the G-invariants. My claim that the *Tractatus* holds this is supported by the passages in TLP 4.014-4.0141 already quoted above. Recall that the general rule (or the law of projection) enables the derivation of the symphony from the score (via a specific rule), the symphony from the groove (via another specific rule) and, using the first (specific) rule, the score from the symphony. Let the two specific rules involved be ϕ and ψ, respectively. ϕ sends the score to the symphony, and is also the same specific rule sending the symphony back to the score, while ψ sends the groove to the symphony. In this case, $\phi\phi$ sends the score to the score itself and thus is the unit-rule ε. Also, ϕ is the inverse-rule of ϕ itself. This suggests that, first, the composition of specific rules is possible and results in another specific rule, that is, (1) holds. Second, there is a unit-rule, that is, ε exists and (3) holds. Third, every specific rule has an inverse-rule, that is, (4) holds. The *Tractatus* does not indicate if (2) is accepted as well. But, given that the other three are accepted, it is reasonable to believe that it does. Thus, the *Tractatus* in effect takes the set of all specific rules of depiction, or language, as a transformation group. Pictorial forms, or propositional forms, are then invariants under a transformation group. It is then proven that, for the *Tractatus*, language is a geometry with the invariants under the relevant transformation group as its objects.

In 1872, the mathematician Felix Klein announced what was later called 'Das Erlanger Programm' in his famous inauguration lecture (Klein 1921, 460-497). Its kernel is the definition of a geometry as the study of the invariants under a transformation group (ibid., 463). It was found later that the 'Erlanger Programm' can characterize geometries like projective geometry, euclidean geometry and some non-euclidean geometries but not those like algebraic geometry and Riemannian geometry. (For an excellent discussion of the 'Erlanger Programm', see Yaglom, 1988, 111-124.) Nevertheless, it is still safe to say that the study of the invariants under a transformation group is a geometry. The 'Erlanger Programm' was very influential amongst mathematicians and physicists, as well as philosophers who were interested in what was going on in the areas of mathematics and science, in late nineteenth century and early twentieth century. Russell has been greatly influenced by Klein, as one can see from his *An Essay on the Foundations of Mathematics* (Russell, 1897), *The Principles of Mathematics* (Russell 1937, 435-436) and his preface to the *Tractatus* (TLP, p.xi). It is not sure if

Wittgenstein knew the 'Erlanger Programm'. But, as the discussion in this paper suggests, it is very likely that the *Tractatus* at least has been influenced by views originated from the 'Erlanger Programm'.

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Moore's Proof of an External World. Just Begging the Question

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The aim of this paper is to assess Moore's Proof of an external world, in light of recent interpretations of it, namely Crispin Wright's (1985) and James Pryor's (unpublished).

In the first section I will present Moore's original proof and claim that, despite Moore's intentions, it can be read as an anti-sceptical proof. In the following two sections I will present Wright's and Pryor's interpretations of it. Finally, I will claim that *if* we grant some of Pryor's intuitions, it is true that the proof does not exhibit what Wright calls "transmission-failure" and Pryor misleadingly presents as a case of question-begging argument. I will then offer my own interpretation of what a question-begging argument is. On that basis, I will claim that, contrary to what Pryor maintains, Moore's proof is not just wanting because of a generic dialectical shortcoming, but because it begs the question after all.

1. Moore's Proof: Moore

Moore's proof is often presented without mentioning the actual context in which it was first produced, and it is almost always presented as an anti-sceptical proof. The dialectical setting which is usually taken for granted features two characters: a sceptic about the existence of the external world and Moore himself in his capacity of common sense philosopher, *par excellence*. As a matter of fact, however, things are not that straightforward. For "Proof of an External World" (1939) is a long essay consisting of two parts. In the first and more substantial part Moore takes his lead from Kant's famous complaint that it is still a scandal to philosophy that nobody has proved that the external world exists. He then introduces a number of distinctions which should clarify the *meaning* of the expression "external world" and he concludes that in order to prove that the external world exists, one should prove that there are things that *can be encountered in space and that exist independently of our minds*. He then moves on to the proof. By holding his hand in front of him, so that he and his audience can see it, Moore says:

(1) "Here's one hand";

then he hides it.

Then, following the same procedure, he says:

(2) "Here is another";

then he hides it.

Finally, without showing his hands again, he concludes:

(3) "There are two human hands at present".

Since the conclusion concerns the existence of objects which can be encountered in space, despite the fact that they are not currently perceived, and that, therefore, exist independently of our minds, Moore claims that (3) entails:

(4) "The external world exists".

Notice that so far Moore's proof is only a proof against an Idealist who claimed that it is not the case that there is an external world, for he would claim that objects do *not* exist independently of our minds. Such an Idealist could presumably concede the truth of the premises, although I doubt that he would concede (3) and, therefore, the conclusion of the argument. However, nothing has been done so far to show that the premises are *known* – as opposed to be presumed by both Moore and the Idealist – to be true and that, therefore, the conclusion is likewise *known* to be the case. Hence, Moore's proof, so far, can't be taken to have any bearing against scepticism.

In effect, a few years later, responding to his critics (Moore 1942), Moore himself claimed that his proof was meant to be against the Idealist and not against the sceptic. For he was aware of the fact that in order to read it as a proof against scepticism he should have *proved* that he *knew* his premises. In particular, he should have proved that he was not dreaming. But Moore candidly admitted that he could not prove that he was not dreaming, for all his evidence would have been compatible with the fact that he was dreaming. The interesting question then is this: Why is it that almost all the readers have taken Moore's proof to be an anti-sceptical proof? And, moreover, did they have the right to do so, given Moore's claims about his proof?

After producing his proof, Moore goes on to say that his proof is a rigorous one because:

(i) the premises are different from the conclusion;

(ii) the conclusion really follows from the premises and

(iii) he *knows* his premises with certainty to be true.

However, according to Moore, given (iii) and the fact that the inference is valid, knowledge of the premises, should transmit to the conclusion. Hence, if Moore really knew that there were hands in front of him, then he would *also know that the external world exists*. And *this* is a claim that a sceptic about the existence of the external world would find contentious.

Now, how could Moore claim that he knew his premises (and hence his conclusion), while candidly admitting that he couldn't prove that he knew them, while also realising that that was what he should have done in order to convince a sceptic of the fact that he knew his premises? The uncharitable answer would be that Moore was confused about what he was doing. The more charitable answer, and indeed the answer which explains, to an extent, the fascination Wittgenstein felt towards Moore's work is rather the following: if you are a philosopher of common sense then, no matter how much the sceptic presses you by asking "How do you know that *p*?", "Haven't you realised that if you were dreaming that would be compatible with the evidence at your disposal but it wouldn't follow that there are two human hands where you have seen them?", you will stick to your guns, as it were, and respond: "I don't know *how* I know it, but I *do*".

This, as Wittgenstein noticed, is an answer that, although it is badly expressed, because it portrays the attitude we have towards certain propositions as akin to belief and knowledge, shows a deeply right attitude towards scepticism. An attitude that can be glossed as follows: "No matter what you say, I won't give up on this". The diagnosis of the extremely unpleasant consequences of giving up on *this* – let it be the very specific premises of Moore's proof, in that very context, or its conclusion, viz. that the external world exists – and of why we cannot do it would have been for Wittgenstein to investigate in *On Certainty*.

Yet, despite my charitable interpretation of Moore's strategy against scepticism, the fact remains that he claimed that he knew his premises and that his argument was correct, from which it follows that the conclusion would be known too. In order to see whether this is really so, let's now turn to Wright.

2. Moore's proof: Wright

According to Wright, Moore's proof can be reconstrued as follows:

(1) Here's one hand;

(2) If there is one hand here, then the external world exists;

(3) The external world exists.

Wright points out that the *warrant* Moore has for (1) is his visual experience.[1] Now, that visual experience would be the same in case Moore were just dreaming of having a hand. Hence, that experience could be a warrant for (1) just in case Moore were antecedently warranted in assuming that the external world exists. Thus, the warrant Moore has for (1) presupposes that he had a warrant for (3) and, therefore, cannot transmit to (3) across that (valid) inference.

According to Wright, Moore's proof exhibits what he calls a "*transmission failure*". Pryor claims that this is a new name for an old phenomenon, traditionally known as "*begging the question*". But this is misleading in my view because one begs the question against someone else just in case one produces an argument which, at some point, assumes the falsity of the thesis of one's opponent, or of what would follow from that thesis. By contrast, an argument that exhibits transmission failure is, as the name suggests, an argument in which the warrant one may have for the premises does not transmit to the conclusion, because its very being a warrant for the premises in the first place depends on the fact that one has already a warrant for the conclusion.

Thus, on Wright's view, Moore's argument would fail because one's perceptual evidence can be a warrant for (1) only if one has an antecedent warrant for the conclusion (3), viz. that the external world exists. So, as a matter of fact, the argument is ineffective not because it begs the question, but because it can't produce a warrant for (3).

3. Moore's proof: Pryor

According to Pryor, it is *not* true that Moore's proof exhibits a transmission failure. For, in his view, (1) is what he calls a "*perceptual basic belief*": one's visual experience has a content that can be taken at face value to form the corresponding belief, *without having to have an antecedent warrant for (3)*. Hence, one's visual experience gives one a warrant[2] for (1), if one has no reason to doubt (3) and despite the fact that one has no antecedent warrant for (3). So, Moore's proof, *as such*, does not fail to transmit a warrant, for one need not have any antecedent warrant for (3), in order to be warranted in holding (1) on the basis of one's visual experience. Hence, in so far as one has no reason to doubt (3), one is warranted in holding (1) and that warrant transmits to (3) across that (valid) inference.

Yet, according to Pryor, Moore's proof is *dialectically ineffective*, because the sceptic doubts (3), viz. that the external world exists. According to Pryor, if one doubts that (3), then one thinks either that (3) is *false*, or, at least, that it is *more likely to be false* than true. Thus, by doubting that (3), one would hold that the original perceptual evidence at Moore's disposal is defeated and that, therefore, Moore's proof is formally correct, but dialectically ineffective because it starts with a (more probably or altogether) *false premise*. Hence, the proof cannot convince the sceptic that his doubts are misplaced. Yet, there is nothing wrong with the proof *as such*. Rather, it fails to *persuade* one of the parties within a certain dialectical setting, given the latter's collateral beliefs.

4. Assessing the reconstructions

For present purposes, I will agree with Pryor that perceptual experience can give a subject a warrant for believing "Here's one hand". No doubt such an assumption should be further investigated. But there are some initial reasons in its favour. For instance, forming the belief that there is a hand in front of one on that basis is not unmotivated. For it is not like forming that belief on the basis of *no* evidence at all – as it would be the case if one had no perceptual experience whatsoever. Nor is it like forming that belief *contrary* to the evidence at one's disposal – after all, the content of the subject's visual experience is as of a (human) hand in front of her. Moreover, it seems odd to suppose that, ordinarily, in order to be entitled to take one's perceptual evidence at face value to form a perceptual belief such as (1) one should also have some antecedent warrant for the belief in the existence of the external world. So, let us assume for the sake of argument and in light of the previous considerations that perceptual evidence can, *in general*, give one a warrant for (1), without having to have an antecedent warrant for (3).

What remains to be seen is whether, in light of this assumption, Moore's proof is wanting because it is dialectically ineffective, as Pryor maintains. In order to asses this issue we should consider in more detail the kind of dialectical setting in which the proof is produced.

[1] To have a (defeasible) warrant for p is a weaker notion than knowing that p. Yet, to have a warrant for p is a necessary condition for knowing that p (according to a non-externalist notion of knowledge). So if the warrant does not transmit, a fortiori knowledge does not transmit.

2 As a matter of fact, Pryor talks about a prima facie justification. In conversation he has pointed out to me that he takes this notion to be equivalent to the generic notion of epistemic warrant used by Wright.

Contrary to Pryor, I do not think that the sceptic[3] should be committed either to the belief in the non-existence of the external world, or to the fact that it is more probable that the external world does not exist. (The sceptic is no Idealist). Rather, I think that the sceptic is someone who claims that one *cannot have a warrant* for the belief that (and, *a fortiori*, one cannot know whether) the external world exists and this is a hypothesis that is compatible *both* with the existence and the non-existence of the external world. So, I take it, the sceptic is *agnostic* as to whether (3) is the case.[4] That is to say, the sceptic neither believes that the external world exists, nor that it doesn't.

Now, if Moore's proof is produced against an agnostic, then, as a matter of fact, it neither exhibits a failure of transmission, nor some kind of dialectical ineffectiveness, if the latter is taken to be something over and above what I have offered as the proper characterisation of a real question-begging argument. For the agnostic claims that one *can't* have a warrant for (and, therefore, can't know whether) the external world exists. However, if one can't have a warrant for (3), then one can't have a warrant for (1) either, for (1) is a belief about the existence of a material object. More explicitly, if one holds with the agnostic that one can't have a warrant for a belief of the generality of (3), then one is committed to holding that one can't have a warrant for (1) either, since (1) is just a belief about one particular material object.

However, according to Pryor's reconstruction of Moore's proof, that's precisely what isn't the case. For, according to Pryor, "Here is one hand" would be a perceptually basic belief, which would be warranted and, moreover, would be so independently of having a warrant for (3). But this is just to assume the opposite of what would follow from holding the view that one cannot have a warrant for the belief in the existence of the external world, viz. that one cannot have a warrant for that perceptual belief. In short: this is simply what I have characterised as begging the question against the best possible sceptic.

5. Conclusions

I have argued that despite Moore's intentions, his proof of an external world can be read as anti-sceptical argument. In presenting Wright's reconstruction of the proof I have argued that transmission failure, which is what Wright offers as a diagnosis of the failure of the proof, and Pryor takes to be a form of question-begging argument, is in fact a different phenomenon. I have then claimed that if – as there are reasons to maintain – one agrees with Pryor that there are perceptually basic beliefs, then one should also agree that Moore's proof isn't ineffective because of transmission failure. Yet, I have argued that it would be equally wrong to suppose that the proof fails because of a generic dialectical shortcoming as Pryor maintains. Rather, it fails because it begs the question against the best possible sceptic, namely the agnostic.

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[3] At least, a philosophical sceptic as opposed to someone who, in ordinary parlance, professes herself sceptic as to whether *p* is the case.

[4] Notice that agnosticism is not tantamount to *open-mindedness*. Agnosticism is a position earned through careful consideration of the reasons pro and against *p* and by finding both of them *necessarily* non-conclusive. Agnosticism, therefore, is stable. By contrast, open-mindedness can be due to the fact that one has never considered whether *p* (or not-*p*) before. Or else, it can be due to having considered evidence both pro and against *p* without being in a position to decide (yet) which one of the two evidential sets is more compelling. Hence, open-mindedness is *not* a stable a position.

Über die epistemologischen Grundlagen der Religionsphilosophie von Max Adler

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1. Einleitung

Der Gegenstand unserer Erörterungen ist die Rekonstruktion der epistemologischen Grundlagen der Religion, die wir am einem historischen Beispiel darstellen wollen, nämlich an der Religionsphilosophie von Max Adler[1]. Bewusst verzichten wir auf die Darstellung der Relation zwischen Religion und Ethik, die dieser Theorie innerlich ist, sowie auf die Rekonstruktion ihrer Hauptidee: Adlers Versuch, religiöse Ideen mit sozialistischen zu vereinigen und die Religion als Grundlage des historischen und sozialen Fortschritts aufzufassen. Diese interessante Problematik hängt nicht eng mit unserem Thema zusammen.

Der Religionsphilosophie widmete Adler zwei seiner Werke: *Über einen kritischen Begriff der Religion* (1913) und *Das Soziologische in Kants Erkenntniskritik* (1924)[2]. Sie ist eine Synthese des Erbes von Kant und Marx. Mit Kant hatte Adler die antimetaphysische Einstellung gemeinsam, die kritische Sicht der Religion, die Auffassung der historischen Religionen als bestimmte Formen religiösen Bewusstseins, die grundsätzliche Anerkennung des Dualismus zwischen Sein und Sollen, die Behandlung der Moral als Weg in die Religion, die Gegenüberstellung von religiöser Eschatologie und einer profanen Vision der Welt, die Kritik der religiösen Strukturen und aller Formen der Institutionalisierung des Glaubens sowie die Forderung nach einer vollkommenen künftigen Verfassung. In Anlehnung an den Marxschen Begriff von dem „sozialen Wesen des Menschen“ führte Adler in den Bereich der Ethik und der Religion die Kategorie einer apriorischen Vergesellschaftung ein, mit deren Hilfe er versuchte, den Kantischen – seiner Meinung nach individualistisch verstandenen – Ideen eine gesellschaftliche Dimension zu verleihen und so den Beweis für einen kollektivistischen Charakter der ethischen und religiösen Lehre Kants zu liefern. Auf diese Art und Weise erfuhren die theoretischen Prämissen der Philosophie Kants eine wesentliche Modifizierung, die am Ausgangspunkt den Begriff „Religion“ selbst anders festlegte, und darüber hinaus den Kantischen ethischen und religiösen Kategorien einen neuen Sinn gab. Postulate wie Gott, Freiheit, Unsterblichkeit verwandelten sich in dieser Religionsphilosophie in ein Bindeglied zwischen der theoretischen und praktischen Vernunft, der Natur- und der ethischen Welt, der Notwendigkeit und der Freiheit; sie wurden zum konstituierenden Prinzip des menschlichen Handelns im allgemeinen Sinne – des Handelns für den moralischen und historischen Fortschritt, für die Kulturentwicklung. Vom Kantianismus und Marxismus inspiriert, bedeuten sie eine interessante Synthese, die uns Max Adler weder zu den Epigonen Kants noch jeden von Marx rechnen lässt.

[1] Max Adler war Professor der Philosophie an der Universität Wien und zugleich der bedeutendste Philosoph aus dem Kreis des sog. Austromarxismus 1903-1934.

[2] Die beiden Abhandlungen führten in ihrem philosophischen Ansatz die von Adler in seinen früheren Arbeiten angenommene Richtlinie weiter (u.a. in *Kausalität und Teleologie im Streite um die Wissenschaft* 1904, *Marxistische Probleme* 1913), durch die sich der Autor dem von den Marburgern entfachten Streit um die Beziehung des Marxismus zur Kantischen Epistemologie und Ethik anschloss, indem er – i n seinem Verständnis der Dinge – von marxistischer Position aus argumentierte.

2. Kritisch-erkenntnistheoretische Auffassung der Religion

Das Konzept der Religion von Max Adler entsprang seiner Nichtübereinstimmung mit: 1. dem von den Rationalisten der Aufklärung ererbten Glauben an das Ende von religiösen Gefühlen als Folge der Macht der Vernunft; 2. der dogmatischen Auffassung der Religion , die in der Verabsolutierung bestimmter ontologischer Prinzipien die Grundlage für eine Beziehung zur Welt sah; 3. der – hauptsächlich unter dem Einfluß K. Kautskys – verbreiteten genetischen Methode beim Erforschen von religiösen Phänomenen; 4. dem von den Klassikern des Marxismus festgesetzten Verständnis der Religion als Produkt der Entfremdung, als „ Opium für das Volk“. Auf ausdrücklichen Widerstand Adlers stieß die von Marx und Engels gehegte Überzeugung, dass die Religion in einer von ökonomisch-sozialen Widersprüchen befreiten Zukunftsgesellschaft notwendigerweise absterben müsse. Für ihn gab es nämlich – und diese Ansicht teilte er mit den Vertretern der deutschen klassischen Philosophie, von Kant bis Hegel – einen anderen Grundtypus der Entfremdung, der aus der Einschränkung der individuellen Freiheit in einer der Naturnotwendigkeit unterworfenen Welt resultiert. Eine Möglichkeit, diese auf den Gegensatz zwischen Natur und Moral zurückzuführende Entfremdung aufzuheben, sah er ausgerechnet in der Religion, die er für einen unumgänglichen, irreduktiblen Faktor der menschlichen Existenz hielt.

Von der Beständigkeit der religiösen Bedürfnisse und deren rein formalen Charakter zutiefst überzeugt, bemühte sich Adler somit, in der Religion ihren positiven, von historischen Formen unabhängigen, unvergänglichen und allgemeingültigen Sinn aufzudecken. Obwohl die Intentionen Adlers Kant nahestanden, hat doch sein Gedankengang die Voraussetzungen der Kantischen Religionsphilosophie wesentlich modifiziert. Ein unbestreitbares Verdienst der Kantischen Religionskritik sah Adler im Bruch mit der dogmatischen Auffassung der Religion und deren Verständnis als eine Bewusstseinserscheinung. Der transzendentale Gesichtspunkt erlaubt - so die Meinung des Denkers- ein Eindringen in das Wesen der Religion; er ermöglicht die folgende Entdeckung: „ Nicht mehr ist die Religion eine jenseitige Offenbarung , die an die Menschen herantritt, ihren Glauben um jeden Preis zu fordern, (...), nicht mehr ist Religion ein Fremdes, über uns, sondern sie ist unser eigenes geistiges Wesen selbst, nur von einem bestimmten Standpunkt aus erlebt, sie ist nirgends anders offenbart als in unserem Geist.“ [3]

Was bedeutet die Formulierung Adlers, „Religion ist unser eigenes geistiges Wesen“? Eine Antwort , die auf das geistige Dasein des Menschen als Quelle seiner religiösen Bestrebungen pochen oder auch in ihnen eine Erweiterung menschlicher Existenz sehen würde, wäre zu simpel und zu naiv. Adlers Gedanke von einem mit unserem Wesen versöhnten Geist ist- wie hier aufgezeigt werden soll- in seinem gesamten philosophischen System

[3] M. Adler: Das Soziologische in Kants Erkenntniskritik, Wien 1924, S. 185.

fest verwurzelt, hauptsächlich in dessen epistemologischen Voraussetzungen.

Adler wiederholte zwar nach Kant, dass das religiöse Bewusstsein eine bestimmte auf andere nicht reduzierbare Form des Bewusstseins sei und dies sei allen sog. historischen Religionen gemeinsam. Die Person Kants war für ihn mit der Entdeckung des Wesens der Religion verbunden; folgendes konnte er jedoch nicht akzeptieren: 1. die - seines Erachtens - von Kant vorausgesetzte Autonomie der Bewusstseinsformen: der theoretischen, ethischen, ästhetischen, religiösen; 2. Kants individualistische Auffassung des Phänomens „Religion". Vom Marxismus beeinflusst, brachte Adler in die Analyse des religiösen Bewusstseins – an die Stelle der Kantischen „Allgemeingültigkeit des Subjektiven" – den transzendental-sozialen Aspekt hinein, damit unmittelbar an die Grundkategorie seines philosophischen Systems („sozial a priori"[4]), die er in der Polemik mit Rudolf Stammler von 1904 herausgearbeitet hatte, anknüpfend. Dieses Verfahren führte auf direktem Wege zur Formulierung einer über den Gedankengang Kants - und im übrigen auch über den Gedankengang Marx' hinausgehenden – Definition der Religion, laut der Religion eine besondere Form apriorisch vergesellschafteten Bewusstseins, des Geistes in uns ist.

Unter Verzicht, an dieser Stelle Prinzipien der Adlerischen Epistemologie näher zu charakterisieren, sei lediglich auf zwei von ihnen hingewiesen, die als Grundlage für den vom Philosophen konstruierten Religionsbegriff dienten.

Dem einem gemäß wird die Allgemeingültigkeit des Subjektiven im Transzendentalen Bewusstsein, d.h. im „Bewusstsein schlechthin", vorausgesetzt. Dies bedeutet, dass apriorische Bewusstseinsformen im jeweiligen Bewusstsein des einzelnen auf die gleiche Art und Weise erscheinen und daher allen gemein sind, was über ihren allgemeingültigen Charakter entscheidet. Das andere Prinzip lässt sich auf die Voraussetzung der apriorischen Vergesellschaftung jedes individuellen Bewusstseins zurückführen sowie auf die Tatsache, dass jene Vergesellschaftung die Rolle eines Bindeglieds zwischen vielfältigen Subjekten spielt. Die genannten Grundsätze auf den Boden seiner Religionsphilosophie übertragen kam Adler zu dem Schluss, dass 1. der Religion als apriorischer Bewusstseinsform der Rang der Allgemeingültigkeit zukommt; religiöse Begriffe resultieren zwar aus subjektiv empfundenen Bedürfnissen, das Verlangen selbst ist jedoch apriorischer Natur, somit allgemein und notwendig; 2. der Verweis auf die Verbindung zwischen religiösem Bewusstsein und transzendentaler Vergesellschaftung ermöglicht die religiösen Kategorien als Kategorien zu betrachten die den Einzelnen mit der menschlichen Gemeinschaft verbinden; sie sollten demzufolge als soziale Kategorien gelten. Es sei betont: Adler ging nicht so weit, dass er den Marxschen Gesichtspunkt in bezug auf die Religion als eine Form sozialen Bewusstseins, die sich aus den Bedingungen gesellschaftlichen Lebens ableitet, angenommen hätte. Dies war ihm nicht möglich, denn gemäss den idealistischen Grundlagen hielt er daran fest, die transzendentale Vergesellschaftung gehe der empirisch-historischen voran.

Man sollte noch einen wesentlichen Aspekt des kritisch-erkenntnistheoretischen Religionsbegriffes von Adler ins Auge fassen, der direkt das Problem der Realität der Religion betrifft, indirekt dagegen die für weitere Ausführungen außerordentlich bedeutende Frage der Beziehung zwischen Natur [Sein] und Geist [Bewusstsein]. Innerhalb des Kreises eigener epistemologischer Voraussetzungen verharrend, leitete der Philosoph - in Übereinstimmung mit dem transzendentalen Ausgangspunkt – jede Realität aus der regulativen Funktion des konstitutiven, d.h. allen denkenden Subjekten gemeinsamen Denkens ab. Bei einer solchen Epistemologie kann vom Gegensatz Natur-Geist keine Rede mehr sein, denn die Realität ist - wie bei den Marburgern - eine Gesetzmäßigkeit des Bewusstseins, und das einzige Dasein ist das gedachte [begrifflich konstruierte]. Die Realität der Religion ist - Adler zufolge - in Einheit des Transzendentalen Bewusstseins gegeben[5].

Als Ergänzung der vorangehenden Überlegungen sei hinzugefügt, dass Adler wenig - im Vergleich zu Kant viel weniger - Wert auf die Untersuchung historischer Religionen legte. Der geschichtliche Blickpunkt hat nach Adler [neben dem kritischen] seine Richtigkeit ausschließlich bei Studien über die Entwicklung des religiösen Bewusstseins, er erklärt jedoch keineswegs das Wesen der Religion. Den historischen Religionen sprach Adler somit die für den kritischen Religionsbegriff wesentlichste Eigenschaft ab: nämlich die Fähigkeit, die beiden Welten, die Natur- und die ethische Welt, dank der transzendental-sozialen Struktur des Subjekts zu verbinden.

3. Religion als praktischer Begriff – die Bedeutung der „Erlebung"

Das bisher Dargestellte lässt schon vermuten, welchen Platz im Bereich menschlicher Aktivität die Religion Adlers Ansicht nach einnimmt. Für ihn gehörte sie – ähnlich wie für Kant – zum praktischen Bewusstsein. Im Lichte der kritischen Philosophie stand für den Denker außer Zweifel, dass religiöse Begriffe weder empirisch noch substantiell sind. Adler setzte religiöse Begriffe (Gott, Unsterblichkeit) und Kategorien (Glaube, Erkenntnis) mit dem praktischen Tun des Menschen in Verbindung.

Der Philosoph modifizierte jedoch weitgehend den Gedanken Kants, die Religion in den Bereich der praktischen Vernunft einzubeziehen. Die Kantische Trennung von Wissen und Glauben hielt er nur am Anfang seiner Überlegungen aufrecht. In späteren ausführlichen Untersuchungen über den Charakter der Religion bemühte er sich die Antinomie zwischen der theoretischen und praktischen Vernunft auf Basis der Religion zu überwinden.

Adler war zwar überzeugt, dass man die Religion unmöglich in Form einer Wissenschaft fassen kann (darin stimmte er mit der ursprünglichen Orientierung der Anhänger Kants überein), doch er konnte Kant nicht zustimmen, dass sie sich nur auf Moral reduzieren lässt. Sein Gedankengang war der folgende: Das menschliche Tun verbindet objektive und subjektive Elemente, die Kausalität und die Freiheit, es überschreitet somit die Grenzen der reinen praktischen und theoretischen Erfahrung. Um den Bereich, in dem sich die beiden Erfahrungstypen berühren, zu benennen, führte Adler als einen dritten Erfahrungstyp den Begriff „Erlebung" ein (den er austauschbar mit den

[4] Die Kategorie „sozial a priori" bezeichnet bei Adler das transzendental vergesellschaftete individuelle Bewusstsein, eine innere Vergesellschaftung der menschlichen Natur – nicht aufgrund der Teilnahme des Individuums am Gesellschaftsleben, sondern als Folge der allen Menschen gemeinsamen apriorischen Formen des geistiges Lebens. In diesem Verständnis der Dinge bringt die soziale Bindung eine, im individuellen Bewusstsein gegebene, geistige Verbindung der denkenden Subjekte zum Ausdruck. Sie entsteht innerhalb der Erfahrung des Einzelnen.

[5] Das Einordnen der Religion in die Allmacht des all umfassenden Bewusstseins bereitete Adler zahlreiche Schwierigkeiten, indem er die Beziehung zwischen Natur und Geist aus dem erkenntnistheoretischen in den ethischen Bereich zu verschieben suchte. Schwierigkeiten, die letztendlich - wie wir es später verdeutlichen wollen - über den Zusammenbruch seines philosophischen System entschieden.

Begriffen „verstehende Erfahrung“ und Glaube verwandte). Dieser steht für keine Erfahrung im strengen Sinne, er gehört nicht zu der phänomenalen Welt, denn „ wir selbst sind mehr als Natur, wir sind vor allem Geist, der die ganze Natur als eine bloße Auffassungsseite an sich trägt“[6]. „Erlebung“ ist eine Form der Einheit des Bewusstseins, die höchste – wie es Adler bezeichnete – Stufe der Gedankenwelt, in der die Kluft zwischen Wissen und Glauben (beide sind die Formen desselben Bewusstseins), Kausalität und Freiheit, der rationalen und irrationalen Welt verschwindet. „Erlebung“ als Synthese der beiden Welten ermöglicht uns die Entdeckung der Wahrheit über die Erfahrung als Ganzes, die sich weder in die Natur – noch in die Moralordnung einfügen lässt; sie enthüllt den wahren Charakter der Religion „als Einheitsstreben, welches Vernunft und Natur, Mensch und Welt widerspruchslos zu begreifen sucht“[7]. Der Religion ist demzufolge – was P. Heitel treffend formulierte – Synthese der theoretischen und praktischen Erfahrung, Einheit von Natur und Geist, Natur und Moral, Kausalität und Freiheit[8]. Auf die Frage hin, was für das synthetische Wesen der Religion spricht und auf Grund welcher Erfahrung man es aufspüren kann, wenn die Erkenntnismöglichkeiten der theoretischen und praktischen Erfahrung ausgeschlossen sind, antwortet Adler getreu seinen epistemologischen Voraussetzungen, indem er auf die Totalität als ihr Objekt, zugänglich dank der religiösen Erfahrung, das sog. Erlebnis, also, den Glauben, hinweist.

An dieser Stelle sollte man kurz auf die Adlersche Reflexion über die religiöse Begriffe eingehen und die wesentliche Differenz zwischen seiner Theorie und der Philosophie Kants unterstreichen. Sie macht sich bemerkbar, wenn Adler den Charakter der religiösen Begriffe und Kategorien zu erhellen versucht, indem er in ihre Analyse konsequent den transzendental- sozialen Aspekt einbezieht. Auf diese Art und Weise verlagert er den Schwerpunkt vom individuellen Subjekt auf das kollektive und setzt die analysierten Kategorien zum Kollektivhandeln in Beziehung. Denn der Philosoph behauptete, der Mensch (aufgrund der zur Debatte stehenden Konzeption immer als Gattungswesen verstanden) als freies und vernünftiges Wesen wolle sich in der ihn umgebenden Welt zurechtfinden, in ihr eine Stütze finden. Auf dieser Suche berufe er sich auf eine Vorstellung von Gott als in der Welt wirkende Kraft, als absolute Weltordnung – nicht mehr als transzendentes Dasein – und bemühe sich, in dieser Ordnung einen Platz für sich zu finden, um Ruhe und Frieden zu erlangen. Der Gottesbegriff wird demgemäss im Kantischen Sinne aufgefasst. Er stellt einen notwendigen Bestandteil des Bewusstseins dar, sein Inhalt und Sinn sind subjektiv, denn sie betreffen das individuelle Erlebnis (religiöse Erfahrung). Die Subjektivität darf man aber – der Epistemologie von Adler zufolge – nicht als Beliebigkeit verstehen: Die Idee Gott ist a priori subjektiv (diese Art Apriorismus bezieht sich auf apriorische Bestandteile des individuellen Bewusstseins), ihre Allgemeingültigkeit in der transzendentalen Form des Bewusstseins gegeben (den ganzheitlichen, in der Religion gegebenen Sinn der Welt erfährt das Individuum als einen für alle denkenden Subjekte identischen Sinn – seine Identität wird durch überindividuelle Bewusstseinsformen gesichert). Das Postulat „Gott“ wird in Form des Glaubens und Willens realisiert. Der Glaube ist dabei nichts anderes als eine spezifische Art des apriorisch vergesellschafteten Bewusstseins; also keine Sammlung von beliebigen Vorstellungen und Urteilen, sondern eine allgemeine, die religiöse Erfahrung ermöglichende Bewusstseinsform. Der Wille dagegen lässt sich vom transzendental-sozialen Gesichtspunkt aus ausschließlich als Ausdruck des apriorischen gesellschaftlichen Wollens im individuellen Bewusstsein begreifen. Wenn Adler meint, die „Ideen Gott, Unsterblichkeit“ seien notwendige Resultate des Willens, so verbindet er damit eine transzendental begriffene Subjektivität. Das Streben nach Gott wird hier nicht als bemühen des einzelnen Ich, sondern des menschlichen Bewusstseins schlechthin aufgefasst. Es handelt sich nicht mehr um einen Gott für mich, sondern um einen solchen Gottesbegriff, der kraft der Voraussetzungen der Adlerschen Epistemologie allen denkenden Subjekten gemeinsam wäre und sich in deren Beziehung zur Welt realisierte. Auf diesem Wege gelangte Adler an eine für das praktische Verständnis der Religion wesentliche Frage – die ihrer Vermenschlichung. Jene sollte man im Lichte seiner Philosophie im doppelten Sinn verstehen: indem man die Religion als 1. Produkt des apriorisch vergesellschafteten Bewusstseins, 2. Prozeß der Selbstbestimmung des vernünftigen Wesens Mensch (Gattungsbegriff) definiert. Der Prozeß der Selbstbestimmung des Menschen kann nur deshalb stattfinden, weil die Religion in ihm zwei Welten vereinigt: die Natur- und die ethische Welt.

4. Die Zukunft der Religion

Der von Adler auf dem Grund der Religion herausgearbeitete Begriff der Totalität ließ die Frage nach der Beziehung zwischen Religion und Philosophie und die Zukunft der Religion aufkommen. In seinen früheren Werken versuchte Adler eine wissenschaftliche Philosophie zu betreiben. Es ist ihm misslungen ihr die ontologischen Voraussetzungen und die Wertungsfähigkeit zu nehmen. In *Das Soziologische ...*veränderte er deswegen sein Verhältnis zur kritischen Philosophie erheblich. Er gab zu, dass sie außerstande sei, der Frage nach der Totalität auszuweichen, was sie der Religion nahe bringe. Das die beiden Bereiche Verbindende liegt in der metaphysischen Reflexion über den Sinn des Ganzen.

Der Zukunft solle eine Entwicklung eigen sein, in der die Trennungslinie zwischen Religion und Philosophie immer verschwommener wird, um am Ende völlig zu verschwinden. Dieser Moment interessierte Adler besonders. In den Vordergrund schob sich nämlich damals die Frage nach der Zukunft der Religion. Seine persönliche Einstellung kam in der Bejahung der Religion und der Überzeugung zum Ausdruck, man dürfte das Ende des Glaubens weder erwarten noch herbeisehnen. In Rahmen seiner sozialistischen Theorie behauptete er, in der Zukunftsgesellschaft werde die Religion als Aberglaube, dogmatische Theologie oder institutionalisiertes System von Kultusformen aussterben. Es bleibe jedoch der philosophische Glaube als eine besondere Religionsform.

[6] M. Adler: Das Soziologische...., Op.cit., S. 236.
[7] a.a.O. S. 207.
[8] P. Heitel: System und Ideologie. Der Austromarxismus im Spiegel der Philosophie M. Adlers, Wien-München 1967, S. 354.

Das cartesische Begründungsideal und seine kritische Rezeption durch Sosa und Wittgenstein

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1. Descartes´ Ideal begründeter Erkenntnis

Descartes nennt als Ziel seiner Bemühungen, mit gesicherter Zuversicht durchs Leben zu schreiten (AT VI, 10). Dieses Ziel hängt von der möglichst großen Gewißheit des Denkers ab, daß die Überzeugungen, gemäß denen er lebt, wahr sind. Daran richtet Descartes die Aufgabe der Philosophie aus, die daher durch zwei Aspekte gekennzeichnet ist:

1. Gewißheitsstreben: In einer programmatischen Äußerung avisiert Descartes vier „Stufen der Weisheit" und stellt ihnen eine „[..]fünfte unvergleichlich erhabenere und sicherere Stufe der Weisheit[..]" (AT IX / 2, 5)[1] gegenüber. Überzeugungen, die ihr zugehören, erfüllen einen höheren Maßstab der Gewißheit als andere. Descartes sieht die traditionelle Aufgabe der Philosophie darin, diese Stufe zu erreichen (AT IX / 2, 5).

2. Fundierungsideal: Descartes umreißt den Bereich dieses Wissens, wenn er erklärt, daß die Philosophen „die wahren Prinzipien suchten, woraus man die Gründe alles Wißbaren ableiten könnte"(AT IX / 2, 5)[2] Die Philosophie soll das gesamte Wissen auf eine neue Grundlage stellen und unseren Überzeugungen unvergleichlich größere Gewißheit geben.

Descartes unterscheidet grundlegende Überzeugungen und solche, die von ihnen abhängen. Daraus leitet er die Notwendigkeit ab, sich dieser grundlegenden Überzeugungen besonders sorgfältig zu vergewissern (AT VI, 13f.). Sie sind dem Zweifel ausgesetzt und müssen begründet werden. Die erforderliche Gewißheit kann nur gewonnen werden, indem nachgewiesen wird, warum der Denker nicht irren kann, wenn er auf bestimmten Wegen zu Überzeugungen gelangt. Dieser Nachweis beinhaltet, auszuschließen, daß ein Grund gefunden werden kann, der die Möglichkeit aufzeigt, daß auf jenen Wegen gewonnene Überzeugungen falsch seien. Descartes meint, er könne auch den entlegensten Zweifelsgrund zurückweisen. Dazu muß ein Zweifelsgrund zuerst mit Recht geltend gemacht und dann zurückgewiesen werden. Diese Aufmerksamkeit auch auf den entlegensten Zweifelsgrund legt ein Gewißheitsniveau fest. Überzeugungen, von denen die Fundierungsfunktion der Philosophie abhängt, müssen dieses Niveau erreichen.

Die Gewißheit dieser fundierenden Überzeugungen muß auf die fundierten Überzeugungen übertragen werden. Überzeugungen, die jenen strengen Maßstab erfüllen, gehören unmittelbar zu einer eindeutig identifizierbaren Klasse von Evidenzen, oder sie werden aus solchen Evidenzen abgeleitet. Wissen, das die cartesischen Ansprüche erfüllt, wird durch eine Intuition gewonnen, die jeden Zweifel ausschließt, oder durch Deduktion daraus (AT VI, 18f.). In keinem Fall ist bei angemessenem Vorgehen ein Irrtum möglich. Dieses kann durch einige Verhaltensmaßregeln charakterisiert werden. Die Fähigkeit zu einem entsprechenden Verhalten ist die Vernunft. Sie beinhaltet die Fähigkeit, Evidenzen zu erfassen und fundierende Überzeugungen zu generieren, und die Fähigkeit, daraus andere Überzeugungen abzuleiten. Der cartesische *foundationism* zeichnet eine Klasse von Wahrnehmungen aus, aus denen Überzeugungen direkt gewonnen oder abgeleitet werden (AT VI, 19).

2. Sosas und Wittgensteins Kritik dieser Konzeption

E. Sosa faßt die eben skizzierten Überzeugungen Descartes folgendermaßen zusammen:

> „[..] reason puts us directly and infallibly in touch with certain truths from our particular perspective and then enables us to reach many other truths, again infallibly, through deductive proof. For the rationalist, therefore, reason both intuitive and deductive is the only source of knowledge[..]"(Sosa 1991, 211)

Wittgenstein nennt er als prominenten Kritiker dieser Position (Sosa 1991, 89). Wittgenstein bezieht sich kaum auf Descartes. Daher soll versucht werden, zu rekonstruieren, worin seine Kritik bestehen könnte. Auch Wittgenstein unterscheidet zwischen grundlegenderen und weniger grundlegenden Überzeugungen, solchen, die notwendig für ein „Weltbild" sind (Wittgenstein 1990, §§ 93ff.), und solchen, zu denen wir innerhalb dieses Weltbildes erst gelangen. Wittgenstein vergleicht erstere mit dem festen Gestein und letztere mit dem Sand im Flußbett (Wittgenstein 1990, § 99). Beides läßt sich nicht scharf trennen. Dennoch ruht eins auf dem anderen. Auch zwischen beiden Arten von Überzeugungen besteht keine feste Grenze (Wittgenstein 1990, § 56). Überzeugungen der ersten Art sind oft nicht explizit bewußt, können erst durch eine Besinnung auf sie explizit gemacht werden (Wittgenstein 1990, § 152).

Wittgenstein kritisiert zweierlei:

1. Wir müssen uns dieser Überzeugungen nicht mit Hilfe eines besonderen Vermögens und durch eine besondere Begründungsform versichern.

2. Andere Überzeugungen müssen nicht mit Hilfe eines besonderen Vermögens aus den ersten begründet werden.

Es gibt kein intuitives Vermögen als Voraussetzung, uns der fundierenden Überzeugungen zu versichern. Ihre fundierende Rolle besteht darin, daß ein Ansinnen ihrer Begründung zurückgewiesen wird. Es gibt daher auch keinen Vorgang, den man als ihren Beweis oder als Zweifel an ihnen bezeichnen könnte, denn Zweifeln beinhaltet, Gründe gegen Überzeugungen geltend zu machen, die begründet werden müssen (Wittgenstein 1990, §§ 122, 220). Gleichwohl muß es einen Weg geben, wie diese Überzeugungen zu ihrer Stellung in unserem Weltbild gelangen. Sie stehen in einem Verhältnis wechselseitigen Abgleichs, des reflective equilibrium, mit dem Ganzen des Weltbildes (Sosa 1991, 112, 259ff.), das nicht vollständig durch allgemeine Regeln z.B. des Schließens beschrieben werden kann. Ihre Annahme ist

[1] „[..]vn cinquiéme degré pour parvenir à la Sagesse, incomparablement plus haut & plus assuré que les quatre autres[..]"
[2] „[..]chercher les premieres causes & les vrays Principes dont on puisse déduire les raisons de tout ce qu´on est capable de savoir."

teilweise Ergebnis eines Lernprozesses (Wittgenstein 1990, § 159), hat aber auch ein Entscheidungsmoment.

Das typische Feld von Zweifel, Begründung und Vergewisserung sind Überzeugungen der zweiten Art. Für sie gilt: Wir sind uns einer Sache gewiß, wenn wir gute Gründe dafür zu haben glauben. Was als Grund für eine Überzeugung oder als Grund für einen Zweifel daran zählt, ist je nach der Rolle dieser Überzeugung verschieden (Wittgenstein 1990, § 66). Nicht alle Gründe, die hinreichend für die Falschheit der betreffenden Überzeugung wären, zählen als Zweifelsgründe (Wittgenstein 1990, § 163). Es gibt keine Prüfungsmethode, einen beliebigen auch noch so schwachen Zweifelsgrund zu suchen und dann auszuschließen, daß es einen solchen gibt, um ein durch diese Methode definiertes Gewißheitsniveau zu erreichen. Die Abhängigkeit dessen, was als Zweifeln und Begründung zählt, von der Rolle der jeweiligen Überzeugung schließt ein einliniges Deduktionsverhältnis zu grundlegenden Überzeugungen aus.

E. Sosa erkennt an, daß das cartesische Begründungsprogramm nicht aufrechterhalten werden kann. Er nimmt insbesondere folgende Kritikpunkte auf:

1. Es ist falsch, nur eine Art grundlegender Evidenzen anzunehmen, von denen wir wissen sollen, daß sie absolut zuverlässige Überzeugungen liefern.

2. Es ist falsch, jeden Wissensanspruch auf jene Evidenzen oder Deduktion daraus zurückzuführen.

3. Wissensansprüche müssen nach der Rolle einer Überzeugung in unserem Leben abgestuft werden.

4. Grundlegende Überzeugungen werden trotz ihrer fundierenden Rolle in einem reflective equilibrium mit dem Gesamtsystem von Überzeugungen abgeglichen (Sosa 1991, 261). Dabei spielen auch Übereinkunft und Entscheidungen eine Rolle.

Dennoch nimmt Sosa das cartesische Wissensideal in modifizierter Form wieder auf. Gegen den überzogenen Anspruch des *foundationism*, aus schlechthin gewissen Intuitionen alle anderen Überzeugungen abzuleiten, setzt er einen abgestuften *reliabilism*, dessen Kriterium ist, daß eher wahre Überzeugungen gewonnen werden als falsche (Sosa 1991, 89).

Er wendet das Augenmerk auf die Epistemologie, die bei Wittgenstein in den Hintergrund tritt. Auch grundlegende Überzeugungen müssen Gegenstand von Rechtfertigungsüberlegungen sein. Sie gehören wie Ergebnisse von Wahrnehmungen und Introspektionen zur „Peripherie“ unseres Überzeugungssystems, wo dieses nicht von vornherein sprachlich gefaßte Inhalte aufnimmt, die notwendig für ein Wissen über die Welt sind. Die Peripherie bilden solche Überzeugungen, weil sie nicht selbst aus anderen Überzeugungen abgeleitet werden, aber Ausgangspunkt solcher Herleitungen sind.

Sosa greift daher auf das cartesische Schema eines Erkenntnismoments, das den Kontakt zur Welt erlaubt, und eines Moments der Deduktion daraus zurück. Er unterscheidet generative und transmissive geistige Fähigkeiten (Sosa 1991, 225f.). An jener Peripherie kann das Muster einer Rechtfertigung nicht der Schluß auf eine Überzeugung aus anderen sein noch die Beobachtung bestimmter sprachlicher, z.B. inferentieller Regeln. Rechtfertigung darf aber nicht mit bloßer Verursachung verwechselt werden. Welche Art Kontakt zur Welt rechtfertigt dann Ansprüche auf ein Wissen über sie? Der einzelne kann zur Rechtfertigung nicht seine individuelle Intuition, Wahrnehmung oder Introspektion *zeigen*, aus denen er eine Überzeugung erst gewinnt. Er muß sich darauf berufen, daß er eine geeignete *Fähigkeit* zur Intuition etc. gebraucht. Aber wann liegt darin eine Rechtfertigung? Eine Antwort auf die Frage kann nicht alles, von dem ein Wissen abhängt, vollständig spezifizieren. Aber sie muß bestimmten grundlegenden Differenzierungen Rechnung tragen. Nach Sosas Überzeugung bietet die cartesische Theorie Ansatzpunkte dafür. Sie erklärt die Fähigkeit, nichtsprachliche Wissensinhalte zu erfassen, durch ein irreduzibles intuitives Erkenntnisvermögen. Wissensansprüche werden analysiert durch eine geeignete normative Disposition des Erkennenden, zu richtigen Überzeugungen zu gelangen. Hier scheint Sosa die Analogie zur Tugendethik aussichtsreich (Sosa 1991, 189f.): Wie praktische Tugenden nur begrenzt durch allgemeine Normen beschrieben werden können, aber der allgemeinen Maßgabe unterstehen, daß sie zur Realisierung des Guten beitragen, gilt auch für epistemische Tugenden, daß sie als Dispositionen richtigen Vermögensgebrauchs eher zu richtigen als zu falschen Überzeugungen führen (Sosa 1991, 225). Epistemische Tugenden müssen erworben werden. Dabei leiten nicht sprachliche Regeln, sondern nur eine Art Organon tugendhaften Vermögensgebrauchs, wie es Descartes mit seiner *Methode* entwirft (Sosa 1991, 246). Epistemische Tugenden beinhalten einerseits eine gewisse Erfolgskomponente. Sie müssen in der jeweiligen Situation des Erkennenden eher zu wahren Überzeugungen führen. Sosa erläutert mit dem cartesischen Argument eines Täuscherdämons, daß es andererseits Umstände gibt, in denen das Scheitern von Erkenntnisanstrengungen nicht die epistemische Tugend beschädigt (Sosa 1991, 281). Nur selten wie beim cartesischen Schluß „Cogito, ergo sum“ spielen Umstände keine Rolle.

3. Metakritik im Ausgang von Descartes

Abschließend soll nun mit Descartes auf die Kritik Wittgensteins und Sosas geantwortet werden. Descartes verkennt die „normale“ Rolle von Begriffen wie Gewißheit und Zweifel keineswegs, sondern er beansprucht, sie sei bloß ein Teil der Funktion dieser Begriffe. Diese „normale“ Rolle ist der „moralischen Gewißheit“ verwandt, die Descartes von der oben beschriebenen „metaphysischen Gewißheit“ unterscheidet:

1. Moralische Gewißheit ist „[..]hinreichend, unsere Lebensweise zu regeln, oder so groß wie die der Dinge, die wir nicht zu bezweifeln pflegen, was die Lebensführung angeht[..]. (AT IX / 2, 323, meine Übersetzung)[3]

2.Gewiß sind Überzeugungen, wenn es für das Handeln besser ist, sie zu haben.

3. Solche Überzeugungen sind öfter richtig als falsch. Sinnesdaten zum Beispiel sind in der Regel zuverlässig (AT VIII / 2, 41), nur weil sie „[..] weit öfter wahre als falsche Angaben machen.“(AT VII, 89)[4] Es gibt freilich Situationen, z.B. Fälle der Wassersucht, in denen sie systematisch mißleiten (AT VII, 84). Dennoch sind wir gerechtfertigt, ihnen zu trauen.

4. Es gibt mehrere Arten von Quellen solcher Überzeugungen, z.B. Sinnesdaten, Konventionen, sogar Entscheidungen:

5. Bisweilen ist es Sache einer Abwägung, ob Überzeugungen trotz schwacher Evidenz akzeptiert werden. So

[3] suffisante pour regler nos moeurs, ou aussi grande que celle des choses dont nous n´auons point coustume de douter touchant la conduite de la vie[..]“

[4] „[..]multo frequentius verum indicare quam falsum[..]“

räumt Descartes einen Entscheidungsspielraum ein, ob eine Überzeugung in einer gewissen Situation akzeptiert wird, wenn er meint, bisweilen dürften wir nicht einmal das Wahrscheinliche abwarten (AT VII, 149).

6. Daher können nicht alle Überzeugungen auf Evidenz oder Deduktion daraus beruhen.

7. Überzeugungen in diesem System korrigieren einander wechselseitig. Es gibt daher eine Art reflective equilibrium zwischen einer Überzeugung und einem Überzeugungssystem, wenn die Anerkennung einer Wahrnehmung davon abhängt, daß sie „[..] in stetigem Zusammenhang mit meinem ganzen übrigen Leben[..]“ steht. Descartes schließt: „[..]Habe ich dann noch alle Sinne, das Gedächtnis und den Verstand angerufen, um jene Wahrnehmungen zu prüfen, und hat keiner von ihnen mir etwas vermeldet, was mit den anderen im Widerstreit steht, so darf ich nicht mehr den geringsten Zweifel an ihrer Wahrheit hegen[..]“(AT VII, 90)[5]

8. Konventionen spielen eine Rolle bei der Formierung dieses Systems. So will Descartes die Sitten seines Landes übernehmen (AT VI, 22f.).

9. Viele Überzeugungen sind nur implizit, werden erst durch Reflexion bewußt (AT VI, 23).

10. Moralische Gewißheit ist unabhängig von einem universalen Standard, der sich an der Zurückweisung auch des übertriebensten Zweifelsgrundes bemißt.

11. Ein Zweifel an fundierenden Überzeugungen wäre daher absurd (AT IX / 2, 7). Sie sind offensichtlich.

12. Wann welche Zweifelsgründe eine Rolle spielen, wann eine Überzeugung gewiß ist, bestimmt der Kontext des Handelns, in dem diese Überzeugung eine Rolle spielt. Gegen diese Überzeugungen Zweifelsgründe vorzubringen, hieße die Funktion des Zweifels verkennen. So kritisiert Descartes diejenigen, welche den Zweifel auf die Belange des Lebens ausdehnen (AT IX / 2, 6).

Der entscheidende inhaltliche Unterschied zwischen Wittgensteins Analyse des Zweifelsbegriffs und der cartesischen Auffassung von Gewißheit ist, daß letztere offen ist für einen Verwendungsbereich der Begriffe Zweifel, Gewißheit, Begründung, dessen Regeln sich von denen des Bereichs der moralischen Gewißheit unterscheiden. Gegen Wittgenstein besteht Descartes darauf, daß fundierende Überzeugungen für sich genommen wahr sind ohne Abgleich mit einem Weltbild. Dies rechtfertigt den Übergang zum Unternehmen, metaphysische Gewißheit zu erlangen. Im Gegensatz zur moralischen Gewißheit ist metaphysische Gewißheit nicht selbstverständlich. Man muß sich erst dazu entschließen, die Suche nach ihr aufzunehmen. Das erklärt den Anschein, moralische Gewißheit umfasse den normalen Gebrauch des Gewißheitsbegriffs.

Wittgenstein meint, unsere Einstellung zu fundierenden Überzeugungen sei nicht nur Sache des Lernens. Sie habe auch mit einer Entscheidung über ein Weltbild zu tun. Dies könnte Descartes nutzen, um zum Übergang zu einem Regelsystem zu überreden, das erlaubt, sie in Zweifel zu ziehen. Solche Entscheidungen fallen nicht unter das Verdikt, daß Zweifeln keine Sache einer Entscheidung ist (Wittgenstein 1990, § 221), denn es geht nicht um den normalen Gebrauchs des Zweifelsbegriffs bei einer bestimmten Überzeugung, sondern um den Übergang zu einem Weltbild, in dem der Zweifel eine neue Rolle spielt.

Das Konzept der moralischen Gewißheit widerlegt auch Sosas Descartesinterpretation:

> „Descartes´s radical foundationism tries to show how all our beliefs, both the scientific and the quotidian, may be founded by means of deduction on a basis of intuitive reason.“(Sosa 1991, 260)

Mit der moralischen Gewißheit nimmt Descartes Anforderungen Sosas an eine epistemische Tugend vorweg. Wissensansprüche beruhen nicht durchgehend auf absoluter Evidenz oder Deduktion daraus, sondern auf mehreren abgestuften nichtsprachlichen Erkenntniskompetenzen und dem wechselseitigen Abgleich in einem Überzeugungssystem. Sosa erkennt später diese Auffassung Descartes zu, allerdings mit anderen Gründen (Sosa 1997). Auch der moralischen Gewißheit entspricht eine normative Willensdisposition, zu jener zu gelangen, die mit Hilfe eines Organons realisiert wird. Sie erlaubt den Übergang von nichtsprachlichen Wahrnehmungen zu wahren Urteilen. Sie untersteht nur der Grundnorm, daß sie relativ zu den Erfordernissen des Handelns eher zu wahren Überzeugungen führt als zu falschen. Nur in bestimmten Fällen wie dem des „Cogito“ ist die epistemische Tugend situationsunabhängig. Es sind extreme Umstände denkbar, unter denen sie durchgehend zu falschen Überzeugungen führt. Diese Umstände ändern an der Rechtfertigung der Wissensansprüche nichts.

Descartes entgeht also nicht nur der Kritik Wittgensteins, sondern nimmt auch wesentliche Züge von Sosas Konzeption einer epistemischen Tugend vorweg.

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[5] „[..]earumque perceptionem absque ullâ interruptione cum totâ reliquâ vitâ connecto [..]Nec de ipsarum veritate debeo vel minimum dubitare, si, postquam omnes sensus, memoriam & intellectum ad illas examinandas convocavi, nihil mihi, quod cum ceteris pugnet, ab ullo ex his nuntietur.“

Knowledge and Belief according to Lanza del Vasto

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1. Religious belief and scientific knowledge

In past millennia religious traditions suggested a kind of wisdom from which science divorced since its beginning, belief being then considered as a backwards attitude with respect to the triumphant scientific reason. Apparently, no sacred text suggested an adequate analysis on both the admirable intellectual construction built by scientific reason and modern way of life, essentially advantaging progress with respect to all traditions.

Since one century a new attitude on scientific knowledge was proposed by a particular renewal of religious belief, the non-violent philosophy of life suggested by Tolstoy (Tolstoy 1880), Gandhi (Gandhi 1908) and Lanza del Vasto (Lanza del Vasto 1959). All they criticized Western science inasmuch as it is severed from both ethics and common life of mankind. The criticism was qualified by Lanza del Vasto (= LdV, 1901-1981, graduated in Philosophy at Pisa University in 1928) through an analysis of two Christian texts, i.e. Genesis 3 and Apocalypse 13, in the same years Catholic Council Vatican 2 instead accepted modern science as an ineluctable modernity (incarnationist thesis vs. apocalyptic thesis).

2. Lanza del Vasto's interpretation

Let us remark that LdV considered the two above-mentioned texts as substantially shared by a great number of religious traditions; the first text concerns what is commonly called the problem of theodicy; the second one describes a period of social persecution of religious belief.

The following synthesizes chapter I of LdV's main theologico-social analysis of Western society (LdV 1959). Essentially, he changes the traditional interpretation of the word "original"; he locates the original sin not at the temporal origin of mankind, but at the origin of the widest aggregation of men in a society, i.e. whatsoever civilisation. This sin is defined as a diversion of the human being from the direct knowledge on the intimate nature of every being - God first -, to an interested knowledge-calculation upon all beings, in the aim to exploit them. In a social aggregation a man/woman tends to hide under some conventional or legal customs his relationships of exploitation. In the historical development of a civilisation a lot of formal rules and artefacts are introduced, that expand monstrously the artificial level, at the expenses of both the natural level and the super-natural level of personal life. By shaping the main structures of a society, mainly those of the widest society as possible, i.e. a civilisation, the original sin is thus characterised as a structural sin. Sharing common customs, both evil men and benevolent ones are evenly merged in the original sin; at last, all they sustain the pyramidal structure of our society, where weakest and naive men/women are forced to support heaviest social weights.

In the latter text two monstrous animals grow up respectively from sea and earth. They subdue all peoples, till up to impress a seal on both the mind and the hands of whatsoever person. In continuity with previous interpretation, LdV sees the two monsters as two social structures substantiating in a given civilization the social result of the infinite collective multiplication of original sin. Through a communitarian interconnection of several minds this original sin grows up to became two cpecific social institutions for exploiting Nature, that is Science and its application, Technology. By means of such two actors LdV vividly illustrates the advanced life of modern times as already represented by the biblical story. In fact, in modern times they gained, more than any cultural force of modern society, an unprecedent authority on all peoples; till to lead them to entry in a society subjugated by the spirit of possession.

According to this interpretation LdV holds, in a parallel way to Induist tradition and some other religious traditions too, that present Western civilisation represents the greatest renewal of the original sin, since for the first time it was institutionalized in Science and Technology and then it was applied world-wide.

3. The suggestion of LdV for instrumentalizing scientific knowledge

Science and Technology are condemned by LdV not forever, but only in the particular Western civilization, owing to the specific finalization it gives them. This appraisal is corroborated by the meaning LdV gives to the final words of latter text. They suggest to the reader a way for saving himself from this kind of structural sin; this way consists in gaining the knowledge of the nature of evil, which is symbolised by the name of the latter beast; which is a number, i.e. 666. LdV interprets this enigma (LdV 1959, p. 39-40) according to the main notion of Western science (Koyré 1957), the limit of a series. In other terms, he subdue an element of the basic science, Mathematics, to suggest a spiritual hint; hence, he instrumentalizes scientific knowledge to know the path of salvation.

He reads 666 as an infinite series of the same cipher 6, i.e. as 666…, a series of 6 tending, at the right hand, to a limit number. In agreement to the meanings that all peoples give to numbers, 6 is then intended as representing a man/woman. Hence, the number 666 represents an infinite expansion of the man/woman on a merely natural level; yet, this series is unable to reach the number 7, i.e. the typical number of a spiritual man/woman.

By means of the oldest Western science, Geometry, I suggest one more interpretation (Drago 1997). Three ciphers 6 joined in one number means three men wanting to reach unity, likely as three vertices shape a triangle; just the figure Christian tradition and by other religious traditions attribute to God; actually, in Genesis *3* to become similar to God was the promise by the snake. Actually, the efforts to reach unity through merely natural drives (6) in a long-term perspective is doomed to fail to achieve a higher spiritual status.

Among past Christian interpretations of Apocalypse *13*, LdV's one has to be qualified as the first structural interpretation, since the two social actors are no more recognised as celebrated evil personalities (e.g. Nero), but as specific social structures (after forty years an encyclical text joined the notion of a structural sin), i.e. Science and Technology; and even the salvation is intended in structural terms.

4. The conversion of religious belief

Although, to my knowledge, in no other religion some authoritative scholar interpreted sacred texts with reference to modern Science and Technology, after this interpretation, no more Science and Technology are allowed to consider belief as essentially unable to understand the modern way of living. Hence, LdV gave again authority to old sacred texts with respect to modern Science and Technology.

By a comparison of the two texts, we see that they represent the same kind of sin, yet in two different civilisations, a primitive one and a mature one. In fact, LdV's main category is the notion of a civilisation, which is narrower than metaphysical and ethical notions, and broader than society and other political notions. It leads LdV to characterise anew ancient theological notions, mainly the sin, now intended even in a structural sense, and the correlated notion of a conversion from this kind of sin, as a conversion from even social structures.

By following Gandhi's attitude, LdV's interpretation offers an unprecedent linkage between Eastern and Western religions, concerning both the interior life and the active participation, inspired by the awareness of social structures, to social life. But this new attitude converted a religion, in agreement with Gandhi's teachings, to mainly an ethical commitment for improving not only the welfare of our little neighbourhood, but the whole mankind; a welfare to be obtained by even fighting against oppressive social structures. Indeed, while in the past religions suggested efforts addressed to mainly achieve transcendental life, by non-violent teachers they are thus converted in a creative effort for substantiating inside the present society God's kingdom as best as possible; or even, in layman terms, a free, peaceful and just society. As a consequence, this new attitude does not belong to any specific religion; rather, it can be shared by whatsoever person, even a person not believing in God, provided that he is believing in the essentially positive nature of each man/woman; i.e. in the infinite potentialities of a person.

This attitude was illustrated by the first European non-violent, the philosopher Aldo Capitini. Inside the historical development of Western philosophy he focussed his attention on Kant's crucial step. By recognizing the failure of a millennial effort elicited by mankind to know the “thing in itself”, Kant suggested to regain reality by means of a different effort, the ethical one, to be performed through an “adjunction” of ethical nature. This adjunction then originated Hegel's notion of *Aufhebung*, representing a move of Absolute Spirit. Rather, it was intended by Capitini as the proposal, inside a given unsatisfactory situation, for an immanent ethical effort, performed by whatsoever person sincerely wanting to produce transcendent values inside a community; that means "to do oneself a centre" in order to achieve the "compresence" and at last that “you-all people” which constitutes a "freed reality" substantiating an "omnicracy", where life is developing in a "choral way" and "politics is religion at the highest level". Capitini's philosophy can be defined as a pan-personalist philosophy (Bobbio 2002); I add, as a personalist left of Hegelian philosophy (Drago 1998).

5. Generalizing the main suggestions to religious teaching, scientific knowledge and philosophy

According to non-violent teachers, both science and technology , when scrutinized under an ethical viewpoint, present, contrarily to a *prima facie* appraisal, an essentially double nature: good and evil. In synthesis, the ethical nature of science too is a conflict; just the opposite of the common image, according to which science is capable to solve almost all conflicts.

Moreover, both the above-illustrated interpretations of the structural evil, symbolized by 666, suggest that the failure, and hence the salvation too, has two dimensions, i.e. infinity and organisation. Upon each of the latter ones a man can take his two basic choices.

These two dimensions are relevant in theology too. For instance, out of the ten commandments the first three concerns infinity and the last seven one the (familial and social) organization. The same holds true for Christ's synthesis of them in two commandments only; as well as for the prayer Our Father. According to Bagavad Gîta, human hearth includes two chords, Infinity and Unity, i.e. a unitarian organization (quoted by LdV 1993, p. 18).

In my opinion the best hint for revealing in science the basic option on the infinity was Koyré's analysis (Koyré 1957), which emphasized Newton's option for actual infinity in opposition to both Descartes' and Galilei's choices for potential infinity only. Moreover, by following d'Alembert, L. Carnot (Carnot 1783, 102-105; 1803, xiii-xvii.) supported the view that there are two kinds of organisation of a scientific theory, i.e. an "empirical" one and a "rational", deductive one. I characterised the foundations of science as constituted by these two options. By means of them I interpreted Koyré's characteristic statements "Dissolution of finite space and geometrisation of space", and then generalized them in new categories capable to interpret the history of modern science. Moreover, I interpreted all the categories suggested by previous historians of science. (Drago 2001)

In recent philosophy, Levinas emphasized both dimensions (Levinas 1961). But already Leibniz emphasised the two labyrinths of human reason, i.e. the notion of infinity and the dilemma on freewill or law (truly, a dilemma on the two kinds of organisation, as they are viewed from a subjectivist viewpoint). They can be associated respectively to the two great principle Leibniz recognized, i.e. the principle of non-contradiction and the principle of sufficient reason. When interpreted through the two basic options, Leibniz’ program for a metaphysics of science - i.e. his *Scientia Generalis* - results to be successful (Drago 1994). This fact gives new relevance to his philosophy of science and moreover it suggest to change the common interpretation of the historical development of philosophy.

Moreover, the two basic options suggest a general theory of conflict resolution (Drago 1996). According to it, the non-violent attitude makes appeal to the principle of sufficient reason, governing a heuristic method for solving the conflict at issue. The rational reason for associating non-violence and that principle is their common feature to be double negated sentences, to each one of them correspond a positive sentence lacking empirical, operative support. Since the failure of the double negation law characterizes intuitionistic logic, all that means that they essentially pertain to a different logic to common one; or even, they open the minds to see a new world. Remarkably, in Capitini's philosophy of non-violence the main characteristic words are double negated words. Moreover, in agreement to his characteristic way of arguing, he proposed a reform of dialectics (Capitini, 1959).

In sum, we obtained a structure of knowledge constituted by two dimensions; each one can be considered as splitting in two dichotomic choices; in total, four pairs of choices, giving up to four models of theory (Drago 1991), to be considered as the four cardinal point for our knowledge inside an essentially pluralistic framework (just in the spirit of non-violence).

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Mimesis and Metaphor

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"Representation", "imitation" and "mirroring" have proved to be insufficient translations of the concept of mimesis. Walter Benjamin's notion of "mimetic potential" offers a different view on the qualities of mimesis. Benjamin stresses the importance of language and its mediality to mimesis; for him language is the "höchste Stufe des mimetischen Verhaltens und das vollkommenste Archiv der unsinnlichen Ähnlichkeit" (Benjamin 1991, Bd. II/1, 213) He considers mimesis on the level of linguistic mediality.

In the following I will try to outline the mimetic potential of metaphors in literary texts which focus on their linguistic mediality. As Paul Ricoeur suggests, "the possibility that metaphorical discourse says something about reality collides with the apparent constitution of poetic discourse, which seems to be essentially non-referential and centred on itself. To this non-referential conception of poetic discourse I oppose the idea that the suspension of literal reference is the condition for the release of a power of second-degree reference which is properly poetic reference. Thus, to use an expression borrowed from Jakobson, one must not speak only of split sense but of 'split reference' as well." (Ricoeur 1977, 6)

Differing from Ricoeur's speculative and hermeneutically orientated conception I will concentrate on the formal aspects of metaphors, especially regarding the question wether or not there is any sort of resemblance between the form of metaphors and the objects they signify. It follows out of this that my re-definition of mimesis and metaphor will not focus on the relation between *mythos* and *mimesis* predominant in Ricoeur. On the contrary I shall concentrate on the world-creating aspects of metaphor which are said to arise from the mimetic potential of language (in Benjamin's ideal sense).

Despite this I will try to rethink the Benjaminian conception of "ideal language" in a more appropriate analytical way, using central ideas of the approach to a theory of symbols that Nelson Goodman suggested in his "Languages of Art" (Goodman 1976). Goodman states that metaphor involves the transfer of a schema (and the labels within that schema) between disjoint realms. (A schema applied to a realm makes up a system.) In metaphor a familiar scheme is implicitely applied to a new realm or to its old realm in a new way. Typically, the result is novel organization of the realm, for the metaphorical scheme classifies together objects in the realm that are not classified together by any literal scheme. (Goodman/Elgin 1988, 16) But let us challenge this Goodmanian theory of metaphor. We must keep in mind as a presupposition: Goodman states that resemblance between two objects *A* and *B* is no necessary or sufficient condition for representation in the sense that *A* represents *B*. An object resembles itself to a maximum degree but rarely represents itself. *A* must be a symbol for *B*, which means: stand for it, refer to it, as far as the matter of representation is concerned. According to this view denotation is at the very core of representation and is independent of resemblance. This denial of resemblance brings with it that the kind and the direction of the transfer of the schema are arbitrary: almost anything may stand for anything else, even and especially in the case of metaphor. According to Goodman even pictorial systems of signs lack the category of resemblance to some degree and against our intuitions. These intuitions derive primarily from the argument of natural language systems and pictorial symbol-systems having different perception conditions. While the words of a natural language must be learned through teaching and one cannot decide which signs are related to which objects when confronted with an unknown foreign language, the perception of pictorial systems is almost anthropologically universal. Leaving aside the question wether this is true or not we could try to imagine and put forth the crucial assumption: Is there any relation between the signs and the signified objects that is beyond convention and arbitrariness? Goodmans answer for representation as a whole is devastating; any hope for so called realistic features vanishes: "Realistic representation [...] depends not upon imitation or illusion or information but upon inculcation. [...] If representation is a matter of choice and correctness a matter of information, realism is a matter of habit." (Goodman 1976, 38) In the case of metaphor, however, one answer of the radical nominalist Goodman can be isolated that is a bit astonishing. In compliance with his nomialism Goodman states that in metaphor a schema can be transferred almost anywhere; this transfer is bound only to cultural, historical, i.e. conventional decisions and settings. "The choice of territory for invasion is arbitrary", as Goodman writes, "but" – and I think that is very crucial – "the operation within that territory is almost never completely so." (Goodman 1976, 74) Goodman continues with his example of the "deliberate application of temperature predicates to sounds or hues or personalities or to degrees of nearness to a correct answer; but *which* elements in the chosen realm are warm, or are warmer than others, is then very largely determinate. Even where a schema is imposed upon a most unlikely and uncongenial realm, antecedent practice channels the application of labels." (Goodman 1976, 74) It seems that Goodman leaves behind the concept of resemblance and turns to some kind of analogically structured relation between the label order within the transferred schema and the objects in the new realm. Admittedly the term analogy does not seem to play an important role in Goodman's "Languages of Art". But maybe the concept named with that term could be clarifying in the process of comprehending the phenomenon of metaphor. Let us turn back to the difference between pictorial symbol systems and the symbol systems of natural languages. One argument for the resemblance between pictures and what they represent is that we can – *cum grano salis* – understand new pictures while on the contrary we cannot understand new words for example in a foreign language. This assumption conflicts with the second one, which proves pictorial realism to be a matter of inculcation, according to which view pictures – like words – do not resemble their referents at all. I think Robert Schwartz (Schwartz 1997, 166–168) has outlined an interesting solution for this dilemma. He argues in the following manner: "Consider a system like standard Western music notation. Given only a suitable sampling of written notes (symbols) and taught to correlate them with sounds (referents), we might very well learn how the system works, 'how to go on.' Getting the idea of how the system works enables us to handle new symbols in the system not included among the teaching samples. Schwartz is not talking here about new combinations of previously learned notes, but of understanding

new, hitherto unheard individual notes. And this kind of learning can occur, it would seem, without our ever receiving explicit instruction concerning the structure of musical notation. Yet there is no reason to suppose that the written notes 'look like' or resemble the sounds they denote. Again, resemblance between symbol and referent seems hardly to play a role. Indeed, we can find examples of this sort of inductive semantic learning in natural language, too." The ability to understand brand new metaphors is one of the examples Schwartz gives for inductive learning: Our habits associated with the literal use of the word put sufficient constraints on metaphorical use that we can frequently intuit the semantic import of the metaphor the first time around, without being taught it specifically. Systematic correlation of the set of symbols with their referents does not depend in any obvious way on resemblance. This lack of resemblance entails that the system at use in metaphorical transfer is conventional. But Schwartz discriminates further: "Still, the symbols within a given system may not be arbitrary with respect to the other symbols in the system, for there may be sufficient regularity among the symbols, regularity in how they denote or describe, so that learning to use some provides adequate evidence for interpreting other members of the set." Words of natural languages in their literal use are relative to each other, while within metaphorical use the labels within the transferred schemas gain some systematic regularity among each other. This regularity, of course, is not a priori or non-conventional. The point is that, given the way the system works, with the correlations that have been established (and do exist), we can learn the semantic force of some members of the system through learning the semantics of others. Thus, arbitrariness is not a question of conventionality, but more a question of induction and learning. We see the assignment of symbol to referent as arbitrary when we can discover no pattern that enables us to project the semantic import of the symbol from knowledge of other symbols in the system. A symbol can be arbitrary then in the sense that it is a matter of convention or choice or not an a priori necessity that it denotes what it does, but this differs from saying that its interpretation is arbitrary in relation to the other symbols in the system. It does not in any way follow that if symbols do not resemble their referents, the symbols need be arbitrary in relation to each other in the way ordinary words such as 'cat,' 'shoe,' and 'ink' are.

But for further discussion it seems clarifying to turn to a conception which is at the very core of Goodman's "Languages of Art": exemplification which is regarded as a central mode of symbolizing in the arts. Goodman defines exemplification (Goodman 1976, 52–57) as a subclass of the converse of denotation: a label (or in the case of language: a predicate) denotes an object, and, roughly spoken, the denoted object exemplifies that label or predicate. The difference between denotation and exemplification is a matter of direction. Exemplification, however, coincides not with the converse of denotation but with a proper subclass of that converse: the subclass consisting of those cases in which what is denoted or posseses refers back as a sample to what denotes or is possessed. Exemplification is possession plus reference. Goodman gives the example of small swatches of cloth in a tailor's booklet. These function as samples, as symbols exemplifying certain properties. But a swatch does not exemplify all its properties. Goodman's concept of exemplication looks quite plausible when dealing with material objects, as they are individual and perceptible. The swatches in the tailor's book are signs which share their material and perceptible properties with the objects which they signify. In this case a naive conception of mimesis could be diagnosed: due to the material properties that it posseses and to which it refers the sample imitates the labels or predicates which denote that sample. But Goodman applies exemplification even to pictorial systems of signs – in conflict with his repudiation of resemblance between sign and object that I quoted above. Goodman goes even further and says that any predicate instantiation in a natural language may exemplify not only its perceptible properties but its syntactical and semantical classification features as well. Which predicates denote an instantiation of a predicate in natural languages? Not only those which focus on the perceptual qualities of the instantiation and not only those which focus on its syntactical classification features but also those which focus on its semantical classication features. In the light of the no-resemblance theory of representation this seems rather hard to swallow: Goodman's use of exemplification in that broad sense seems to be overstressing and weakening the concept of exemplification. Is this concept of exemplification coherent with a nominalistic, extensional view which tries to dispense with intensions? I am inclined to say no. And I think Monroe C. Beardsley has uttered a critique similar to mine, concentrating on pictorial systems of signs (Beardsley 1997, 43–66) – but let us look at Goodman's answer: "First he [i.e. Beardsley] is quite right in calling me to account for misapplying the term 'exemplification' in certain cases that amount only to instantiation. To say a picture is of a certain kind – say a Churchill-picture or a centaur-picture – is not to say that the picture exemplifies but only that it instantiates a label for, or possesses the property of being such a picture." (Goodman 1997, 68)

But, so my hypothesis: Would it not be possible to speak of self-exemplification in the case of many metaphors in poetry? Could it not be that these metaphors possess the quality of being metaphors and refer to their metaphorical status? In this way metaphors could turn out to be an exemplification of some linguistic potential inherent to natural languages (cf. Kants concept of hypotyposis). And could that kind of poetic reference (cf. Ricoeur's "split reference") not be characterized as mimesis based on linguistic mediality, on a mimesis without perceptual resemblance (and so meet the Benjaminian requirements)?

Currently it seems to me that two different types of mimesis should be assumed: one in any case of metaphor which I would like to call schema mimesis and one which occurs when poetry reflects upon its own linguistic mediality, which I would like to call self-referential mimesis or exemplificational mimesis.

The question to be put to schema mimesis: if metaphor provides a novel organization of the realm, to which it is applied – as the metaphorical scheme classifies together objects in the realm that are not classified together by any literal scheme – then: are that realm and the objects and their properties completely unstructured before being metaphorically represented? Or could one suppose that this realm must have some intrinsic order of objects and properties that resembles the order of the labels within the scheme transferred to it? In the latter case metaphor would expose something about the objects and the properties of the realm and therefore be a mimetic act. (I wonder if this has anything to do with diagrammatic iconicity.)

The question to be put to selfreferential mimesis: Would it not be possible to repudiate the answer of Goodman to Beardsley (cf. above) in the cases of some poetry that deals with ist own linguistic mediality? And would it not be possible to return to Goodman's original concept that some

utterances in a natural language may possess the property of being utterances of that type *and* refer to that possession? If yes, that would mean that these utterances exemplify their own linguistic mediality. In case of metaphors – and NB: we are in the field of poetry – one instantiation exemplifies metaphor as a whole. And if we take seriously Walter Benjamin's myth of an ideal language that evolves in poetry, then this exemplification could turn out to be a case of mimesis of the world in a self-referential way as supposed by radical constructivism. This modern, formally orientated reading of the concept of mimesis would perfectly match the Aristotelian definition of mimesis: not the result of a work of art but the process of world creation, natural or artistic, must resemble nature. It would, furthermore, match the Platonic definition of philosophical mimesis, which is self-referential and differs in that regard from poetical mimesis which is in Platon's view based upon an ordinary subject-object-relation.

What does this renewed conception of mimesis mean for a concept of metaphor, especially for metaphor in science? In Western science we see a historical shift toward the belief that analogy rather than generalized metaphor provides a basis for scientific inquiry. (Gentner/Jeziorsky 1993, 477) Despite this I tend to follow Thomas S. Kuhn's view that metaphors are fundamental to science, providing on occasions "an irreplaceable part of the linguistic machinery of a scientific theory," playing a role that is "constitutive of the theories they express, rather than merely exegetical". (Kuhn 1993, 538) This could imply that knowledge in science is strongly related to the linguistic means by which scientific theories are formulated. And this could further imply that poetry which refers to its own linguistic mediality could turn out to be a crucial sceptical challenge to knowledge based theories in science. "Und das", to speak with Rainer Maria Rilke, "ist viel."

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Closure and Rational Belief

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What kinds of principles belong in a theory of rational belief? One contention of this paper is that it is impossible to reach informed conclusions about the answer to this question without a clear sense of what such a theory is intended to do. It may be rejoined that such a theory is always, at least, intended to cash out, in perspicuous terms, the notion of rationality, and hence no further context is needed to try and decide what principles belong in the theory. This will not do: use of the term 'rationality' is so multi-faceted that it is doubtful whether there is a single concept that it picks out. In fact, specifying what a theory of rationality is intended to do may go hand in hand with providing a characterization of one notion (out of many) of rationality. This will prove to be the case in the following.

A second, and in fact the major, contention of this paper is to argue for some particular closure principles for rational belief. I will, following my own advice above, supply a use for a theory of rational belief against which my discussion will take place. I will identify very strong, and very weak views about closure and argue that, against the background of the use of the theory that I have in mind, they both fail. I will then argue for a position somewhere in between.

One - I do not claim the only - task of a theory of rational belief is to enable us to interpret others. By interpreting others, I mean being able to explain and predict their actions by attributing various mental states to them. A number of philosophers have argued that the best way to do this is to assume that the interpreted other is rational, and to ascribe to her mental states that make her actions rational. A theory of rational belief can play an essential role in this process. Of course it cannot be anywhere near the whole story since, by definition, it concerns only belief and no other mental states. But belief is generally admitted to be especially important among mental states and, along with desire, is often taken as the main ingredient of an interpretation of someone. Sometimes, when we are interpreting someone, we have direct evidence for the presence or absence of a given belief. The person, for example, asserts, or denies, that *p*. Often, however, we wish to ascertain whether someone believes, or does not believe, something when we have no direct evidence. It is in such cases that a theory of rational belief will be of vital importance. Since we will have direct evidence for the presence or absence of other beliefs, the assumption that the person being interpreted is rational will allow us to use a theory of rational belief to extend our interpretation into areas for which we do not have direct evidence. This picture provides the background against which I will now discuss various approaches to closure.

Closure principles come in different strengths. Strong closure is expressed thus:

(SC) A set of rational beliefs **S** is such that, for any finite subset **T** of **S**, if **T**$\vdash$*b*, then *b* belongs to **S**.

By contrast, weak closure requires only:

(WC) A set of rational beliefs **S** is such that, for any member *a* of **S**, if *a*$\vdash$*b*, then *b* belongs to **S**.

The difference is that, by weak closure, a set of rational beliefs contains what is logically implied by any of its members taken by itself, whereas by strong closure, a rational belief set contains what is implied by any its members taken with each other. Those attempting to provide formal theories of rational belief have typically adhered to one or another form of closure.

Against the background of interpretation, both of these principles seem much too permissive. Even (WC) would license us in attributing to someone many beliefs that would either have no bearing on explaining and predicting her behavior, or would be positively misleading, bringing us to expect actions that were never performed or not expect ones that were. As a special sub-problem of this variety, (WC) might well lead us to attribute beliefs to someone that she positively abjured, thus coming into conflict with our direct evidence.

Many people have argued thus against (WC) or (SC) and several weaker alternatives have been suggested. A modest alternative is to require closure of rational belief under *believed* implication:

(BC) A set of rational beliefs **S** is such that, for any members *a,b,c*... of **S**, if it is believed that *a,b,c*...$\vdash$*d*, then *d* belongs to **S**.

This does well in dealing with the problems that beset (SC) and (WC), but it faces problems of its own, owing now to its weakness. The underlying problem is that it severs the link between belief and rationality, as this link serves the goal of attributing beliefs to a subject in interpretation. We cannot assume that just because *a,b,c*... do imply *d* that a subject believes that, nor that, given that a subject believes that *a,b,c*... imply *d* that they really do. The interpreter thus cannot use a knowledge of logical relations to extend the beliefs she can attribute to a subject without some well-grounded beliefs about the subject's beliefs about what implies what. Such beliefs about implication are highly theoretical and unlikely to be forthcoming in many cases. We therefore risk ending up with a theory that simply cannot do the job it is designed for.

A more extreme response to the failures of traditional closure is adumbrated by Christopher Cherniak (1986). Cherniak argues that which logical abilities a creature has is determined by its psychology, but that there is no necessary connection between rationality and any particular type of psychology. Hence, equally rational creatures may, owing to their different psychologies, have very different (possibly non-overlapping) sets of logical abilities. As a consequence, Cherniak argues that there can be no theory of rational belief that is *a priori* suitable for all creatures that we might wish to interpret. The only 'closure' rule that applies to a rational creature *per se* is that it believes *some* of the consequences of its beliefs. Nothing more specific can be said. The only way to supply a more detailed theory for interpretation is to rely on a theory that details the specific psychology of the creature to be interpreted.

The real weakness of this approach is masked by the fact that it may well be true that all normally developed, adult human beings do share the relevant psychological features, and that such creatures are, as it happens, the only ones with which we are acquainted that are plausible candidates for interpretation. It could even be argued (though Cherniak does not) that humans have innate access to the type of psychological theory necessary for

interpretation (on his view), or that we can easily - if with some inductive weakness - obtain it by extrapolation from our own cases. But even among normally developed, adult humans, there are strong linguistic and cultural differences and it has been urged that these differences extend to differences in logical abilities. For Cherniak's approach to be generally useful in human interpretation, such relativism must be answered at the empirical level, something that a theory that genuinely dealt with rationality *per se* would not have to do. And of course, should there turn out to be non-human rational beings, there would not even be a *prima facie* reason for thinking, on Cherniak's view, that we could use knowledge of logical relations to extend our belief attributions beyond those for which we had direct evidence. If we had direct evidence for such a creature's believing the conjunction *p and q*, there would be no justification, absent an appropriate psychological theory, for assuming that it believes *p*.

I come now to my proposals. We should start by thinking about what kind of creatures should fall within the scope of a theory of rational belief if it is to be used for the purposes of interpretation. Clearly, such creatures must be rational, but we need to say more about what this means, since, as noted, the concept has been so diversely used. Here, then, are some conditions, individually necessary but not claimed to be jointly sufficient for one conception of rationality that is tied to the project of interpretation.

I propose that a rational creature must a) be capable of intentional action, and hence of deliberation. b) It must be able to develop and modify, in response to information received piecemeal, some conception of a unified world of which it is a part. c) It must recognize the (at least potential) existence of other creatures with their own representations of the world, and hence have a concept of belief, and therefore concepts of truth and falsity.

It must be said that these conditions add up to both a meager and a stringent conception of rationality. Stringent, in that normally-developed humans are very likely the only example with which we are acquainted of creatures meeting these conditions. Meager, in that the conditions are clearly and obviously met by all such humans, that they do not exhaust all that could be said of the rationality of such humans, and in that any type of being that had anything remotely similar to human culture (that could sustain any forms of art, technology and social institutions) would surely have to meet them.

I have argued at length elsewhere (Evnine 2001) that satisfaction of these conditions entails the possession of certain particular logical abilities. I shall not repeat the arguments here, though of course they form an essential piece of the position I am working out here about closure requirements. Here is a list of the inferential abilities entailed by satisfaction of the conditions that are relevant to our present purposes:

a) possession of a concept of conjunction subject to the usual introduction and elimination rules;

b) possession of at least one of any concept of conditionality that is subject to *modus ponens*.

(Some of the conditions on rationality support logical abilities that are not inferential in nature, and that are connected with consistency conditions on rational belief.) It is on the basis of these 'universal' logical abilities that we can formulate a principle of closure that occupies a middle ground between the overly strong and overly weak versions we have rejected:

(Closure) If **S** is a set of rational beliefs, then i) for any pair of beliefs {*a,b*} in **S**, *a and b* is in **S**; ii) for any belief *a and b* in **S**, *a* is in **S** and *b* is in **S**; iii) for any pair of beliefs {*a*, *if a then b*} in **S**, *b* is in **S**.

(Closure) requires, thus, not universal closure under entailment, but closure only under conjunction (elimination and introduction) and *modus ponens*. It is weaker than either (SC) or (WC), but unlike (BC), it preserves a genuine link with logic, in allowing the attribution of (some) beliefs to someone merely on the grounds that they follow logically from other beliefs that person has. And unlike Cherniak's view, (Closure) is independent of any psychological theory, being tied only to satisfaction of the highly general conditions contained in the characterization of rationality.

In the remainder, I will mention two objections to (Closure), one specific, the other general. Specifically, clause i) of (Closure) requires that a rational person's beliefs be closed under conjunction introduction. This particular aspect of closure has received a lot of criticism independent of the general problems for closure conditions that we looked at above, criticism centered around the Lottery and Preface paradoxes, which are purported to show that closure of belief under conjunction introduction will lead to irrationality, even to the violation of the weak (WC). I have addressed these objections elsewhere (Evnine 1999). I will say here only this. The requirement expresses the view that all our beliefs should be open to rational interaction with each other; that we should not, in other words, compartmentalize our beliefs. In the context of interpretation, I believe this assumption is the default one - when we interpret, we initially assume that we can bring to bear on our interpretations *any* other beliefs we have reason to attribute to the person whom we are interpreting. There are, of course, special occasions when this default assumption must be modified. The theory of rationality of which the condition of closure under conjunction introduction is a part may thus be said to yield a theory of *prima facie* interpretation rather than interpretation *tout court*.

The general criticism of my proposals is that they have the appearance of being arbitrary. We have closure under certain logical operations but not others (for example, inclusive-or introduction). Why just the conditions that we have, and not others?

To see the answer to this objection, we must remember how we got to those requirements. They were established on the basis of particular logical abilities that themselves were argued to be entailed by the fulfillment of certain general necessary conditions on being rational, in one sense of that term. If the arguments (for which I referred to another work of mine) that link the necessary conditions on rationality with the various logical abilities are good, this means that a theory of rational belief with these closure requirements should be a good method of interpretation for any creature that manifests that form of rationality - any creature, I argued, that is a remotely plausible candidate for interpretation. I have not argued that *only* these inferential abilities can be proven to be 'universal' on the basis of this conception of rationality, but I have not seen a way to establish the universality of others. If anyone can, then further closure requirements might be added to the theory of rational belief for the purposes of interpreting such creatures. Furthermore, if anyone can, by adding further conditions to the conception of rationality, establish the necessity of further inferential abilities, then a theory of rational belief, with additional closure requirements, can be developed for creatures satisfying that narrower conception of rationality. Such a conception of rationality may well

still be wide-enough to include any creature we may want to interpret, given the initial weakness of my own characterization of rationality.

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Hilary Putnams Religionsphilosophie zwischen Relativismus und Schizophrenie

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Ein Jahr vor seiner Konversion zum internen Realismus hat Hilary Putnam 1975 eine Konversion zum expliziten Theismus durchgemacht (vgl. Putnam, H., (1/1992), S. 351) und einer Zeit gewisser Schizophrenie als Gläubiger und Atheist zugleich (vgl. Putnam, H., 1992, S. 1) ein Ende bereitet. Bislang hat nach verbreiteter Meinung Putnam aber weder eine eigene Religionsphilosophie oder auch nur religionsphilosophische Überlegungen systematischer Art im Sinne einer Rechtfertigung der Rationalität religiösen Glaubens derart vorgelegt, als dass klar wäre, was diese Konversion nun in seinem Leben bewirkt hat und folglich, gerade von einem pragmatistischen Standpunkt aus gesehen, mit seiner Philosophie zu tun haben soll. Putnam selbst erachtet seine religiöse Praxis in jüdischer Tradition als einen Katalysator sowohl für seine bereits *vor* der Konversion einsetzenden ablehnenden Haltung dem Szientismus gegenüber als auch für seinen den Pluralismus anerkennenden internen bzw. pragmatischen Realismus (vgl. Putnam, (1/1992), S. 351). Darüber hinaus fällt es ihm jedoch schwer, einen weiteren Einfluß seiner religiös geprägten Lebensform auf sein philosophisches Denken dingfest zu machen oder gar einen Einfluß seiner Philosophie auf seine religiöse Einstellung.

Sami Pihlström teilt diesen Eindruck Putnams und wirft ihm deswegen einen *Fideismus* vor (vgl. Pihlström, S., 1996, S. 348-378, besonders S. 362, Anm. 170.). Mit dem Fideismusvorwurf einhergehend liesse sich m.E. Putnams Philosophie auf zweifache Weise belasten: *Erstens* könnte man ihn als eine Unterminierung seiner pragmatistischen Philosophie insofern auslegen, als er scheinbar den für einen Pragmatisten eigentlich ernstzunehmenden Anliegen der religiösen Menschen samt seiner eigenen Person nicht gerecht wird. *Zweitens* liesse sich der Einwand zu einem Relativismusvorwurf ausbauen, der natürlich Putnams Lebensprojekt der Elaborierung eines pragmatischen Kognitivismus (vgl. Mueller, A., 2001, besonders S. 26f.) folgenschwer treffen muss, soll es sich doch hierbei um eine Position zwischen metaphysischem Realismus und Relativismus handeln. Philström scheint mir beide Vorwürfe gegen Putnam geltend zu machen. M. E. ist jedoch nur der *Relativismusvorwurf* diskussionswürdig, weil man ja auch von einem pragmatistischen Philosophen nicht erwartet, eine Naturphilosophie auszuarbeiten, nur weil eine exzessive Liebe zu Blumen und Tieren sein Leben prägt. Abgesehen davon ist der Einwand wohl auch falsch, liegen doch bereits Rekonstruktionen einer Religionsphilosophie Putnams im Ausgang von seinen Schriften vor. Der *Relativismusvorwurf* steht jedoch zur Disposition und wiegt schwer. Unter dem Relativismusvorwurf liesse sich im Anschluss an Philström verstehen, dass Putnams Philosophie nicht genügend Argumente zur Verfügung stellt, die religiöse Sprache kognitiv zu interpretieren. Es seien bei Putnam keine positiven Argumente für die Realität und damit für die kognitive Bedeutsamkeit von religiöser Sprache in Sicht. Pihlström scheint von Putnam entgegen dessen ablehnender Haltung einer solchen Erwartung gegenüber (vgl. Putnam, H., 1992, S. 177) eine Art metaphysischer Fundierung religiöser Sprache zu erwarten. Putnam böte aber nur die Auskunft, „that our language (by means of which we *can* say that 'some things are true and some things are warranted and some things are reasonable') rests on 'trust'" (Pihlström, S. 1996, S. 362., Anm. 170).

Ich möchte in meinem Vortrag dafür argumentieren, dass Pihlström mit seiner Lesart von Putnam und folglich mit seinem Relativismusvorwurf falsch liegt. Dagegen stelle ich eine Würdigung der bereits vorgelegten Rekonstruktionen einer Religionsphilosophie in Putnams Werk. Unter Aufnahme dieser bereits vorgelegten Rekonstruktionen von Putnams Religionsphilosophie werde ich dann die These formulieren, dass man Putnams Position als einen *Semi-Fideismus* charakterisieren sollte. Darunter verstehe ich eine Position innerhalb der jüdisch-christlichen Religionsphilosophie, die dafür argumentiert, dass die religiösen Aussagen es mit Sachverhalten zu tun haben, die von der Vernunft *nicht* aufgewiesen werden können, *aber* sich gegen jeden vernünftigen Einwand verteidigen lassen. Jüdisch-christliche Religion zeichnet sich demnach durch Offenheit und Öffentlichkeit aus.

Mit dieser Charakterisierung genüge ich einerseits bisherigen Rekonstruktionen einer Religionsphilosophie Putnams samt erhobener Einwände. So etwa derjenigen mittels einer synoptischen Darstellung im Ausgang von einigen dafür einschlägigen Texten Putnams vorgenommenen Rekonstruktion von Klaus Oehler samt seines zentralen Einwandes (Oehler, K., 2002). Oehler liest m. E. ganz zutreffend Putnams Religionsphilosophie im Ausgang von Putnams Wittgenstein-, James- und Maimonidesexegese als eine Depotenzierung des Intellektualismus in der Religion. Das macht den Weg frei „für die Anwendung der pragmatischen Methode auf die Religion, einen Weg, der mitten hindurch führt zwischen dem religionsfeindlichen Empirismus auf der einen und dem wirklichkeitsfernen Rationalismus auf der anderen Seite" (Ebd., S. 339). Oehler befürchtet jedoch, dass Putnam den Individualismus überstrapaziert und so keinen Platz mehr für das Institutionelle, das Soziale läßt (vgl. ebd., S. 339f.). Auch Michael Quante legt eine Rekonstruktion von Putnams Religionsphilosophie vor, die sich weitaus kritischer und distanzierter geriert als die von Oehler (vgl. Quante, M., 2002). Im Kern der Anfragen von Quante steht eine vermeintliche Spannung zwischen den drei Grundsäulen von Putnams Religionsphilosophie, nämlich 1. Pluralismus, 2. Toleranz und 3. Existenzielle Verpflichtung. Er äußert die Befürchtung, dass in Putnams Religionsphilosophie die „Versöhnung von existenzieller Verpflichtung und Toleranz möglicherweise nicht bruchlos aufgeht" (ebd., S. 346). Die religiöse Einstellung sei nach Quante ein unmittelbares, nicht distanziertes und ungebrochenes Verhältnis eines Subjekts zu seinen religiösen Einstellungen und deswegen mit einer inneren Toleranz unvereinbar. Einer solchen inneren Toleranz rede Putnam aber das Wort. Dass Putnam das tut bzw. tun muß, begründet Quante zweifach: *Erstens* bleibe eine solche Toleranz vom pragmatistischen Standpunkt aus gesehen prinzipiell defizitär und *zweitens* sei das Prinzip der inneren Toleranz bereits in dem dritten der von Putnam protegierten Prinzipien einer pragmatistischen Konzeption der Vernunft, nämlich in dem der Kommunikation enthalten.

Wenn ich auch den meine Charakterisierung von Putnams Position als einen Semi-Fideismus befördernden

Rekonstruktionen von Oehler und Quante zustimmen kann, meine ich gute Gründe vorbringen zu können, warum den ausgeführten Einwänden widersprochen werden kann. Ich werde dafür argumentieren, dass a) entgegen Oehlers Meinung die semi-fideistische Position von Putnam sehr gut geeignet ist, sowohl für die existentielle Verpflichtung und damit für den Individualismus im Sinne Oehlers einerseits und einer institutionellen Rückbindung an eine Gemeinschaft andererseits genügend Raum läßt. Die von der religiösen Sprache ausgedrückten Sachverhalte sind nämlich weder durch logische Schlußfolgerung noch durch Introspektion, geschweige denn durch Sinneserfahrung zu erwerben. Sie müssen einem gesagt werden, was die starke Betonung der Tradition in der jüdisch-christlichen Religion erklärt. Wir haben es hier vielleicht mit einer besonderen Instanziierung von sozialem Wissen zu tun. Ich argumentiere sodann b) dafür, dass ich Quantes Einwand gegen Putnam nicht überzeugend finde, derzufolge äußere Toleranz defizitär sein und von Putnam nicht nur auf Grund dieser Defizität, sondern auch weil es sich um eine Implikation des Prinzips der Kommunikation handele, auf eine innere Toleranz hin überstiegen werden muß. Meinen Widerspruch möchte ich einmal damit zu begründen versuchen, dass ich einen Dissens darüber geltend mache, wieso eine äußere Toleranz im Sinne einer toleranten Verhaltensdisposition gegenüber Un- und Andersgläubigen bei gleichzeitiger distanzloser Positionierung meinen eigenen religiösen Überzeugungen gegenüber defizitär sein muß, *wenn* diese die Toleranzforderung bereits enthalten. Das ist m. E. nun im Fall der jüdisch-christlichen Tradition gegeben. Quante schließt diesen Rettungsversuch im Hinblick auf einige Religionen aus (vgl. Quante, M., 2002, S, 359). Mir scheint aber, dass mehr nicht erforderlich ist, damit Putnam sich als praktizierender *Jude* und als analytischer Philosoph zugleich verantworten kann. Davon einmal abgesehen, möchte ich auch darauf hinweisen, dass die religiöse Einstellung entgegen Quantes Meinung den Zweifel und damit eine Distanzierung von den eigenen religiösen Überzeugungen impliziert.

Abschließend soll meine eigene Lesart von Putnam eigens systematisch entfaltet werden, ohne die Anfragen aus dem Auge zu verlieren. Ich werde die These stark zu machen versuchen, dass die Pointe von einer Religionsphilosophie in Putnams Schriften darin liegt, dass religiöse Aussagen nicht als arationale Aussagen diskreditiert werden können, sondern als Aussagen zu bewerten sind, die zwar nicht mit der Vernunft aufgewiesen, jedoch gegen alle vernünftigen Einwände verteidigt werden können. Mein Ansatz versucht dem Faktum Rechnung zu tragen, dass der jüdisch-christlich-religiösen Einstellungen ein Moment des eschatologischen Vorbehalts bzw. des Messianischen innewohnt, die man mindestens so lesen kann, als ob der jüdisch-christlichen Religion eine Distanz von den eigenen Überzeugungen innewohnt. Zusätzlich zu einer der religiösen Einstellung inhärenten intrapersonalen Distanzierung gegenüber den eigenen religiösen Überzeugungen in Form von Glaubenszweifeln mache ich damit eine der religiösen Einstellung inhärente religionsgemeinschaftliche Distanzierung gegenüber den religiösen Überzeugungen in Form einer Zurückhaltung der Glaubensgemeinschaft geltend. M. E. kann ein Charakteristikum der jüdisch-christlichen Glaubenstradition damit angegeben werden, dass auf das Wort eines anderen hin ein bestimmter Sachverhalt vertrauensvoll angenommen wird und nicht mit der Vernunft als Garantieleistung aufgewiesen werden kann (vgl. Knauer, P., ^{6}1991). Damit ist, wohlgemerkt von einem philosophischen an der Vernunft orientierten Standpunkt aus gesehen, die Hoffnung aber nicht die Garantie verbunden, dass das, was geglaubt wird, auch die letzte Wahrheit ist. Es ist von diesem Standpunkt gerade Kennzeichen einer aufgeklärten jüdisch-christlichen Religion, dass sie sich in derartiger Offenheit den Anfragen von Un- und Andersgläubigen stellt und sie damit ernst nimmt. Davon bleibt die unbeirrbare Gewißheit unberührt, die von einem theologischen Standpunkt aus in den Blick gerät. Nur einen derartigen Toleranzbegriff kann man im religionsphilosophischen Kontext sinnvoll anbringen und nicht einen Toleranzbegriff, wie ihn Quante suggeriert. Demnach müsse nach der pragmatistischen Religionsphilosophie einer religiösen Person zugemutet werden, dass sie gleichzeitig die unterschiedlichsten religiösen und areligiösen Überzeugungen mit existenzieller Entschiedenheit akzeptiert (so verstehe ich Quante, M., 2002, S. 355-357). Das wäre aber Schizophrenie und nicht Pragmatismus.

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The Philosopher's Garden: Scepticism within (and from without) Wittgenstein

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I am sitting with a philosopher in the garden;
he says again and again "I know that that's a tree",
pointing to a tree that is near us.
Someone else arrives and hears this, and I tell him:
"This fellow isn't insane. We are only doing philosophy."
On Certainty § 467

If philosophy is disease, the sceptic must surely have a terminal case. There seems to be no relief for one so ill. However, in *On Certainty* Wittgenstein offers us a new way to examine the problem, a new treatment, as it were. As Wittgenstein's methodology is so uniquely multi-faceted, so too is his attack on the sceptic, and as it has been said before, Wittgenstein has a marvelous capacity, not for solving problems, but dissolving them. We should not therefore be surprised that the die-hard sceptic remains unconvinced by Wittgenstein's attack; it is not the sort of maneuver the sceptic is used to. Indeed, at times it does not seem like an attack at all. The sceptic must beware however; behind Wittgenstein's oblique style there lies an assault of such subtlety and caliber that only a master of could deliver it. But really, for all his mastery, for all his philosophical poignancy, how effective is Wittgenstein's criticism? It is certainly of a very different order than those we have seen in the past, but can Wittgenstein ultimately avoid the charge of "question begging" that have plagued so many before him? The question is somewhat complicated in the case of Wittgenstein, not only by his philosophical position, but also by his methodology.

To be sure there is justification,
but justification comes to an end.
On Certainty § 192

While there are many points upon which Wittgenstein definitely appears to attack the sceptic, he simultaneously denies those very foundations the "anti-sceptical" position typically relies on. As Wittgenstein famously remarks in § 166 of *On Certainty*, "The difficulty is to realize the groundlessness of our believing." No matter what the nature of our reasoning may be, those reasons must eventually give out. It appears as though Wittgenstein's writings suggest a kind of cultural relativism that ultimately abandons universal objective knowledge to those realms inaccessible to humanity. But while this may seem to play right into the sceptic's hands, he does so in a manner that somewhat deflates the traditional sceptic, though ultimately, I shall argue, cannot abolish scepticism entirely. Wittgenstein's philosophy may very well create a new, somewhat more sophisticated sceptic, as it were.

I said I would combat the other man, - but wouldn't I give him *reasons*? Certainly; but how far do they go? And the end of reasons comes *persuasion*.
(Think what happens when missionaries convert natives.)
On Certainty § 612

Wittgenstein has a strange way of affecting his readers; he influences us without our full knowledge of how it is that we have been swayed. But given the intimacy of Wittgenstein's philosophy with his methodology, his form with his content, I am led to question how much of Wittgenstein's own influence is, in fact, persuasion. Indeed, at times it seems as though Wittgenstein does not so much *convince* us, but *convert* us. Though all in all, this "persuasive" aspect of Wittgenstein's philosophy should not surprise us. If he truly wishes to abandon a universal ground or logic from which we may depart, as he does indeed seem to, what other option does the man have? He cannot *argue* his position, he can truly only present it. As he writes in § 109 of the *Philosophical Investigation*s, "We must do away with *explanation*, and description alone must take its place." It just so happens that he does this in a very persuasive manner. Think here of all those metaphors (like the beetle in the box for example), and the snappy slogans ("Back to the rough ground!"), Surely this is no accident; these devices play an integral role, not only in Wittgenstein's method, but in his philosophy as well.

Not every false belief of this sort is a mistake.
On Certainty § 72

It is impossible to discuss Wittgenstein's philosophy apart from his methodology; each is like a mirror of the other. As I have discussed my concerns regarding the persuasive aspect of Wittgenstein's method, so must I in turn discuss the philosophic thread that reflects this tendency of his. The philosophic theme I would like to pursue here is the theme of mistake and madness. This distinction is fundamental to his critique of the sceptic: it is through this distinction that Wittgenstein demonstrates what he calls the "intellectual distance" that can exist between people, and, I believe, the cultural relativism that makes it impossible for us to genuinely argue against those with radically different positions from our own. The point being, if it can be shown that the sceptic is not as "intellectually distant" as they may at first appear, we have a field upon which to "combat" them. If the sceptic can be shown to participate in our "form of life", as it were, there must be some sense of rationality in which we share, and thus a basis on which to judge right from wrong, a mistake from madness. So, while Wittgenstein does, as I say, deflate the traditional sceptic, he does not explicitly deny the possibility of a sceptical "form of life", however intellectually distant these people might be.

If my friend were to one day imagine that he had been living for a long time past in such and such a place, etc. etc., I should not call this a *mistake*, but rather a mental disturbance, perhaps a transient one.
On Certainly § 71

The theme of madness and mistake is one that runs throughout *On Certainty*. How is it, Wittgenstein asks, do we distinguish between these "mental disturbances" and a simple, ordinary mistake? And where does the sceptic fall upon this scale? Most reasonable people (including a few philosophers,) believe the sceptic is certainly misguided, but is the sceptic mistaken, or mad? To answer this question we must investigate how it is that such a strange and destructive error should arise in the first place. The source of the problem, according to Wittgenstein, like the source of all philosophical problems, is, not surprisingly, the misuse of language. In deviating from our ordinary natural language games, as the sceptic does, our words are placed in an unnatural context, they take on a meaning unfamiliar to us, and thus the problems that arise from such an abuse are truly not the problems we perceive

them to be. In the context of *On Certainty*, this point is clearly raised in response to G. E. Moore's blatant epistemic assertions.

> This situation is thus not the same for a proposition like "At a distance from the sun there is a planet" and "Here is a hand" (namely my own hand). The second can't be called a hypothesis.
> But there isn't a sharp boundary between them.
> *On Certainty* § 52

Moore does not *know* these things he claims to (like "Here is one hand, and here is another."), argues Wittgenstein, for knowledge is not an appropriate characterization of those paradigmatic understandings that are actually the *foundations* of knowledge. As he states in § 205, "If the true is what is grounded, then the ground is not *true*, nor yet false." The paradigms are not proper objects of knowledge themselves, for knowledge requires a number of conditions that the paradigms do not meet; knowledge must, among other things, be open to verifiability and doubt. Wittgenstein is famously of the opinion that where doubt is impossible, so too is knowledge. The language game of knowledge requires the possibility of satisfying oneself, and this is not possible in the case of Moore's paradigms. Take the statements from § 52 for example, the claim "there is a planet this distance from the sun" is an empirical proposition, obviously open to empirical investigation. "Here is a hand", however, is not. Any proof one could provide for such a claim is no more certain than the claim itself. One cannot say *how* one knows "here is a hand", for these sorts of propositions, within a system of others like it, are the conditions for empirical investigation in the first place. As Wittgenstein writes in § 515, "If my name is *not* L.W., how can I rely on what is meant by 'true' and 'false' anymore?!" We should not therefore claim that we *know* these paradigmatic propositions, claims Wittgenstein, but that they "stand fast".

> So is the *hypothesis* possible, that all the things around us don't exist? Would that not be like the hypothesis of our having miscalculated in all our calculations?
> *On Certainty* § 55

Wittgenstein makes a very subtle move here in § 55. Notice that he asks, "Is the *hypothesis* possible…?" He does not directly address the question whether the belief itself is possible, only the hypothesis. This is not irrelevant; it is exactly the position the traditional sceptic is in. The sceptic asks us to consider, isn't it *possible* that we may be a brain in a vat, or that there is an evil demon who deceives us in everything we do, etc.? The sceptic presents us here with what appears to be hypothesis, but as a genuine hypothesis these possibilities ultimately fail. They are not genuine, according to Wittgenstein, because they are not verifiable, and an hypothesis that is not verifiable is no hypothesis at all. In other words: these questions the sceptic typically raise do not satisfy the criterial requirements of an hypothesis. This is why, I believe, Wittgenstein alludes to the idea of calculation here in § 55. It is much easier to accept the notion that we cannot have been wrong in *all* our calculations, because we have so obviously created the conditions under which calculation occurs. This just is calculation. "This is how one calculates. Calculation is *this*" (§ 47); *we* are the ones who have defined it as such, so how could *we* be wrong? On the other hand, we tend to conceive of empirical propositions as somehow independent of us, and thus we feel that a mistake is more appropriate here. Most people find it much easier to doubt an empirical proposition such as "This is chair" rather than a logical proposition like "1+1=2". This does not mean that it is any more certain however.

> But nor am I *making a mistake* about twelve times twelve being a hundred and forty-four. I may say later that I was confused just now, but not that I was making a mistake.
> *On Certainty* § 304

Of course, it is one thing to say that one has no doubts, but quite another to abandon the possibility of changing one's mind later. Similarly, while it may not possible for *us* to mistake calculating 1+1, we can certainly imagine those who may calculate differently from us. Wittgenstein presents us with a case of this in § 137 of the *Remarks on the Foundations of Mathematics III*. He writes there,

> Imagine someone bewitched so that he calculated:
>
> 3 3 3 3 2
>
> ∩∩∩∩∩ i.e. 4x3+2=10
>
> | | | | | | | | | | |
>
> 1 2 3 4 5 6 7 8 9 10

Surely we would not say of this man that he was simply making a mistake, but that some madness had overcome him, "bewitched" as it were. But what if he was just one of many who calculated like this, should we call them all insane? It would seem that in this case we could call them neither, even though their view disagrees with ours. Our beliefs form a great system of mutual support, propositions such as these have a place only within that system; at a certain distance outside of that system we no longer have an adequate test for truth. How then are we to judge? This is the situation we are presented with when we consider Wittgenstein's "strange tribes".

> Giving grounds, however, justifying the evidence, comes to an end; - but the end is not certain propositions striking us as immediately true, i.e. it is not a kind of *seeing* on our part; it is our *acting*, which lies at the bottom of the language game.
> *On Certainty* § 204

Genuine comparison is only possible *within* sufficiently similar language games, but there seems to be some confusion regarding the boundaries of those language games. We should not, of course, be surprised at this given Wittgenstein's views on vagueness, however, even given this, what would then count as a test whether someone operates sufficiently within our system? There must be some manner for determining just how intellectually distant we are from another, particularly if we wish to address the sceptic, for if there were none, there could be no genuine disagreement, discussion, or debate. Certainly discussion and disagreements do occur, but how do we know when someone occupies enough of our "intellectual vicinity" that we are *genuinely* entitled to accuse them of falsehood? For this test I believe that Wittgenstein has none other than the idea of action in mind. Is not this what all the talk about Goethe and the squirrels is about? The foundations of a language game do not rest upon propositions, parts of language themselves requiring grounding, but upon an "ungrounded way of acting". In this sense, we have a common denominator against which different systems of believe may be compared. The primacy of action is fundamental to them all.

> My life shows that I know or am certain that there is a chair over there, or a door, and so on. – I tell a friend e.g.: "Take that chair over there", "Shut the door", etc, etc.
> *On Certainty* § 7

Wittgenstein is fond of characterizing our foundations as "bedrock". Our most fundamental source of action is fossilized within that bedrock, it is the ground from which or "form of life" springs. These bedrock 'beliefs' that inform our actions are so basic they cannot be genuinely expressed through language, and as such, neither can they be genuinely questioned. They can only be lived, and thus lived, they are lived with certainty. As Wittgenstein writes in § 334, "My life consists in my being content to accept many things." The sceptics thus betray themselves. Every time the sceptic sits down, eats lunch, or addresses another person, they betray their certainty that the chair exists, food nourishes, and that their friend is not truly a mindless automaton whose bodily actions are governed by an evil genius bent on deceiving them. How genuine is a doubt that *cannot* be upheld? Wittgenstein claims that such a doubt is no doubt at all. Words can lie, they can be manipulated, they can be ingenuine; actions, of the fundamental sort Wittgenstein discusses here, cannot. "Philosophy is a battle against the bewitchment of our intelligence by means of language." (*PI* § 109) Isn't that why Wittgenstein wants to replace argument with description? To disclose the abuse of words that philosophers are so fond of, Wittgenstein attempts to reveal their *use*. This is no coincidence.

But mightn't I be crazy and not doubting what I absolutely ought to doubt?
On Certainty § 223

Of course, this critique only works for the *traditional* sceptic, the philosophical sceptic, that is, the one with which we share a "form of life." Ultimately, Wittgenstein cannot deny the possibility of an unusually sceptical foreigner, or even a dramatic shift in our own "form of life". Perhaps this is the reason he himself battled with insanity for much of his life. Wittgenstein's philosophy offers us no assurance of truth or sanity. We must recognize and accept, perhaps even appreciate, this constant threat that madness presents. When we fully realize this, if this is even possible, we will have made our peace with scepticism, not as a problem to be solved, but as an imminent fact of human existence; a reality that forces us to abandon our search for the foundation and begin an explorations of ourselves and our limitations. We must not flee from our finitude; we must embrace it.

If someone asked us "but is it true?" we would say "yes" to him; and if he demands grounds we might say
"I can't give you any grounds, but if you learn more you too will think the same."
On Certainty § 206

So, in this great twenty-five hundred year struggle with scepticism, where does Wittgenstein sit? Wittgenstein occupies a strange place. On the one hand, he deflates the traditional sceptic, claiming there sceptical concerns are impossible to uphold, and thus without meaning, but on the other hand, he presents an unmistakably sceptical position himself, but one that is inevitably placed within some (albeit, foreign) system of beliefs. I'm not sure to what extent Wittgenstein ultimately begs the question directly, though certainly he presupposes many things central to his position. Though amazingly, *even this* is placed within a system of beliefs, and thus, to some extent, justified. Wittgenstein's philosophy is an attempt to convert the reader; it is an attempt to establish not an absolute foundation, but a common ground. Wittgenstein is truly a man of his time. A master of his times, he is a master of style, and a master of question begging, for he begs those questions that only readers with a common ground will allow him to beg, because we beg them as well.

Scepticism dissolved?

The Scenery of Knowledge's Language-Game in Wittgenstein's *Philosophical Investigations*

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1. Our Claims

Our purpose is to take into account Wittgenstein's analyses about knowledge in the *Philosophical Investigations*, in order to articulate them and elaborate a concept of knowledge (*Wissen*). My first claim is that this is possible. My second claim is that the complexity of this concept has not been taken into consideration and its originality has been misunderstood in the horizon of the Philosophy of Mind (Vohra, A. 1986), of Philosophy of Psychology (Schulte, J. 1993; Budd, M. 1989). My objection is that the analysis of "knowledge" presupposes the dissolution of mind and psychology. My third claim concerns the interpretation of the verb "to know" from K. Bühler's point of view as a kind of signal (*Signal*), at least in some uses, and as a symbol or an expression in some others. This connection concerning "knowledge" has not been brought out in, e.g., (Hacker, P.M.S. 1993; von Savigny, E. and Scholz, O.R. 1995).

2. Wittgenstein's Concept of Knowledge

Wittgenstein analyzes the use of the word "knowledge" (*Wissen*). Then this word becomes a language-game. That is to say, it is applied correctly under certain circumstances. All these constitute the scenery (*Schauplatz*) of our language-game. Wittgenstein emphasizes the network of actions (*Handlungen*), which constitute the scenes (*Szenen*) corresponding to every move of the language-game. Consequently, we do not find out a mere state of consciousness, mental process, or experience. Accordingly, the concept of psychology is not sufficient for this approach. We need to know in what family of language-games we learn its use. Wittgenstein also advises: "you should consider the occasion and purpose of these phrases" (PI p. 221).

Wittgenstein considers that "to know" has a grammar. This one is closely related to that of "can", "is able to", and also to that of "to understand". It is a matter of a mastery of a technique (PI § 150). In this sense, to know is a condition of possibility of the denomination: "One has already to know (or to be able to) something in order to be capable of asking a thing's name" (PI § 30).

Wittgenstein identifies, as one possibility at least, knowledge and concept when he says: "Isn't my knowledge, my concept of a game, completely expressed in the explanations that I could give" (PI § 75).

For Wittgenstein, "to know" is primarily a queer phenomenon. He accepts to consider phenomena as "mental processes" (*seelische Vorgänge*), but these take roots in the ground of actions and human body.

With regard to doubt, " 'I know' may mean 'I do not doubt' " (PI p.221). Doubt is not logically excluded from knowledge. It belongs to the horizon of knowledge: "but does not mean that the words 'I doubt' are *senseless*" (PI *ibid*).

When does doubt begin?: "if we cut out human behaviour, which is the expression of sensation, it looks as if I might *legitimately* begin to doubt afresh" (PI § 288).

Even knowledge can become belief: "One says 'I know' where one can also say 'I believe' or 'I suspect'" (PI p.221), where we can become convinced (*sich überzeugen*).

Paradoxically, knowledge cannot be applied to the others: "I can know what someone else is thinking, not what I am thinking. It is correct to say 'I know what you are thinking', and wrong to say 'I know what I am thinking'" (PI p.222). Neither can be applied to sensations: "I cannot be said to learn of them. I *have* them." (PI § 246).

For Wittgenstein, there is a particular use of "to know" when we say: "Now I know" , "Now I can do it" and so on (PI § 151). Concerning an example of series of numbers, it "is something that makes its appearance in a moment" (PI *ibid*). We have an assumption (*Annahme*) that is confirmed. And finally, there is the human body as part of the scenery: "he watches A writing his numbers down with a certain feeling of tension" (PI § 151), or he has perhaps the sensation "of a light quick intake startled" (PI *ibid*). This represents a certain pragmatics of human body, which exceeds the domain of psyche. Besides, human behavior is able to put off-center the psyche: "We can also imagine the case where nothing at all occurred in B's mind (*Geist*) except that he suddenly said 'Now I know how to go on'" (PI § 179).

3. Taxonomy of knowledge and Bühler's viewpoint

Wittgenstein distinguishes three cases of use of "to know" from the point of view of saying:

1) "how many feet high Mont Blanc is" (PI § 78). It is surprising that one can know something and not be able to say it. It is the matter of descriptions: "what we call '*descriptions*' are instruments for particular uses" (PI § 291). For instance, after looking how my finger was moving, knowing it is "being able to describe it" (PI p.185). This approach concerns *Darstellungsfunktion* proposed by K. Bühler, that is to say, it is a question of symbols.

2) "how the word 'game' is used". It is disputable that we can say it. It concerns a know-how.

3) "how a clarinet sounds" (PI § 78). There is nothing to say: "Certainly not of one like the third" (PI *ibid*). This case is isomorphic to the following use: "I know the direction from which the sound comes; for instance, I look in that direction" (PI § 185). Concerning sensation, "if we construe the grammar of the expression (*Ausdruck*) of sensation on the model of 'object and designation as irrelevant" (PI § 293). That is to say, we have here Bühler's distinction between expression (*Ausdruck*) and symbol (*Symbol*). Let us consider the following case: "if someone whispers 'It'll go off now', (…), still his words do not describe a feeling; although they and their tone may be a manifestation (*Äusserung*) of his feeling" (PU § 582). In conclusion, we have two Bühler's functions at work: *Darstellungsfunktion* and *Ausdrucksfunktion*.

In these three cases, the *Appellfunktion* of Bühler, performed by signals is not applied. Nevertheless, it is applied in the *Philosophical Investigations*. When Wittgen-

stein analyzes the words "I know how to go on", he concludes that there is no description of a mental state, but a signal (*Signal*): "One might rather call them a 'signal', and we judge whether it was rightly employed by what he goes on to do"(PI § 180). Afterwards, Wittgenstein interprets the words "Now I now!" (PU p.218) also as a signal: "What is the signal for?" (PI *ibid*).*

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Zur Externen Kritik der Bayesianischen Epistemologie. Ein Vorschlag zur Differenzierung des Subjektivismusvorwurfs

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1. Von der Subjektivismus- zur Psychologismuskritik

Seit einigen Jahrzehnten nehmen die bayesianischen Ansätze eine zentrale Stellung in der epistemologischen Diskussion ein. Mit Hilfe der Wahrscheinlichkeitstheorie wird z.B. das Problem der Induktion teilweise auf dasjenige der Bestätigung zurückgeführt, indem davon ausgegangen wird, dass eine bestimmte Hypothese durch das vorhandene Belegmaterial (über das diese Hypothese in analytischer und synthetischer Hinsicht hinausgeht) genau dann in signifikanter Weise gestützt und bestätigt wird, wenn der Beleg die Wahrscheinlichkeit der Hypothese erhöht.

In bayesianischen Ansätzen wird jedoch nicht unmittelbar auf eine (im carnapschen Sinn "logische") metastufliche Wahrscheinlichkeit von Hypothesen Bezug genommen. Im Mittelpunkt stehen statt dessen die Propositionen[1], die durch diese Hypothesen und Beobachtungssätze ausgedrückt werden. Demgemäß wird Wahrscheinlichkeit als das präzise Ausmaß von partiellen propositionalen Einstellungen aufgefasst, als die variierende Intensität also, mit der die betreffenden Propositionen von unterschiedlichen Erkenntnissubjekten (bzw. rationalen Wissenschaftlern) geglaubt und als wahr angenommen werden. Es ist demzufolge eine bayesianische Grundannahme, dass die Glaubensgrade rationaler Personen sich nach den mathematischen Prinzipien der Wahrscheinlichkeitstheorie richten müssen.

Die älteste, bis heute noch weithin akzeptierte Begründung dieser bayesianischen Grundannahme geht auf Ramsey zurück, ihre klassische Form erhielt sie aber unabhängig davon durch de Finetti (1937). In dieser Begründung werden die wetttheoretischen Bedingungen festgesetzt, denen die Glaubensgrade eines jeden rationalen Subjekts gehorchen müssen. Aus der Anwendung des Bayes'schen Entscheidungsprinzips (wonach ein vernünftiges Subjekt jeweils die Handlung mit dem maximalem Erwartungswert an subjektivem Nutzen wählt) auf Wettsituationen ergibt sich, dass der Grad des Glaubens einer Person an eine bestimmte Proposition mit dem maximalen Wettquotienten gleichgesetzt werden kann, zu dem die Person auf diese Proposition zu wetten bereit ist.[2] Als entscheidendes Rationalitätskriterium wird gefordert, dass keine Systeme von Wetten abgeschlossen werden dürfen, die unabhängig vom Ausgang der einzelnen Wetten (in jedem Fall also) letztendlich zu einem Verlust für die betreffende Person führen. Auf diese sog. Kohärenzforderung lassen sich die drei Grundaxiome der Wahrscheinlichkeitsrechnung (die Kolmogoroff-Axiome) zurückführen, so dass für jede Person, die in diesem wetttheoretischen Sinn als rational angesehen werden kann, gelten muss, dass ihr persönliches System von Glaubensgraden die wahrscheinlichkeitstheoretischen Prinzipien erfüllt.[3]

Gemäß der bayesianischen Grundannahme und ihrer wetttheoretischen Begründung gilt demnach, dass die Glaubensgrade rationaler Personen u. a. das Bayes'sche Theorem erfüllen. Hieraus ergibt sich die in Bezug auf das Problem der Induktion zentrale These, dass sich der Grad des Glaubens rationaler Wissenschaftler an den Inhalt einer bestimmten Hypothese durch die Entdeckung eines Belegs, der durch diese Hypothese impliziert wird, erhöht. Durch diese personalistische Ausdeutung des Bayes'schen Theorems wird das methodologische Problem der Bestätigung auf das doxastische Phänomen der Zunahme des Glaubensgrads von rationalen Erkenntnissubjekten zurückgeführt.

Dieser personalistische Aspekt der bayesianischen Bestätigungsanalyse - der auf der Anwendung des intentionalistischen Begriffs des Glaubensgrads beruht - hat immer wieder Anlass zu heftiger Kritik am Bayesianismus gegeben. Um die antisubjektivistische Stoßrichtung dieser Kritik nachvollziehen zu können, muss man sich vergegenwärtigen, dass die bayesianische Berechnung der Nachwahrscheinlichkeit einer gegebenen Hypothese (d. h. des Ausmaßes der Glaubwürdigkeit des Gehalts dieser Hypothese) bei bestimmtem vorhandenem Belegmaterial von den Ausgangswahrscheinlichkeiten der Hypothese abhängig ist. Diese Ausgangswahrscheinlichkeiten fungieren jedoch als weitgehend unbestimmte Faktoren, die nur durch die wahrscheinlichkeitstheoretischen Regeln eingeschränkt sind. Es lässt sich daher sagen, dass die Ausgangswahrscheinlichkeiten den subjektiven Grad unserer anfänglichen Überzeugungen hinsichtlich der betreffenden Hypothese messen (wenigstens insoweit vorausgesetzt werden kann, dass unsere Überzeugungen gewissen Minimalbedingungen der Rationalität genügen). Der metrische Ausgangswert einer gegebenen Hypothese (bzw. das Ausmaß der Glaubwürdigkeit der durch sie ausgedrückten Proposition) wird daher nach bayesianischer Auffassung unter minimalen wetttheoretischen Rationalitätsannahmen auf der bloßen Grundlage komparativer Wahrscheinlichkeitsbeurteilungen einzelner vernünftiger Subjekte (d. h. kompetenter, maßgebender Wissenschaftler) ermittelt. Dadurch werden persönliche partielle Überzeugungen als zwar operational und quantitativ rekonstruierbare, aber letztlich doch irreduzible subjektive Elemente in die Analyse des Bestätigungsbegriffs einbezogen. Darüber hinaus erweist sich am subjektiven Grad des anfänglichen

[1] In Frauchiger 1999 plädiere ich für die Ersetzung neorussellscher Propositionen (Satzgehalte) durch Satzextensionen, d. h. durch mengentheoretisch irreduzible Sachverhalte, deren Identität definierbar ist. - Im vorliegenden Zusammenhang aber muss ich die Unterscheidung zwischen intensionalen Propositionen und extensionalen Sachverhalten dahingestellt sein lassen.

[2] An dieser Stelle zeigt sich deutlich, dass der Begriff des objektstuflichen partiellen Glaubens an Propositionen nicht mit dem metastuflichen Begriff der Hypothesenwahrscheinlichkeit zu vereinbaren ist. Nach de Finetti lassen sich sämtliche "echten" Wahrscheinlichkeiten als Glaubensgrade auffassen, die operational als maximale Wettquotienten bestimmbar sind. Im Unterschied zu Hintikka bestreitet de Finetti aber, dass sich Hypothesenwahrscheinlichkeit wetttheoretisch präzisieren und rechtfertigen lässt. Stegmüller verteidigt de Finettis Position mit dem Argument, dass auf Gesetzeshypothesen nicht gewettet werden könne, da wegen ihrer prinzipiellen Unverifizierbarkeit der Ausgang einer solchen Wette (mit positivem Einsatz) nicht eindeutig feststellbar wäre. Vgl. dazu Stegmüller 1971, 57f.

[3] Das Maß des rationalen Glaubensgrads kann also (wie das übliche abstrakte Wahrscheinlichkeitsmaß) als eine reellwertige Funktion eingeführt werden, die für bestimmte Teilmengen eines gegebenen Möglichkeitsraums (für die Elemente eines Ereigniskörpers über dem betreffenden Möglichkeitsraum) definiert wird. Der späte Carnap hat Ende der 1960er Jahre de Finettis Begründung der bayesianischen Grundannahme übernommen und die subjektivistisch-personalistische Zurückführung der Kolmogoroff-Axiome auf die wetttheoretische Kohärenzforderung in formaler Hinsicht ergänzt. Denn er weist nach, dass sich die mathematische Interpretation der Wahrscheinlichkeitstheorie mit der tarskischen Semantik und Modelltheorie verbinden lässt (so dass z. B. der umstrittene Propositionsbegriff modelltheoretisch ausgedeutet werden kann). Vgl. dazu Stegmüller 1971, 51-53.

Fürwahrhaltens einer gegebenen Hypothese, dass mit dem Begriff des rationalen Glaubensgrads zusätzlich zum semantischen Wahrheitsbegriff ein weiterer, auf einzelne kompetente Wissenschaftler (statt auf eine bestimmte Theoriesprache) relativierter subjektiver Wahrheitsbegriff eingeführt wird. Es lässt sich also mit Recht sagen, dass durch den Bayesianismus subjektivistische oder vielmehr individualpsychologische Gesichtspunkte in die Epistemologie eingeführt werden.

Die irreduzible Subjektivität der Intensität von Ausgangsüberzeugungen in Bezug auf den Gehalt wissenschaftlicher Hypothesen führt jedoch erst dann zu einer psychologistischen Naturalisierung[4] der Epistemologie, wenn die bayesianische Bestätigungstheorie zusätzlich zu ihrer ontologischen Verpflichtung auf subjektive Glaubensgrade einen deskriptiven Anspruch trägt. - Genau dies ist jedoch der Fall, denn in der bayesianischen Bestätigungsanalyse geht es bei der empirischen Zuschreibung, Messung und Berechnung der präzisen Glaubwürdigkeit des Gehalts einer Hypothese vor und nach dem Eintreffen eines (mit gewisser Intensität) erwarteten Belegs v. a. um die Beschreibung des Ausmaßes der Verfestigung der Ausgangsüberzeugungen maßgeblicher, vernünftiger Wissenschaftler bei der Entdeckung bestimmter Belege und mithin auch um die Beschreibung des Ausmaßes der Bestätigung von Hypothesen durch die eintreffenden Belege. Derartige Beschreibungen werden von manchen Bayesianern zwar als Idealisierungen eingeschätzt, aber dennoch für grundsätzlich richtig und sachlich angemessen gehalten.[5] - Da im Bayesianismus also unter Einbeziehung irreduzibler subjektiver Faktoren die Verfestigung und Bestätigung wissenschaftlicher Überzeugungen beschrieben und erklärt wird, muss die bayesianische Epistemologie als eine Art psychologistische Erklärungstheorie auf allgemeinster Stufe gewertet werden. Sie verwischt die Grenzen zwischen Erkenntnistheorie und Psychologie und führt damit zu einer Naturalisierung der Erkenntnis- und Wissenschaftstheorie.

Gegen den Subjektivismusvorwurf und die darüber hinausgehende Psychologismuskritik sind verschiedene Gegenargumente vonseiten der Bayesianer zu erwarten; diese Gegenargumente lassen sich voraussichtlich in zwei Gruppen einteilen: Erstens wird bestritten, dass der Bayesianismus subjektivistisch ausgedeutet werden muss, und zweitens wird argumentiert, dass der im Bayesianismus vorausgesetzte Personalismus so weit abgemildert werden kann, dass jede Gefahr von Subjektivismus oder Psychologismus in der Epistemologie gebannt ist. Im folgenden Abschnitt sollen einige dieser Gegenargumente kurz besprochen und entkräftet werden.

2. Objektiver, subjektiver oder psychologistischer Bayesianismus?

Der latente Subjektivismus oder Psychologismus, der der bayesianischen Epistemologie grundsätzlich droht und der auf der Anwendung des numerischen Begriffs des Glaubensgrads beruht, ist schon früh von einigen Bayesianern erkannt und einzudämmen versucht worden. In den späten 1940er und frühen 50er Jahren versucht beispielsweise Carnap (1950/62) in einer bemerkenswerten Erweiterung des Bayesianismus den metastuflichen Begriff der induktiven Hypothesenwahrscheinlichkeit zu entpsychologisieren, indem er den psychologischen Begriff des bedingten rationalen Glaubensgrads (in Bezug auf Hypothesen) durch den “objektiven”, metalogisch-semantischen Begriff der partiellen, abgeschwächten logischen Folgerung ersetzt.[6] Gegen Carnaps Umdeutung des metastuflichen Wahrscheinlichkeitsbegriffs sind allerdings mehrere entscheidende Einwände vorgebracht worden, deren wichtigster wohl der folgende ist: Durch seinen Begriff der partiellen logischen Folgerung schließt Carnap das Bestehen jeglicher logischen Unabhängigkeit zwischen Sachverhalten aus. Logische Unabhängigkeit wird bei ihm durch logische Unverträglichkeit ersetzt, die selbst ein Spezialfall der logischen Folge ist. Damit schafft Carnap eine quasi-spinozistische Welt, in der es nur noch logische Abhängigkeiten zwischen Sachverhalten gibt.[7]

Aber auch heute gibt es weiterhin Bayesianer, die den ausgeprägten Subjektivismus scheuen, der über die weitgehend uneingeschränkten Ausgangswahrscheinlichkeiten von Hypothesen (bzw. über den irreduzibel subjektiven Grad unserer anfänglichen Überzeugungen in Bezug auf Hypothesen) Eingang findet in die bayesianische Bestätigungsanalyse. Sie schlagen deshalb zusätzliche Prinzipien vor, denen das System von Glaubensgraden eines jeden rationalen Subjekts angeblich gehorcht, und die in den angebrachten Fällen die Ausgangswahrscheinlichkeiten von Hypothesen eindeutig bestimmen. Ein häufig vorgeschlagenes, vermeintlich objektives Rationalitätskriterium, das eine einheitliche Zuschreibung von anfänglichen Glaubensgraden bei vernünftigen Subjekten garantieren soll, betrifft die Einfachheit von Gesetzeshypothesen. - Dieser Vorschlag kann jedoch nicht überzeugen. Denn selbst wenn man von der Mehrdeutigkeit des Einfachheitsbegriffs absieht, lässt sich nicht plausibel begründen, warum ein vernünftiges Subjekt jeweils die einfachere Hypothese für die anfänglich wahrscheinlichere halten sollte.[8]

Eine weitere, naheliegende bayesianische Strategie für die Abblockung oder Abmilderung des erhobenen Subjektivismusvorwurfs lässt sich anhand des folgenden naheliegenden Gegenarguments verdeutlichen: Ein Bayesianer könnte dem Subjektivismusvorwurf entgegenhalten, dass es bei der Ermittlung des Bestätigungsgrads einer Hypothese (bzw. bei der Zuschreibung und Berechnung des Ausmaßes, mit dem die von ihr ausgedrückte Proposition vor und nach der Entdeckung eines erwarteten Belegs geglaubt wird) gar nicht auf den Grad des tatsächlichen Glaubens einzelner, beliebiger rationaler Personen ankomme; vielmehr gehe es dabei um die Intensität, mit der, vor der Entdeckung des jeweiligen Belegs, eine ideale, für eine ganze Fachgemeinschaft repräsentative fiktive Figur an den Gehalt der betreffenden Hypothese glauben würde.

Um diesen Vorschlag besser analysieren zu können, identifizieren wir das Konstrukt des abstrakten bayesianischen Individuums mit der sozialen Gruppe, die es repräsentieren soll. Wenn wir soziale Gruppen sodann als eine

[4] Ich verstehe unter Psychologismus eine Spielart des Naturalismus, und zwar einen weichen, d. h. methodologisch nichtszientistischen und ontologisch nichtreduktionistischen Naturalismus.

[5] Horwich (1992, 42f) z. B. hält die numerische Repräsentation von partiellem Glauben zwar für einen heuristischen Kunstgriff, aber die Annahme, dass es Grade des Glaubens gibt, erachtet er für wahr. Er vertritt, dass die Vorstellung von rationalen Glaubensgraden, die der Wahrscheinlichkeitsrechnung gehorchen, zwar eine Idealisierung sei, aber er betont auch, dass die betreffende bayesianische Grundannahme viele zentrale epistemologische Probleme erhelle. Nach Horwichs Ansicht ermöglicht es der Bayesianismus, wichtige epistemologische Fragen klar und deutlich darzustellen und befriedigend zu klären, ohne dass dadurch wesentlichen Einzelheiten außer Acht gelassen oder durch unnötig realistische Details verdunkelt würden.

[6] Durch diesen Kunstgriff bemüht sich Carnap (u. a.), keine relevanten subjektiven Eigentümlichkeiten psychologischer Subjekte innerhalb der induktiven Logik zuzulassen. Allerdings wird dieser antipsychologistische logische “Elitismus” dadurch relativiert, dass Carnap schließlich gezwungen ist, das Ideal einer einzigen adäquaten induktiven Methode aufzugeben und ein unendliches Kontinuum von solchen zuzulassen.

[7] Dieser Einwand findet sich in Stegmüller 1971, 44-50.

[8] Für ähnliche Einwände siehe Howson 2000, 112 und Horwich 1992, 43.

Art höherer Individuen auffassen, in denen mehrere konkrete Subjekte als Mitglieder enthalten sind, so wird aus der mysteriösen Überzeugung des abstrakten (fiktiven) bayesianischen Erkenntnissubjekts schlicht die altvertraute Gruppenmeinung. - Solche Gruppenmeinungen werden jedoch anders zugeschrieben als subjektive Überzeugungen. Abstrahierend von den idiosynkratischen Reaktionen der einzelnen Mitglieder kann z. B. über die Errechnung des Mittelwerts der verschiedenen empirisch erhobenen individuellen Wahrscheinlichkeitsurteile eine abstrakte Bestätigungsfunktion bestimmt werden. Der Durchschnittswert, den diese überindividuelle Wahrscheinlichkeitsfunktion für Hypothesen (und Belege) liefert, kann sodann als Glaubensgrad eines abstrakten bayesianischen Individuums ausgezeichnet werden (bzw. als Glaubensgrad der Fachgemeinschaft, die es verkörpert). In der Sozialpsychologie wird natürlich eine weit differenziertere und zweifellos empirisch fruchtbarere Gruppentheorie entwickelt. So wird etwa der Umstand berücksichtigt, dass Einzelpersonen in ihrem privaten Umkreis oft anders denken, also teilweise andere Überzeugungen haben, als während der statusbewussten Ausübung ihrer Funktion als Mitglieder einer Berufsgruppe (wie z. B. einer wissenschaftlichen Fachgemeinschaft). Es ist also überhaupt nur unter Anwendung zusätzlicher gruppenpsychologischer Kriterien möglich, die für die Gruppenmeinung relevanten Verteilungen der subjektiven Überzeugungen zu eruieren und die gesuchten Mittelwerte zu errechnen. Darüber hinaus wird die in einer Gruppe vorherrschende Meinung ohnehin kaum je als Ergebnis einer Durschnittstendenz angesehen, sondern meist als der sich abzeichnende Schnittpunkt einer generellen Annäherung von subjektiven Meinungen: Individuelle Einstellungen, wie z. B. der Glauben an gewisse Sachverhalte mit einer bestimmten Intensität, entstammen oft nicht eigenen Erfahrungen, sondern sind von anderen, vorbildlichen Mitgliedern der Gruppe übernommen oder beeinflusst. Zusätzlich führt die Konsultation derselben Fachmedien zur weiteren Vereinheitlichung von Meinungen. Der Annäherungsprozess führt in wissenschaftlichen Fachgemeinschaften dazu, dass die Akzeptanz bestimmter Hypothesen derart gefestigt wird, dass sie kaum mehr ernsthaft durch neue eigene oder kollektive Erfahrungen überprüft werden. Auf solche Weisen entsteht ein sogenanntes Gruppendenken (“group think”), das auch von außen kaum mehr veränderbar ist.

Aber abgesehen davon, wie genau - technisch gesehen - die Gruppenmeinung skaliert wird, ob als Mittelwert oder als Grenzwert konvergierender subjektiver Überzeugungen, der Begriff des sozialen Glaubensgrads muss jedenfalls mit Hilfe des subjektiven Glaubensgrads bestimmt werden. Ähnlich wie Gruppen über ihre Mitglieder und deren Verhältnisse zueinander identifiziert werden, werden Gruppenmeinungen über die Analyse der Überzeugungen ihrer Mitglieder ermittelt. - Im Hinblick auf die externe, antipsychologistische Kritik am Bayesianismus macht es demnach keinen wesentlichen Unterschied, ob man sich in einer Bestätigungstheorie auf die persönlichkeitspsychologisch ergründeten subjektiven Überzeugungsgrade einzelner Mitglieder konzentriert, oder ob man darüber hinaus eine sozialpsychologisch erhobene, den vorherrschenden “Geist” der Fachgemeinschaft erfassende, präzise Gruppenmeinung ermittelt. Denn die Glaubensgrade des reifizierten “Gruppen-Ichs” einer gegebenen Fachgemeinschaft sind genauso sehr Gegenstand einer deskriptiv-psychologistischen Epistemologie wie die Glaubensgrade einzelner konkreter Subjekte. - Entscheidend ist letztlich bloß, dass in der naturalisierten bayesianischen Epistemologie die empirisch-psychologische Zuschreibung und Ermittlung der in einer Fachgemeinschaft tatsächlich bestehenden (subjektiven oder überindividuellen) Überzeugungen bei der Klärung des Grades der Bestätigung von wissenschaftlichen Hypothesen im Vordergrund steht.[9] *

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[9] Dabei ist es unerheblich, dass nur jene tatsächlichen Systeme von Glaubensgraden bei der Analyse der Hypothesenbestätigung berücksichtigt werden können, die die oben erwähnten Minimalbedingungen der Rationalität erfüllen.

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Religious Belief *versus* Scientific Knowledge in Undergraduate Students of Psychology

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1. Introduction

Several works by Wittgenstein present excellent testimony of the conflicts which build faith and, at the same time an actual model that one must not avoid addressing such conflicts from the standpoint of personal life experience despite the precision that one must develop in regards to the philosophical and scientific language. Furthermore, as stated by Abreu-e-Silva (in press), "Philosophy is seen by Wittgenstein, in its objectivity as an activity of language criticism, and in its subjectivity, as self-analysis activity ".

This perspective of approaching knowledge construction also as an outcome of *work on oneself* inspired the reflections introduced in this study. The reflections were based on the results of a research undertaken with Psychology students from the Catholic University of Brasilia – UCB, Brazil. We consider the epistemological oppositions between science and religion as an issue overcame yet once the similarities and differences between them have been sufficiently studied by logics, as illustrated in the writings of Weingartner who analyses the scientific and the religious beliefs in various levels in a detailed and formal way (Weingartner, 1994) and shows that regardless of what is commonly believed, it is possible to apply logics to religious problems (Weingartner, 1998). Abreu e Silva (in press), inspired by Wittgenstein's statement: "I am not a religious man, but I can not help seeing everything from a religious perspective" proposes that Clinical Psychology would be more effective in its specifically therapeutic action if it considered daily human phenomena through a religious point of view, since a pure innocuous scientific perspective has been ineffective to relieve the most fundamental human suffering.

This work, therefore, proposes that during their educational process, psychology students should be asked to conduct important reflections about their own subjectivity through the activity of language criticism and extract from them a rich experience for their future professional career. In order to accomplish that we need to avoid theoretical reductionism, and assume that it is not a task for Psychology to dispute the ontological reality of God or a transcendent dimension. It is its task to consider the studied subjects, clients´ convictions and to respect and understand the acquired meaning of these convictions in the context of their lives.

2. Religion and Psychology: The Supposed Rivalry

On one hand, contemporary introductory psychology textbooks systematically avoid the subject of religious phenomena in the human experience, or in what is conventionally called "Psychology of Religion". On the other hand, history shows that Psychology, since its origins in Philosophy until its contemporary format, was constructed by men in their efforts to understand such phenomena. If it is possible that a number of the academic psychologists would have had difficulties speaking about the subject, it is also true that the great figures in history of Psychology, such as Brentano, Wundt, William James, Freud & Jung, did not avoid it. In fact they pursued it on their own account, intensively reflecting about the question in the context of their own inner life.

Clinical psychology, which is fundamentally based on the concept of "help", is the chosen field of most of the psychology students since the beginning of their studies. Its foundation is religious, however, under a rationalist shelter, moreover in a secularised culture and in its urge to seek the scientific status, the clinical psychologist aims to show that his work is not only independent from religious beliefs but also, in a certain way, it is its declared rival. The price of this intent is an artificial established dichotomy, frequently at the expense of the lived experience (*Erlebnisse*). A paradox is then created: the very avoidance of the fundamental object of clinic – the *life-world*.

The mentioned paradox creates a great discomfort, as expressed by the Psychology students. It is experienced in several ways, for example: in a tendency to live their religious orientation or the cultivation of their own beliefs as an heresy in the academic context. By being considered heretic, the theme tends to be avoided resulting in a black spot between belief and knowledge. In this way, when religious themes are dealt within an interview in an authentic and moving relationship, the students´ initial reactions are cathartic (because the topic until then has been repressed), or tense (expressed by long silences, distrust looks, nervous smiles and half smiles, jokes as if to gain time to approach the theme in the perspective of the *lived experience* .

Under the name of a supposed asepsis between the belief and the knowledge universes, the *belief* of that rational variables of science negatively affect the religious position and the *belief* that irrational variables of religion negatively affect science are frequently cultivated. This sterile attempt establishes a false dichotomy, as if science and religion were disputing over the same prize, which is the correct description and explanation for the psychological phenomena. Frequently students statements denounce their teachers´ assumptions within the academic context: the prize belongs to science. In this way, it is cultivated in that context the position that religious belief is pejorative, minor and innocuous; and therefore must be uprooted due to its posed risk of contaminating the intellectual education by undermining the true scientific knowledge development.

In the context of a supposed rivalry between psychological knowledge and beliefs of religious nature, the subjective, affective and cognitive impact of the studied contents during the courses is expressed in the students´ *life-world* in different ways: personal conflict between belief and knowledge; inter-personal conflict with family, teachers and peers; insecurity or doubt regarding the distinguishing criteria between psychopathology and religious experience; preoccupation regarding ethical issues in the future relationship with religious or atheist patients.

A great deal of the intra- and inter-personal conflicts are anchored in the opposition between the contents of belief as posed by the scientific discourse and its contents as posed within the religious sphere.

If both were placed in different, although complementary planes, such conflicts would no longer exist. However, few students are able to grasp this difference and understand the conceptual confusion when the scientific speech (which follows a criteria of the natural forces with logical and empirical verification) tries to cover the theological plane (whose criteria is a transcendent revelation), and vice versa.

Furthermore the uncertainty to distinguish psychopathology from religious experience is anchored on a dichotomy established by the psychiatric speech (or "vocabulary") which created an opposition between the normal and the pathological. Again, this is much more an opposition between the content of a belief in its supposed scientific origin (which also prescribes values and life styles it recommends, for example medication or other alternatives of psychiatric treatment) and the content of a religious belief (which can recommend prayers for example). In this direction, if the content of a religious belief is based on the idea of evil, sin or the good and evil fruit, the criteria in Psychiatry has varied throughout history depending on their approach emphasis, e.g. organic, empirical, psychodynamic or cultural.

Frequently the student's concerns regarding to ethics is based on the demand of impartiality in the practice of clinical psychology. This supposed impartiality is supported on the scientific neutrality myth, which seeks to refrain from any beliefs when conducting the therapeutic work. In this sense, some psychology students come to admit that they are gradually adopting psychology as their religion. This is based on a belief that psychology will make it possible for them to accomplish the *ideal of helpfullness*, sustained by the mystical attitude of dedication to the other without falling in the abusive power of a guardianship, a supposed characteristic of a religious authority. This expectation also hides an ethical dilemma: the repudiation of the religious theme would not also be an abuse of guardianship power, in this case, legitimated by the supposedly scientific authority assumed by Psychology?

Fortunately, the ethical concerns are not based only on the model offered by the scientific neutrality myth. Many students seem touched and receptive to the opportunity of a space to discuss and elaborate their own religious beliefs, which can enable them to deal better with their future patients´ beliefs. In this case, a better personal and professional development is demanded in order to deal with the theme and shelter *the lived experience* in its diversified expressions, including the religious one. In other words, it is required a psychology that would be established upon technical knowledge only, but also, recognised in its expressive action. And this implies in accepting the need of a double dynamism: firstly to qualify the patient's *felt experience*, that must not be replaced by a discourse which disregards the reality of human suffering which usually comes along with it; and secondly, to recognize that science and knowledge are built in and through language, not allowing the naive acceptance of a pure a naturalist observation cut apart from the evidence that every observer, in their case that the psychologist is a human being and therefore a bearer for language, desires, and after all, beliefs.

3. Conclusions

In spite of semantic borders given by language, the interview method allowed student's speech to appear as a general symptom of scientific production. In this way, we conclude for a demand of a greater integration between the scientific contents studied in psychology and the theological dimension, in order to create conditions for the psychology students to deepen their epistemological reflection, and simultaneously to create alternatives to review their meanings of religious or scientific beliefs.

Due to the fact that education in psychology gives priorities to theories that are constructed under a rationalist shelter and simultaneously aims at developing the student's capacity of critical and ethical review of the dogmatic assumptions, a defensive ideology is created. This leads many students to an exercise of uprooting the religious belief in their own subjective experience. This exercise is lived with suffering and anguish. It remains then the questions: the destruction of determined dogmas is only possible by their replacement at expense of the development and maintenance of other dogmas as it seems to be felt by some students? Or, would it be possible a more integrative approach for the sake of the psychology student's and their future client's mental health?

Considering that religious position is not affected significantly by the rational variables of science (once both can shelter different kinds of beliefs), but by the psychological ones (and many of them unconscious), here we defend a psychology education that is able to contemplate *the religious* as an object for reflection. Until the belief phenomena are appropriately considered, a conceptual confusion will remain and the scientific attitude will be mistaken for ideology, defensive or not. Once it is supported by the paradigm of control, such ideology limits itself to border *the speakable* (the proper scientific domain) it aims to replace the paradigm of *surrender*, the domain of the ineffable, unspeakeable where the limits of that control are suspended.

From the ethical standpoint, this replacement is unbearable, the *lived experience* denounces that what is actually meaningful for the search and fulfilment of the existential meaning resides beyond the technical and elaborated knowledge. If the psychology students do not realise that, they will continue reproducing the supposed rivalry between scientific and religious belief. Among its other serious implications, this conceptual confusion will be more effective at enabling the psychologist to fight in the work market (competing with the religious leaders for example) than to prepare the psychologists for a more respectful clinical practice concerning the more fundamental human questions.

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God and Hinge Proposition

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The issues in traditional Western philosophy of religion revolve around theism and its counterview. At the heart of theism is a belief in God, a personal being and creator of but organically different from the universe. And this God is believed to be knowable through revelation, or reason, or both. A counterview of theism would be the position that denies that there is such a being as God, and that the universe came to be by means other than what is narrated by theism. In defense, theists had made a tradition trying to justify their belief in God over and against the doubts and denials of the counterview.

Wittgensteinians, and maybe Wittgenstein himself, had wanted to dismiss the issues that had long concerned mainstream philosophy of religion. These issues are deemed underpinned by a fundamental mistake and pursuing them necessarily means demanding for proof far beyond the stage where it makes sense to ask for them (Phillips 1970, 124). In effect, if not in intention, God is treated as if it is a hypothesis that needs to be tested (Phillips 1970, 72). But if one takes a hard look at religion, God is other than what theology and philosophy had conceived it to be. God is neither a knowable being nor a factual entity that can be referred to in propositions; rather, God forms the core of a world picture that underwrites religious practices (Wittgenstein 1972, 63; Wittgenstein 1980, 50, 82; Phillips 1970, 2, 17-19, 71, 85, 86; Phillips 1992, 136-138). So if Wittgensteinians would have their way, belief in God would be, to use Wittgenstein's own term, a *hinge proposition*. It is by its very nature *immune to doubt* and *beneath the propriety of justification*. Thus, efforts to justify, or undermine, belief in God is superfluous, confused and self-undermining. Their argument we phrase thus:

> Hinge propositions are immune to doubt and beneath justification. Belief in God is a hinge proposition. Therefore belief in God is immune to doubt and beneath justification.

Hinge propositions are so basic to any discourse that no coherent doubt can be raised over them and no justification at all can be called for. Wittgenstein had made some remarks about hinge propositions and taking cue from a secondary Wittgensteinian text (Glock 1996, 78-9) we sum up the remarks thus:

> [1] They are certain for all reasonable persons.
>
> [2] Misgivings about them are an aberration rather than an error.
>
> [3] They are inherited fiduciary artifacts accepted fortuitously rather than by virtue of their demonstrated truth.
>
> [4] Their sense is less clear than empirical propositions.
>
> [5] They transcend both doubt and justifiability.

We may take these points together as the defining features of hinge propositions. A proposition having *all* these features is *incontrovertibly and ineluctably* a hinge proposition; but the "hingeness" of one lacking some of these features may not be ineluctable, and certainly not incontrovertible.

The statement 'I know I have two hands' is a hinge proposition, a kind of proposition "affirmed without special testing; …which have a peculiar logical role in the system of our empirical propositions" (Wittgenstein 1969, § 136). Any misgivings about it, such as raising a query "But how do you (or I) know that you (or I) have two hands?" would therefore be misplaced. Says Wittgenstein:

> One says "I know" when one is ready to give compelling grounds. "I know" relates to a possibility of demonstrating the truth. Whether someone knows something can come to light, assuming that he is convinced of it.
>
> But if what he gives is of such a kind that the grounds he can give are no surer than his assertions, then he cannot say that he knows what he believes. (Wittgenstein 1969, § 243)

One can say that he knows if and only if at some prior point in time he had not been aware of that fact which he had since then known. But, barring extraordinary circumstances such as a serious neurological problem, it is unimaginable that a normal person at some point in his self-conscious life would for one moment cease to be aware that he has two hands such that he needs to be reoriented to the fact that it was so. To him, his "having two hands is, in normal circumstances, as certain as anything that (he) could produce in evidence for it" (Wittgenstein 1969, § 250). None, in other words, can be more fundamentally certain than the belief that one has two hands as to be capable of obtaining something else to lend credence to it. To him the cognizance of having two hands is not one of knowing but of having, in Wittgenstein's words, an *irreversible belief*. Any propriety of justifying this belief is from the start redundant and unfeasible. No point in justifying the statement 'I know I have two hands' can ever be shown, and no room for doubt about it can ever be made.

Going by Wittgenstein, the fact about a belief being "shared by every reasonable person" is a mark of the irreversibility of that belief (Wittgenstein 1969, § 252, § 254). If a person in his right mind would not in any circumstance cast doubt on and demand justification for a belief, then it must be to him irreversible. And if every person in his right mind shares this sense of irreversibility of the said belief then it means that that irreversible belief is ineluctable and incontrovertible. Only a person with an unhinged mind would bother cast doubt on an irreversible belief such as his having two hands. Anyone with two hands who in all earnestness has misgivings about his having two hands and thinks of ways and means to try to reassure himself that he really has two hands would be deemed mentally aberrant. Wittgenstein would "take him to be a half-wit" (Wittgenstein 1969, § 257). The society at large would call him "demented," "mentally disturbed," or "insane" – unless he is a comedian, or is in the business of philosophizing (Wittgenstein 1969, § 467).

Theists believe in a God whom none could be greater than, one who is God whether or not there exists any other being who would believe that God is God. This God ought to be aseitic. And if the aseitic God had caused to exist the universe that each and every person takes for granted, and if it would so absurd t think that the universe could have come into existence without God, then belief in God *ought* to be an ineluctable and incontrovertible hinge proposition. But it seems that theism is not one school of

thought that offers a model of God such that belief in God would have to be an ineluctable and incontrovertible hinge proposition – something attested to by the need to demonstrate the existence of God.

Wittgensteinians may be right in insisting that belief in God ought to be a hinge proposition. But it seems they do so for the wrong reason. The Wittgensteinian God does not seem qualified to figure on that hinge proposition. Such a God is merely embedded in a world picture (frame of reference or form of life). God does not have a being of its own. It is not clear what this world picture might be but it is unlikely that this could be thought to have a being of its own akin to platonic essence. If humans who happen to conduct their lives according to the world picture with God embedded in it all perish or even just experience mass epiphany and switch world pictures, God will simply fade into oblivion for without the living there will be no form of life and without sentient beings there will be no world picture. The Wittgensteinian God is merely contingent on those who believe it. And it seems to show: belief in God, even the Wittgensteinian God, does not entirely fit Wittgenstein's description of a hinge proposition.

It is true that belief in God possesses hinge proposition features [3] and [4] mentioned above. But if this belief at issue were really a hinge proposition then it expresses would have been so ineluctable and incontrovertible that it cannot be helped but be shared by all reasonable persons. Yet it looks like it differs in some significant ways from other recognized hinge propositions. The belief that the universe exists is necessarily ineluctable and incontrovertible for all reasonable persons. No person of sound mind would entertain for a moment the thought that the universe might not exist – not that he refuses to do so but that it is simply a given state that he just cannot bring himself to do so without feeling silly or ironic or both. Thus the belief in the existence of the universe is ineluctably and incontrovertibly a hinge proposition. But the classic Christian belief in the existence of God is in fact something not shared by all serious and reasonable persons. Anyone clearly can have the option not to postulate the existence of God and still make a coherent discourse. Many a famous person held in high esteem for their rational achievements have taken that option.

It is methodologically necessary for *every person* to postulate the existence of the universe to make any sane, coherent and rationally sustainable discourse; a person can never have the option to be exempted from having this postulate and still remain sane and make any coherent discourse. Any misgivings about the existence of the universe would undermine virtually every reasonable discourse, including the very discourse that makes even such misgivings coherently conceivable. To doubt the existence of the universe would lead to all sorts of odd consequences such as doubting one's self's very own existence for in fact one is an organic part of the universe. Sans any one's self there cannot be any doubter. Sans a doubter there cannot be any state of doubt. In effect, to doubt the existence of the universe is to doubt whether there could be a state of doubt. A person who would doubt the existence of a state of doubt and would demand proof for it to assure him that indeed there is such a state is either a comedian or is insane. On the other hand, postulating God is, by all appearance, not a methodological necessity. If the existence of God were to be placed in doubt, only the theistic discourse would be undermined. One can eschew belief in the God of the theists without forfeiting one's wit. Indeed, one can deny the existence of God and make a discourse out of it without necessarily risking ludicrousness and incoherence. To say in earnestness 'This universe could not have been created by God because no such being could be proven to exist' does not entail obvious incoherence and would not evoke odd notions or make impressions of weirdness as it would to say 'It shall one day be proven that the universe does not exist'.

A believer in God may have only fortuitously imbibed rather than deliberately chosen his belief in God, yet is it conceivable that he may deliberately forsake it. This would not likely be enough for him to lose his rational equilibrium; he still may remain equally capable of making reasonable judgments, if not more so. Not everyone thinks that belief in God is a prerequisite to sane discourse. While, other than being a philosophical joke, doubting the existence of the universe may be an index of an aberration, misgivings about belief in God are not at all deemed similarly. Unbelievers who deny belief in God dismiss the believers as "superstitious." In turn, believers adjudge those who deny their beliefs as "erring" or even "fools." Those who are skeptical are said to be "in the dark." There is no mention of insanity or being a halfwit or a moron in the exchange of uncomplimentary labels for linguistic conventions that Wittgenstein holds almost sacred as not to be tampered with does not warrant labeling believers as such.

Justification of hinge propositions is uncalled for because, to start with, it cannot be meaningfully doubted. Casting doubt on it will lead to incoherence and absurdity. The doubt will creep over to many beliefs that sane, serious and reasonable persons take to be certain. The same doubt will cast doubt on beliefs that form the basis upon which one doubts. One would end up with a doubting game that entails doubting one's own doubt. This is a game that only lunatics play, perhaps along with comedians out to elicit a good laugh, or philosophers going out of their way to probe the limits of reason. So doubting religious belief, being supposedly a hinge proposition, is misplaced. Still this begs some questions, such as why religious language is not shared or cannot be easily shared by all reasonable persons as hinge propositions are supposed to be, or why doubting religious belief is not deemed an index of an aberration as doubting a hinge proposition is. These questions cast doubt on the Wittgensteinian position that belief in God, or at least the God presented by the theists, is really that immune to doubt as the belief that one has two hands or that the universe exist. One therefore cannot be easily faulted for not treating belief in God as an ineluctable and incontrovertible hinge proposition. Justifying belief in God is probably still a sensible thing to do for the believer.

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Seeing, Thinking, Acting Different: Wittgenstein's *Language Games* and Bateson's *News of Difference* in Therapeutic Narratives

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"To see keeping a conversation going as a sufficient aim in philosophy, to see wisdom as consisting in the ability to sustain a conversation, is to see human beings as generators of new descriptions rather than beings one hopes to be able to describe accurately".

R.Rorty, Philosophy and the Mirror of Nature

1. Introduction

Ever since R.Rorty published *The Linguistic Turn* in 1967, the study of narrative has acquired new consideration. For postmodern philosopher J-F. Lyotard the very advances of science are seen "as anything more than a narrative and not one that can override all others" (Lyotard, 1984, 16).

In the last two decades the attention of scholars has focused upon the ability of narrative of modelling our concepts of *legitimacy* and *reality* (Bruner, 2002, 124). The dimension of narrative and that of narrating about oneself is not only what constitutes our peculiar way of being humans, but the privilege means by which we make order in our lives and experiences and this also emphasizes the therapeutic side of narration.

Many philosophers have considered the dimension of multiple perspectives, but some have also underlined a kind of philosophical practical narrative through a relatively new professional figure, that of the *Philosophische Bereiter* set *zur Mitte der philosophischen Praxis*, which Aschenbach sees as "a free dialogue, that does not prescribe any philosopheme, does not give any philosophical knowledge whatsoever; instead it sets thinking in movement in the sense of 'philosophizing' together with someone" (Marquard, 1989, pp.1307).

Aim of this paper is to reflect on what can be called the intermediate territory between psychology and philosophy. The former, before being considered as a discipline, is seen primarily as the *logos* for the *psych*è, which is at the same time a *thèrapeia* for the *psych*è, or, in other words, how *to take care of one's soul by means of words* (Hillman, 1984, 46).

It is a reflection in the field of philosophy where this is seen strictly linked to human existence assuming that "living a human life *is* a philosophical endeavour. Every thought we have, every decision we make, and every act we perform is based upon philosophical assumptions" (Lakoff & Johnson, 1999, 9).

In this sense a *therapeutic relationship* is one which *does not* necessarily or exclusively occur between a "therapist" and his/her "client"; it is dialogical, in the sense of being a narrative capable of transforming reality, of creating new situations. It is a human relationship made up of concrete interactions between people that take part in it, with an open emphatic disposition, and where, as Wittgenstein says, *words are actions* (Wittgenstein 1953, 546; 1977, 90) bound to produce changes.

In this sense *thèrapeia* is a being together in a place, in a relationship, giving to others and to oneself time to speak, reflect, understand, ask and tell, time to make sense out of experiences; open to others, willing to listen to them with empathy and where, as with the ancient Greeks, words may function as a *Pharmakon*.

Here it will be sought to explore new narrative-philosophical metaphors on the basis of Peirce's statement that: "We *believe* to a proposition on which basis we are willing to act" (Peirce, 1992, 112).

This is very similar to what Gorgias says in his *Encomium of Helen* (12): "A speech that has persuaded a mind, makes the mind that has persuaded to believe in the words and to consent in deeds".

2. Searching for mythologies

The ancient Greek believed every person's identity could be expressed by the events, i.e. *the story* or *stories,* the person had taken part in during the course of the life. When Ulysses at the court of the king of the Pheaces sits in disguise and listens to the blind bard who sings a story about "Deeds of Heroes, a story whose fame goes up to the sky" (Odyssey, VIII, vv. 72-74), for the first time he listens to someone telling about the War of Troy, about himself and his actions, and, as Homer says, in that precise time Ulysses cries. Hannah Arendt says at this regard: "Never before had he cried when the events he now listens to had really happened. Only listening to the tale he gets the full gist of them" (Arendt, 1987, 221).

Always for the ancient Greeks as the gods themselves did take part in these human stories, they were equal to *myths*, and a person's biography became his/her *mythology* (Hillman, 1984, p. 106).

Later the same Greeks identified the concept of *introspection* or *self-knowledge* with the activity of putting in order or reviewing carefully these *stories* (Hillman, 1984, p. 107).

Myths have accompanied the history of mankind from its dawn, "Myth" is a tale, novel, a speech, whose "function is to express in a discursive way an ontological simultaneousness, it simulates a genesis" (Birrel, 1993, 34).

Mythology is a "modality of *signification*", but also an "system of communication, a form and a meaning", a "kind of discourse" (Barthes, 1972, 114, 127).

The concept of *myth* and that of *mythology* in hinted to in some works of Wittgenstein in two fields strictly related with the present paper: with reference to Freudian psychoanalysis and to his own philosophical activity.

In his *Lectures* Wittgenstein refers to Freud's psychoanalysis as "a powerful mythology" and moreover, as a "way of behaving" and "a way of thinking" (Wittgenstein, 1966, 52). He says in fact: " The general result of analysis is that it provides explanations which many people are inclined to accept … it make easier for them follow certain routes: certain ways of behaving and of thinking becomes natural. They have abandoned a way of thinking and have adopted a new one" (Wittgenstein, 1966, 43). Wittgenstein was keen on reading Freud's works because he believed Freud was "a psychologist who had something to say"

(Monk, 1990, 357) and who "Having read the ancient myth of Oedipus", had not given a scientific explanation of the same, "but simply had proposed a new myth" (Wittgestein, 1966, 51), a new language or a new narrative.

Wittgenstein considered himself "a disciple of Freud" (Monk, 1990, 357) but opposed Freud's claim that his method was *scientific*. "Freud is constantly claiming to be scientific, but what he gives is only a *speculation*, something prior even to the formation of an hypothesis" (Wittgenstein, 1966, 44).

For how could Freud be scientific if the same discipline he was engaged into was not a scientific one? "Psychology is often called the science of mental phenomena … this is a bit suspect as if we said: it stands to physics as the science of physical phenomena … By the science of mental phenomena we mean … the science which deals with thinking, judging, wishing, wondering. When psychologists draw their correlations they do so by observing individuals … So, where is the science of mental phenomena?" (Monk, 1990, 496).

But when Freud's method was considered as a *myth* it has the peculiar "attraction which mythological explanation have, …which say this is all a repetition of something which has happened before" (Wittgenstein, 1966, 43), and through this mythological explanation many people get benefits and advantages because "certain things seem much clearer and easier for them" (Wittgenstein, 1966, 43).

In one of his *Bemerkungen* W. adds that "in a way having oneself psychoanalyzed is like eating from the tree of knowledge. Knowledge acquired set us new ethical problems but contributes nothing to their solution" (Wittgenstein, 1977, 71). Probably psychoanalysis does not help to solve problems, but in the same way as his own philosophical method it may help to "propose or invent new ways to look " (Monk, 1990, 496) at the problems.

In his *Lectures* he writes: "If you are led by psychoanalysis to say that you really thought so and so, or really your motive was so and so, this is not a matter of discovery, but of *persuasion*" (Wittgenstein, 1966, 27) and also: "One thinks of certain results of psychoanalysis as a discovery … as apart from something persuaded by a psychoanalyst" (Wittgenstein, 1966, 27). A bit further he adds "What I do is also persuasion", because "very often I draw your attention on certain differences" (Wittgenstein, 1966, 28). Also he, as Freud, made use of myths, because "my symbolic description was really a mythological description" (Wittgenstein, 1953, 221).

It is in psychoanalysis, as new language, line of thinking, way of seeing the positive side of it, non in his presupposed scientific nature, that Wittgenstein finds common roots, because as far as human beings are concerned, he thought that one had to choose the correct myths, capable of giving "a *perspicuous* representation" of the "processes". "One of the principal origin of our incomprehension" he says "is the fact that we *do not see clearly* the use of our words. Our grammar lacks *perspicuity*. A perspicuous representation make comprehension possible, which means that we see *connections*" (Wittgenstein, 1953, 122).

So Freud's explanations of dreams is not valuable as a science that explains their causes, but rather as the correct language to speak about them. With this language Wittgenstein identified because "is all made up of excellent similes" but also "what I invent are *new similes*" (Monk, 1990, 357) which, as with those of Freud's bring someone to elaborate "a line of thinking" or to modify the existing one, since: "much of what we do is to change our line of thinking, much of what I do is to change the line of thinking, much of what I do is to persuade others to change their line of thinking. Much of what we do is a matter of changing line of thinking" (Wittgenstein, 1966, 30).

We have assumed so far that Wittgenstein's way of philosophizing and psychoanalysis "required analogous talents" to persuade they both have to make use of the same instruments by which a conversation becomes persuasion as a narrative (a convincing explanation or a good story) and for its use of good or correct rethoric means. Wittgenstein says that his aim in philosophy was to "to give the morphology of the use of one expression. To show uses you had never dreamt before" (Monk, 1990, 496). This he does after having introduced the reader with the notion of language-game "the whole (of which) consisting of language and the actions into which it is woven" (Wittgenstein, 1953, 7). But he also says that a language-game is "part of a *frame* on whose basis our language operates" (Wittgenstein, 1953, 240). The concept of *frame* was extensively used by G. Bateson since 1954 or better, the action of *reframing* existing language games behaviours, or beliefs in the clients and their families lies at the heart of the systemic therapeutic method or of that of various brief therapies. But framing or reframing presupposes in the therapist linguistic-rethorical skills similar to those already mentioned. The concept of frame and that of language-game are similar, so we can presuppose that the persuasive or reframing activity, simply means as Wittgenstein notes abandoning old games to adopt new ones "But how can the new game made the old one seem obsolete? We now see something different and cannot continue to play ingenuously as before" (Wittgenstein, 1956, 132). To "see" means to "perceive", "But" says Bateson, "Perception operates only upon *difference*. All receipt of information is necessarily the receipt of news of difference" (Bateson, 1979, 29).

This "something different" is what Bateson calls *news of difference* "It takes at least two something to produce a difference. To produce news of difference, i.e. *information*, there must be two entities (real or imagined) such that the difference between them can be immanent in their mutual relationship" (Bateson, 1979, 68).

In classical therapeutic conversation there is always a structure which presupposes the notion of *power* and *control* beside a conditioning "value laden" which starts from the very definitions of the roles indicate by the terms "therapist" "patient", "client". But we have started by saying that the meaning by which to understand the term "therapy" was that of a *logos* for the *psychè*, how to take care of the *psychè* by means of words, or through a conversational praxis apt to produce changes, where the emphasis is on *language*, people and their problems are seen as problems in *language* whose aim is to let emerge those *news of difference* as the flow of conversation goes on or as the *language games* of people involved become clear. The language games which condition our behaviour as "a 'picture' that "held us captive. And we could not get outside it, for it lay in our language" (Wittgenstein, 1953, 115).

But this 'image' can be the too much structured framed, vertical and asymmetrical of classical therapy, while in real conversations the flow is horizontal, polyphonic, unpredictable and unforeseen: a narrative which co-constructs itself in the dialogue, set thinking in movement, makes news of difference be perceived.

And this sometimes brings forth a change in the line of thinking, in the way of seeing, can teach "how to pass from a piece of disguise nonsense to something that is patent nonsense" (Wittgenstein, 1953, 464), can make changes through words.

All this, if it may be of any therapeutic value, still pertains to philosophical reflection and practice.

As, with Hillman "A successful therapy is in the end, a collaboration among narrations, a revision of the story in a more clever, more imaginative plot, which implies, however, the sense of the *mythos* in every part of it" (Hillman, 1983, 21).

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Connections and Divisions in *On Certainty*

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I

The central claim of this paper is that *On Certainty* (1969) is not to be seen as a "work" of Wittgenstein, but as an assemblage from the enormous collection of material that constitutes the *Nachlass* (cf. Stern 1996; Ackermann 1998; Hintikka 1991). To substantiate this assertion, I will critically compare the publication to its sources, namely manuscripts 172, 174, 175, 176 and 177 of the *Nachlass*. I will trace and value the decisions G.E.M. Anscombe and G.H. von Wright have made in gathering this collection. Their claim is twofold: first, Wittgenstein "marked it [*On Certainty*] off in his notebooks as a separate topic", and second "it constitutes a single sustained treatment of the topic" (Wittgenstein 1969, Preface). I will show that the first claim is incorrect: not only are Wittgenstein's "marks" ambiguous, but the editors applied their own demarcations in these notebooks as well. Their second claim is in need of amplification. Wittgenstein's concern with epistemological issues is not limited to these five manuscripts: other notebooks of the same period also contain entries that strongly relate to topics discussed in *On Certainty*. I will discuss examples from the undated notebooks MSS 169, 170 and 171, published in *Last Writings on the Philosophy of Psychology, Vol. II: The "Inner" and the "Outer"* (1992). These show that it is difficult to make strict divisions in the *Nachlass* in general, and in the late writings of the years 1949-1951 in particular. In addition, I will diverge from two editorial claims regarding the nature and dating of these three manuscripts and I propose an alternative one.

I believe that we may benefit from tracing and assessing the editorial choices in two ways. First, hitherto neglected connections between different manuscripts and themes will come to focus. Wittgenstein's mapping of epistemological concepts for example turns out to be strongly allied to his analysis of the relation between mental states and bodily behavior. Second, a search for such connections at the same time forces us to pay attention to the historical development of Wittgenstein's thoughts. Wittgenstein has written on the same topic at different periods of time, and the significance of remarks is completely different due to different contexts in which these remarks appear.

II

On Certainty derives from four different notebooks and a bundle of loose sheets. The source of the first section (§§ 1-65) is MS 172, a manuscript of 24 loose pages. The last five pages are printed as part II of *Remarks on Color* (1977). A remark on belief in miracles, originally placed between § 64 and § 65 of *On Certainty*, has not appeared in print. The whole manuscript is undated: Anscombe assumes that Wittgenstein wrote these remarks between December 1949 and March 1950.

Strikingly, Wittgenstein does not clearly separate the section "on certainty" from the section "on colors"; § 65 at page 20 in the original manuscript is followed by one other remark, and Wittgenstein hereafter immediately continues - without drawing any line – with remarks on Goethe's phenomenological analysis of colors. Moreover, at the end of the *On Certainty* section Wittgenstein draws lines between every single remark, that is, between §§ 60-66. I believe these subsequent lines indicate that Wittgenstein does not draw lines merely to mark a change of topic. Possibly the lines between §§ 60-66 signify the importance Wittgenstein attached to each of these remarks, yet it is equally probable that they have no particular purpose at all. The editors' grouping of remarks based on such lines seems therefore arbitrary. It may seem trivial to talk about lines that Wittgenstein did or did not draw. However, such observations do reveal to what extent the grouping of remarks is based on editorial decisions - and not so much on Wittgenstein's own clustering or separation of notes.

§§ 66-192 of *On Certainty* derive from a notebook of 40 pages (MS 174), a manuscript that contains only one date at page 2r, namely April 24th 1950. At page 14v Wittgenstein draws a line; with the exception of a few remarks - printed in *Culture and Value* (1980) -, the notes preceding this line are published in *Last Writings Vol. II*, and the subsequent notes are printed as the second section of *On Certainty*.

A large notebook of 79 pages (MS 175) is the source of the whole third section of *On Certainty* (§§ 193-425). This manuscript contains several dates, the first at page 33r - September 23rd 1950 - and the last - March 21st 1951 - at page 74v. The editors omitted one remark, written at March 10th.

The first cluster of remarks in MS 176 is undated and printed as Part I of *Remarks on Color*. At page 22r we find the date March 21st 1951. After this date follow remarks 426-523 of *On Certainty*. Wittgenstein draws no line between these sections. Subsequently, at page 46v, Wittgenstein does draw a line, and the eleven pages that follow are printed in LW, Vol. II. Then, at page 51v of MS 176, we find § 524 of *On Certainty*, and the notebook continues up to § 637 of the published work. The last date is April 24th 1951. Considering the amount of text it is unlikely that Wittgenstein wrote the last nine pages of MS 175 and the first 22 of MS 176 all on March 21st; it is possible that Wittgenstein wrote the first section in a completely different period. Possibly this gap in chronology motivated the editors to publish both parts in different editions, yet Wittgenstein does not segregate these two sections.

The last section of *On Certainty* (§§ 638-676) is written in a small notebook (MS 177), the first remarks of which are dated April 25th 1951. The last remarks, dated April 27th 1951, are written two days before Wittgenstein's death.

The above survey of the content of these five notebooks shows that *On Certainty* is a rather diffuse editorial compilation of notes that derive from five different manuscripts written over a period of approximately 17 months. Surely the choices of the editors are not unreasonable or illogical. However, Wittgenstein did not unmistakably mark off these sections in his notebooks. In MS 172 Wittgenstein draws several lines the purpose of which is far from clear. The presumed function of such lines as marks of demarcation is therefore doubtful. Furthermore, in manuscripts 172 and 176 the editors applied their own, alternately thematically or chronologically orientated, demarcation marks. The preface to *On Certainty* does not mention editorial decisions such as

these: Anscombe and von Wright suggest that Wittgenstein conceived of these four sections as a separate piece of work. This claim is, I believe, incorrect.

III

I will qualify the second claim regarding *On Certainty* - that it constitutes a single sustained treatment of the topic -, indirectly, by first discussing the editorial claims that are made regarding three undated manuscripts – MSS 169, 170 & 171 -, which are published in *Last Writings Vol. II*. In their preface to this edition, G.H. von Wright and H. Nyman assert that MS 169 "was probably already begun in late fall, 1948, or in the spring of 1949". They also claim that this notebook is of the nature of preliminary studies for MSS 137-138. Wittgenstein composed these two manuscripts between 2 February 1949 and 20 May 1949. The second half of 137 and the entirety of 138 are published as *Last Writings on the Philosophy of Psychology, Vol. I* (1982). The small notebooks MS 170 and MS 171 – 19 pages in all – are, according to von Wright and Nyman, chronologically probably closely connected to MS 169 and possibly written in 1949.

In my view, both claims regarding MS 169 are incorrect: I believe that MS 169 is written not sooner than the summer of 1949. This implies that MS 169 cannot be regarded as preliminary studies for MSS 137 & 138, manuscripts that Wittgenstein wrote earlier. The claim regarding MSS 170 & 171 needs qualification: in my view these manuscripts are, like MS 169, written in the summer of 1949, or shortly after.

Evidence for this position lies in the relation between a series of conversations that Wittgenstein held with Norman Malcolm in the summer of 1949, and the content of all three manuscripts. Wittgenstein set sail to America in July 1949, and he stayed with Malcolm for nearly three months. Malcolm gives an account of their conversations in his *Memoir* (1958). At the time Wittgenstein visited him, Malcolm had just written an article (Malcolm 1949) in which he criticizes G.E. Moore's ideas as formulated in "Defence of Common Sense" (1925) and "Proof of an External World" (1939). Malcolm's criticism was the main subject of discussion.

A first theme discussed by both philosophers is Moore's use of " I know" in for example his statement " I know that here is one hand, and here is another" (Moore 1959, 146). Moore is misusing language, says Malcolm. His use of " I know" is contrary to the ordinary and correct use of this expression. Wittgenstein is less forthright about the idea that Moore misuses language. Rather than declaring that it is a misuse of language to say "I know that this is a hand", Wittgenstein prefers to say that it has no clear meaning, "and that Moore himself doesn't know how he is using it" (Malcolm 1958, 89).

Notes in MS 171 concern the same topic. On Moore's use of " I know" Wittgenstein remarks: "Wenn Moore es gebraucht, so ist es, als wollte er sagen: 'Die Philosophen sagen immer, man könnte das Gefühl des Wissens nur in dem und dem Fall haben, ich aber habe es auch in diesem und diesem und diesem Fall'. Er schaut auf die Hand, gibt sich das Gefühl des Wissens und sagt nun, er habe es" (MS 171, 9-10).

In this manuscript Wittgenstein further comments upon another example that he elaborately discussed with Malcolm. It concerns the use of "I know" in an expression such as "I know that this is a tree". The case derives from a discussion between Malcolm and Moore: while sitting in the garden of Moore's house, Moore would give an example of something he knows for certain, and he "would point at a tree a few feet away, and say, with peculiar emphasis, 'I *know* that *that's* a tree'. He would then claim that he had just made an assertion that was perfectly meaningful (as well as true)" (Malcolm 1976, 173). Wittgenstein writes: "Es ist wahr, daß [Moore] weiß, daß dies ein Baum ist, dies zeigt sich in seinem ganzen Benehmen. Daraus folgt nicht, daß er beim Philosophieren die Worte "Ich weiß [...| etc.]" nicht mißversteht" (MS 171, 12). Wittgenstein subscribes to Malcolm's idea that Moore's peculiar emphasis upon 'I know that that's a tree' will not refute a skeptical philosopher who denies that we can ever know with certainty the truth of an empirical proposition like "This is a tree" or "The house is on fire". Moore, says Wittgenstein, wants to exhibit knowing for certain to himself, i.e. he wants to produce in himself the feeling of knowledge, which is to counter the skeptic's claim that we can never have absolute certain knowledge. However, says Wittgenstein, this "feeling of knowing" is irrelevant, since we are not dealing with a psychological but a logical issue. And this means that we have to show the septic "that there is a point at which there is neither any 'making more certain' nor any 'turning out to be false'" (Malcolm 1958, 91). Note that Wittgenstein draws several lines in this manuscript. The editors have chosen not to interpret them as lines of demarcation this time.

At the end of MS 169 Wittgenstein expresses the absurdity of Moore's expression "I know that this is a tree" as follows: "'I know that this is the earth' – saying which I stamp my foot on the ground" (Wittgenstein 1992, 46). The irony is obvious. This section of the manuscript contains several remarks on the use of "I know". As Malcolm recalls, according to Wittgenstein there is an ordinary use of "I know" when there is not any making sure. For example, a blind man might ask "Are you sure that it is a tree?" A sighted person could reply "I know it is a tree". This, says Wittgenstein, would be a case of certainty "in the highest degree" (Malcolm 1958, 89-90): I should be willing to count nothing as evidence that there is not a tree there.

The same point is expressed in MS 169. If someone reports a well-known fact to us, e.g. that that is the Schneeberg, we may say "I know that it is the Schneeberg", meaning that it is not subject to any doubt at all" (Wittgenstein 1992, 45). This is an example of the use of "I know" "in which that expression really functions 'im sprachlichen verkehr'" (Malcolm 1958, 90). Yet Moore, says Wittgenstein, does not give such examples: "Moore's sentence was a practical one left indeterminate" (Wittgenstein 1992, 44).

Next to Moore's use of the expression "I know", Malcolm and Wittgenstein talk about the meaning of Moorean truisms such as "There exists at present a living human body, which is my body"; "The earth existed for a long time before my birth"; "My body has never been far from the surface of the earth"; "I am a human being" (Moore 1959, 33-34). Wittgenstein finds it difficult to think of a usage for "I know that the earth has existed for many years", and remarks that if we cannot think of a use for the sentence, "then we do not understand it at all" (Malcolm 1958, 90). MS 170 contains the earliest entries that are related to Moore's truism on the existence of the earth. If someone would ask us whether the earth really had existed before our birth, our response, says Wittgenstein, will be "of course it had". A doubt here "ist unmöglich" (MS 170, 5r). He adds that we would be slightly annoyed and timid, since we would be conscious of the fact that "wir einerseits gar nicht im Stande sind Gründe dafür anzugeben, weil es

scheinbar zu viele dafür gibt, und anderseits, daß ein Zweifel unmöglich ist, und man dem Fragenden gar nicht durch eine besondere Belehrung antworten kann sondern indem man ihm nach und nach ein Bild unserer Welt beibringt" (MS 170, 5). Again, Wittgenstein draws a line in this manuscript that the editors ignore.

IV

The similarities between the content of the three undated notebooks MSS 169, 179 & 171 and Malcolm's *Memoir*, lend plausibility to the view that Wittgenstein wrote MSS 170 & 171, and at least the latter part of MS 169, during or shortly after his stay in America. This means that their dating should be adjusted: in contrast to editorial suggestions, these manuscripts are not written at the end of 1948 or at the beginning of 1949, but in the summer of 1949 or shortly after. Consequently, MS 169 cannot be regarded as preliminary studies for MSS 137-138.

There is additional evidence for this last proposal (cf. Pichler 1994, 138-139). The beginning of MS 169 has the character of a summary: Wittgenstein omits the greater part of a remark and replaces it with a line. The complete remark comes from MS 137, MS 138, MS 144 or TS 234 – sometimes a remark is found in two or three of these items. Wittgenstein apparently extracted remarks from these four manuscripts for MS 169. Consequently, the view that MS 169 is preliminary to MSS 137-138 loses its plausibility. It is commonly held that Wittgenstein prepared TS 234 - printed as Part II of the *Investigations* - in June or July 1949, before he went to America, and that MS 144, the source for this typescript, is composed earlier that same year. It is more than likely, then, that MS 169 was written later than MS 144 or TS 234.

In his *Nachlass* studies, M. Nedo surmises that Wittgenstein wrote and dictated MS 169, MS 144 and TS 234 in the fall of 1949 (Nedo 1993, 46). There is too many evidence to the contrary: in a letter to Malcolm of 18 February 1949 Wittgenstein writes that he intends to "dictate the stuff that I have been writing since last autumn" (Malcolm 1958, 81). This intention is repeated in a letter written at 4 June. Anscombe recalls that Wittgenstein dictated TS 234 at the end of June or beginning of July 1949, while Wittgenstein stayed at von Wright's house in Cambridge (von Wright 1992, 185-186). Monk expresses the same view (Monk 1990, 542-544). Surprisingly, there are reasons to assume that Wittgenstein did not bring TS 234 with him when traveling to America. In an earlier letter to Malcolm, Wittgenstein expresses his intention to send Malcolm a copy of his work. This Wittgenstein did not do, yet, as Malcolm recalls, Wittgenstein had with him a copy of the writings he referred to in his letter, material that is "incorporated in Part II of the *Investigations*" (Malcolm 1958, 81). It is likely that Wittgenstein brought a copy of MS 144: according to Rush Rhees there existed a second copy of MS 144, in addition to the top copy. This second copy has been lost in the meantime (von Wright 1992, 182). Possibly Wittgenstein did not discuss TS 234 with Malcolm, but rather MS 144. This may seem a bit odd considering the fact that Wittgenstein had already shifted and rearranged this material. However, it must remain an assumption that it was a copy of this manuscript that Wittgenstein had with him.

Of what importance are the previous observations for *On Certainty*? The examples in MSS 169, 170 & 171 show, I believe, that Wittgenstein's concern with epistemological concepts is not limited to MSS 172, 174, 175, 176 and 177: other manuscripts of the same period contain notes on related issues. Moreover, there are several earlier manuscripts that contain reflections on the same topics, like MS 137, MS 138 and, most importantly, MS 119, a manuscript written in 1937, partly published as "On Cause and Effect" (1976). Clearly, the *Nachlass* contains numerous - scattered - sections on epistemology: apparently Wittgenstein felt the need to write on the topic in many different contexts, which points out that these issues may be of more importance to Wittgenstein's philosophy than is often assumed. Studying these remarks enables us to trace the development of Wittgenstein's thoughts on these matters. In turn, such an overview points to connections that exist between Wittgenstein's thoughts on epistemology and his reflections on the philosophy of psychology. This, however, is a matter of future research.

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Epistemische Rechtfertigung durch neue probabilistische Methoden

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In diesem Vortrag sollen die Humeschen Skrupel bezüglich allgemeiner Sätze nicht widerlegt werden, sondern Wahrscheinlichkeitsmethoden angeführt werden, die in geeigneten Fällen, aber keineswegs immer, zu so hohen Sicherheiten führen, dass Zweifel für alle praktischen Zwecke unmöglich und Zweifel für theoretische Zwecke zumindest selbst zweifelhaft werden.

1. Wahrscheinlichkeitsmethoden

a) Multiplikationsregel: Das zufällige Zusammentreffen von stochastisch unabhängigen A und B wird mit

(A & B) = P(A) x P(B) [1a]

berechnet, wobei das Produkt kleiner als die Faktoren ist. Bei Abhängigkeit lautet die Formel:

P(A & B) = P(A) x P(B|A) oder P(A|B) x P(B) [1b]

b) Zahlreiche Methoden basieren auf dem Prinzip der *relativen Häufigkeit*. In weiterem Sinne auch Signifikanzteste, wobei neben der Zahl der Untersuchungen die Streuung berücksichtigt wird. Sehr brauchbar ist die Variante der *Laplaceschen Methode*, die erlaubt, die Wahrscheinlichkeit für den nächsten beobachteten Fall zu eruieren: P = (N + 1) / (N + 2).

c) Hierher gehört auch die *Bayessche Methode*, mit der u.a. der Einfluss eines Befundes auf die primäre Wahrscheinlichkeit einer Hypothese berechnet wird. Hierzu wird die `Likelihood´ [P(E|H)] benötigt, die Wahrscheinlichkeit für das Zutreffen des Befundes, wenn die Hypothese wahr ist. Die (moderne) Bayessche Formel lautet:

P(H|E) = P(H) x P(E) / P(H) x PE) + P(¬H) x P(E|¬H) [2]

d) Ohne Likelihood kommt die *MPE- Methode (Muiltiplication of the probability of error)* aus, die ursprünglich für Konjunktionen von sich gegenseitig stützenden Daten entworfen wurde (Gottlob, 2000), nach neueren Untersuchungen aber auch zur Addition verschiedener Wahrscheinlichkeiten dienen kann, wobei die Nichtlinearität, bedingt durch die mit 1 oben geschlossene Skala berücksichtigt wird:

P↑(A & B) = 1 – [1 – P(A)] x [1 – P(B)] [3a]

Bei dieser Formel werden die Komplemente der Wahrscheinlichkeiten multipliziert und das Produkt von 1 abgezogen. Voraussetzung ist, dass sich A und B und C etc. aktiv, in der Regel kausal unterstützen, was durch `↑´ gekennzeichnet wird. Hierbei kann keine stochastische Unabhängigkeit vorliegen, es ist aber *semantische* Unabhängigkeit zu fordern. [Notation: Komplement von P(A) = 1 - P(A) = $P(A^c)$].

P↑(A & B & C & …& N) =

1 - $P(A^c)$ x $P(B^c)$ x $P(C^c)$ x …x $P(N^c)$ [3b].

Durch Ausmultiplizieren von [3a] erhalten wir:

P↑(A & B) = P(A) + P(B) – P(A) x P(B) [3c]

Beispiel: Die Wahrscheinlichkeit von Wärmegewittern in einer Woche im Juli beträgt .P(A) = .4 . Bei erhöhter Temperatur (Tagesdurchschnitt 2°C höher) nimmt diese Wahrscheinlichkeit um P(B) = .2 zu. Eine erhöhte Luftfeuchtigkeit unterstützt P(A) mit P(C) = .3 . Nach [3b] rechnen wir
1 – $P(A^c)$ x $P(B^c)$ x $P(C^c)$ = 1 - .6 x .8 x .7 = .664.

Im Folgenden eine graphische Darstellung der Methode.

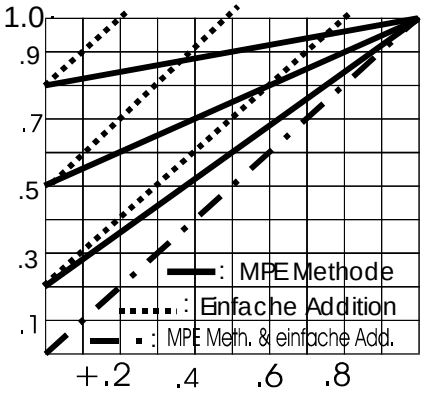

Abb. 1: Zu den Wahrscheinlichkeiten der Ordinate (.2, .5, .8) werden die Wahrscheinlichkeiten der Abszisse mit der MPE- Methode addiert. Wegen Gleichbleiben eines Faktors entstehen gerade Linien, die bei Wahrscheinlichkeit 1 zusammentreffen. Die Nichtlinearität kommt durch die unterschiedlichen Neigungen der Linien zum Ausdruck. Beispiel :Addition von P = .5 und P = .4 ergibt nach [3a und b] 1 - .5 x .6 = .7 . Einfache Additionen führen zu parallelen Geraden, die die P(A) = 1- Linie überschreiten. Nur bei Ausgangswert 0 decken sich MPE-Methode und einfache Additionen.

Es folgt eine Reihe von Anwendungen der MPE- Methode.

2. Singuläre Erkenntnisse

„Dieser Gegenstand ist ein Apfel“ Wie kann ich den Apfel mit weitgehender Sicherheit erkennen? Betrachten wir die Fehlerwahrscheinlichkeit der einzelnen Wahrnehmungen:

Optischer Eindruck. Ich habe bisher mindestens 2000 Äpfel gesehen, nur zweimal war es eine Attrappe aus Kunststoff. P(Täuschung optisches Bild) = 2 / 2000 =.001 = 10^{-3}. Die Fehlerwahrscheinlichkeit des *Tastbefundes* (Oberfläche, Gewicht, Feuchtigkeit) kann ebenfalls höchstens 10^{-3} ausmachen und der spezifische *Geruch* wird höchstens unter 10000 Fällen einmal täuschen. Wir kommen auf Grund der semantischen Unabhängigkeit auf eine Fehlerwahrscheinlichkeit von 10^{-3} x 10^{-3} x 10^{-4} = 10^{-10} und somit auf eine Wahrscheinlichkeit P > .999 999 999 9 . Diese von 1 kaum mehr zu differenzierende Wahrscheinlichkeit erklärt, warum wir niemals in einen Kieselstein gebissen haben, wenn wir einen Apfel essen wollten.

Die im Vergleich zur Bayes- Methode [{2] einfache Rechnung begünstigt unbewusste Verarbeitung.

3. Gestaltwahrnehmung

Ich erkenne auf der Straße meinen Bruder. Ähnlich wie beim Apfel erkenne ich zunächst die Spezies (Mensch) an Hand zahlreicher Merkmale. Zumindest ebenso viele Merkmale sprechen dafür, dass es mein Bruder ist: Die Größe, Haartracht- und Farbe, Kleidung etc. ermöglichen eine noch unsichere Vermutung. Manchmal genügt aber schon der typische Gang, ohne dass ich sagen könnte, was daran typisch ist, dass ich sofort meinen Bruder erkenne. Das wichtigste Unterscheidungsmerkmal ist das Gesicht, wobei nach P.M. Churchland (1995, S. 34) drei Kriterien die Hauptrolle spielen: Die Augengegend, die Nase und die Lippenform genügen, um einen Menschen unter 10 Millionen sicher zu erkennen. Hinzu kommt die Stimme und was mein Bruder bei der Begegnung sagt. Am Telefon erkenne ich meinen Bruder an der typischen Stimme mit den zahlreichen charakteristischen Obertönen, die ich aber wieder nicht näher beschreiben kann. So multiplizieren sich zahlreiche, unbewusst verarbeitete sehr geringe, Fehlerwahrscheinlichkeiten. woraus große Sicherheit entsteht.

Entscheidend ist die semantische Unabhängigkeit und das Fehlen von Gegenargumenten: Sollte ich wissen, dass mein Bruder zur Zeit verreist ist, wäre ich erheblich vorsichtiger bei meiner Erkenntnis. Auch die Gestaltwahrnehmung einer Melodie beruht auf zahlreichen, sich unterstützenden Einzelmerkmalen, die wir wieder in der Mehrzahl unbewusst verarbeiten.

4. Trompe l`oeil – Bilder

werden oft als Gegenargument für unsere Erkenntnisfähigkeit angeführt. Hier muss aber bedacht werden, dass sich Bilder dadurch grundsätzlich von der Realität unterscheiden, dass sie uns die Betrachtung von einer einzigen Seite her „aufzwingen“. Bei einem realen Kaninchen, einer Ente können wir von mehreren Seiten semantisch unterschiedliche Eindrücke aufnehmen, wir können die Räumlichkeit, den Geruch, das Verhalten der Tiere einbeziehen und werden uns daher in der Realität praktisch nie täuschen.

5. Wissenschaftliche Erkenntnis

Als W. Harvey (1628) erstmalig beobachtete, dass der Blutstrom eine Venenklappe nicht retrograd überwinden konnte, war das ein Hinweis auf eine Zirkulation im Körper von Menschen und Tieren. Woher sollte auch das ständig fließende Blut kommen, wo gelagert werden, wenn kein Kreislauf bestand. Hier addierte sich zu einem ganzen Mosaik früherer anatomischer Studien ein Naturgesetz, hier in Form eines Erhaltungssatzes. Diese Kombination ist typisch für einen Großteil wissenschaftlicher Erkenntnisse. Zahlreiche Beobachtungen ergänzen sich und setzen durch Multiplikation der Fehlerwahrscheinlichkeiten diese stark herab. Eine weitere drastische Reduzierung wird erreicht, wenn noch ein höheres Gesetz, etwa ein Naturgesetz, hinzukommt. Zusätzlich wirkt ein weiteres Prinzip: Natürliche Arten. Alle Menschen entsprechen anatomisch und physiologisch einem Grundmuster. Daher konnte Harvey seine Beobachtung von einem Probanden auf die ganze Spezies übertragen. Ein etwas weniger starres Grundmuster ist Menschen und höheren Tieren gemeinsam und weitere Grundmuster in zunehmender Lockerung allen Tieren und allen Lebewesen. So konnte die Humanmedizin von der Tiermedizin profitieren, aber auch umgekehrt.

6. Naturgesetze

verlangen universelle Gültigkeit bei Fehlen von ungeklärten Gegenbeispielen. Ungeklärte Gegenbeispiele sind Beobachtungen die trotz Einhalten relevanter Bedingungen einem Naturgesetz widersprechen. Es ist erstaunlich, dass wir über eine Anzahl solcher Gesetze verfügen. Ich führe das auf W. Whewells „Consilience of Induction“ zurück. Whewell bemerkte schon 1840, dass ihm kein Fall einer Widerlegung einer Hypothese bekannt sei, die durch eine andere Hypothese gestützt wurde. Die MPE-Methode erklärt diese Annahme mathematisch. Tatsächlich wird, was wir als Naturgesetze ansehen, durch eine gewaltige Zahl von Stützungen bestätigt.

a) *Große Beobachtungszahlen*. `Alle materiellen Gegenstände unterliegen der Schwerkraft´. Sechs Milliarden Menschen beobachten in jeder Sekunde ihres wachen Lebens eine Menge von Dingen, die ihrer Unterlage aufliegen: Gebrauchsgegenstände, Menschen, Häuser etc. Gegenbeispiele, Flugzeuge, Luftballons, Geschoße, Vogelflug etc. sind physikalisch erklärbar. Ein sechzigjähriger Mensch hat sicher schon 10 Milliarden Erfahrungen gesammelt. Umgesetzt auf 6 Milliarden Menschen und ohne Einbeziehung früherer Generationen kommen wir auf mindestens 10^{19} Einzelbeobachtungen und wir können die Fehlerwahrscheinlichkeit auf Grund der Beobachtungszahlen zunächst mit mindestens 10^{-18} ansetzen.

b) *Stützung durch semantisch verschiedene Erkenntnisse*. Eine ähnliche .Beobachtungszahl steht uns für die Trägheit materieller Gegenstände zur Verfügung. Zwar geschehen diese Beobachtungen nicht bewusst, wir würden uns aber wundern und daher sicher registrieren, wenn sich Gegenstände ohne auf sie einwirkende Kräfte spontan bewegen oder ihre Bewegung ändern würden. Wir können Whewell´s Consilience mit der MPE- Methode mathematisch erfassen und sagen, dass die Fehlerwahrscheinlichkeit mindestens $10^{-18} \times 10^{-19} = 10^{-37}$ betragen muss. Es kommen aber noch weitere Naturgesetze hinzu, etwa die Erhaltungssätze, das Uniformitätsgesetz, Kausalität, die Gesetze von Raum und Zeit und auch Mathematik und Logik und wir können für diese sich gegenseitig stützenden Gesetze in grober Größenordnung eine Fehlerwahrscheinlichkeit von $< 10^{-100}$ annehmen, eine Zahl mit hundert Neunern hinter dem Dezimalpunkt Ein klassisches Beispiel war die Vereinigung von Galileis Fallgesetzen und Keplers Gesetzen der Planetenbewegung durch Newton.

Die erwähnten Consiliences sind noch nicht alles. Die großen Naturgesetze stützen nicht nur einander, sie stützen auch, ähnlich wie der Erhaltungssatz Harveys Kreislaufgesetz stützte, eine große Zahl von wissenschaftlichen Gesetzen, und zwar gegenseitig, sodass die weniger allgemeinen Gesetze, auf Grund ihrer großen Zahl, noch erheblich zur Stützung der großen Naturgesetze beitragen. Auf diese Weise ist ein gewaltiges holistisches Netz entstanden, das von unseren momentanen Beobachtungen, von unseren Erfolgen mit technischen Geräten, von wissenschaftlichen Lehrsätzen bis zu den großen Naturgesetzen reicht und alles durchdringt. Zur weitgehenden Sicherheit einfacher wissenschaftlicher Gesetze siehe Gottlob (1985, 1992 1996). Hinzukommt die Anwendung der MPE-Methode für

„Alle : Kein Situationen“. Wenn alle an Milzbrand leidenden Menschen einen spezifischen Erreger aufweisen, aber kein gesunder Mensch (zwei ich stützende, semantisch unabhängige Kollektive), dann ist der Erreger als Ursache der Krankheit bewiesen. Etwas geringer ist die Beweiskraft von „Einige : Kein Situationen“. Die Regel, bei allen Versuchen Kontrollserien laufen zu lassen, die der Versuchsse-

rie bis auf die zu testende Einwirkung gleichen, beruht auf dieser Regel. Hier drängt sich jetzt die Frage auf:

7. Wie kommen dann aber Fehler zustande?

Bei den häufigen Fällen technischen Versagens ist die Antwort leicht: Es hat niemals ein Naturgesetz oder eine Naturkonstante, sondern immer nur der Mensch versagt. Schwieriger ist die Erklärung für Fälle, in denen ein „Naturgesetz“ revidiert werden musste. Denken wir an die Neufassung der Newtonschen und Galileischen Gesetze durch Einstein. Hier wurde durch die Ausdehnung unseres Erfahrungskreises eine begriffliche Neuformulierung notwendig. Im mesokosmischen Raum, der unserer Beobachtung vor einigen Jahrhunderten allein zugänglich war, hat sich im Wesentlichen nichts geändert, hier arbeiten wir erfolgreich mit den Newtonschen Gesetzen weiter und die Euklidische Geometrie ist voll gültig. Bei Ausdehnung unseres Erfahrungskreises auf den makrokosmischen Raum war aber ebenso eine Korrektur unserer Begriffe und Axiome (etwa der Euklidischen Geometrie) notwendig, wie bei Eindringen in den subatomaren Raum, wo sich der Begriff des Atoms als „das Unteilbare“ nicht mehr als haltbar erwies.

Wir müssen also damit rechnen, dass unser heutiges Wissen ein Sonderfall für zukünftiges Wissen sein wird. Unser Holismus unterscheidet sich aber vom Duhem-Quine’schen Holismus wesentlich:

> “If this view is right, it is misleading to speak of the empirical content of an individual statement – especially if it is a statement at all remote from the experiential periphery of the field. … Any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system. Even a statement very close to the periphery can be held true in the face of recalcitrant experience by pleading hallucination or by amending certain statements of the kind called logical laws. Conversely, by the same token, no statement is immune to revision. Revision even of the logical law of the excluded middle has been proposed as a means of simplifying quantum mechanics; and what difference is there in principle between such a shift and the shift whereby Kepler superseded Ptolemy, or Einstein Newton, or Darwin Aristotle?”

Hier müssen wir einige Bedenken anmelden. (Siehe auch Gottlob, 1998). Es ist mit wissenschaftlichem Denken unvereinbar, bei Beobachtungen nahe der Peripherie (kontingente Sachverhalte) auf Halluzinationen zu plädieren, wenn sie nicht zu unseren zentralen Vorstellungen passen. Vielmehr muss in einem solchen Falle zunächst die Beobachtung überprüft werden. Kann ein Beobachtungsfehler mit einiger Sicherheit ausgeschlossen werden, dann muss die zentrale Vorstellung hinterfragt werden. Sind danach beide noch immer unvereinbar, so müssen beide als hypothetisch eingestuft werden, bis die Ursache der Unvereinbarkeit gefunden und behoben ist.

Noch eine Frage muss uns beschäftigen: Sind die physikalischen Gesetze auf unser Universum beschränkt (P. Weingartner, 2000)? Wir wissen nicht, ob es außer unserem Universum noch weitere gibt, ob mögliche Welten nicht nur ein Denkgebilde sind, da unsere Astronomen noch an kein Ende unseres Universums gelangt sind. Interessant ist aber, dass eine Untersuchung der Lichtsignale aus einer Entfernung von Milliarden Lichtjahren die gleichen Spektren liefert, wie Signale aus nahen Galaxien.

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Knowledge, Belief, and Assertion

Frank A. Hindriks, Rotterdam

The traditional answer to the question what it is to make an assertion appeals to belief (see Grice 1989 and Searle 1969). To assert something, so the analysis goes, is to express a belief by way of uttering a sentence. Timothy Williamson claims (1) that on the traditional analysis assertion is constitutively governed by the truth rule (242):[1]

One must: assert *p* only if *p* is true.

He argues (2) that the traditional analysis is mistaken, and (3) that assertion is constitutively governed by the knowledge rule instead (243):

One must: assert *p* only if one knows *p*.

I will argue that all three of these claims are false.

Williamson and I share the view that assertion can be characterised in terms of constitutive rules. However, we disagree about what constitutive rules are. Williamson claims that constitutive rules do not specify necessary and sufficient conditions for the relevant act. I will argue that many of them do. Furthermore, the exceptions cannot be used to Williamson's advantage.[2]

1. Constitutive Rules and Regulative Rules

According to Searle, who introduced the term 'constitutive rule', the syntax of a constitutive rule is 'X counts as Y in C'; he contrasts constitutive rules to regulative rules, the syntax of which is 'Do X', or 'If Y, do X'. Neither the truth rule nor the knowledge rule has the syntax that constitutive rules have according to Searle. Reformulating the rules in such a way that they do results in manifest nonsense ('knowing *p* counts as asserting *p*' is obviously inadequate; '*p* being true counts as asserting *p*' even more so). The syntax of the truth rule and the knowledge rule is: 'One must: do X only if Y'. This resembles the structure of regulative rules more closely than that of constitutive rules. There is no mention of the phrase 'counts as'. Furthermore, it contains an imperative. Finally, no reference is made to a context or a set of conditions C.

This third point demands further attention. On Searle's view, (only) constitutive rules define what I will call 'Y terms'. Y terms stand for institutional statuses (Searle 1995). Actions that are Y are constituted by actions that are X. This suggests that Searle's choice of symbols in the second formulation of regulative rules is somewhat unfortunate. Since there are many regulative rules in which no institutional statuses occur, a better proposal would be 'If C, do X'. Similarly, one could render the syntax of Williamson's rules as 'One must: do X only if C'. This means that the Y term is missing rather than the C term, which only strengthens the suspicion that Williamson's rules are regulative rules rather than constitutive rules. Only regulative rules can do without Y terms; constitutive rules cannot. Williamson could respond by insisting that the syntax of his rules is: 'One must: do Y only if C'. The problem with this is that the formulation remains uninformative with respect to the constitution of institutional statuses – in contrast to what one can reasonably expect from a *constitutive* rule.

All this makes one wonder why Williamson believes that the rules mentioned are constitutive rules in the first place. Williamson contrasts constitutive rules to conventions, which are a type of rule for action just as regulative rules are. On his view, the difference between constitutive rules and conventions is that, whereas conventions govern the acts to which they pertain only contingently, constitutive rules govern them necessarily. He writes: '[A] rule will count as constitutive of an act only if it is essential to that act: necessarily, the rule governs every performance of the act.' (239) Even though this may be an important feature of the difference between constitutive rules and rules for action such as conventions and regulative rules, it falls short of a full characterisation of the distinction. As said earlier, it leaves us in the dark with respect to the constitution of institutional statuses.

An obvious development of the notion of a constitutive rule would be to say that such rules specify necessary and sufficient conditions for the applicability of Y terms. This is exactly what Williamson denies (240). He has good reasons for this. However, as we will see in the next section, they fall short of establishing the adequacy of the conception of constitutive rules he proposes.

2. Constitutive Rules and Necessary Conditions

An important thing to appreciate is that constitutive rules can and sometimes do specify necessary and sufficient conditions for institutional statuses. This can easily be illustrated with a constitutive rule that applies to objects rather than actions (the point generalises to many institutional actions). I will use the institutional term 'dollar bill' as an example. Dollar bills are pieces of paper of a certain size, made of a particular kind of material with a peculiar print. Counterfeit dollar bills may have all these features. What makes them counterfeit, is that they are printed without proper authorisation. Combining these features results in the following (rough) characterisation of the constitutive rule for 'dollar bill':

> A piece of paper of a certain size, made of a particular kind of material with a peculiar print, the issuing of which has been authorised by the Federal Reserve counts as a dollar bill.

My claim is that once the details of this rule have been filled in (and perhaps some minor flaws have been fixed) it specifies the conditions that are necessary and sufficient for being a dollar bill. For our purposes, it is the necessity claim that matters: no piece of paper that does not have all these features is a dollar bill.

This pure case is quite useful for diagnosing the flaws in Williamson's position. What he seems to be after is a conception of constitutive rules on which they govern actions without this entailing that the rules are obeyed. The problem with this is that it makes little sense to talk of obeying constitutive rules. Regulative rules can be obeyed or disobeyed, because they are imperatives. Constitutive rules, however, are meaning rules. They provide defini-

[1] Page references are to Williamson (2000).
[2] Due to space constraints, I have little opportunity to argue for positive points here. See my 'Knowledge and the Constitutive Rule of Assertion' for a more elaborate defence and a modification of the traditional analysis. The paper is available from the author on request (hindriks@fwb.eur.nl).

tions that tell us something about the constitution of the statuses to which the terms defined pertain. They do not tell us what to do. This means that they cannot be disobeyed. They can only be misapplied. In the pure cases in which the relevant constitutive rules specify necessary and sufficient conditions, whether or not they are misapplied depends on whether the relevant conditions have been satisfied. In impure cases things are more complicated than this, as we will see shortly. However, the basic point remains: constitutive rules cannot be disobeyed.

Williamson cites games and languages as examples that show that not all constitutive rules specify necessary conditions. He writes:

> When one breaks a rule of a game, one does not thereby cease to be playing that game. When one breaks a rule of a language, one does not thereby cease to be speaking that language; speaking English ungrammatically is speaking English. (240)

The remark about games as such is not fully convincing. Games consist of several rules, some constitutive and some regulative (Lewis 1983). Some of these rules may contain provisions for breaches of others. If one (of the regulative) rule(s) is broken, the game may go on in virtue of a rule that specifies what to do in such a situation. At least in some sense, the set of rules of a game considered as a whole is satisfied in spite of the breach of one of the rules. This explains why the game continues, one could argue.

It is easy, however, to come up with a stronger example. Consider a soccer game during which the ball hits the net of one of the goals. If no violation (of a regulative rule) was made immediately leading up to the event and the umpire calls it, a goal has been scored. If someone was in an offside position and the umpire notices this, he will not call a goal (assuming he has not been bribed). However, if he fails to notice it and calls a goal anyway, it counts (assuming his decision is not overruled by a higher authority). One can analyse this case in the following way. Even though the condition that no one is in an offside position just before the ball enters the goal is part of the constitutive rule for 'goal', it is not a necessary condition for scoring a goal. The call of the umpire is decisive.

Williamson's second example is relevant as well. It does not involve an authoritative person such as an umpire, and should be diagnosed differently. Note first that, once again, the example is too crude. Arguably, there is no constitutive rule of speaking a language (let alone of speaking a language grammatically correct). Instead, there are various grammar rules some of which define grammatical concepts (while others regulate linguistic practices). There need not be an overarching constitutive rule that defines 'English grammar'. Independently of such a rule, it is plausible that one speaks a language if one obeys a sufficient number rather than all of its rules. However, if we suppose there is such an overarching constitutive rule, we can say that the institutional status is instantiated in spite of the fact that not all of the conditions specified by the rule are met. This is due to the fact that a sufficient number of such conditions have been met.

So it is indeed possible that the constituted act is performed even though the relevant constitutive rule has not been (fully) satisfied. Constitutive rules do not always specify necessary conditions. In some cases, an authority such as a judge or umpire plays a role. In others, the institutional status is instantiated due to the fact that a sufficient number of conditions specified by its constitutive rule has been met. Before turning to a discussion of how this reflects on the knowledge rule and the truth rule, let me make a couple of points. First, the cases just discussed suggest that in the ideal case all the conditions specified by a constitutive rule are satisfied.[3] Someone who speaks perfect English does not violate any of the rules of grammar. Ideally, umpires make no mistakes (and are sincere). Second, even in the non-ideal cases, it is clear what constitutes the institutional status. It is the fact that a sufficient number of conditions has been met or the declaration of someone in authority, which may be based on the belief that most or all conditions have been met.

3. The Knowledge Rule, the Truth Rule, and the Traditional Analysis

A straightforward line of argument is now available against the view that knowledge is the only ingredient of the constitutive rule of assertion. First, the knowledge rule is not a constitutive rule (see section 1). Second, if knowledge were the only ingredient of a constitutive rule of assertion, we would have to know that which we assert, and we know that this is often not the case (as Williamson acknowledges; e.g. 243). If the knowledge requirement is not met, there is nothing else left to constitute the status of assertion. At least normally, there is no authority involved in making assertions. Furthermore, the sufficient number argument cannot apply if knowledge is the only ingredient. (See section 2.) It follows that assertion should not be characterised in terms of the knowledge rule.

One might want to propose a disjunctive analysis on which knowledge is only one of the ingredients of the constitutive rule. The problem with this is that the other ingredients would most likely be truth, justification, and/or belief. On the (admittedly controversial) assumption that knowledge entails all these three, it would not play an independent role. One of the three ingredients (or a combination of them) would suffice. This suggests the stronger conclusion that knowledge does not appear in the constitutive rule of assertion at all.

The preceding also indicates that the traditional analysis should not be interpreted in terms of the truth rule. The presence of an imperative already indicates it is not a constitutive rule either. Instead, the traditional analysis should be put in terms of what one might call the belief rule, which is a genuine constitutive rule:[4]

> An utterance *u* counts as an assertion of *p* just if the person who utters it thereby expresses her belief that *p*.

In contrast to knowledge, belief does figure in the constitutive rule of assertion. The belief rule fits nicely with what Grice and Searle say about assertion. It even fits perfectly with some of the things Williamson writes. Consider the following passage: '[A]ssertion is the exterior analogue of judgement, which stands to belief as act to state.' (238) This idea is adequately captured by the belief rule.

[3] The point requires some rephrasing in cases where multiple realisibility is relevant (think of dollars that can be made of paper as well as traces on computers). In such cases, a disjunctive analysis is called for and only one set of conditions has to be satisfied.

[4] This formulation is obviously incomplete. For one thing, the analysis does not include all conditions that make an utterance an expression of one proposition rather than another. This can be resolved by adding conditions drawn from agent-based semantics in the tradition of Grice and Lewis.

4. Conclusion

Three points have been argued for in the face of Williamson's claims to the contrary. First, assertion is not to be characterised in terms of the knowledge rule. Second, the traditional analysis should not be understood in terms of the truth rule. Third, the traditional analysis should be understood in terms of the belief rule. The arguments presented provide indirect support for the traditional analysis.[5]

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[5] I gratefully acknowledge helpful comments from Igor Douven and Agustin Rayo.

Negative Epistemologie bei Kant und Wittgenstein: Die Kopenhagener Deutung des „Ich deute nicht“ am Grund unseres Urteilens

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In der Technik fallen theoretische und praktische Dimensionen des Wissens zusammen. Je weiter sie fortschreitet, desto dramatischer tritt dieser Zusammenhang zutage. Insbesondere beim Fall der Anwendung physikalischer Erkenntnisse zur Atomwaffenherstellung wird deutlich, wie unangemessen die Reduktion auf Fragen „reinen“ Wissens wäre. Noch dramatischer aber wird dieser ohnehin schon dramatische Zusammenhang, wenn man ihn auf die Bühne bringt. Michael Frayn ist es mit *Copenhagen* gelungen, die philosophische Perspektive auf diese Thematik zu dramatisieren. Das „philosophische Drama“ teilt mit anderen stilistischen Außenseitern wie Dialog, Aphorismus oder Zettel das Schicksal, nicht umstandslos als Philosophie anerkannt zu werden. Hinzu kommt, daß Frayn nicht explizit den Anspruch erhebt, ein philosophisches Werk geschaffen zu haben, auch wenn er dessen – und seine eigene – philosophische Herkunft nicht verleugnet. Diese möglichen Vorbehalte eingedenk, möchten wir dennoch die These wagen, daß Frayns philosophische Reflexion, hätte er sie als Abhandlung verfaßt, unter dem Titel „Über Gewißheit“ stünde. Die Gewißheitsthematik präsentiert sich hier weder als allgemeine Konzeption noch als Erfindung und Beschreibung einer Vielfalt von Sprachspielen, sondern in der Konzentration auf eine Begegnung, deren Konstruktion die verschiedenen Dimensionen der Gewißheit entfaltet. Dementsprechend nennt der Titel des Dramas statt seines thematischen Untersuchungsgegenstands den Ort, an dem diese Entfaltung sich ereignet: Kopenhagen.

Die Ausgangsfrage des Theaterstücks “Why did he come to Copenhagen?“ (Frayn 1998, 3), die Frage nach Grund und Verlauf von Heisenbergs Besuch bei seinem Lehrer Bohr im besetzten Dänemark des Jahres 1941, bildet den Rahmen für die philosophisch relevanten Themen: die Konzeption des Urteils, seine Grundlagen und Folgen, Gewißheit und ihre Rechtfertigung. Damit geht es aber auch um das Verhältnis wissenschaftlicher Theorien zum Leben: Frayn gestaltet das Ringen von Heisenberg, Bohr und dessen Frau Margrethe, posthum Gewißheit über das unauflösbar rätselhafte[1] Kopenhagener Treffen zu erlangen, als Demonstration der in der Kopenhagener Deutung der Quantenmechanik herausgearbeiteten Struktur von Unschärfe und Komplementarität. Und da es diese Theorien sind, die den Bau der Atombombe ermöglichen, stellt sich die Frage nach den ethischen Implikationen der wissenschaftlichen Forschung. Frayn gibt ihr insofern die Rolle des geheimnisvollen Zentrums des Dramas, als sich ihr geheimes, unbeobachtetes und unbelauschtes Gespräch um Heisenbergs Frage dreht “if as a physicist one had the moral right to work on the practical exploitation of atomic energy“ (Frayn 1998, 36). Es geht hier um die epistemologischen, psychologischen, moralischen und politischen Dimensionen des physikalischen Urteils über Möglichkeit und Unmöglichkeit einer zum Atomwaffenbau nötigen Kettenreaktion. Daß Frayn Heisenbergs Urteil als eine Enthaltung inszeniert, als weltgeschichtlich relevanten Verzicht, die Möglichkeit einer nuklearen Kettenreaktion mathematisch zu ergründen, macht *Copenhagen* für die philosophische Urteilsthematik relevant. Das vom Interesse an der Philosophie angeregte Drama erregt nunmehr das Interesse der Philosophie. Die folgenreiche Unterlassung Heisenbergs, die für die Atombombenherstellung benötigte kritische Masse selbst auszurechnen, um sich stattdessen auf seinen Glauben an eine viel zu hoch veranschlagte Schätzung zu verlassen, bildet den Dreh- und Angelpunkt des Dramas. “You needed to calculate the figure (…) And you didn’t? And that’s why you were so confident (…). Because you spent the entire war believing (…)” (Frayn 1998, 82). Was hat es mit Heisenbergs Verzicht auf die mathematische Methode auf sich? Ist er deshalb denkwürdig und bühnenreif, weil ein Urteil, das seine Gewißheit auf eine Unterlassung gründet, einzigartig ist, oder weil die Unterlassung immer Grundlage wissenschaftlicher Urteile oder gar des Urteilens überhaupt ist, so daß sich das in *Copenhagen* dramatisierte Beispiel zum exemplarischem Aufweis dieser allgemeinen Struktur anbietet?

Um diese Frage zu beantworten, muß das Kopenhagener Beispiel in den Zusammenhang philosophischer Urteilskonzeptionen gestellt werden. Dazu scheint uns der von Kant und Wittgenstein aufgespannte Rahmen besonders geeignet, da beide Philosophen zum einen die verschiedenen Arten von Gewißheit auf das unterschiedliche Zuendekommens des Urteilsprozesses gründen und zum anderen der Handlung durch Aufweis der praktischen – sowohl pragmatischen als auch ethischen – Dimension der Gewißheit eine konstitutive Rolle zuteilen, ohne die sich *Copenhagen* nicht angemessen interpretieren ließe. Kant und Wittgenstein lösen die Urteilsthematik aus dem ausschließlichen Zuständigkeitsbereich reiner Logik heraus, indem sie den Verzicht auf weitere Deutungsversuche am Grund des Urteilens ansiedeln. Beim Kantischen „Ich denke“, auf das jedes Urteil bezogen ist, handelt es sich um ein „Ich deute“, das auf einem „Ich deute nicht“ ruht: Ich deute, indem ich nicht mehr weiterdeute. Jedes Urteil stellt einen Abbruch dar, mit dem es in unterschiedlicher Weise markiert, daß ich mich nun in mehr oder minder endgültiger Weise weiterer Deutungsversuche enthalte. Die Notwendigkeit, auf die eine oder andere Art vorzeitig zu Ende zu kommen, beruht auf dem beschränkten Urteilsvermögen endlicher Wesen, die nicht über unendlich viel Zeit zur Urteilsfindung verfügen. Dieses potentiell tragische Dilemma entwickelt sich als Dialektik zwischen der sich in endlichen Urteilsformen manifestierenden Gewißheit und dem unendlichen Anspruch an sie, als Stütze im unendlichen Risiko des Lebens zu fungieren..

Nach Kant erhält ein Urteil seinen Halt weniger durch die Haltbarkeit seiner Gründe und Argumente als vielmehr durch eine Haltefunktion, in der es sich als Meinen, Glauben oder Wissen der Affizierbarkeit durch weitere Gründe, Deutungen und Argumente verschließt.. In welchem Maße dies erfolgt, wie viel weitere Bedenkzeit sich jemand zugesteht, beruht letztlich auf seiner Einschätzung der praktischen Situation. Kant zufolge beeinflußt der Wille das Fürwahrhalten mittelbar, nicht indem er inhaltlich bestimmt, was für wahr gehalten wird, sondern *wozu*, zu welchem Zweck jemand hier und jetzt urteilen will. Die zeitlich

[1] “The more I’ve explained, the deeper the uncertainty has become.” (Frayn 1998, 4)

begrenzte Haltbarkeit eines Urteils, sein Verfallsdatum sozusagen, und seine modale Markierung beruhen auch bei Wittgenstein auf einer praktischen Haltung: Das Weiterdenken und Weiterdeuten wird so lange suspendiert, wie mich „seine weitere Deutbarkeit“ nicht „beschäftigt (und beunruhigt)“ (PG 99; Z 235). Die Gewißheit eines Entschlusses, mit dem Deuten zum Schluß zu kommen, „daß es so ist“, etwas auf sich beruhen zu lassen, ist nicht das Resultat einer theoretischen Einsicht, sondern ein praktischer Zustand der Beruhigung auf Zeit: „Ich bin beruhigt, daß es so ist.“ (ÜG 278)

Der für die Hypothese spezifische Abbruch des Deutungsprozesses ergibt sich nach Kant aus ihrem hybriden Charakter. Als eine durch methodische „Beglaubigung“ mit der Wirklichkeit verknüpfte Meinung besitzt sie Züge verschiedener Modi (KrV B 802). Die Hypothese ist als Sonderform des *Meinens* wesentlich vorläufig, indem sie einen temporären Halt auf einem Grund gewährt, der für gut genug gehalten wird, um auf ihm eine erste Rast einzulegen. Um sich den Zugang zu möglicherweise besseren Gründen offen zu halten, benötigt und sucht der Meinende den Austausch mit Anderen. Das „Ich deute nicht“ am Grund, an dem die Gründe enden, ist in der Meinung ein „Ich deute nicht endgültig“. Da dieses temporäre Anhalten bereits seine Aufhebung im Fortgang enthält, bringt es den Deutungsprozeß nicht wirklich zum Halten und bietet insofern auch keinen wirklichen Halt. Wenn das Leben eines festeren Halts bedarf, ist das spielerische Stehenbleiben aus Mangel an besseren Gründen nicht der angemessene Modus. Die vorläufige oder zurückhaltende Gewißheit durch Suspension eines endgültigen Denkens ist nach Kant indes als Motor der Wissenschaften unverzichtbar. Die *Hypothese* als für den wissenschaftlichen Diskurs relevante Form der Meinung zeichnet sich durch die Angabe der Methode ihrer Beglaubigung aus. Diese kann allerdings nie zu einer apodiktischen Gewißheit führen, denn ihre Evidenz beruht auf einem Grund, der von seinen Folgen gestützt wird: „Eine Hypothese ist ein Fürwahrhalten des Urtheils von der Wahrheit eines Grundes um der Zulänglichkeit der Folgen willen.“ (Logik IX, 84) Je besser die Folgen abschätzbar sind, desto sicherer wird der Grund, doch da wir „nie alle möglichen Folgen bestimmen können“ und dies schließt praktische – pragmatische, politische und moralische – Folgen ein, müssen „Hypothesen immer Hypothesen bleiben, das heißt: Voraussetzungen, zu deren völliger Gewißheit wir nie gelangen können“ (Logik IX, 85. Damit wird es zum einen unübersichtlich, weil wir uns nicht als Beobachter von dem Geschehen abzutrennen vermögen, und zum anderen risikoreich, weil die Unmöglichkeit der Beschränkung auf theoretische Folgen dazu führt, daß bei hypothetischen Abschätzungen möglicherweise das ganze Leben auf dem Spiele steht. Die Quantenmechanik demonstriert die Unmöglichkeit, Gewißheit rein theoretisch in unbeteiligter Betrachtung zu erlangen, indem sie aufweist, daß der Gegenstand allererst durch das Faktum des Messens bestimmt wird. *Copenhagen* stellt dieses Verhältnis nicht nur als grundlegend für unsere Gewißheit in bezug auf Elementarteilchen dar, sondern für Denken und Gewißheit insgesamt. Die Gewißheit stützt sich auf die Folgen, aber diese werden von der „theoretischen Tat“ des Hinschauens und Forschens beeinflußt, so daß wir es mit der paradoxen Struktur zu tun haben, daß die Gewißheit, auf die man sich stützt, sich zugleich auf die Tat(-Sache) stützt, daß man sich auf sie stützt. Die Struktur, sich auf eine Verbindung – wie diejenige, etwas als Grund von antizipierten Folgen anzusehen – zu verlassen, die dadurch bindet, daß man sich auf sie als gebunden verläßt, ist uns von Wittgenstein als Paradox des Regelfolgens bekannt. Seine „imaginierte Notwendigkeit“ (Hofmann 2000, 106) beruht darauf, daß jemand im Hinblick auf die Idee, der Übergang sei bereits vollzogen, diesen – mit der Sicherheit eines Blinden – allererst vollzieht (vgl. PU 218-219). *Copenhagen* richtet den Blick auf das aus solchen Sehbehinderungen resultierende unkalkulierbare Risiko, keine scharfe Sicht auf die Folgen zu haben, aber trotzdem so mit ihnen kalkulieren zu müssen, daß wir ihnen durch Zuordnung von Gründen Wirklichkeit verschaffen. Hier stellt sich die Frage, wann mögliche Folgen ausreichend konstruiert, gedeutet und bewertet sind, um jede weitere theoretische Verdeutlichung abzubrechen und den entscheidenden Schritt von der Imagination zur Wirklichkeit zu machen. Das Vertrauen in die Produkte meiner jeweiligen Deutungstätigkeit erstreckt sich dabei nicht nur auf die Einschätzung, wie wahrscheinlich meine Antizipation der Folgen ist, sondern es geht auch um die praktische Frage, ob ich den Folgen durch die methodische Verknüpfung mit einem Grund Wirklichkeit verleihen *will*. Daß sich die von der mathematischen Methode erzeugte Gewißheit von der Subjektivität vorausgesetzter Interessen in der Hypothese leiten läßt, beendet hypothetisch jede Reflexion über Nutzen und Nachteil dieser versuchsweisen Verknüpfung. Sobald man das Vorfeld der Folgenabschätzung verlassen hat, muß man sich auf die methodisch rechtfertigende Gewißheit verlassen. Die für die wissenschaftliche Hypothese so fruchtbare und gefährliche Mischung formt sich demzufolge in dem folgenreichen Schritt, nicht mehr zu denken und zu deuten, sondern zu rechnen. Da aber kein Wissenschaftler zu diesem Abbruch des Deutungsprozesses gezwungen wird, sondern den Schritt, sich von der Methode zwingen zu lassen, selber machen muß, ist es keineswegs notwendig, daß der Abbruch in dieser Mischung aus Deuten und Rechnen immer zugunsten des letzteren vollzogen wird. Der Schritt in die spezifische Gewißheit der Mathematik ist selbst keine mathematische Operation, sondern eine Handlung des Lebens[2] und gründet damit auf der unbegründbaren (vgl. ÜG 166, 173), ungerechtfertigten (vgl. ÜG 175) Sicherheit des *Glaubens*.[3] Der Hybridform der wissenschaftlichen Hypothese stehen also beide Möglichkeiten des Abbruchs offen: Ich rechne und deute nicht. Oder ich rechne aufgrund meiner Deutung (der Folgen) nicht.

Beim Abbruch des Rechnens zugunsten des Deutens geht es nicht um die Anwendung bereits vorhandener Forschungsergebnisse, sondern um die Entscheidung zur Forschung, d.i. zur Anwendung der Mathematik. Im Kopenhagener Beispiel soll die Mathematik entweder die Möglichkeit erfolgreicher Atomspaltung in atombombenfähiger Konzentration und Reaktionsgeschwindigkeit demonstrieren oder dem Glauben daran die Grundlage entziehen. Die rechnend bereitgestellte Grundlage verändert aufgrund der Verknüpfung mit den jeweiligen Folgen die Welt. Da die Mathematik sich nicht selber anwendet, muß entschieden werden, im Hinblick auf welche Folgen sie angewendet werden soll. Diese jedoch bleiben unvermeidlich unscharf, weil sie sich nicht von der Perspektive des Beobachters abstrahieren lassen.[4], und damit werden auch die Konsequenzen des Rechnens unberechenbar und potentiell gefährlich. “That final core of uncertainty at the heart of things...“ (Frayn 1998, 94) macht selbst vor der Mathematik nicht halt. Heisenberg, der virtuose Mathema-

[2] “Der mathematische Satz wurde durch eine Reihe von Handlungen erhalten, die sich in keiner Weise von Handlungen des übrigen Lebens unterscheiden und die gleichermaßen dem Vergessen, Übersehen, der Täuschung ausgesetzt sind. (ÜG 651)

[3] “Die Begründung aber, die Rechtfertigung der Evidenz kommt zu einem Ende; - das Ende aber ist (...) unser *Handeln.*“ (ÜG 204)

[4] “Everything is personal“ (Frayn 1998, 73), und daher produziert auch die Mathematik unvorhersagbare Ergebnisse: ”Mathematics becomes very odd when you apply it to people. One plus one can add up to so many different sums...” (Frayn 1998, 29)

tiker[5], ist während des Krieges nicht bereit, sich auf die Mathematik zu verlassen und den Zustand des Glaubens an eine Schätzung mit dem Schritt in die Berechnung der kritischen Masse zu beenden.[6] Aufgrund der antizipierten Folgen glaubt er vor dem, was er errechnen könnte, zurückschrecken zu müssen, und diese Unterlassung führt zum Abbruch oder Aufschub einer Kettenreaktion des Wissens.[7] Seinen Glauben stützt die grundlose und folgenreiche Gewißheit der Tat der Unterlassung, nicht eine begründbare Gewißheit als Resultat einer bewußten Entscheidung.[8] Heisenberg sucht die Rechtfertigung, die er seiner Tat allein nicht geben konnte, in dem Gespräch bei Bohr.[9] Wäre dieser auf den Rechtfertigungsmodus eingegangen, hätte Heisenberg womöglich während des Rechtfertigungsprozesses seinen unberechneten und insofern ungerechtfertigten Glauben an die vorliegende Schätzung der kritischen Masse aufgegeben und angefangen zu rechnen. Bohrs Abbruch des Gesprächs beraubt Heisenberg der Möglichkeit, durch die Herausforderung, Rede und Antwort stehen zu müssen, mehr Klarheit über seinen eigenen Gewißheitszustand zu erhalten. Die Weigerung, mit Heisenberg weiterzureden, beläßt ihn im Dunkel seines Glaubens, hilft ihm, diesen zu bewahren und erweist ihm – und der Welt – dadurch letztlich einen Dienst[10]. Erst rückblickend erkennt Heisenberg seine Unterlassung bewirkt hat, aber im Moment der Tat ist ihm diese Einsicht, d.i. eine Sicht auf sich selbst und seine Rolle, verwehrt, weil sie *aus* der eigenen Perspektive *heraus* und nicht *auf* dieselbe blickt. “Two thousand million people in the world, and the one who has to decide their fate is the only one who’s always hidden from me.” (Frayn 1998, 87) Dementsprechend kann Heisenbergs blinder Fleck erst posthum, “now that we’re all dead and gone“ (Frayn 1998, 3), thematisiert werden[11]. Wenn es für die Frage, ob jemand etwas glaubt, nicht entscheidend ist, daß er denkt und sagt, „daß es sich so und so verhält“ (GM Anhang II, 12, S. 115), sondern vielmehr „welche Konsequenzen dieser Glaube hat, wozu er uns bringt“ (PU 578), so ist alles, was in der Rede ausgedrückt werden kann, für die Rechtfertigung des Glaubens irrelevant. Die Rechtfertigung, daß die Gewißheit offenbar hinreichte, um den Deutungsprozeß abzubrechen, liegt in der Tatsache des Handelns. Die Gewißheit zeigt sich in der negativen Bewegung, auf die Rede mitsamt ihren Rechtfertigungsmöglichkeiten zu verzichten und auf der Grundlage dieses Verzichts zu handeln. Daß diese nicht mehr sprachlich vermittelbar ist, bringt den Glaubenden in die Nähe zum Wahnsinnigen. Indem Heisenberg sich bei seinen wissenschaftlichen Tätigkeit auf die Schätzung der kritischen Masse verläßt, handelt er seinem Glauben gemäß, der nicht nachvollziehbar und somit verrückt erscheint.[12] Er drückt sich als Rede aus, die sich selber zugunsten der Tat negiert. „So handle ich eben“ (PU 217) kann, aber muß zum Abbruch der Rechtfertigung nicht wirklich gesagt werden. Die Rede, die mitteilt, nicht mehr weiterzureden, ohne die Gründe für diesen Abbruch mitteilen zu können, markiert den Ort, an dem der Spaten sich umbiegt (vgl. PU 217). Um das Ende des Grabens nach Gründen philosophisch zu untersuchen, muß sich die Aufmerksamkeit auf die Singularität des Ortes richten, an dem der Spaten den Grund nicht weiter deutend durchdringen kann, weil ihm unvermittelt der „harte Fels“ der Handlung entgegensteht. Philosophie wird hier zur Beschreibung der Singularität dieses Ortes zu dieser Zeit: Kopenhagen 1941.

[5] „You calculated everything! The first thing you did with a problem was the mathematics!” (Frayn 1998, 85)

[6] Bohr: But Heisenberg, your mathematics, your mathematics! How could they have been so far out? -
Heisenberg: They weren`t. As soon as I calculated the diffusion I got it just about right. –
Bohr: As soon as you calculated it? (…) You mean you hadn`t calculated it before? (…) That`s why you were so confident you couldn`t do it until you had the plutonium. Because you spent the entire war *believing* that it would take not a few kilograms of 235, but a ton or more. (Frayn 1998, 82, Hervorhebungen, D.V.H.)

[7] Bohr: Simply by failing to try the diffusion equation.
Heisenberg: Such a tiny failure.
Bohr: But the consequences went branching out over the years, doubling and redoubling.
Heisenberg: Until they were large enough to save a city. Which city? Any of the cities that we never dropped our bomb on. (Frayn 1998, 84)

[8] Bohr: You haven’t considered calculating it. You hadn’t consciously realized there was a calculation to be made. (Frayn 1998, 89)

[9] Margarethe: That was the last and greatest demand that Heisenberg made on his friendship with you. To be understood when he couldn’t understand himself. (Frayn 1998, 89)

[10] Margrethe: And that was the last and greatest act of friendship for Heisenberg that you performed in return. To leave him misunderstood. (Frayn 1998, 89)

[11] “Heisenberg: I look at the two of them looking at me, and for a moment I see the third person in the room as clearly as I see them.” (Frayn 1998, 87)

[12] “Heisenberg: We go on with the reactor. Of course. Because now there’s no risk of getting it running in time to produce enough plutonium for a bomb. (...) We work like madmen on the reactor. (...) Bohr: You’d all gone mad! (...) You’d lost all contact with reality down in that hole!“ (Frayn 1998, 49f.)

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Kant, I. 1902ff. *Akademie-Textausgabe Bd. I-IX,* Berlin: Königlich Preußische Akademie der Wissenschaften. Siglen:

KrV	Kritik der reinen Vernunft, zitiert nach der 2. Auflage 1787 als B.
Logik	Logik, hrsg. von G. B. Jäsche.

Wittgenstein, L. 1984 *Werkausgabe in 8 Bänden*, Frankfurt am Main: Suhrkamp. Zitiert wird unter Angabe der Abschnittsnummer mit folgenden Siglen:

GM	Bemerkungen über die Grundlagen der Mathematik
PG	Philosophische Grammatik
PU	Philosophische Untersuchungen
ÜG	Über Gewißheit
Z	Zettel

A Correction Rule for Inductive Methods

Ruurik Holm, Helsinki

I will discuss the problem of choosing the correct inductive method from Carnap's (1952) continuum. My proposal is to use a correction rule to adjust the method according to obtained evidence. I will discuss a minimum requirement such a rule has to satisfy, especially from a consturctive point of view. The question of refuting inductive scepticism by means of a correction rule is assessed.

Carnap (e.g. 1950, 564; 1952, 38) regards the extreme method $\lambda=\infty$ as seemingly inappropriate for sound scientific reasoning on the grounds that it gives no consideration to experience in making expectations or estimations. However, the argument is based on the presupposition that inductive reasoning is sound. A strict anti-inductivist holds that $\lambda=\infty$ is the right choice precisely because it gives no regard to experience. Therefore, the question remains how to reject $\lambda=\infty$ in Carnap's continuum without making the inductivist presupposition.

My aim in this paper is to argue for a correction rule for adjusting inductive methods, including $\lambda=\infty$, to overcome this difficulty which can be considered as one formulation of the problem of induction. First, however, I will discuss what kind of minimum requirement any correction rule must have, especially from the point of view of constructive semantics. Then I will proceed to present a concrete example of such a rule. In the final section, I will discuss if using the rule presented in section 2 satisfying the requirement presented in section 1 is more rational than adhering to $\lambda=\infty$.

1. The Minimum Requirement

My first proposal for a minimum requirement for any acceptable correction rule is that the method it yields should be the same in the limit as the method corresponding to the limit of the degree of order of the sequence, always when one of the limits exist.

However, in constructive mathematics, limits can only exist for sequences that have been constructively given. Let us consider the state description obtained by tossing an indestructible coin with an unknown bias. It is clear that a particular infinite sequence of tosses cannot be given as a computable or constructive function – otherwise the result of each toss would be fixed in advance. A classical formalization is available: one can define the *i*'th toss to be the value *t(i)* of some function $t: N \rightarrow \{Heads, Tails\}$, even without being able to give a computation rule for *t*.

Martin-Löf's (1990) nonstandard type theory provides a constructive semantics for sequences that are not given by a computable rule. However, there remains another problem with respect to the constructive interpretation of the minimum requirement as phrased above.

A sequence can constructively converge towards a limit only if one can compute the terms of the sequence up to infinity since otherwise it is impossible to know the value of the limit and hence also impossible to consider that the sequence has a limit in the constructive sense. On the other hand, the motivation behind the correction rule is that it would eventually guide us towards the optimum method, even if it is not knowable what the optimum method is. The problem is how to formulate this idea in constructive semantics.

In nonstandard type theory, one can give a constructive formulation of the minimum requirement. Denote the sequence of *x* tosses by *w(x)*, the degree of order of the sequence *w(y)* by $d_o(w(y))$ and the correction rule applied to *w(y)* by $Corr(\lambda_a, w(y))$, where λ_a is the initial method. The function $\delta: /\rightarrow /$ gives the corresponding degree of order for each real-valued method (hence, when $\lambda\rightarrow\infty$, $\delta(\lambda)\rightarrow 0.5$ in the case of the coin tossing example since then the maximum degree of disorder is *0.5*). By Δ_ω we denote any infinite subsequence (in the nonstandard sense) of the set natural numbers *{0,1,2,…}* that consists of consecutive numbers, and *a* is an arbitrary real number:

$$(\forall y \in \Delta_\omega)(d_o(w(y)) \approx a) \Leftrightarrow (\forall y \in \Delta_\omega)(\delta(Corr(\lambda_a, w(y))) \approx a).$$

The above formula says that for any (in the nonstandard sense) infinite interval, the real degree of order remains within the same boundaries as the degree of order obtained by *Corr*. The standard interpretation of the formula is that there is a minimum length such that for all intervals with at least that length, if the degree of order is within some distance ε from *a* in that interval, also the degree of order obtained by using the correction rule is within ε from *a*, and vice versa. In other words, it follows from the minimum requirement that for all sufficiently long intervals, the results of the correction rule have the same boundaries as the degree of order.

The motivation for using nonstandard type theory here arises from the infinitistic property of the nonstandard number ω of being provably bigger than any standard natural number. The meaning of expressions dealing with such an infinitely long interval is constructively explained by reference to multiple finite intervals so that the minimum requirement is not in contradiction with any proposition obtained by negating it and replacing the infinite interval Δ_ω with an arbitrary finite interval.

Since it is now clear that the minimum requirement makes sense also constructively, I can proceed to present a concrete example of a correction rule which fulfils the requirement.

2. Formulating the Rule

It is obvious that the correction rule must have its first effects on the initial method when some finite amount of data is received. One cannot change the method unless one begins at some finite point.

Let the parameter *c* denote a positive real number which expresses how cautiously the method is changed according to the observed degree of order; a big value for *c* means moderate changes. The variable w_x denotes a sequence of *x* first tosses.

The following formulas give an inductive definition of a simple but still adequate correction rule *G*, where the induction variable denotes the number of performed tosses:

$$\begin{cases} G(\lambda_a, c, 0, w_0) = \lambda_a, \\ G(\lambda_a, c, x+1, w_{x+1}) = \delta^{-1}(\delta(G(\lambda_a, c, x, w_x)) + \frac{1}{c}(d_0(w_x) - \delta(G(\lambda_a, c, x, w_x))))). \end{cases}$$

The definition can also be applied when $\lambda_a \to \infty$.

The idea of the rule is to take the difference of the observed degree of order and the one implied by the currently used method as the basis of correction. This number is then multiplied by the caution factor 1/c to acquire the magnitude of the adjustment. The final result, which is a number denoting an inductive method, is obtained by application of the inverse function of δ.

3. The Problem of Induction

The problem of induction formulated in the context of inductive probability concerns the justification of increasing or decreasing the probability value of a hypothesis on the basis of evidence.

Strict anti-inductivism represented by the choice of $\lambda=\infty$ means that one will never adopt the optimum method when the order in the state description under examination is higher than the theoretical minimum. The question is if this kind of complete rejection of inductive inference is justified, i.e., whether it is justified to hold that past observations should not influence the probabilities of future observations even though it follows that one makes less than optimal estimates about the relative frequency of properties except in the case of minimum order, the error being bigger the higher the degree of order of the state description in question is.

Hans Reichenbach's (1949) vindication of induction was based on the idea that one should adopt a method of which it is known that it will lead to successful approximations about the relative frequencies of properties in an infinite domain, provided that such success is possible, i.e., that the limits of relative frequencies exist when the domain size tends to infinity.

A related idea can be applied here. The correction rule will eventually lead to closer and closer approximations of the optimum method when the sample size increases, but it does not exclude the possibility of *a priori* considerations about the optimum method. The problem with both Reichenbach's straight rule and the correction rule is that no particular body of obtained data can really justify inductive predictions concerning future observations. In the correction rule approach, this means that no particular sample can justify the shift from the anti-inductivism toward moderate inductivism.

However, even if one holds that inductive reasoning is not justified, one must admit that it is possible that the method $\lambda=\infty$ is not optimal any longer when more information is obtained. There is always some (logical) probability that future will manifest order, even according to the anti-inductivist method, because it assigns positive probabilities to ordered state descriptions. If one does not change the method on the basis of evidence at all when one has set $\lambda=\infty$ in the beginning, one thus runs the risk of making an infinite number of inaccurate predictions, while the employment of an adequate correction rule would eliminate this risk. Hence, there seems to be a pragmatic argument suggesting the utilization of a correction rule.

On the other hand, if the unknown optimum method corresponding to the unknown state description is $\lambda=\infty$, every correction rule satisfying the minimum requirement will necessarily agree with any approximation of the real degree of order. Hence, there is no risk of making an infinite number of inaccurate predictions. The risk one takes is only that the first observed terms of the sequence are misleading with respect to relative frequencies in the full sequence, guiding the adjustment of the method away from the optimum value. There is thus a possibility of an arbitrarily high but still finite number of inaccurate predictions.

To add up, the correction rule never leads to an infinite number of inaccurate predictions, whereas for $\lambda=\infty$ this possibility exists. I hold this to be an argument for not adhering to $\lambda=\infty$, which does not contain the inductivist presupposition. What remains to be discussed in this context is the role of probabilities, namely those assigned by $\lambda=\infty$ to state descriptions where $\lambda=\infty$ is not the optimum method as contrasted to those assigned to state descriptions where the method is indeed optimal.

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Degrees of Belief as Basis for Scientific Reasoning?

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1. The Bayesian Approach to Scientific Reasoning

Bayesianism is the claim that scientific reasoning is probabilistic, and that probabilities are adequately interpreted as an agent's actual subjective degrees of belief measured by her betting behaviour.

Confirmation is one important aspect of scientific reasoning. The thesis of this paper is the following: Given that scientific reasoning (and thus confirmation) is at all probabilistic, the subjective interpretation of probability has to be given up in order to get right confirmation, and thus scientific reasoning in general.

This will be argued for as follows: First, an example will be considered which is an instance of a more general version of the problem of old evidence, POE. This suggests to look whether the existing solutions to POE provide a solution to the more general problem called C.

The first result is that the existing solutions to POE are no genuine ones, because they do not provide a solution to C.

More importantly, the attempts to solve C all have in common that they essentially depend on the agent's absolutely first guess, her first degree of belief function p_0.

Therefore, C leads to the problem of prior probabilities, POPP. However, the standard solution to POPP – the "washing out of priors" relying on convergence to certainty and merger of opinion – is not applicable here, because the solutions to C never get rid of the agent's first degree of belief function p_0.

By the subjective interpretation of probability, p_0 is any arbitrary assignment of values in [0,1] to the atomic propositions of the underlying language. Thus, by choosing an appropriate p_0 one can obtain more or less any degree of confirmation. In case evidence E is known and logically implied by hypothesis H and background knowledge B, the degree of confirmation is even uniquely determined by the agent's first guesses in H and E.

The only way out is some kind of objective or logical probability function the agent could adopt as her first degree of belief function p_0. However, the difficulty of determining such a logical probability function just was the reason for turning to the subjective interpretation of probability.

2. Bayesian Confirmation Theory

According to Bayesian confirmation theory, the agent's degree of confirmation of hypothesis H by evidence E relative to background knowledge B is measured by some function c_p such that

$$\begin{aligned} &> 0 && \Leftrightarrow && p(H \mid E \wedge B) > p(H \mid B) \\ c_p(H, E, B) &= 0 && \Leftrightarrow && p(H \mid E \wedge B) = p(H \mid B) \\ &< 0 && \Leftrightarrow && p(H \mid E \wedge B) < p(H \mid B), \end{aligned}$$

where p is the agent's degree of belief function. Any such function c_p is called a *relevance measure* (based on p).

An example is the *distance measure* d_p,

$$d_p(H, E, B) = p(H \mid E \wedge B) - p(H \mid B).$$

3. The Example

An agent with degree of belief function p considers the hypothesis

H = All Scots wear kilts.

At time t_1 she has the impression to see her friend Stephen wearing a kilt. As the agent is not wearing her glasses, her degree of belief in

E = Stephen wears a kilt

is not very high, say

$$p_1(E \mid B_1) = .6,$$

where p_1 is her degree of belief function at t_1. B_1 is her background knowledge at that time containing the information that Stephen is Scot.

Because of knowing that H and B_1 logically imply E, the agent gets interested in whether Stephen is indeed wearing a kilt. So she takes on her glasses and has a careful second look at Stephen, who still seems to wear a kilt – this happening at time t_2.

In passing from t_1 to t_2 the only change in the agent's degrees of belief is in E. Moreover, for some reason she cannot express her observation in terms of a proposition. So her degree of belief in E increases *exogenously*, say to

$$p_2(E \mid B_2) = .9,$$

where p_2 is the agent's degree of belief function at t_2. Her background knowledge B_2 at t_2 is the same as at t_1, because the only change is in E, and that change is exogenous, i.e. not due to any proposition on which the agent could condition. So B_1 is logically equivalent to B_2, $B_1 \equiv B_2$.

4. The Less Reliable the Source of Information, the Higher the Degree of Bayesian Confirmation

Let us compare the agent's degrees of confirmation at time t_1 and at time t_2.

As the agent knows that H and B_1 logically imply E (and does not forget this and that Stephen is Scot),

$$p_j(E \mid H \wedge B_j) = 1, \text{ for all points of time } t_j,\ j \geq 0,$$

even if it is not assumed that she is logically omniscient in the first sense that all logical truths are transparent to her (cf. Earman 1992, 122).

Given Jeffrey conditionalisation (JC), i.e. assuming

$$p_1(H \mid \pm E \wedge B_1) = p_2(H \mid \pm E \wedge B_2),$$

it follows that

H is more confirmed by E relative to B_1 at t_1 than (relative to B_2) at t_2 if and only if the agent's degree of belief in E at t_1 is smaller than at t_2, i.e.

$$d_{p1}(H, E, B_1) > d_{p2}(H, E, B_2) \Leftrightarrow p_2(E \mid B_2) > p_1(E \mid B_1).$$

More generally,

C $d_{p1}(H, E, B_1) > d_{p2}(H, E, B_2) \Leftrightarrow$
$p_1(E \mid H \wedge B_1) > p_1(E \mid B_1)$ and
$p_2(E \mid B_2) > p_1(E \mid B_1)$

or

$p_1(E \mid H \wedge B_1) < p_1(E \mid B_1)$ and $p_2(E \mid B_2) < p_1(E \mid B_1)$,

where the only change in the agent's degrees of belief in passing from t_1 to t_2 is exogenous and in E, whence $B_1 \equiv B_2$, and JC is used. Here and in the following the probabilities of all contingent propositions involved are assumed to be positive.

C holds for the distance measure d_p, the *log-likelihood ratio* l_p, and the *ratio measure* r_p,

$l_p(H, E, B) = \log[p(E \mid H \wedge B)/p(E \mid \neg H \wedge B)]$,

$r_p(H, E, B) = \log[p(H \mid E \wedge B)/p(H \mid B)]$.

The measure s_p,

$s_p(H, E, B) = p(H \mid E \wedge B) - p(H \mid \neg E \wedge B)$,

is invariant w.r.t. exogenous belief changes in E (which yield $B_1 \equiv B_2$), i.e.

$s_{p1}(H, E, B_1) = s_{p2}(H, E, B_2)$.

In case of c_p,

$c_p(H, E, B) = p(H \wedge E \wedge B) \cdot p(B) - p(H \wedge B) \cdot p(E \wedge B)$,

something different (but not much better) holds:

C' $c_{p1}(H, E, B_1) > c_{p2}(H, E, B_2) \Leftrightarrow$

$p_1(E \mid H \wedge B_1) > p_1(E \mid B_1)$ and $p_1(E \wedge B_1)/p_2(E \wedge B_2) > p_2(\neg E \wedge B_2)/p_1(\neg E \wedge B_1)$

or

$p_1(E \mid H \wedge B_1) < p_1(E \mid B_1)$ and $p_1(E \wedge B_1)/p_2(E \wedge B_2) < p_2(\neg E \wedge B_2)/p_1(\neg E \wedge B_1)$.

For the different measures and the problem of measure sensitivity cf. Fitelson 2001.

5. A More General Version of the Problem of Old Evidence

C is a more general version of the problem of old evidence, POE. POE is that evidence E which is old in the sense of being assigned a degree of belief of 1 cannot provide any confirmation, since for any p, H, E and B:

$p(H \mid E \wedge B) = p(H \mid B)$, if $p(E \mid B) = 1$.

POE is a problem, because there are historical cases where old evidence did provide confirmation (for an excellent discussion cf. chapter 5 of Earman 1992).

And: If POE is a problem, then so is C.

This is important, because a Bayesian could simply refuse to consider C as counterintuitive. Is it not rational, she might say, that I take positively relevant E to provide the less confirmation for H, the more I already believe in E and have built this belief into my belief in H?[1]

[1] This point was made by Luc Bovens in personal correspondence.

This reply is perfectly reasonable, but applies equally well to POE. However, a brief look at the literature shows that POE is taken to be a problem.

Let us therefore look whether the existing solutions to POE give rise to a solution to C. Generally, there are two ways of approaching POE:

1) Conditioning on the entailment relation: Garber 1983

2) Counterfactual strategy: Howson and Urbach 1993

6. Conditioning on the Entailment Relation

The idea here is to distinguish between a historical and an ahistorical POE, and to solve the former by noting that

> what *increases* [the agent]'s confidence in [H] is not E itself, but the *discovery* of some generally logical or mathematical relationship between [H] and E. (Garber 1983, 104)

Then one shows that even if $p(E \mid B) = 1$,

> the discovery that [H entails E] *can* raise [the agent]'s confidence in [H]. (Garber 1983, 123)

Conditioning on the entailment relation does not provide a solution to C, for in the example the agent is interested in E just because of knowing that H and B_1 logically imply E (and does not forget this and that Stephen is Scot), whence

$p_j(H \text{ entails } E \mid B_j) = 1$, for every point of time t_j, $j \geq 0$.

Moreover, by substituting 'H entails E' for E one gets another instance of C.

7. The Counterfactual Strategy

Concerning POE, Howson and Urbach write:

> the support of [H] by E is gauged according to the effect which one believes a knowledge of E *would now have* on one's degree of belief in [H], on the (counter-factual) supposition that one does not yet know E. (Howson and Urbach 1993, 404-405)

Suppose $B - E$ is the logically weakest proposition such that

$(B - E) \wedge E \equiv B$,

so that $p(X \mid B - E)$ is the agent's degree of belief in X "on the (counter-factual) supposition that [she] does not yet know E".

Then, if $p(E \mid B) = 1$, the agent's degree of confirmation is given by

$d'_p(H, E, B) = p(H \mid B) - p(H \mid B - E)$,

"actual" – "counterfactual".

However, in case E is not known, it cannot be dropped from B. Therefore one has to generalize from the case of POE where $p(E \mid B) = 1$ to the case of C where $p(E \mid B)$ need not be 1.

The question is, of course, how the counterfactual strategy is adequately generalized. Apart from the above, there are the following (and uncountably many more) formulations of $d'_p(H, E, B)$:

$d'_p(H, E, B) = p(H \mid (B - E) \wedge E) \cdot p(E \mid B) + p(H \mid (B - E) \wedge \neg E) \cdot p(\neg E \mid B) - p(H \mid B - E)$

$= p(H \mid (B - E) \wedge E) \cdot p(E \mid B) - p(H \mid B - E)$

$= p(H \mid (B - E) \wedge E) - p(H \mid B - E)$

$= p(H \mid B \wedge E) - p(H \mid B - E)$

8. Generalizing the Counterfactual Strategy

Instead of considering

> the (counter-factual) supposition that one does not yet know E (Howson and Urbach 1993, 405)

the quote suggests to consider

> the (counter-factual) supposition that one does not yet *believe in E to degree* $p(E \mid B)$.

However, the background knowledge at t_1 and at t_2 is the same, because the change in the agent's degree of belief in E is exogenous. Therefore one cannot just drop something (say, all information bearing on E) from B_2 to get a counterfactual supposition $B_2 \setminus E$ which could play a role analogous to that of $B_2 - E$ in the special case where $p_2(E \mid B_2) = 1$.

Instead, one really has to adopt a new probability function p^E! Suppose $p^E(X \mid B)$ is the agent's degree of belief in X on the counterfactual supposition that she does not yet believe in E to degree $p(E \mid B)$.

Then there are the following (and uncountably many more) ways of generalizing *d'*:

$g_{1p}(H, E, B) = p^E(H \mid B \wedge E) \cdot p(E \mid B) + p^E(H \mid B \wedge \neg E) \cdot p(\neg E \mid B) - p^E(H \mid B)$

$g_{2p}(H, E, B) = p^E(H \mid B \wedge E) \cdot p(E \mid B) - p^E(H \mid B)$

$g_{3p}(H, E, B) = p^E(H \mid B \wedge E) - p^E(H \mid B)$

$g_{4p}(H, E, B) = p(H \mid B \wedge E) - p^E(H \mid B)$

$g_{5p}(H, E, B) = p(H \mid B) - p^E(H \mid B)$

9. The Result to Follow – and a Necessary and Sufficient Condition for it

According to Bayesian intuitions, the result to follow is that

> H is more confirmed by E relative to B_2 at t_2 than (relative to B_1) at t_1 if and only if the agent's degree of belief in E at t_2 is greater than at t_1, i.e.

$c_{p2}(H, E, B_2) > c_{p1}(H, E, B_1) \Leftrightarrow p_2(E \mid B_2) > p_1(E \mid B_1)$,

> provided E is positively relevant for H given B_1 ($\equiv B_2$).

More generally, this means either D_C or D_A, depending on how one construes "positively relevant":

D_C $\quad c_{p2}(H, E, B_2) > c_{p1}(H, E, B_1) \Leftrightarrow$
$p_1^E(E \mid H \wedge B_1) > p_1^E(E \mid B_1)$ and $p_2(E \mid B_2) > p_1(E \mid B_1)$

or

$p_1^E(E \mid H \wedge B_1) < p_1^E(E \mid B_1)$ and $p_2(E \mid B_2) < p_1(E \mid B_1)$

D_A $\quad c_{p2}(H, E, B_2) > c_{p1}(H, E, B_1) \Leftrightarrow$
$p_1(E \mid H \wedge B_1) > p_1(E \mid B_1)$ and $p_2(E \mid B_2) > p_1(E \mid B_1)$

or

$p_1(E \mid H \wedge B_1) < p_1(E \mid B_1)$ and $p_2(E \mid B_2) < p_1(E \mid B_1)$.

Before continuing, note that it is plausible to assume that counterfactual degrees of belief are stable over time, i.e.

E $\quad p_1^E(H \mid B_1) = p_2^E(H \mid B_2)$.

The reason is that in going from t_1 to t_2 the only change is exogenous and in E, and $p_i^E(H \mid B_i)$ is the agent's degree of belief in H on the counterfactual supposition that she does not yet believe in E to degree $p_i(E \mid B_i)$.

Interestingly, E sheds positive light on g_1 and g_5 (here and in the following the index of the background knowledge is dropped, because $B_1 \equiv B_2$):

> 1) E is necessary and sufficient for g_1 to satisfy D_C, assuming "counterfactual Jeffrey conditionalisation", i.e. $p_1^E(H \mid \pm E \wedge B) = p_2^E(H \mid \pm E \wedge B)$, and
>
> 2) E is necessary and sufficient for g_5 to satisfy D_A, assuming JC.

Moreover, E sheds negative light on $g_{2\text{-}4}$: Given counterfactual JC,

> 3) E is necessary and sufficient for g_2 to satisfy F, and
>
> 4) E is necessary and sufficient for g_3 to satisfy G_C.

Given JC,

> 5) E is necessary and sufficient for g_4 to satisfy G_A.

Here

F $\quad c_{p2}(H, E, B) > c_{p1}(H, E, B) \Leftrightarrow p_2(E \mid B) > p_1(E \mid B)$,

G_C $\quad c_{p2}(H, E, B) = c_{p1}(H, E, B) = p_i^E(H \mid B \wedge E) - p_i^E(H \mid B)$,

G_A $\quad c_{p2}(H, E, B) = c_{p1}(H, E, B) = p_i(H \mid B \wedge E) - p_i^E(H \mid B)$.

F is odd, because it does not matter whether E is positively relevant for H given B. G_C and G_A are odd for a Bayesian, because confirmation is invariant w.r.t. exogenous belief changes in E.

All things considered it seems fair to say that the proper generalisation of *d'* is g_1 or g_5. In order to get confirmation right they both require counterfactual degrees of belief to be stable over time.

So g_1 and g_5 reduce to

$g_{1pi}(H, E, B) = p_0^E(H \mid B \wedge E) \cdot p_i(E \mid B) + p_0^E(H \mid B \wedge \neg E) \cdot p_i(\neg E \mid B) - p_0^E(H \mid B)$,

$g_{5pi}(H, E, B) = p_i(H \mid B) - p_0^E(H \mid B)$.

10. Actual Degrees of Belief

Whether or not the preceding generalisations are appropriate, they are not satisfying, because it remains questionable how $p^E(X \mid B)$ is determined and related to the agent's actual degree of belief function $p(X \mid B)$. This question being unanswered, the counterfactual strategy is concluded to provide no genuine solution to C either.

Let us therefore consider an account solely in terms of actual degrees of belief (and providing a possible answer to the mentioned question).

Generally, the example in section 3 is one where E is positively relevant for H given B, and the agent's degree of belief in E changes exogenously as time goes by. If there is an increase (decrease) in the agent's degree of belief in

E, her degree of belief in *H* increases (decreases), too; and conversely, if *E* is negatively relevant for *H* given *B*.

All Bayesian accounts of confirmation measure in some way the difference between

$$p(H \mid E \wedge B) \text{ and } p(H \mid B).$$

Given Bayes or strict conditionalisation, this is just the difference between the agent's prior and posterior degree of belief in *H* when she learns *E* and nothing else.

The counterfactual strategy measures the difference between the agent's actual or posterior degree of belief in *H* and her counterfactual one – the latter replacing her prior. The reason is that the prior and posterior degrees of belief coincide if *E* was already known.

Solving C requires something more general, because there one does not learn or know *E*; there is only a change in the agent's degree of belief in *E*.

This suggests to consider the agent's prior and posterior degree of belief in *H* when the only change is exogenous and in *E*.

However, one cannot simply take the difference between

$$p_i(H \mid B) \text{ and } p_{i-1}(H \mid B).$$

(*B* is the same, because all changes are exogenous.)

For suppose the agent's degree of belief in *E* increases enormously in going from t_{i-2} to t_{i-1}, say from

$$p_{i-2}(E \mid B) = .01 \text{ to } p_{i-1}(E \mid B) = .9;$$

and then it increases again in going to t_i, but only slightly, say to

$$p_i(E \mid B) = .91.$$

Then the difference between

$$p_{i-2}(H \mid B) \text{ and } p_{i-1}(H \mid B)$$

is much greater than the difference between

$$p_{i-1}(H \mid B) \text{ and } p_i(H \mid B).$$

Consequently, the difference between the prior and posterior degree of belief in *H* at t_{i-1} is much greater than that at t_i, although the agent's degree of belief in *E* at t_{i-1} is smaller than at t_2, i.e.

$$p_i(H \mid B) - p_{i-1}(H \mid B) < p_{i-1}(H \mid B) - p_{i-2}(H \mid B)$$

and

$$p_i(E \mid B) > p_{i-1}(E \mid B),$$

where *E* is positively relevant for *H* given *B*, and all belief changes are exogenous.

What one has to consider instead is the difference between the agent's current degree of belief in *H*, $p_i(H \mid B)$, and her *first* degree of belief in *H*, $p_0(H \mid B)$, where the only change in going from t_0 to t_i is exogenous and in *E*.

The proposal therefore is

$$g_{6pi}(H, E, B) = p_i(H \mid B) - p_0(H \mid B)$$

$$= p_0(H \mid E \wedge B) \cdot p_i(E \mid B) + p_0(H \mid \neg E \wedge B) \cdot p_i(\neg E \mid B) - p_0(H \mid B) \qquad i \text{ times JC},$$

which satisfies D_A.

g_1, g_5, and g_6 coincide, if

$$p_0^E(H \mid \pm E \wedge B) = p_0(H \mid \pm E \wedge B) \text{ and } p_0^E(H \mid B) = p_0(H \mid B).$$

11. The Common Knock-Down Feature *or* Anything Goes

All three measures g_1, g_5, and g_6 have in common that their values essentially depend on the agent's first degree of belief function p_0.

In case *E* is known and logically implied by *H* and *B*, the agent's degree of confirmation of *H* by *E* relative to *B* at time t_i (measured by g_6) is even uniquely determined by her first guesses in *E* and *H*, $p_0(E \mid B)$ and $p_0(H \mid B)$!

Why the exclamation mark?

First, because this shows that the idea behind any Bayesian theory of confirmation – namely to determine the degree of confirmation by the agent's actual subjective degrees of belief – is shown to fail.

Second, because – by the subjective interpretation – p_0 is any arbitrary assignment of values in [0,1] to the atomic propositions of the underlying language, whence by choosing an appropriate p_0 one can obtain more or less any degree of confirmation.

12. The Problem of Prior Probabilities

Thus we are back at the problem of prior probabilities, the standard solution to which I take to be the "washing out of priors" relying on convergence to certainty and merger of opinion (cf. Earman 1992, esp. 57-59).

However, the latter is not applicable here, because g_6 and company never get rid of the agent's first degree of belief function p_0.

The only way out is some kind of objective or logical probability function the agent could adopt as her p_0.

Yet the difficulty of determining such a logical probability function just was the reason for turning to the subjective interpretation. [2] [3]

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Das Drama des Zeitgeistigen – Die 'Ludwig-Wittgenstein-Industrie' als *lieu de mémoire* des österreichischen Wissenschaftsbetriebs

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"I ought to be no more than a mirror in which my reader can see his own thinking with all its deformities, so that helped in this way, he can put it right." (*Ludwig Wittgenstein*)

Ludwig Wittgenstein's 50th anniversary of his death two years ago was the reason for remembering someone who was never forgotten. These recent publications and events are challenging to look at the 'drama' of Wittgenstein's instrumentalisation by sience, influenced by society and politics. It's to ask why he was so popular in various disciplines and also *each* epoque had *their* Wittgenstein: These different perspectives tell more about the context than about Wittgenstein himself. About this mystic interest in Wittgenstein some things can be said with special focus on *Biographieforschung* and the *Kulturwissenschaften*: The focus on biography from the very beginning in Wittgenstein research seems to have connected the interests of different disciplines; supported also by Wittgenstein's *own* interdisciplinary philosophical writing. Further it's less his realizations than his method-oriented thinking, which is independent from times and disciplines and therefore grants always new perceptions.

Es ist nicht nur die 'Zeitgeistigkeit' seines philosophischen Werkes, sondern auch das ewigliche Interesse an seiner Person: Ludwig Wittgensteins 50. Todestag im Jahr 2001 war der Grund für zahllose Konferenzen, Ausstellungen und Artikel – an jemanden erinnernd, der niemals vergessen war. Es ist dieses Phänomen 'Wittgenstein' das die Kulturwissenschaften herausfordert sich seine Instrumentalisierung durch die Wissenschaft, beeinflusst von Gesellschaft und Politik, anzuschauen.

Der Wittgenstein-Boom

Ludwig Wittgenstein ist 1951 in Cambridge gestorben. Fast 25 Jahre später wird die Österreichische Wittgenstein Gesellschaft (1974) gegründet, die seitdem jährlich ein Symposium in Kirchberg ausrichtet. Wieder ca. 25 Jahre später signalisiert dort eine Ausstellung mit dem Titel *Wirklichkeit und Mythos* (1997) bereits ein überdeutliches Verlangen nach Zuordnung und Eindeutigkeit in der Unübersichtlichkeit einer blühenden 'Wittgenstein-Industrie' – mit alleine drei Wittgenstein-Gesellschaften und zwei Wittgenstein-Archiven. Das österreichische Bundesministerium für Wissenschaft, Bildung und Kunst vergibt seit 1996 den Wittgenstein-Preis, den höchstdotierten Wissenschaftspreis. Das *Time*-Magazin hat ihn zu *dem* Philosophen des 20. Jahrhunderts gekürt, einem welcher "continues to attract fanatics who devote their life to disagreeing with one another…" (29. März 1999).

Diese Allgegenwart in der österreichischen Kulturlandschaft macht Ludwig Wittgenstein zu einem österreichischen 'Erinnerungsort'. *Lieux de mémoire* nennt der Soziologe Pierre Nora die Repräsentationen eines nationalen Gedächtnisses, die nicht nur zeigen, auf *was* (Orte, Personen, Gebäude) die Gesellschaft im Prozess von Identitätsbildung zugreift, sondern auch *wie* sie es tut. In den letzten 50 Jahren haben sich die verschiedensten Disziplinen zu unterschiedlichen Zeiten auf Wittgenstein bezogen, was herausfordert die diversen Interessen dieser 'Wittgenstein-Industrie' zu dekonstruieren. Das würde in Summe zeigen: jede Gesellschaft entdeckt *ihren* Wittgenstein, sobald sie in seinen Problemen die eigenen entdeckt. Es ist unmöglich einen Überblick über diese verschiedenen Rezeptionen zu geben. Ich stelle deshalb zwei jüngste Lesarten Wittgensteins vor, diejenigen, die möglicherweise aufschlussreich sind für die Frage, wa*rum* Wittgenstein in verschiedensten Disziplinen rezipiert und zu unterschiedlichen Zeiten als spannend empfunden wurde. Denn vergleicht man Wittgenstein mit Karl Popper, der in Amerika und England kaum noch genannt wird, weil er zum 'demokratischen Selbstverständnis' geworden ist (Edmonds/Eidinow 2000, 230), ist nach den Ursachen dieses stets neuen Interesses an Wittgenstein zu fragen. Dazu möchte ich zwei Hypothesen anbieten:

1) Ein Blick auf die *Biographieforschung* zu Ludwig Wittgenstein verleitet zu der Annahme, dass Wittgenstein deshalb eine so breite Resonanz findet, weil seine Biographie von Beginn an mit im Zentrum der Forschung stand. Dem Forschungsfeld Biographie war die Interdisziplinarität von Anbeginn eingeschrieben – so kam aus der Ethnologie das reflektierte Verhältnis von Forscher und Erforschtem, aus der Psychologie die Erkenntnis über die Konstruktion von Erzählungen, aus der Literaturwissenschaft der Blick auf Erzählstrukturen und Motive. Was bedeuten könnte, dass die von Beginn an *Biographie-zentrierte Wittgenstein-Rezeption* diese interdisziplinäre Resonanz von Wittgenstein motiviert und unterstützt haben könnte.

2) Auch die *Kulturwissenschaften* sind interdisziplinär motiviert. Deshalb rezipieren sie *diejenigen* Ansätze bei Wittgenstein, die vor allem für seine disziplinen-übergreifende Rezeption Motiv sein könnten. So legt *eine* aktuelle Rezeption nahe, dass es nicht alleine die Vielfalt seines Werk oder seine Erkenntnisse sind, als vielmehr die *Methodik* seines Denkens und Schreibens, die ihm eine breite Rezeption gewährt. Diese beiden Hypothesen werden nachfolgend in zwei Kapiteln ausgeführt.

1. Die Biographie-Forschung zu Ludwig Wittgenstein

Bereits während seiner Lehrtätigkeit in den dreißiger Jahren herrschte ein großes Interesse an der Biographie Wittgensteins, was in den fünfziger Jahren bereits "Legende" (Ingeborg Bachmann) war. Das wurde einerseits durch Wittgenstein selbst motiviert, durch sein Charisma und die bizarren Lebenswenden, durch seine gepflegte Aura der Distanz und seine Weigerung zu veröffentlichen: So publizierte er (nach dem Erstwerk *Tractatus* 1922) weder seine Manuskripte noch Autobiographisches. Das förderte die Neugier, verstärkt durch die unvollständige Veröffentlichung seiner Kriegstagebücher 1914–16 durch seine Nachlasswalter im Jahr 1961 – *ohne* die chiffrierten Teile. Das führte dazu, Wittgensteins Werk durch seine Biographie zu (ver)erklären. Unterstützt vom Zeitgeist der 1970er Jahre verpflichtete die "Tyrannei der Intimität" (Richard Sennett) auf die moralische Norm und suchte pathologische Abweichungen: so reduzierte die erste Biographie von William Bartley (1973) Wittgenstein psychoanalytisch auf einen homosexuellen Außenseiter und missdeutete sein Werk dementsprechend. Auch auf wissenschaftlicher Ebene galt das Interesse zunehmend dem "homo psychologicus" (Carl Schorske) der Wiener

Moderne, dem Interesse an einer Generation. Waren in der Dekade zuvor die philosophischen Schriften Wittgensteins herausgegeben worden, folgten nun die ersten Briefwechsel mit Kollegen und Freunden (u.a. P. Engelmann, G.E. Moore), Anfang der 1980er Jahre die ersten Memoiren seiner Freunde (u.a. N. Malcolm, R. Rhees) – eine Antwort auf das zunehmende Interesse am (Auto-) Biographischen, aber auch das Resultat einer Wende in der Wissenschaftskultur. Denn die Anerkennung musste sich die Biographie, und damit lebensgeschichtliche Zeugnisse wie Tagebuch, Brief oder Erinnerungen, im Wissenschaftsbetrieb erst erarbeiten.

Gegenüber der Biographie herrschte in der Wissenschaftsgeschichte stets eine ambivalente Haltung zwischen totaler Ablehnung oder absoluter Integration. Der Biographismus war seit dem Niedergang des Positivismus in den deutschsprachigen Ländern eher ein anglophones Spezifikum. Denn der Glaube an das autonome Subjekt ging unter den Erfahrungen des Nationalsozialismus und dem Einfluss von *Kritischer Theorie* und *Sozialgeschichte* verloren (Szöllösi-Janze 2000). Erst der *New Historicism* bringt Subjekt und Struktur wieder zusammen. Auch die Rezeption von französischen und angelsächsischen Theorien (M. Halbwachs, Cultural Studies) unterstützt das Wiederaufleben des Biographischen in den 1980er Jahren. Insbesondere der *narrative turn* – was meint, den Blick auf die Bedeutung der Erzählung für die Darstellung von Wirklichkeit zu richten – hat die bisherige Unterscheidung zwischen "facts" and "fiction" (Richard Evans) aufgelöst, und dem früher als Einschränkung empfundenen Faktor der *Subjektivität* und *Selektivität* besondere Qualität beigemessen. Empfindungen und alltäglichen Erfahrungen wurde damit nun ebenso wie Tagebüchern oder Briefen wissenschaftlicher Wert zugesprochen. Auch *Multikulturalismus* und poststrukturalistische *Dekonstruktion* haben zu einem "rethinking of biography" beigetragen, betonend, dass "the production of meaning in biographical form is a powerful force in shaping and reshaping cultural memory" (Rhiel/Suchoff 1996, 3f.). Diese Anerkennung des Biographischen ging einher mit der "interpretativen Wende" der Humanwissenschaften, den Verweisen auf die Standortgebundenheit jeder Wissenschaft und die Abhängigkeit des Forschungsobjekts vom Ort des Betrachters. Das führte zunächst zu einer zunehmenden Skepsis am Autobiographischen und dem Ruf nach vermehrter Quellenkritik[1], in den 1990er Jahren aber doch zu einem wachsenden Vertrauen in die Biographie als investigative und argumentierende Berichterstattung (Schlaeger 1995, 59f.).

In Folge haben der *postmoderne Identitätsturn* der 1980er Jahre und der *Erinnerungsboom* der 1990er Jahre den biographischen Zugang quer durch *alle* Wissenschaftsdisziplinen etabliert – und damit der biographischen Wittgensteinforschung wichtige Impulse geliefert: Sichtbar anhand der Publikationen anlässlich der 100-Jahrfeier seines Geburtstages (1989), wie seines 50. Todestages (2001)[2]. Sichtbar auch in der wechselseitigen Beeinflussung der Diskussionen zwischen Philosophie, Literatur und Editionswissenschaft. Ein interdisziplinärer Austausch der das Potential hat, Forschungsdogmen zu erkennen.

Interdisziplinarität versus Forschungsdogmen

Spricht man gemeinhin sogar von einem zeitgenössischen Dilemma eines überbordenden biographischen Interesses, hinter welchem die Werke selbst oft zu verschwinden drohen, wie es das Beispiel Iris Murdoch zeigt,[3] ist das *Besondere* im Fall Wittgenstein: Hier scheinen sich zumindest seit den 1990er Jahren die Interessen an Biographie und Philosophie *gegenseitig* zu inspirieren. Das ist möglicherweise ein Zugeständnis an den vielfach geforderten Theorien- und Methodenpluralismus und an Dialogkultur, wenn sich nun auch die Philosophie für kulturwissenschaftliche Perspektiven öffnet, wie in der jüngsten Diskussion zwischen denen, die die Biographie als belanglos für das Verstehen des Wittgensteinschen Werkes erachten und denjenigen, die es als Voraussetzung jeglichen Verständnisses betrachten. Dieses Wiederaufleben eines alten philosophischen Streits, doch unter neuen Vorzeichen, zeigt, wie sehr die Biographieforschung in den letzten Jahrzehnten an Qualität, Anerkennung und integrativer Funktion gewonnen hat. So erklärt James Conant, dass es auch aus philosophischer Perspektive im Falle Wittgenstein durchaus Sinn mache, Leben und Werk gemeinsam zu betrachten, denn Wittgenstein sei kein moderner Philosoph, der eine "well-reasoned philosophical theory" suchte, sondern einer, der in der sokratischen Tradition der antiken Philosophie stehe: "philosophy as a way of life" (2001, 21f.).

Diese umfassendere Wahrnehmung der Person Wittgenstein führte zum kritischeren Blick auf die bisherigen Werk-Editionen, die dem Willen des Autors selbst kaum Rechnung trugen. Ray Monk war es, der mit seiner intellektuellen Biographie *Ludwig Wittgenstein, The Duty of Genius* eine Debatte in der Editionswissenschaft mitinitiierte. Er bezog die bis in die 1980er Jahre separierten Interessen an Wittgenstein – sein Leben, kulturelle, ethische und religiöse Themen und die Philosophie – aufeinander, um, angelehnt an Wittgensteins Spätphilosophie, zu beschreiben und nicht zu erklären. Er folgt hier Wittgensteins eigenen Verweisen in seinem Tagebuch, wo dieser schreibt: "Die Denkbewegungen in meinem Philosophieren müssten sich in der Geschichte meines Geistes, seiner Moralbegriffe und dem Verständnis meiner Lage wieder finden lassen." Deshalb nennt Monk die Biographie auch "a typical Wittgensteinian genre", denn sein Leben ohne das Werk anzuschauen, sei ebenso verkehrt wie vice versa (2001, 5).

Aus diesem Grund u.a. wurde auch die erste Wittgenstein-Werkausgabe (1962f.) kritisch hinterfragt, weil hier vereinzelte Werke aus dem Gesamtbestand herausgenommen, betitelt und gesondert publiziert wurden. Ist die Diskussion über die Verantwortung von Nachlasswaltern, die Notwendigkeit Eingriffe kenntlich zu machen, Methoden und Interessen zu offenbaren, bereits im Anschluss daran geführt worden, so haben vor allem die zunehmenden Erkenntnisse aus seiner Biographie in den 1990er Jahren einen spezifischen Wittgensteinschen Stil erkennen lassen: seine Sicht des Werkes als Gesamtwerk, wo jede Bemerkung nur in der "Summe ihrer Kontexte" (Michael Nedo) zu verstehen sei. Werkgetreue Editionen folgten.

Kontext-evoziert sind auch zwei andere Umstände, die das Interesse an Wittgensteins Biographie maßgeblich pushten. Michel Foucault hat gezeigt, dass es der Zeitgeist ist, der die Kategorien der Wahrnehmung formt und bestimmt, welche Fragen gestellt werden. Denn es sind

[1] Diese Form der Reflexion, der Kriterien der Auswahl und des Einflusses von außen, fehlt für die meisten Briefwechsel, ebenso für die Erinnerungen an Ludwig Wittgenstein.

[2] Vgl. zur Biographie u.a.: Monk (1990); McGuinness (1988); Secessionskatalog (1989); Somavilla (1997); Janik, Veigl (1998). Gegenwärtige Projekte: Nedo (2004); die Erstellung einer umfassenden Briefdatenbank im Brenner Archiv Innsbruck; Wittgenstein, H. (1948), *Familienerinnerungen*, als kulturwissenschaftliches Editions-Projekt von Ilse Somavilla und Nicole Immler.

[3] Das Buch ihres Ehemannes John Bayley 'Iris' (1999) wurde im Erscheinungsjahr fünf mal neu aufgelegt, der Film 'Iris' (2002) euphorisch gefeiert. Ihre Werke bleiben im Verborgenen, ebenso ihre intellektuelle Biographie.

die öffentlichen Diskurse, die "systematisch die Gegenstände bilden, von denen sie sprechen…" (1981, 74). So hing beispielsweise in den 1970er Jahren im Zuge der nationalen Selbstfindung Österreichs das biographischen Interesse an Wittgenstein unmittelbar mit der Frage nach seiner philosophischen wie geographischen Zuordnung zusammen, in der Rede von *Wittgensteins Wien* (Janik, Toulmin) oder einer *Österreichischen Philosophie* (Rudolf Haller). Zu einem Zeitpunkt als die Wiener Jahrhundertwende breitenwirksam erforscht wurde, ist Wittgenstein als typischer Vertreter *Wien um 1900* porträtiert worden.[4] Diese Fragestellungen weichen im Kontext der Globalisierung einer größeren zentraleuropäischen Perspektive, generelleren Spannungsfeldern, wie dem von Universalismus und Partikularität (Gellner 1998).

Ähnlich dominant beherrscht heute ein neues Paradigma die Wittgensteinsche Forschungslandschaft. Die Diskussionen um die *Vergangenheitsbewältigung* in der Zweiten Republik, die sich ausdehnende Exilforschung, die Lancierung der Begriffe *Identität* in den 1980er und *Erinnerung* in den 1990er Jahren – sie alle sind wesentlich durch die internationale *Holocaust-Forschung* geprägt (Levi, Sznaider 2001), die mit ihrer Frage nach der jüdischen Herkunft über das Paradigma Biographie auch die Wittgensteinforschung beeinflusst hat. In den jüngeren Veröffentlichungen zu Ludwig Wittgenstein steht somit die Frage nach dem Jüdischen – "*Was Wittgenstein a Jew?*" – an prominenter Stelle, was dem "Diktat des Jüdischen" in den heutigen Fragestellungen der Wissenschaft zu verdanken sei, so Brian McGuinness. Es seien die Erfahrungen der zweiten Hälfte des 20. Jahrhunderts, durch die sich der Blick auf die Jahrhundertwende unter der Prämisse des Jüdischen richte; basierend auf der Idee, dass das kosmopolitische und pluralistische Wien des Fin de Siècle hauptsächlich von Juden getragen wurde (Beller 1992) – ein zu Recht problematisierter Ansatz, nicht nur, weil viele Nichtjuden unter den Kulturträgern waren. Dennoch, wenn McGuinness argumentiert, dass weder die Familie Wittgenstein noch Wittgenstein selbst etwas Jüdisches an sich hatte – "Wittgenstein did not think of himself as Jewish, nor need we do so. The concept is an attractive, although, or because, a confused one….But in any case these are aspirations, not realities" (2001, 231) – bleibt zu fragen: Ist es der gegenwärtige Zeitgeist zu zeigen, wie unjüdisch die Familie war? Hier wäre mit David Stern, der von Rush Rhees Interpretation, des Jüdischen als eine Geisteshaltung bei Wittgenstein ausgeht, die einseitige Definition des Judentums von McGuinness zu kritisieren und auf das ambivalente, inkonsistente Konzept des Jüdischen zu verweisen, demgemäß die Frage nicht lauten sollte, ob Wittgenstein ein Jude war oder nicht, sondern zu fragen sei, welche Rolle dieser Aspekt in seinem Leben gespielt hat, nämlich beispielsweise die, eines besseren Verständnisses seiner eigenen Person: "(…) this writing about Jewishness was a way in which he thought about the kind of person he was and the nature of his philosophical work" (ebda., 237).

Das macht Sinn, denn Wittgenstein selbst verweigerte sich diesen Zuordnungen rassischer, staatsbürgerlicher und nationaler Natur, indem er stets für Authentizität plädierte. Auch ein Blick auf familiäre Quellen, wie die *Familienerinnerungen* von Wittgensteins ältester Schwester Hermine, zeigt, dass in jenen zwar das Jahr 1938 und die jüdische Herkunft eine zentrale Rolle spielt, doch der Aspekt des Jüdischen für die Familie selbst nicht von Bedeutung war. Vielmehr war die Beschäftigung damit eine Antwort auf die nationalsozialistische Gegenwart, welche den Aspekt des Jüdischen für die Identität in den 1930er und 1940er Jahren in Wien maßgeblich machte (Immler 2002). Die Frage nach dem Rassischen zeigt sich damit als *eine* Folge der Holocaust-Forschung und ihres Diktats nach Zuordnung.

2. Kulturwissenschaftliche Rezeption von Ludwig Wittgenstein

Die Kulturwissenschaften richten den Blick insbesondere auf die Fragesteller und ihre Motive. Diese Grundsatzdebatte über notwendige, größere Reflexivität im Wissenschaftsbetrieb hat den Blick auf die *Methode* statt auf die *Erkenntnis* bei Wittgenstein gelenkt (Daniel 2002[3], 71f.) und legt nahe, dass es nicht alleine die Vielfalt von seinem Werk, als vielmehr die Methodik seines Schreibens ist, die ihm stets neue und disziplinenübergreifende Aktualität gewährt. Wurde Wittgensteins Schreibstil schon desöfteren im Zusammenhang mit der Editionsweise oder einem literarischen Anspruch beschrieben – so doch nicht als ein mögliches Motiv für die vielfältige Rezeption seiner Schriften, und erst jüngst in Bezug auf sein autobiographisches Schreiben.[5]

Deutlich wird das methodische Anliegen Wittgensteins in seinen fragmentarischen, verstreuten autobiographischen Bemerkungen, genereller in seiner Art die Manuskripte zu verfassen. Sein philosophisches Werk ist formal offen, eine Sammlung von Taschennotizbüchern, Manuskripten, Typoskripten und Zetteln, ohne lineare Argumentation mit Anfang und Ende, Theorien meidend, auf Beispiele setzend, weder Synthesen noch Resümees ziehend, den Aphorismus als offenes System pflegend, um in der Thematik zu mäandern. Es ließe sich spekulieren, ob nicht ein Text, wenn er offen bleibt, metaphorisch, imaginativ und plurisemantisch ist, statt fachspezifisch und abgeschlossen zu argumentieren, ein Vielfaches mehr an Resonanz erfährt. Wittgenstein vergleicht seine philosophischen Bemerkungen mit einer "Menge von Landschaftsskizzen, die auf diesen langen und verwickelten Fahrten entstanden sind. Die gleichen Punkte, oder beinahe die gleichen, wurden stets von neuem von verschiedenen Richtungen her berührt und immer neue Bilder entworfen" (1969, 285). Sein Werk, durch Vorworte und Mottos verknüpft, wünscht integrierte Betrachtung und pflegt die Vermischung von persönlichen und philosophischen Bemerkungen. Wenn man so will, hat Wittgenstein mit dieser Art, seine Manuskripte aus einer Masse loser Bemerkungen zusammenzustellen, den poststrukturalistischen Textbegriff (J. Kristeva, J. Derrida) als Gewebe von Querverweisen, vorweg genommen.[6] Sein Werk gilt deswegen nicht nur als Experimentierfeld postmoderner Texttheoretiker, sondern auch als interessant für jene Kulturwissenschaftler, die das "Frageinteresse" (Ute Daniel) vom Gegenstand zur Methode verlagert haben. Denn Wittgenstein propagierte absolute Transparenz bei der Gedankenanordnung: "Und wir dürfen keinerlei Theorien aufstellen… Alle Erklärung muss fort, und nur Beschreibung an ihre Stelle treten" (1984). Er wird damit in die Reihe jener Philosophen gereiht, die wie Friedrich Nietzsche, Georg Simmel, Ernst Cassirer oder Karl Mannheim über die Beschaffenheit von Wissen nachdachten, die Existenz von objektiven Erkenntnissen hinterfragten und "wissenschaftliche Selbstwahrnehmung" einforderten (Daniel 2002[3], 36f.).

[4] Vgl. u.a.: Schorske (1982); Johnston (1992[3)]; Janik, Toulmin (1984).

[5] Vgl. u.a.: Szabados (1995); Immler (2001).

[6] Diese vernetzte Schreibweise mit Verweisungscharakter gilt als ein Charakteristikum der literarischen Moderne um 1900 und findet sich bei Robert Musil, Walter Benjamin, Georg Simmel u.a.

So verweigerte Wittgenstein das rigide, linear argumentierende Denken der Moderne mit seiner Kritik am populärsten ethnographische Werk seiner Zeit, James G. Frazers *The Golden Bough*, ebenso wie mit seinem Wunsch, sein Erstwerk die *Logisch-Philosophische Abhandlung* gemeinsam mit den späteren *Philosophischen Untersuchungen* zu veröffentlichen, im Sinne einer "organischen" Philosophie.

Seine mäandernde Methode des Philosophierens, sein Prinzip einer Anordnung der Gedanken im Text war aber vielleicht auch, so ließe sich spekulieren, eine unbewusste Antwort Wittgensteins auf die regelrechte *Fetischisierung* seines Erstwerkes, das als *Tractatus* (1922) bereits gleich nach seinem Erscheinen berühmt geworden war und Wittgensteins Wahrnehmung lange dominiert hatte. So zeigte sich in den 1930er Jahren in der Zusammenarbeit zu einem gemeinsamen Buchprojekt, dass Friedrich Waismann unfähig war, auf Veränderungen in Wittgensteins Denken einzugehen, der sich in Folge dem Projekt entzog, denn er hatte jene früheren Gedanken schon lange völlig neu weitergeführt (Nedo 2004). Wittgensteins Spätwerk, so könnte argumentiert werden, begegnet mit seiner offenen, netzartigen Struktur dieser Gefahr einer "Fetischisierung" von Texten, wo ein "isoliertes Fragment die Gesamtheit" verdrängt (Frisby 2001, 68).[7] Diese Gefahr bestätigten jene Schriften Wittgensteins, die im nachhinein vereinzelt herausgegeben wurden, statt sie in Wittgensteinscher Manier im Gesamtkontext zu belassen.

3. Resümee

Zu Wittgensteins multipler Resonanz kann mit Blick auf die Biographieforschung und die Kulturwissenschaften zumindest soviel gesagt werden: Die von Beginn an Biographiezentrierte Wittgensteinforschung hat die verschiedenen disziplinären Interessen an Wittgenstein vernetzt, unterstützt von Wittgensteins *eigenem* interdisziplinären Denk- und Schreibstil. Weiters ist es weniger sein erkenntnis- als methodenorientiertes Denken, das zeit- und disziplinenunabhängig stets neue Rezeptionen ermöglicht. Denn dieses Interesse an der Methode ist ein generelles Anliegen der Wissenschaft, wo zunehmend ein höherer Reflexionsgrad auch seitens der Öffentlichkeit eingefordert wird.

Da Neuinterpretationen von Werk wie von Person stets den jeweiligen Zeitgeist widerspiegeln, gilt: Alles zu und über Wittgenstein ist eine Interpretation von Individuen – doch in einem erklärbaren soziopolitischen Kontext. Gewinnbringend sind hier interdisziplinäre Annäherung an Wittgensteins Werk, wie folgendes Beispiel zeigt: Lange wurde in der Philosophie diskutiert, ob das Werk in einen *ersten* Wittgenstein (des *Tractatus*) und einen *zweiten* (der *PU*) zu teilen sei. Literaturwissenschaftliche Analysen von Wittgensteins Schriften zeigten aber (am Bsp. der Begriffe Abbildung, Darstellung etc.), dass es eine durchgehende literarische Komponente im Werk gibt (Schmidt-Dengler u.a. 1990), sowie eine "verblüffende" Kontinuität zwischen Wittgensteins Tagebüchern aus dem Ersten Weltkrieg und denen aus den 1930er Jahren (Le Rider 2000, 290). Hier können mit Erkenntnissen aus der Literatur- wie der Biographiewissenschaft Debatten im Feld der Philosophie bestätigt, korrigiert, auf jeden Fall bereichert werden.

[7] Ich verweise auf eine Analogie mit David Frisbys Argumentation hinsichtlich des Werks von Georg Simmel; Frisby (2001, 68).

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Sehen als, Wahnsinn und Soziale Erkenntnis

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1. Einführung

Mein Artikel hat drei Zwecke. Der erste Zweck ist das Konzept *sehen als* vorzustellen, der zweite verwendet die obengenannten Konzepte in der Beschreibung des Fall des Wahnsinnes von Don Quijote. Der dritte Zweck besteht darin, einige theoretische Vorschläge zu bearbeiten, die Licht auf soziale Aspekte der Erkentniss und des Wahnsinnes werfen könnten.

2. Sehen als

Wittgenstein erklärt das Konzept des *Sehen als* im XI. Kapitel des zweiten Teiles der "Philosophischen Untersuchungen":

> Aber wir können auch die Ilustration einmal als das eine, einmal als das andere Dinge sehen.-Wir deuten sie also, und sehen sie, wie wir sie deuten. (…). Die folgende Figur, welche ich aus Jastrow entnommen habe, wird in meinen Bemerkungen der H-E-Kopf heißen. Man kann ihn als Hasenkopf, oder als Entenkopf sehen (Witttenstein 1988: 445-446)

Was Wittgenstein hier sagt läuft darauf hinaus, daß (1) Wir Ilustrationen wie den H-E-Kopf als *dies* oder *dies* sehen können; Ihre Beschreibung nimmt die Form: *O sieht P als Z* an; (2) Verschiedene Beschreibungen unserer Seherlebnisse derselben Ilustration sind möglich, weil wir einen oder einen anderen Aspekt des Bildes bemerken: *Der Ausdruck des Aspektwechseln ist der Ausdruck einer neuen Wahrnehmung zugleich mit dem Ausdruck der unveränderten Wahrnehmung* (Wittgenstein 1988: 450); Im Fall, daß ich einen stetigen Aspekt sehe, kann ich nicht aussagen: 'Ich sehe das jetzt als': *Man hält auch nicht, was man bei Tisch als Essbesteck erkennt, für ein Essbesteck; sowenig wie man, beim Essen, für gewöhnlich den Mund zu bewegen versucht, oder zu bewegen trachtet* (Wittgenstein 1988: 448). Diese Bemerkung ist interresant: das Konzept *sehen als* kann man nicht benutzen im Fall, wenn der Gegenstand unseres Sehens etwas Gewöhnliches, etwas "Normales" ist; (3) Angenomen in der Form *O sieht P als Z* gibt es mindestens sechs Werte, die die Variable *Z* annehmen können: Zum Beispiel, in der Ilustration des H-E-Kopfes kann man sie als (a) einen Bildgegenstand H-E-Kopf, (b) als einen Hasenkopf, (c) als einen Entenkopf, (d) als einen Bildhasenkopf, oder (e) als einen Bildentenkopf sehen (Wittgenstein 1988: 448-450). Gibt es eine weitere Möglichkeit (f), in der Illustration des H-E-Kopfes etwas anderes als in a-e zu sehen? (Zum Beispiel die Landkarte einer Halbinsel auf welcher ein Schatz versteckt ist); 4) das Kriterium des Seherlebnisses ist kein inneres Erlebnis, sondern *die Darstellung dessen, 'was gesehen wird'*" (Wittgenstein 1988: 454). 5) Diese Darstellung ist mit einer Einstellung, oder einer Aktivität verbunden: *Es ist für mich ein Tier, vom Pfeil durchbohrt. 'Ich behandle es als das; dies ist meine Einstellung zur Figur. Das ist eine Bedeutung davon, es ein 'Sehen' zu nennen* (Wittgenstein 1988: 470). 6) Die Grammatik der Ausdrücke *sehen als, halten für* und *vorstellen* sind nicht identisch aber verwandt (Wittgenstein 1988: 462; 488). Damit man diese Ausdrücke gut verstehen kann, muss man ihren Gebrauch im Fluss des Lebens beobachten.

Warum kann man in derselben Illustration so viele Bilder sehen? Bevor man auf diese Frage eine Antwort geben kann, muss man die Bedeutung der Frage selbst erklären. In wittgensteinischer Sicht hat das Wort *warum* mindestens zwei verschiedene Bedeutungen (Wittgenstein 1958: 15). Die eine bezieht sich auf die kausalen Verhältnisse, die andere bezieht sich auf die Gründe. Der Grund, P als Z zu sehen, besteht in der partikulären Deutung. Das kausale Verhältnis stützt sich auf die Erklärung der subjektiven Verhältnisse des Betrachters, das heißt, eine wissenschaftliche Theorie der Subjektivität.

Im Fall, daß das Wort *warum* in einer Frage nach den kausalen Verhältnissen benutzt wird, bemerkt Wittgenstein, daß für unsere Beschreibungen des H.E. Kopfes viele kausale Erklärungen gefunden werden können. Unsere Deutungen können *herkömmlich* sein und können durch *Erfahrung, Gewohnheit, Erziehung, Vorstellungskraft, Geläufigkeit des Operierens in der Zeichnung* und die *physiologischen* Umstände erklärt werden (Wittgenstein 1988: 446, 462, 466, 476). Es scheint, daß diese Erklärungen im zweiten Teil der "Untersuchungen" unsystematisch vestreut sind. Als Grund dafür, daß Witttgenstein diesen Problemen wenig Aufmerksamkeit gegeben hat, sagte er, daß die wissenschaftlichen Probleme ihn *nie wirklich fesseln* (Witttenstein 1980: 79). Die Handlungen der sozialen Agenten, aus der anthropologischen Sicht, kann als die Konjunktion dreier verschiedener Bedingungen dargestellt werden: der persönlichen Lebensgeschichte, der Kultur und der sozialen Struktur. *Gewohnheit*, *Erziehung* und *Tradition* beziehen sich auf die kulturellen und sozialen Aspekte des Lebens; *Vorstellungskraft*, *Erfahrung* und *Geläufigkeit des Operierens in der Zeichnung* und die *physiologischen* Umstände sind psychologische Faktoren und konstituiren die persönliche Geschichte. In dem folgenden Beispiel zeige ich in welcher Weise die Kultur und sozialen Verhältnisse die Einschätzung der Figur *des Don Quijote de la Mancha* beinflussen.

3. Der Wahnsinn von Don Quijote

Cervantes in "Don Quijote" erzählt uns die Geschichte des "Wahnsinnes" eines Mannes aus La Mancha im XVI. Jahrhundert, der, beeinflusst von Büchern über mittelalterliche Ritter, begann die Welt als etwas Anderes als andere Leute aus seiner Umgebung zu sehen. Nachdem er seine neue Persönlichkeit erschaffen hatte, ging er mit Sancho Panza, seinem einfachen Freund, der eine neue Rolle als

Schildknappe spielte, auf Abenteuersuche. Einmal, zum Beispiel, sah Don Quijote Riesen in Windmühlen. In einer anderen Situation sah er ein Schloss in Gaststätten, Damen in einigen Dienstmädchen, Armeen in Schafsherden, einen Helm in einer Barbierschale, eine Dame in der Figur der heiligen Jungfrau, wirkliche Menschen in Gliederpuppen, eine verzauberte Welt in der Höhle von Montesinos, ein verzaubertes Schiff in einem Fischerboot und so weiter. Einige Erlebnisse von Don Quijote könnten als Ilusionen analysiert werden; andere könnten als Beispiele von *sehen als*, *halten für* und *vorstellen* gedeutet werden. Um eine korrekte Beschreibung von Don Quijotes Erlebnissen zu geben, müssen wir jedes seiner Abenteuer einzeln analyzieren. Zu den Berühmtesten gehört der Kampf mit den Windmühlen. Don Quijote sah *ungeschlachte Riesen* mit denen er *ein Treffen zu halten und ihren sämtlich das Leben zu nehmen*, gedachte: *'Was für Riesen?' fragte Sancho Panza. 'Die du dort siehst' erwiderte sein Herr, 'die mit den langen Armen, denn manche haben ihrer, die sind an die zwei Meilen lang.' 'Gebt wohl acht, gestrenger Herr, was Ihr tut, denn was wir dort sehen, das sind keine Riesen, sondern Windmühlen, und was Ihr für die Arme haltet, das sind die Flügel, die den Mühlstein treiben, wenn der Wind sie dreht.' 'Da sieht man' sprach Don Quijote, 'wie schlecht du dich auf Abenteuer dieser Art verstehst. Und kommt dich etwa Furcht an, so hebe dich weg und bete ein Vaterunser, dieweil ich hingehe, um den Kühnen, wenn auch ungleichen Kampf zu bestehen* (Cervantes 1975, I, 113-114).

Kann man sagen, daß Don Quijote in den Windmühlen Riesen sah? Was sah in ihnen Sancho Panza? Sah er Windmühlen in Windmühlen? Hatte Don Quijote eine Illusion und Sancho Panza hatte sie nicht? Wie erkennt man hier, ob jemand eine Illusion hat?

Die einfachste, idealistische Deutung ist, daß Sancho sah, was er deutete. Da Sancho seine Wahrnehung als Windmühlen deutete, sah er Windmühlen; da Don Quijote seine Wahrnehmung als Riesen deutete, sah er die Riesen. Man kann jedoch nicht aussagen *Don Quijote sah Riesen in den Windmühlen*, außer, daß man an Sancho Panza Stelle ist. Man kann nicht aussagen: *Sancho Panza sah Windmühlen in den Riesen* außer, daß man an Don Quijote Stelle ist. Eine andere, Gott-Stelle, existiert nicht*: Wir deuten sie also, und sehen sie, wie wir sie deuten*: P= Z1 V Z2 V Z3 V Zn.

Diese Stellung trifft auf das folgende Problem: Im Fall, daß es etwas, zum Beispiel Z gibt, daß man als Z1 sehen kann, gibt es auch etwas, was man als Z sehen kann? Aber angenommen, daß es etwas, zum Beispiel Y gibt, was man als Z sehen kann, gibt es etwas, was man als Y, sehen kann? Wo sollen wir den *Regressus* halten?

Ist eine andere, realistische Deutung des *Sehen als* möglich, die Deutung, die die Existenz des Gegenstandes P fördern könnte? Cervantes scheint zu denken, daß solche Deutung möglich ist: Don Quijote hatte eine Ilusion und Sancho Panza hatte sie nicht. Warum? Es ist klar, daß Don Quijote und Sancho Panza am Anfang zwei verschiedene Erlebnisse hatten, deren Kriterium *die Darstellung dessen, 'was gesehen wird'* ist. Beide, Sancho Panza und Don Quijote, drückten zwei verschiedene Einstellungen zur Figur aus: Sancho war passiv und still: die Windmühlen hatten einen stetigen Aspekt, sie waren ein Teil der Landschaft, die immer da war. Don Quijote hielt die Windmühlen für Riesen, aber sie waren so wirklich und lebendig wie die Windmühlen für Sancho Panza. Dann aber hollte Don Quijote seine Lanze heraus, bereitete sich für einen Kampf vor, trieb Rocinante, sein geliebtes Pferd, an, und zum Schluss steckte er seine Lanze in die Windmühlen hinein, wurde mitgerissen und fiel vom Pferd herunter. Sancho Panzo sagte ihm: *Hab ich es Euer Gnaden nicht gesagt, Ihr solltet achtgeben, was Ihr tut, und es seien nur Windmühlen? Meiner Treu! man mußte selber Windmühlen im Kopfe haben, wenn man das nicht sehen wollte?* (Cervantes 1975, I, 114). Don Quijote der früher meinte, daß die Windmühlen Riesen waren, musste sich jetzt mit Sancho einigen: *Schweig, 'Freund Sancho', sagte don Quijote; 'das Kriegsglück ist verändlicher als alles andre. Und sicherlich ist es so, wie ich dir sage; (...)* (Ibidem). Die praktische Konsequenzen der Einstellungen scheinen ein neues Kriterium der falschen oder richtigen Wahrnehmungen zu sein. Glaubte Don Quijote, nachdem er mitgerissen wurde, daß seine frühere Meinung falsch war? Was bedeutet der Aussdruck *das Kriegsglück ist verändlicher als alles andre*? Das ist genau der Punkt an welchem Don Quijote aus der wittgensteinischen Sicht gedeutet werden kann.

Da der Gegenstand (P) für Sancho Panza (O1) die Windmühlen (Z1) ist, konnte er nicht *ich sehe dies als Windmühlen* aussagen. Für Don Quijote (O2) hatte der Gegenstand einen aufleuchtenden Aspekt. Die Gramatik des Ausdruckes *ich sehe das jetzt als* bezieht sich auf den *Ausdruck einer neuen Wahrnehmung* (P als Windmühlen gesehen=Z1) *zugleich mit dem Ausdruck der unveränderten Wahrnehmung* (P als Riesen gesehen=Z2). Es gibt einen anderen Unterschied zwischen Sancho Panza y Don Quijote. Sancho Panza dachte, daß das Aspektwechseln etwas war, was Don Quijote in seinem *Kopfe* trug. Don Quijote nahm an, daß P von Freston, dem Zauberer, verzaubert wurde. Den Aspekt von Z1 zu Z2 wechseln war möglich, weil P1 in P2 verändert wurde: *jener weise Zauberer Friston, der mir Kammer und Bücher entführte, hat auch die Riesen in Windmühlen verwandelt, nur damit er mir nicht die Ehre des Sieges zu lassen brauchte; (Ibidem)).* Sancho Panza konnte nicht mehr gegen Don Quijote argumentieren.

4. Wahnsinn und die soziale Erkenntnis

Obwohl der fahrende Ritter denkt, daß Friston und andere Zauberer für das Aspektwechseln der Sachen verantwortlich sind, denken die andere Menschen in Don Quijotes Umgebung, daß Zauberer nicht existieren und daß Don Quijote wahnsinnig ist. Sie werden die unsichtbaren Helfer von Sancho Panza sein.

Wie Wittgenstein sagte: Den Wahnsinn muss man nicht als Krankheit ansehen. Warum nicht als eine plötzliche- mehr oder weniger plötzliche- Charakteränderung? (Wittgenstein 1984: 54) Tatsächlich veränderte sich das Leben und der Charakter von Don Quijote. Von der Zeit seiner ersten Reise an, hatte es eine ethische Mission: er wollte den Armen und Kranken in selbstloser Weise helfen, seiner Angebeteten Dulcinea dienen, seine Ritter-Hochtung aufrechterhalten und aussichtslose Unternehmungen unterstützen. Seine Meinungen, die falsch für die anderen schienen, spielen eine wichtige Rolle in Don Quijotes Leben: Die Wahrheit gewisser Ehrfahrungssätze gehört zu unserm Bezugssystem (Wittgenstein 1994: 297). Dem Bezugsystem entspricht ein Weltbild. Wie kann man zwischen einem unakzeptierten Weltbild und dem Wahnsinn unterscheiden?

In Bezug auf diese Frage, stelle ich als eine mögliche Antwort die folgende These vor: Das Bezugsystem nimmt die Form der sozialen Erkenntnis an, wird representiert und gefördert von definierten sozialen Handelnden. Im Fall Don Quijotes existierten die soziale Kreise, die sein Weltbild unterstützen konnten, nicht mehr. Und das Weltbild

den existierenden Kreise steht im Kampf mit dem Weltbild von Don Quijote. Wer hatte Angst davor, daß Don Quijote seiner Charakteränderung nachgab? Cevantes stellt vier Personen dar, die in der Nähe von Don Quijote standen: (1). Seine Nichte; (2) die Haushälterin; (3) Der Pfarrer, Herr Lizentiat; (4) Der Barbier; (5) Der Bakkalaureus Sansón Carasco; und (6) Sancho Panza, der einfache Nachbar von Don Quijote. Die ersten vier Personen verbrannten seine Bibliothek, alle schmiedeten Pläne hinter seinem Rücken, sie sperrten ihn in einen Käfig, sie logen ihn an, und alles um den irrenden Ritter zu einem "normalen" Leben in La Mancha zu zwingen. Eine von den außerordentlichen Figuren ist Sancho Panza, der am Anfang seinen Herren für verrückt hielt, aber danach seine Meinung änderte.

Alle stimmten überein daß Don Quijote ein außergewöhnlicher Verrückter war: seine Aussagen und Handeln konstruierten ein elegantes Bezugsystem; seine einzige Sünde bestand darin, daß er die Welt aus einer anderen Perspektive sah. Nachdem sein "Wahnsinn" mit der sozialen, "normalen" Erkenntnis verglichen wurde, wurde seine Wahrnehmung für eine Pathologie gehalten. Die Charaktere, die die "richtige" Erkenntniss represäntierten und sich um die "Gewohnheit", "Erziehung" und die "Tradition" sorgten, symbolisierten die folgenden sozialen Werten und Institutionen:

Personen	**Institutionen**	**Werte**
Die Nichte	Familie	Leistungsfähigkeit, Fortpflanzung des Lebens
Die Haushälterin	Familie	Leistungsfähigkeit, Fortpflanzung des Lebens
Der Pfarrer	Religion	Wahrheit, Ritual, Schicksal-kontrolle
Der Barbier	Kosmetik, Hygiene, Medizin	Alltagsweisheit, tägliche Aktivitäten,
Der Bakaulaureat Sansón Carasco	Wissenschaft	Wahrheit, Aufklärung, Rationalität

Don Quijote sah die Welt in einer Weise, die mit der Lebensform vom XVI. Jahrhundert in Spanien in einem Widerspruch stand: Die soziale Ordnung, die von der Tradition des XVI. Jahrhunderts in Spanien verheiligt und gerechtfertigt wurde, wurde von Don Quijote und seinen Zoffen in einer symbolischen Weise, angezweifelt und zerstört. Das ist ein ausreichender Grund, Don Quijote und seine Perspektive zu unterdrücken und, zum Schluss, zu vernichten: *Endlich kam Don Quijotes letzte Stunde, nachdem er alle Sakramente empfangen und die Ritterbücher zu wiederholten Malen in kräftigen Ausdrücken verwünscht hatte* (Cervantes 1975, III 1354).

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Konstruktion und Dekonstruktion des Radikalen Konstruktivismus

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1. Einleitung

Der Radikale Konstruktivismus hat nur wenige Anhänger unter Philosophen, dafür aber zahlreiche in der Soziologie und der Kommunikationsforschung, der Neurologie und Kognitionswissenschaft. Im folgenden sollen einige der Thesen und Theorieentwürfe dargestellt werden, die für den Radikalen Konstruktivismus repräsentativ sind. Dabei lasse ich mich von der Darstellung von Siegfried J. Schmidt in seinem Einleitungsaufsatz zu dem von ihm herausgegebenen Sammelband *Der Diskurs des Radikalen Konstruktivismus* leiten, der entsprechende Anregungen in Überfülle präsentiert (Schmidt 1987b). Wir brauchen einen roten Pfaden durch dieses Theorien-Labyrinth, und ich habe mich für die Leitfrage entschieden: Wie konstruiert sich der Radikale Konstruktivismus? Dazu frage ich zunächst nach dessen Selbstverständnis und wende mich dann den Bausteinen Erkenntnistheorie, Kommunikationsmodell und Wissenschaftsauffassung zu. Abschließend werde ich einige Probleme des Radikalen Konstruktivismus diskutieren und damit gleichsam zu prüfen, wie stabil das Haus des Radikalen Konstruktivismus gebaut ist.

Was ist nun Radikaler Konstruktivismus? Radikaler Konstruktivismus, so will es Schmidt, ist „a way of thinking“ (1987b, 11). Er sei, wie Schmidt in der Vorbemerkung zu dieser Aufsatzsammlung schreibt, „keine homogene Doktrin, sondern ein äußerst dynamischer interdisziplinärer Diskussionszusammenhang“ (1987a, 7). Noch könne der Radikale Konstruktivismus nicht „auf Lehrbuchniveau dargestellt werden“ (1987b, 75). Gemeinsam sei den verschiedenen Richtungen (Schmidt 1987b, 75):

> die empirische Basis in Biologie, Neurophysiologie und Psychologie
>
> die Anerkennung grundlegender ethischer Folgerungen
>
> die Anwendungsorientierung
>
> die Orientierung aller Beschreibungen und Erklärungen menschlichen Verhaltens auf autopoietische Organisation und deren Aufrechterhaltung
>
> die Verbindung mit dem evolutionären Erklärungsansatz und der kognitiven Psychologie
>
> und die Orientierung auf Konstruktivität statt auf Abbildung und Informationsverarbeitung.

Auf diese Punkte soll im folgenden eingegangen werden. Mit zwei Ausnahmen: Die ethischen Überlegungen und die gesellschaftspolitischen Forderungen lasse ich gänzlich außer acht. Für den Bereich, den ich hier vorstellen will, gilt: Radikaler Konstruktivismus ist eine Erkenntnistheorie oder ein Forschungsansatz der Kognitionswissenschaft.

Die Grundthese des Radikalen Konstruktivismus ist: Die Wirklichkeit ist bloß unsere Erfindung. Oder anders formuliert: Objektivität entsteht durch die Täuschung eines Subjektes, daß Beobachtung ohne es stattfinden könnte. Realistische Theorien gehen davon aus, daß es eine von uns und unserer Wahrnehmung unabhängige Wirklichkeit gibt, die Gegenstand der Wahrnehmung ist. Die Objektebene wird nun vom Radikalen Konstruktivismus ausgeblendet, er beschränkt sich auf die Analyse der Erkenntnissubjekte.

Im Alltag gehen wir davon aus, (A1) daß es eine Welt gibt, (A2) daß wir diese Welt erkennen, (A3) daß wir über sie sprechen und sie verändern. Seit der Antike haben Philosophen die eine oder die andere dieser Annahmen abgelehnt. Eine besonders radikale Position vertrat der Sophist Gorgias. Seine drei berühmten Thesen sind:

> (G1) Es existiert nichts.
>
> (G2) Wenn doch etwas existieren sollte, so könnten wir es nicht erkennen.
>
> (G3) Und sollten wir wider Erwarten doch etwas erkennen, so könnten wir nicht darüber sprechen.

Ganz soweit geht der Radikale Konstruktivismus nicht. Er leugnet keineswegs die Existenz einer Welt. Er leugnet lediglich, daß wir einen direkten Zugang zu ihr haben. Wir haben, so der Radikale Konstruktivist, keinen Grund für die Annahme, daß unser Wahrnehmen, unser Erkennen ein Abbilden der Welt ist. Optische Täuschungen und andere wahrnehmungspsychologische Beobachtungen sprechen vielmehr dafür, daß unser Wahrnehmen eben nicht einem bloßen Abbilden gleichkommt. Deshalb verweigert der Radikale Konstruktivist jede Aussage über eine mögliche Ähnlichkeit oder ein Übereinstimmen unserer Erkenntnis mit einer von uns unabhängigen Wirklichkeit. Der Radikale Konstruktivist folgert daraus, daß wir aufhören müssen, die Wahrheit zu ergründen. Wenn Wahrheit *adequatio rei et intellectus* ist, also die Übereinstimmung von Denken und Welt, dann ist aus konstruktivistischer Sicht klar: Die Welt ist uns nicht gegeben, folglich können wir nie über die Wahrheit unserer Sätze urteilen. (Eine solche Kritik setzt freilich eine Korrespondenztheorie der Wahrheit voraus. Statt den Wahrheitsbegriff aufzugeben, könnte ein Radikaler Konstruktivist auch für eine Kohärenztheorie der Wahrheit optieren.)

Der Radikale Konstruktivismus leugnet auch nicht die Möglichkeit von Kommunikation. Schließlich wollen viele Kommunikationswissenschaftler, darunter auch Schmidt selbst, den Radikalen Konstruktivismus als Forschungsparadigma für die Kommunikationswissenschaft etablieren, und eine Kommunikationswissenschaft wäre höchst überflüssig, gäbe es keine Kommunikation.

2. Die Erkenntnistheorie

Daß wir es nie mit den Dingen, sondern immer nur mit unserer Wahrnehmung von den Dingen zu tun haben, ist eine alte Weisheit. Berühmt ist Immanuel Kants Unterscheidung zwischen dem „Ding an sich“, das uns verborgen ist, und dem „Ding in der Erscheinung“, zu dem wir durch die Apperzeption unserer Sinne gelangen. Der Radikale Konstruktivismus geht nun noch einen Schritt weiter: Er relativiert nun auch die Rolle der Sinne. Wir sehen nicht mit dem Auge, sondern mit dem Gehirn.

Für die Motivation dieser These spielen die Ergebnisse der Neurophysiologie eine große Rolle. Zunächst einmal ist die Vernetzung des Gehirns mit den Sinnesorganen, die es mit der Außenwelt verbinden, nahezu vernachlässigbar im Vergleich zur gehirninternen Vernetzung von Gehirnzellen mit anderen Gehirnzellen. Das Gehirn ist also zum größten Teil mit sich selbst beschäftigt. Aber immerhin: Das Gehirn hat einen gewissen „Zugang“ zur

Welt, nämlich unsere Sinnesorgane. Doch hier setzt das zweite Argument ein: Die Sinnesorgane übersetzen die Umweltreize in elektrische Impulse, die das Gehirn aber nicht einfach „zurückübersetzen“ kann: Für das Gehirn ist das „Klick, Klick“ der Nervensprache „bedeutungsneutral“ (Schmidt 1987b, 15): Das Gehirn muß diesen Signalen eine Bedeutung *zuschreiben*. „Aufgrund dieser Arbeitsweise“, so argumentiert Schmidt, „ist das Gehirn gar nicht in der Lage, Wirklichkeit als solche abzubilden oder zu repräsentieren. [...] Alle Bewertungs- und Deutungskriterien muß das Gehirn aus sich selbst entwickeln.“ (1987b, 15) Wir halten also fest:

1. „Wahrnehmung ist Bedeutungszuweisung zu an sich bedeutungsfreien neuronalen Prozessen, ist Konstruktion und Interpretation.“ (Roth 1986, 14; zit. nach Schmidt 1987b, 14) Und:

2. Das Gehirn hat keinen direkten Zugang zur Welt, es ist „kognitiv und semantisch abgeschlossen“. Es muß die Regeln, nach denen es Bedeutung zuweist, selbst entwickeln, es ist „selbstreferentiell und selbstexplikativ“ (Schmidt 1987b, 15).

Nun ist die Bedeutungszuweisung durch das Gehirn kein bloßes Spiel, kein Rätselraten zum Zeitvertreib, weil unsere kleinen grauen Zellen sonst nichts besseres zu tun hätten: Diese Bedeutungszuweisungen sind „überlebensnotwendige Leistungen“ (Schmidt 1987b, 17). Das Überleben, also der Erfolg der Bedeutungszuweisungen in der Interaktion mit der (realen) Umwelt, ist das wichtigste Kriterium, an dem das Gehirn seinen internen „Gewinn von Kenntnissen über die Umwelt“ prüfen und korrigieren kann. Eine andere Möglichkeit ist, zu überprüfen, ob die verschiedenen Bedeutungszuweisungen zueinander passen, ob sie konsistent sind. Diese Überprüfung kann parallel geschehen (durch Vergleich mehrerer Sinne) oder konsekutiv (durch Gedächtnisvergleich).

Führen wir nun einen neuen Begriff ein: den Beobachter. Es bleibt bei Schmidt unklar, wie der Beobachter zusammenhängt mit dem System, dem Organismus, dem Gehirn. Wichtig ist die Trennung von internem und externem Beobachter:

„Der externe Beobachter beobachtet Organismen und deren Umwelt und bezeichnet deren Interaktionen als ‚Verhalten‘, indem er Gesetzmäßigkeiten festzustellen versucht. ‚Innere Zustände‘ sind nur dem internen Beobachter zugänglich [...], über sie hat er unmittelbare und absolute Gewißheit.“ (Schmidt 1987b, 19)

Der externe Beobachter schaut also „von außen“ auf die Dinge, beobachtet Körper und deren Bewegungen, das Verhalten anderer Personen. Die Gedanken und Gefühle einer Person können von einem externen Beobachter nie erkannt werden, sie sind nur der Person selbst als internem Beobachter zugänglich. Was der externe Beobachter sieht, so Schmidt, ist dem internen verborgen, und umgekehrt. Daher „dürfen Aussagen aus den Bereichen der beiden Beobachter nicht zur gegenseitigen Begründung herangezogen werden“ (Schmidt 1987b, 19). Schmidt sieht also eine kategoriale Trennung zwischen Dingen, die der externe Beobachter sieht, und Empfindungen, die der interne Beobachter „hat“. Daraus soll folgen, daß man niemals feststellen kann, welche neuronalen Zustände im Gehirn welchen Empfindungen als geistige Zustände entsprechen.

Weiter: Dem „Ich“ und dem „Bewußtsein“ kann man keine Bereiche des Gehirns zuordnen. Die wichtigen Funktionen – wie Aufmerksamkeit, Wahrnehmung, Gedächtnis und Planung – werden von ganz unterschiedlichen Gehirnregionen wahrgenommen.

Fragen wir nun nach der Entstehung von System und Beobachter, so erhalten wir aus konstruktivistischer Sicht die Antwort:

3. „Lebende Systeme sind selbsterzeugende, selbstorganisierende, selbstreferentielle und selbsterhaltende – kurz: autopoietische – Systeme.“ (Schmidt 1987b, 22)

Lebende Systeme, so lautet die These, arbeiten „induktiv“ und „prognostisch“, das heißt nach dem Motto: „Was einmal geschehen ist, ereignet sich wieder.“ Daher ist die Organisation des Systems „konservativ“: Es „wiederholt nur das, was funktioniert.“ (Maturana 1982, 52; zit. nach Schmidt 1987b, 23) Lebende Systeme werden – in der Sprache des Radikalen Konstruktivismus – „deformiert“ durch Umwelteinflüsse. Für das System ist es nun nicht wichtig, diese Deformation „wahrheitsgemäß“ zu deuten, sondern für sein Weiterbestehen ist es notwendig, angemessen auf die Deformation zu reagieren. Wichtig ist also ein angemessenes *Verhalten*.

3. Das Kommunikationsmodell

Jedes Verhalten wird vom Beobachter genutzt, um eine *Beschreibung* der Welt zu erhalten: War das Verhalten erfolgreich und befriedigend, so geht der Beobachter davon aus, daß die Welt so beschaffen ist, wie er es in den Voraussetzungen dieses Verhaltens angenommen hat. Das Verhalten ist also gewissermaßen ein Tapsen in der Dunkelheit der uns verborgenen Realität. Maturana nennt es daher *Orientierungsverhalten*. Dieses Verhalten der ersten Stufe ist noch *denotativ*: „es weist auf ein Merkmal der Umwelt hin“ (Maturana 1982, 53; zit. nach Schmidt 1987b, 26).

Nun stellen wir uns einen zweiten Organismus als Beobachter vor. Er gewinnt aus dem Verhalten des ersten Organismus eine Beschreibung zweiter Ordnung: Eine Beschreibung der Beschreibung der Welt. Eine solche „orientierende Interaktion“ (Schmidt 1987b, 26) ist für Maturana der Beginn von Kommunikation und die Grundlage sprachlichen Verhaltens. In diesem Kommunikationsmodell ist nicht mehr von Sender und Empfänger, von Sprecher und Hörer die Rede, sondern vom Orientierenden und vom Orientierten (vgl. Rusch 1990).

Aus diesem Entwurf ergeben sich zwei wichtige Konsequenzen. Erstens funktioniert Sprache nach diesem Kommunikationsmodell nicht denotativ, sondern konnotativ:

4. Es gibt keine Informationsübertragung durch Sprache, sondern nur Informationskonstruktion innerhalb von kognitiven Systemen (vgl. Schmidt 1987b, 28 und 31).

Zweitens: Immer, wenn wir mit Sprache interagieren, bleiben wir im Bereich von Beschreibungen zweiter Ordnung. Wir haben es immer mit Beschreibungen von Verhalten zu tun. Wer sprachliches Verhalten wahrnimmt, muß sich selbst jene Merkmale in der Welt erschließen, auf die dieses Verhalten hinweist oder von denen dieses Verhalten veranlaßt wurde. Denotation ist für die Radikalen Konstruktivisten daher eine Beobachterkategorie, eine Kategorie, die der Beobachter schafft, um die auf ihn einströmenden Informationen zu bewältigen.

4. Die Wissenschaftsauffassung

Meist denkt man sich nichts Böses, wenn man behauptet, Wissenschaftler würden der Wahrheit nachjagen. Doch was tun wir mit der Wissenschaft, wenn, wie der Radikale Konstruktivismus behauptet, die Wahrheit zu suchen sinnlos ist, da wir niemals feststellen können, ob wir sie erreicht haben? Für die Konstruktivisten tritt die Nützlichkeit an die Stelle der Wahrheit; die Stärke der Wissenschaft soll sich erweisen in ihrer Kraft zur Lösung von Problemen:

> 5. Nicht mehr Wahrheit, sondern Anwendbarkeit soll Ziel der Wissenschaft sein.

Eine wichtige Frage stellt sich in diesem Zusammenhang, nämlich „wie es trotz Konstruktivität und Subjektabhängigkeit dazu kommen kann, daß wir uns in aller Regel gut in unserer Umwelt orientieren, mit anderen erfolgreich kommunizieren und selbst komplexeste technische Probleme (etwa der Raumfahrt) lösen können“? (Schmidt 1987b, 34)

Der Radikale Konstruktivismus geht davon aus, daß, wenn gewisse Bereiche (der wirklichen Wirklichkeit?) von mehreren Systemen wahrgenommen werden, diese als *sozial akzeptierte Wirklichkeit* etabliert werden können. Dies geschieht durch vorsprachliche Interaktion. Kann ich annehmen, daß ein anderer die gleichen Erfahrungen und Problemlösungen hat wie ich, so interpretiere ich meine Erfahrung, *als ob* sie „wirklichkeitsadäquat“ wäre. Die These lautet also:

> 6. „Lebende Systeme sind interagierende Systeme, die mit anderen Systemen konsensuelle Bereiche als sozial akzeptierte Wirklichkeiten aufbauen.“ (Schmidt 1987b, 34)

Mit der von Schmidt skizzierten Wissenschaftsauffassung habe ich zwei methodische Probleme: Erstens wird bei Schmidts Darstellung nicht klar, welche Sätze ein Sein und welche ein Sollen beschreiben. Will Schmidt die Wissenschaftswirklichkeit beschreiben, wie wir sie heute vorfinden? Oder skizziert er ein Wissenschaftsideal, wie es von den Radikalen Konstruktivisten hochgehalten wird? Schmidts Kritik an der Grundlagenforschung (1987, 37) legt nahe, daß wir es nicht mit deskriptiven, sondern mit normativen Aussagen zu tun haben, die Vertreter der Grundlagenforschung und Freunde des zweckfreien Forschens so nicht akzeptieren werden. (In der Tat kann man dafür argumentieren, daß auch zweckfrei betriebene Wissenschaften, wie Mathematik oder Philosophie durchaus einen Nutzen haben; vgl. Jansen 2001.) Zweitens versieht Schmidt den sowohl in der Bildungssprache, als auch in der Praxis der Wissenschaften bereits trefflich eingeführten Ausdruck „wissenschaftlicher Erwerb empirischen Wissens“ mit einer neuen Definition. In dieser Revision des Wissenschaftsbegriffes sind natürlich die seltsam anmutenden Folgerungen wie die Kritik an der Grundlagenforschung begründet.

5. Probleme

Ich habe damit die Erkenntnistheorie, das Kommunikationsmodell und die Wissenschaftsauffassung des Radikalen Konstruktivismus im Umriß vorgestellt. Im Folgenden möchte ich zwei Probleme einer solchen Auffassung diskutieren. Ein erstes Problem ergibt sich, wenn wir einen Konstruktivisten fragen, was es alles gibt, wenn wir ihn also nach der zugrundeliegenden Ontologie fragen:

> „Der reale Organismus besitzt ein Gehirn, das eine kognitive Welt erzeugt, eine Wirklichkeit, die aus Welt, Körper und Subjekt besteht, und zwar in der Weise, daß dieses Subjekt sich diese Welt und diesen Körper zuordnet.“ (Roth 1985; zit. nach Schmidt 1987b, 16)

Wir haben also zunächst den realen Organismus, das reale Gehirn, daß den ganzen Spuk veranstaltet. Dieses reale Gehirn konstruiert sich nun Welt, Körper und Subjekt, wozu natürlich auch ein konstruiertes Gehirn gehört. Hinzu tritt – zumindestens bei Schmidt – die „die reale Welt“, die „eine notwendige kognitive Idee, aber keine erfahrbare Wirklichkeit ist“ (1987b, 16). Wir können, so Schmidt an anderer Stelle,

> „zwar die epistemische Notwendigkeit eines Substrats für die möglichen Interaktionen behaupten, wir können jedoch dieses Substrat hinsichtlich seiner vom Beobachter unabhängigen Eigenschaften nicht kennzeichnen. Daraus folgt, daß eine Realität als eine Welt unabhängiger Gegenstände, über die wir reden können, notwendigerweise eine Fiktion des rein *deskriptiven* Bereiches ist [...].“ (1987b, 30)

Zu realem Gehirn und konstruiertem Gehirn tritt also als drittes die notwendige Fiktion des realen Gehirnes hinzu, das also, was wir – kantisch gesprochen – als transzendentales Objekt postulieren, das unseren Erscheinungen zugrundeliegt. Halten wir also fest:

> 7. Der Radikale Konstruktivismus verwickelt sich in eine ontologische Konfusion zwischen den Ebenen Realität, Konstruktion und (notwendiger) Als-Ob-Fiktion.

Ein zweites Problem: Wenn Logiker sich über die ausgefallensten mehrwertigen, intuitiven und von mir aus auch präsuppositionsfreien Logiksysteme unterhalten, so benutzen sie in der Metaebene, also in der Sprache, in der sie ihre Logik formulieren, die stinknormale klassische Logik. Entsprechend gilt in erkenntnistheoretischen Diskussionen:

> 8. In der Metaebene muß auch der Konstruktivist Realist sein.

Auch wenn der Radikale Konstruktivismus sich als Metatheorie explizit mit unter die Konstrukte zählt, jeder Konstruktivist wird einmal sagen müssen: „Es ist so, daß ...“ Die Alternative wäre so etwas wie:

> „Ich konstruiere, daß ich konstruiere, daß ich konstruiere, daß ich konstruiere, daß ich konstruiere, u.s.w.“

Ich breche hier ab, es müßte unendlich lang weitergehen. Wir würden wir nie zu dem gelangen, was wir sagen wollten. Demgegenüber ist der Realist deutlich im Vorteil. Es ist ganz offensichtlich: Realismus ist ein sehr erfolgreiches Verfahren zur Reduzierung der Komplexität des Erkenntnisprozesses. Angesichts dieser Sachlage hat Schmidt allen Grund, zu klagen:

> „[...] unsere Umgangssprache wie unsere Wissenschaftssprache sind imprägniert mit klassischer europäischer Philosophie und wissenschaftlichen Vorstellungen, sie sind durchgehend ontologisch und dualistisch geprägt. Wie soll man in einer solchen Sprache das unendliche Werden und Vergehen unserer kognitiven Welten beschreiben?“ (1987b, 74)

Nun, hier können wir Schmidt weiterhelfen: Wir haben gesehen, man *kann* es nicht ausdrücken. Und was man nicht kann, kann man auch nicht sollen. *Ultra posse nemo obligatur*.

Damit ist aber noch ein anderes Problem verbunden: Dieses „unendliche Werden“, die unendlich vielen Stufen von Konstruktivität, müßten auch unendlich viel Zeit in Anspruch nehmen. Und nun ist es einmal an mir, mit empirischer Wissenschaft zu argumentieren: Seit meiner Geburt ist erst endlich viel Zeit vergangen, also deutlich weniger als unendlich viel; ich dürfte daher noch gar nichts konstruiert haben.

Hier stehen wir nun vor folgenden Alternativen: Entweder halten wir es mit Schmidt, und erklären unsere Sprache für unfähig, so sensible Sachverhalte wie die Theorie des Radikalen Konstruktivismus zu formulieren. Dann müssen wir künftig halt schweigen. Oder wir kommen zu der sicherlich gesunden Einsicht, daß der Radikale Konstruktivismus zwar wichtige Aspekte des Erkenntnisprozesses beschreibt, aber auch noch nicht die ultimative Theorie des menschlichen Erkennens ist. Der Radikale Konstruktivismus ist eine Theorie, die es versteht, wichtige Erkenntnisse der Neuro- und Kognitionswissenschaften in die Erkenntnistheorie zu integrieren, die aber durchaus nicht alle alten Probleme löst und dazu noch ein paar neue aufwirft.

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A Critical Assessment of Wittgenstein's View on Religion: An Islamic Perspective

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Wittgenstein's views on religious language have been taken by many of his commentators as a form of non-cognitivism. According to this view "religious statements are regarded as exhortations to lead a certain sort of life, or as prescriptions on how to lead one's life, or as expressing certain kinds of sentiments or attitudes, such as encouragement to lead a moral life." (Runzo 1993, 157) John Hick recognizes the idea of "language game" that belongs to the later philosophy of Wittgenstein as the root of this non-cognitive interpretation that was developed by D.Z. Philips and others. (Hick 1990, 96) Hick also appeals to this non-cognitive character of religious language to conclude that Wittgenstein held a non-realistic interpretation of religion. Hick identifies non-cognitivism about religious discourse with a non-realist interpretation of religion, defining non-realism as a position that interprets "religious language, not as referring to a transcendent reality… but as expressing our emotions or our basic moral insights and intentions or as referring to our moral and spiritual ideals." (Hick 1990, 7)

Wittgenstein denies the analogy between religious language and other assertive languages such as the language of science. He wants to show that the proper function of religious language is not assertion about reality, but some sort of performance. Religious language is not suitable for informing one another about a specific kind of reality; it has a passionate tone that is appropriate for talking of love and submission. Wittgenstein's emphasis on this important role of religious language leads Phillips and others to take him as a non-cognitivist. I will conclude that although there are some points that support this interpretation, on the whole, it lacks plausibility. Concerning to the non-realistic interpretation of Wittgenstein, I will appeal to some of his remarks on God and religion in general, which are acceptable only in the context of believing in the real God. In addition to these remarks, I will argue that believing in a real God is what gives importance and vivacity to religious language. So, I think that Hick, Philips and others, even if they have some right to take Wittgenstein as a non-cognitivist, should not take him as a non-realist about religion. He doesn't deny the reality of God but only our ability to assert some things of Him within the language game of religion. Indeed, we become familiar with the reality of God not as a result of playing a religious language game, but prior to this, through an existential or even a rational awareness. Religious language comes to express our love and commitment to a known God in a passionate tone of voice and this is possible only *after* our familiarity with Him.

We will explore this further in two sections on non-cognitive uses of language and religious realism.

1. Wittgenstein and Non-cognitive Language of Religion

One of the important bases of the non-cognitivist view is the appeal to the practical character of religion. Wittgenstein repeatedly emphasizes that religion only wants us to do something, but does not justify it, because this is impossible for religion. He says:

> Religion says: *Do this*! – *Think like that* – but it cannot justify this and once it tries to, it becomes repellent; because for every reason it offers there is a valid counter reason. It is more convincing to say: "Think like this! However strangely it may strike you" or "Won't you do this? – However repugnant you find it."(Wittgenstein 1980, 29)

Using the terms of Wittgenstein, we can say that religious discourse is a practical language-game and doesn't refer to something beyond it.

In Islamic literature the importance of practices in religion is recognized, and the varieties of commands and prohibitions of Islam shows makes this evident.

But Muslim scholars affirm that religious discourse also has some important non-reducible descriptive statements. Here, I will not reply to Phillips and others who accept that religion apparently contains truth-claim statements but reduce them to other performative statements. Rather I want to demonstrate that even if religious discourse were lacking in assertive statements, we would still be forced to interpret some commands as pointing beyond religious discourse to make the whole of this discourse possible. Indeed we cannot end the problem only by appealing to the verbal characteristics of religious discourse.

According to Muslim scholars commands or prohibitions presuppose the authority of their source. So God can command us to act in such and such a way but he cannot command us to accept his authority, for to do so would be circular. Religious commands and prohibitions found in religious discourse have accordingly been divided into two parts: authoritative (*molavi*) and guiding (*irshadi*). They treat the many commands of religion to the effect of: "Believe in God," or, "Submit yourself to Me," as guiding us to the judgments of reason. These statements are used to refer to claims that have a prior endorsement through reason, and if we did not have these reasoned claims, we would loose the validity of religious discourse in its entirety. Khwajah Nasir al-Tusi (d. 1274) in a famous remark said, "The negation of reason's obligation to accept God's authority would lead to a denial of the whole of religion." (al- Tusi 1986,303).

In summary, not only does religious discourse actually have many assertive statements, but also some of its commands or prohibitions are disguised assertive statements.

But we can construct a *second reason* for non-cognitivism to the effect that religious statements cannot be justified. It seems that Wittgenstein wants to say that religious beliefs principally cannot be justified, or to use Malcolm's phrase, they are groundless. But this cannot prove the non-cognitive character of religious discourse.

Indeed, some fideists, such as Kierkegaard, have the same belief without denying the cognitive character of religious discourse. Unjustifiability by itself does not commit us to non-cognitivism, unless it is conjoined to a strange thesis to the effect that everything that cannot be justified is meaningless. This is the needed premise that is needed for non-cognitivism. But in his remark Wittgenstein only emphasizes the validity of religion even though we have no reason to accept it. Indeed his remark indicates that he accepts that we can reason about religious beliefs, although whatever reasons we adduce for them will be defeated by valid counter reasons. How could this be possible if there were no truth-claims in religious discourse? If Phillips's non-cognitive interpretation of Wittgenstein were correct, no bringing of reasons and counter-reasons would be possible.

The *third reason* for non-cognitivism is constructed on the basis of an analysis of religious belief. Believing in the afterlife, for example, is not just assent to the proposition that some important event will occur at the end of one's life. This is not religious belief and does not belong to first-order religious discourse. Religious language expresses our commitment to a form of life not predicated on the occurrence of some event. Wittgenstein affirms that someone who believes in a last judgment does not use expressions like "such and such will happen" to make a prediction, but rather to express a commitment to a "form of life" for example one in which people feel constantly admonished by God's approval or disapproval. Indeed, if he were making a prediction, it would not count as a religious belief. (Glock 1996,321)

While I agree with Wittgenstein that religious beliefs have a major difference from other scientific or ordinary beliefs; they express our commitment to some special form of life. But contrary to him, I think that expressing our commitment does not rule out the assertion of some fact. Indeed considering some fact as glorious may motivate our commitment to it. We see many verses in our Noble Book that describe the details of the sequences of the events in the afterlife to stimulate our motivation to commit us to a religious life. If I have no knowledge of this fact, or like Don Cupitt deny the reality of it, then how can I commit myself to this form of life and why? It may be said that the process of committing is not a deliberative reasoned decision; it is rather the result of unconsciousness training that we obtain from our culture. But my question is not answered, because as soon as I come to think that there is no God and no afterlife, the motivation for accepting these sentences is lost. These sentences are similar to metaphors that work only in the context of the claim they make about reality. For example, when we say that the lion of our country is coming, the force of this metaphor depends on our claim that somehow, he really is a lion. As soon as we withdraw the claim, the metaphor ceases to work. The force of religious belief is not in its verbal form, but in its pointing to some important facts that are very essential for human kind. Whether or not what is claimed by religion is true as realistically interpreted, in order for religious belief to have the hold on us that it does, the claim that it describes reality must be assumed. If we lose our knowledge of God, we cannot really pray and we will have many doubts about living a religious life. I think that what may be said in this regard is that we cannot know God or other religious facts thoroughly, but we do have some restricted knowledge of Him and the extent of this knowledge determines the vivacity of our commitment to religious life. According to a verse of the Qur'an the extent of the fear of God directly depends on the extent of our knowledge of him: "*Verily, those of God's servants who fear Him are only those who know.*" (35:28).

I think that what Wittgenstein means to deny is the restriction of the importance of religious belief to mere prediction and description without paying attention to its commitment function. We can agree with Phillips in taking religious discourse as incommensurable with other forms of discourse, but deny that the only possibility for this incommensurability is to reject any assertive character inherent to this language game. It is by virtue of being multifunctional that religious discourse constitutes an exceptional language game. Things and objects have different relations to humanity; so, speaking of them gives rise to different connotations, and speaking of a real God is able to evoke our feelings and commit us to that reality. Religious utterances will not lose their objective character because of having another emotional function. We may accept that the language of religion or morality is the language of commitment or submission, but this by itself does not rule out their cognitive reference. We can offer another interpretation for the difference between the religious language game and the scientific language game. Indeed, religious language itself has different parts, but even those parts that are descriptive of the glory of God or the afterlife have a strange emotional function. In religious texts, God not only speak us as emotional persons, but also as a rational. The neglect of the role of emotion in the religion that is characteristic of the metaphysical literature does not allow us to ignore the important role of reason in our non-metaphysical literature. We must avoid this mistake not by committing another mistake, but by recognition of the importance of emotion, action and knowing in the religious form of life.

2. Wittgenstein and Religious Realism

There is no doubt that the central idea of the religions is believing in a real God, and this is represented in religious discourse, but Phillips and others try to interpret that in a non-cognitive fashion. Here we only concentrate on one of Wittgenstein's remarks about God to show that his view is more akin to realism than non-realism. He says: "What do I know about God and the purpose of life. I know that this world exists. …. The meaning does not lie in it but outside it. That life is the world. The meaning of life, i.e. the meaning of the world, we can call God". (Wittgenstein 1979,73)

Reading Wittgenstein, I suddenly encountered this sentence that reminded me of a couplet by the famous Iranian poet Mawlavi, known in the West as Rumi:

Shaykh of Religion said, "The meaning is Allah."

The sea of meanings is the Lord of the worlds.

All the tiers of earth and heaven

Are as straws in that flowing sea.

(Mawlavi, I, 3338-9)

By the "Shaykh of Religion," Mawlavi means his teacher, Shams, who told him that the only real meaning of every thing is God. Shams divided meanings to two types: the meaning of words and the meaning of the existence. It is evident that God is not the linguistic meaning of the words "world" and "life", but is the existential meaning of the world and of our lives. Shams taught that while the forms of existence are varied, their meaning is one.

Ibn Arabi (d.1240) makes a similar remark: "All the world is like a single word that has a meaning, and that meaning is God." (Ibn Arabi 1911, ch.338)

In the light of the long tradition generated by such remarks, we can put Wittgenstein's point in this way; he accepts that not only the religious language game but all language games (the world) are pointing to something we can call God. We must take his remark in the context of a realistic and even mystical tradition, even if we cannot regard him as a real mystic, in the sense given through the religious traditions of mysticism themselves. So even if we accept that Wittgenstein is a non-cognitivist with regard to religious language, we must accept that he believed that the meaning of the whole of this language and also of other languages only is God, and if He is not real, the whole of the games become empty.

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Private Language and Property Dualism

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1. Physicalism and Dualism

Physicalism says that all the facts, including all the phenomenal facts, are metaphysically necessitated by the physical facts. If physicalism is true at the actual world, there is no metaphysically possible world, which is physically identical to the actual world, but different in some other respect. Note that 'physicalism' is defined in terms of *metaphysical necessity*, because everybody should endorse law-like correlations between the mental and the physical, and so can accept supervenience with *nomological necessity*.

Many philosophers believe that physicalism is false. A repeated line of reasoning is the so-called *conceivability argument*: a certain scenario is ideally conceivable, and whatever is thus conceivable is metaphysically possible, so this scenario is metaphysically possible. But the metaphysical possibility of this scenario is inconsistent with physicalism, so physicalism is false. Thus Descartes argued that it is clearly and distinctly conceivable that I exists without my body given that I, and not my body, is a thinking, non-extended thing, and whatever is thus conceivable is really possible by divine interference, so it's possible that I exist without my body. But if it's possible that I exist without my body, I'm not strictly identical to my body, although I'm closely connected to it, e.g. by laws of nature.

Descartes took this to be an argument for *substance dualism*, the view that each of us is composed of two distinct existing kinds of stuff. Modern proponents of anti-physicalism, however, don't believe in the existence of mental substances. They think that all substances have physical properties, hence that all substances are physical substances, assuming mental substances are those with only mental properties. What they hold is merely that some physical substances have some mental properties that don't metaphysically supervene on physical properties. Call this view *property dualism*. The kind of properties that the property dualists believe are the best candidates for failure of metaphysical supervenience are *phenomenal properties*. These involve the qualitative character of experience, the how-it-is-like aspect of phenomenal consciousness. To have knowledge of phenomenal properties is, on this view, to have *irreducible, propositional, phenomenal information*, which no amount of physical information will enable one to derive. Property dualists also deploy our purported rational access to real modalities in order to refute physicalism: it's conceivable on ideal reflection that there be worlds physically identical to our world in which all qualia are inverted or absent, and what is ideally conceivable is metaphysically possible, so there are metaphysically possible inverted or absent qualia worlds that are physically identical to the actual world. Thus in (1996, 97) Chalmers argues from a possibility – same functional organisation but different physical constitution and lack of phenomenal properties – physicalism allows for to a possibility – same functional organisation and same physical constitution but lack of phenomenal properties – physicalism prohibits.

2. The Argument against Private Language

Now, let's turn to Wittgenstein's considerations about private languages, which are centred in *Philosophical Investigations* §§256-60. What is such a language? It is a language that necessarily only one individual, namely its originator, can understand. The necessity is important. The argument against private language better not rule out the possibility of a language that as a matter of fact only one individual understands. Thus in the case of Robinson Crusoe, only one individual understands it, but someone else might have understood it. Moreover, a private language isn't to be found amongst natural languages; it's a by-product of misguided philosophical theories; §§133, 255. The problem with a private language isn't just that it doesn't exist; it's that it couldn't possibly exist. The reason is that a language necessarily unintelligible to anyone but its originator is unintelligible to her as well, and a necessarily unintelligible language isn't a language at all.

Needless to say, the subject matter of a private language is a private subject matter, entities that necessarily only one individual can come to have knowledge of. The best candidates for privacy are mental objects and properties when misconceived in certain ways. Thus it's part of *Cartesianism* that at least phenomenal properties are such that only the individuals who have them could possibly form a justified opinion about their occurrence and character. This isn't a point about *ownership*. The question isn't whether if I have a token sensation of a particular type, you might have had that very token or just a different token of the same type. The question is whether there is anything about my token sensation that you couldn't possibly come know. If so, that token is private to me. And if there could be private sensations, there could presumably also be a language that reports these sensations

Now, imagine circumstances in which a private language might be thought possible: the *private linguist* S has a sensation of pain that is not tied up with any typical natural pain-expressions such as wincing and escape-behaviour; §256. It's a private particular that S has exclusive epistemic access to. The thought is that S introduces a name 'P' for her sensation by a *private ostensive definition*:

> (POD) Let 'P' designate *this* (while focusing her attention inwardly on the sensation).

Thus S has mentally associated 'P' with her sensation. It's true that S couldn't convey the alleged meaning of 'P' to anyone else given that the sensation itself exhausts its meaning, and in the circumstances envisaged only S has epistemic access to that sensation. We assume that the meaning of 'P' is entirely constituted by its referent; if it isn't, we just introduce a new term 'Q' for that part of the semantic content of 'P' that is determined by that sensation. So, if the subject matter of S's language is private, and its meaning is due to that subject matter, then the meaning of her language is also private.[1] Let's grant all

[1] As Wright (1986) points out, this assumes that mutual understanding requires reason to think that mutual understanding obtains; otherwise it might just be that as a matter of lucky fact S* does understand S's language, namely if they associate the same symbols with the same private sensations. In the absence of this assumption, a private language is better defined as one that necessarily no two people can have reason to think they share.

that. The question is whether S herself could be said to understand 'P'.

The point in §258 is that if (POD) is to fulfil its purpose, it must establish a connection between the sensation and 'P' that has *normative future consequences*. The meaning of a referential term must be a property that determines whether a given object is *correctly* picked out by that term. If S's mental act is to have the required semantic implications, it can't just be an occurrent event in her consciousness; S must form an *intention* to comply with a rule governing the use of 'P'. She must "undertake" in the future to conform to a regularity in the use of 'P' sanctioned by that rule such that 'P' is *correctly* used iff all and only sensations *of the same type* as the initial sensation are called 'P'; §§261-3. But there's no *criterion for correctness* that could guide S's use of 'P'. There's no distinction between S having the *impression* that 'P' is used correctly, and S using 'P' correctly. This follows from the supposed private nature of the referent of 'P'. It has no connection with her sayings and doings, so whether it occurs or not at some later time is only a question about whether S *judges* that it occurs or not at that time. But S's assertion is a judgement about some state of affairs that are *independent* of the judgement. S's assertion is correct iff the state of affairs asserted obtains. On the present view, however, there is no space for ways S's judgements about the reoccurrence of the initial sensation could go wrong: if P occurs, yet it seems to S as if P doesn't occur, S will not judge that P occurs, and if P doesn't occur, yet it seems to S as if P does occur, S will judge that P occurs. But if there is no distinction between what is right and what seems right, no private meaning has been bestowed on 'P'. And if 'P' has no private meaning, and the sensation that 'P' designates is private only if the meaning of 'P' is private, there is no private sensation.

3. Infallibility

It may be objected that the argument *begs the question* against the Cartesian. On this conception of the mental, a suitable endowed subject S is not only incorrigible, but also infallible, and omniscient with respect to her sensational states. S introduced 'P' to refer to a particular token of a type of private phenomenal state. Given that S has an infallible ability to recognise and re-identify tokens of the same type of state in the future, there is no problem about S having a private practice with respect to 'P'. On this view, there is a distinction between what seems right and what is right, i.e. the obtaining of the relevant state of affairs is distinct from S's judgement that they obtain. It's just that whenever they obtain, S judges that they obtain, and whenever they do not, S doesn't judge that they obtain. But the argument assumes, or so the thought goes, that there are cases where S mistakenly judges that P occurs, and where P occurs without S judging so, and so it makes an assumption the Cartesian rejects.

There are two responses. The first is that it's doubtful whether it so much as makes sense to be infallible with respect to a private subject matter. In §§265-6 Wittgenstein imagines, by analogy, an individual with photographic memory checking when a train leaves by bringing forward a memory image of the page in the timetable. Now, this may work, because we have an *independent* test for the correctness of the memory image, namely check the timetable. But in the case of private sensations, there are no independent means by which S can inspect the correctness of the memory image of the original sensation. Unless there are external methods of testing, whatever S brings to mind, it will not tell him how 'P' is to be applied in future cases.[2]

Secondly, *even if* we grant introspective infallibility and omniscience, that isn't enough to make his judgements infallible. When S judges that now P occurs again, he intends to use 'P' with the same meaning as when he baptised the original sensation. That in turn presupposes that he brings the sensation in question under the right concept. But then infallibility with respect to the sensation falls short of infallibility with respect to the judgements. And surely everyone must concede that our ability for *conceptual classification* is fallible; this holds for judgements based on perception as well as for judgements based on introspection. But in the case of a private language, it doesn't make sense to say that S looses track of which term goes with which sensation, for whichever sensation S judges that is P is the sensation that is P. Nor does it make sense to say that S has an impartial grasp of the meaning of 'P' since S is assumed to be infallible and all-knowing when it comes to the sensation that constitutes the whole meaning of 'P'.[3] This means that the Cartesian substance dualist's claim that we are infallible and all-knowing with respect to our sensational states, is, if a meaningful claim at all, inessential to the argument. But then it's hard to see why both forms of dualism are not in the same boat when it comes to the argument in question.

4. Dualism and Privacy

Let's go back to the dualist arguments against physicalism. According to substance and property dualism, there are law-like correlations between mental and physical properties. It may be that, say being in pain and having C-fibre firing are nomologically co-extensive properties, or that there are *ceteris paribus* laws pertaining to pain-behaviour and pain. But that is all. There are neither metaphysical connections between the property of being in pain and neurological or behavioural properties, nor conceptual connections between the corresponding terms for those properties.[4] In worlds with different laws of nature, individuals are in pain, but are neither in a typical brain-state nor display typical pain-behaviour, and in other worlds with yet different laws of nature, individuals have C-fibre firing and display pain-behaviour, but have no pain. And what is true for pain holds for all phenomenal states. Such possibilities were explicitly embraced in the conceivability arguments. But this means that at least in worlds nomologically different from the actual world, phenomenal states are *private* in the sense we have defined the term. No two individuals could ever come to know about their respective sensations, so no two individuals can ever have any reasons to think they both understand 'P' in the same way, because any such reason would derive from circumstances that they could both at least in principle come to know. In the envisaged circumstances, all they have to go on is their respective utterances of 'now P reoccurred'; there are no publicly accessible criteria for the correct application of 'P'.

[2] This reflects an earlier point about *understanding* in §§138-84, namely that to grasp the meaning of a term never consists in having a mental picture before the mind.

[3] Blackburn (1984, 297-300) argues that the private linguist S, if ingenious, can have a private practice with respect to her use of 'P', if she constructs a theory around her observations of the private sensations. On Blackburn's view, S is fallible yet incorrigible. Wright (1986, 239-47) responds that this *fallibilism* fails for the same reason as the private linguist who invents no theory but merely 'reports' his sensations, because when theory and observation conflict there is no best way to resolve the inconsistency.

[4] Chalmers (1999) is explicit that phenomenal concepts are not causal concepts.

So, if the foregoing argument is sound, it afflicts all those views about the mental that deny metaphysical and conceptual connections between the mental and the physical. Analytical behaviourism and common-sense functionalism, for example, both purport to analyse mental vocabulary in terms of ordinary folk psychology. These analyses need not be conceptually reductive in any stronger way than the Lewis-Ramsey method requires. But even views that reject conceptual analysis such as empirical functionalism or a posteriori physicalism entail that mental phenomena are not necessarily private. If the mental is metaphysically necessitated by the physical, it is at least in principle empirically possible to come to know the former on the basis of knowledge of the latter. This means that on these views, mental phenomena are sufficiently tied up with publicly accessible circumstances. The fact that these circumstances are easier to get at on the former views makes no crucial difference as long as both views deny worlds where mental phenomena are disconnected from all such circumstances. Both forms of dualism, however, explicitly allow for such worlds. What the argument against private languages shows is, remember, not just that as things stand, there are no private languages; it is that, no matter how things are, there couldn't be a private language. The upshot is therefore that even modern forms of dualism are faced with this argument.[5]

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[5] Chalmers [1996, 381, fn. 13] thinks the argument either rests on dubious premises or equally applies to everyday concepts. If the foregoing is right, both disjuncts are false.

Internalism externalized. Doxastic Change, the Body, and Causation

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One important element of a reliabilist account of knowledge is the causal production of beliefs about the external world. If such beliefs are thus produced they are likely to be true. This is a strategy that is not available to internalism. A strong link to Humean accounts of causation may be implicit in internalist doctrines about justification since they seem to assume the impossibility of justified beliefs about genuine causal facts. But if it can be shown that beliefs about causal facts are justifiable in the internalist sense then this would decisively modify the unsatisfying position of internalism regarding knowledge about the external world. It will be argued that knowledge presupposes doxastic change and that (i) beliefs about doxastic change are indefeasibly justifiable, that (ii) such change is not itself a doxastic entity, and (iii) that it involves causal facts.

The argument against scepticism then turns on the possibility of knowledge about doxastic change, where the latter is construed as a non-doxastic, i.e. an "external" entity – and where "external" is intended to refer to an extended mental domain. This argument plus the intuition about the causal constitution of somatic experience are supposed to render the standard external world hypothesis more plausible relative to its sceptical alternatives.

Introduction

Epistemological internalism tells us that justification as such is essentially an inferential relation between doxa in a doxastic system. Coherentism, one internalist variant, assumes that this is all there is to justification and its role regarding propositional knowledge: all doxa are equal in principle regarding their possible justificatory status; foundationalism, the other internalist (and classical rationalist) option, admits of foundational doxa that somehow ground a doxastic system, e.g. perceptual beliefs (Bonjour 1985). Internalism is compatible with naturalism where the causal production or change of beliefs is admitted. But causal matters can only enter into an explanation of knowledge and not into its justificatory aspects (Davidson 1984). There seems to be a close relationship between a Humean account of causation and internalism. If causation is seen as a mere constant conjunction of similar facts instead of a genuine relation between certain types of relata then causal facts are unable to have any special role in the production of knowledge. On this account causes and effects cannot be perceived as such and beliefs about causal facts supervene on the beliefs about the experience of regularities. Could internalism profit from realist accounts of causation or are such accounts reserved for externalists?

The conceptual separation of justification from explanation in internalism makes this doctrine attractive and vulnerable at once. The attribution of truth-conductivity to justification is attractive since it makes justification relevant in the evaluation of knowledge claims. Since this attribution is further linked to criteria regarding the permissibility of justification (direct epistemic access to justifiers as well as to criteria), internalism is a complete account of epistemic justification. An important problem that derives from this attribution is the question of how beliefs about non-doxastic things are justifiable. Put more to the point, how can it be that beliefs about external things could become justified without external justifiers and their relevant connection to the domain of doxa?

Epistemological externalism gets much of its persuasiveness from this relative weakness of internalism (Armstrong 1973; Dretske 1981; Plantinga 1993a). After all, beliefs are seen as intentional objects and how could beliefs ever change or new beliefs be produced if all they ever did were to exclusively point logically to other, even foundational, beliefs? Externalism has thus abandoned the essential connection between justification and truth-conductivity in contending that it is not justification but the process by which a belief has been generated that is primarily truth-conducive. If it is a reliable process it will be truth-conducive and vice versa. But this is done at the cost of being unable to name general conditions of the reliability of some such process. Consequently, reliabilism is seen as an account of a concept of knowledge (true belief, produced by a reliable process) rather than as an account of justification. On the other hand, externalism is strong where it involves important and basic intuitions about the constitution of our knowledge. We tend to think of the causal aspects of belief production or belief change as somehow bearing on the justifiability of knowledge (Dretske 1969, Goldman 1979, Plantinga 1993a, 1993b). But this, too, presupposes that the causal (i.e. external) facts involved in the production of reliable beliefs are knowable.

1. An argument from doxastic change

All human knowledge production essentially involves doxastic change. I contend that beliefs can be formed about such change. If there is a doxastic change *d* and a corresponding belief p_d ('*d* has occurred') then p_d will be indefeasibly justified by doxastic change *d* iff p_d is about *d* since *d* and p_d both are directly epistemically accessible. I contend, therefore, that p_d will be indefeasible because it would be impossible to obtain evidence to the effect that p_d is false. (It should additionally be possible to construe an account of a belief about doxastic change to involve properties of *d*, e.g. q_d '*d* involves perception *v* and inference *s*'.)

The next step towards the argument from doxastic change is an ontological interpretation of doxa as opposed to doxastic change. I propose that doxa and doxastic changes belong to different and non-overlapping subclasses of mental entities each. They are, so to speak, external relative to each other. This is so because doxastic changes as such – in contradistinction to doxa – necessarily involve causes and effects (whatever the exact character of the latter may be). It is important to note that this construal of doxastic change can remain unchanged in all hypothetical frameworks regarding the "external world" – whether this be a standard natural world, a world of minds controlled by a *génie malin* or a supercomputer, or simply the environment of a self-organizing system.

With a concept of justified beliefs regarding doxastic change and an ontological interpretation of doxa and doxastic change, the argument (DC) now runs as follows.

(1) Doxastic changes are non-doxastic entities.

(2) There are indefeasible, justified beliefs (doxa) about doxastic changes.

(3) There are indefeasible, justified beliefs about non-doxastic entities.

I now want to suggest that (DC) renders an initial plausibility to the claim that there are justified perceptual beliefs regarding an external world. The plausibility in this case is derived from (DC) in that the latter demonstrates that there is knowledge about non-doxastic entities. This initial plausibility for the claim that there are justified perceptual beliefs regarding an external world needs further support. I will argue that beliefs about doxastic change are perceptual beliefs.

2. Perceptual beliefs and doxastic change

What seems awkward in the internalist picture of knowledge is that it is a static picture of doxastic systems that corresponds badly to our intuitions. If only doxa and the logical relations between them can contribute to the justification of beliefs how is genuine change in a doxastic system to be explained? It seems to me that if something genuinely changes in a doxastic system (e.g. a new belief is formed) then an epistemic agent can have non-inferential knowledge both of the fact of change as well as knowledge about this new belief (e.g. that it was produced in the course of this change). Good examples for this are subjective somatic perceptions which illustrate the point about an intrinsic connection between doxastic change and the corresponding perceptual experience.

Strolling out in the green in spring is relaxing because, among other things, the air is fresh and there are lots of agreeable smells in it. The sudden appearance of a characteristic foul smell under such circumstances will cause a focusing of ones attention. A series of doxastic changes occurrs that may result in one searching for the source of the smell. Maybe one finds a dead animal beneath a tree stump and further doxastic changes occur. I suggest that one can have non-inferential knowledge of these changes as well as of the particular things that caused them (smells, views etc.).

When I ride a bicycle I continuously balance out the movements of my body mass in order to ride smoothly. After a little practice it is easy for me to ride thus with no hands. One day it appears that the balance doesn't work and the bike is not following lead. Again, several doxastic changes occur instantly and noninferentially and eventually the belief is (inferentially) formed that the bike is oversteering by itself. A visual check shows that the back wheel is tilted out of its correct axis. It is adjusted and the ride continues smoothly, with several doxastic changes following swiftly from my somatic perception that there is proper balance again.

To my mind, such examples show it to be a compelling intuition that I am in fact able not only to inferentially interpret all these doxastic incidents as connected, complex causal chains but that in the singular case of an event in the system of doxa I am able to perceive that this is an instance of a singular causal relation. The experience of smelling something new (construed as the experience of a doxastic change of a certain kind) seems to me to be able to ground the possibility of non-inferential knowledge about causal facts involved in the event of this change. Beliefs of this sort cannot exclusively be justified by other doxa because if a change occurred then something non-inferential and non-doxastic has happenend to this doxastic system. Hence the suggestion that doxastic change is perceivable and that beliefs about such change are beliefs about a special kind of perceptual experience.

If beliefs about causal facts were reducible to beliefs about the constant conjunction of similar things (as in Humean causation) then there would be no interesting interpretation of these examples. The compelling intuition that, in cases such as these, causes and effects (qua chains of doxastic change incidents) are indeed perceived would have to remain unanswered. A realist account about singular causation explains this intuition and thus contributes positively to the respective account about beliefs formed on perceptual experience. (Maybe it is precisely such kinds of perceptual and doxastic incidents that are basic for the formation of any concept of causation. In other words, when we talk of causes and effects and their intrinsic connection we mean types of things that are similar to the types of things that I have just mentioned. But I am not suggesting that this could be a substantial account of singular causation; cf. Fales 1990, Tooley 1990).

3. The case against Cartesian Scepticism

Provided a realist account of singular causation, since doxastic change involves causal facts it is plausible to assume that non-inferential knowledge about causal facts is possible. But knowledge about causal facts is knowledge about the external world. Now, doxastic change could either be a somatic entity, or a mental entity, or it could represent some sort of interface between the mental and the somatic. I am uncertain about these options but I want to suggest that it is enough to assume that doxastic change is external in the sense of being non-doxastic to increase the plausibility of the external world hypothesis.

A classical but flawed treatment of the question about the external world is this:

(1) There is (non-inferential and fallible) knowledge about sense experience.

(2) The object of sense experience is the external world.

(3) There is (non-inferential and fallible) knowledge about the external world.

Conclusion (3) is problematic mainly because premise (2) is problematic. The internalist argument from doxastic change in sec. 1 above connected to an externalist, reliabilist epistemological scheme in sec. 2 facilitates a reworking of the above argument. I suggested that we view doxastic change as an entity that is itself not a doxastic entity and that it incorporates causal facts. I further suggested that there are indefeasibly justified beliefs about doxastic change. Furthermore, justification of such beliefs is conferred through the perception of such facts. The reworking of the argument above will thus be:

(1*) There are indefeasible and non-inferential beliefs about doxastic change.

(2*) Doxastic change is part of the non-doxastic world.

(3*) There are indefeasible and non-inferential beliefs about the non-doxastic world.

The examples in sec. 2 all involve perceptual experience and I have tried to illustrate how such experience – qua experience of doxastic change – can have justificatory force for the corresponding perceptual beliefs. But these

and other examples show something more than the existence of justified beliefs about singular causation. Perceptual experience delivers a wide range of qualities and we are able to respond to these diverse inputs in a corresponding wide range of behavioral options. If we were brains-in-vats or something similar then the super-computer would not only have to deliver the impressions we have of the world as passive perceivers but it would have to tackle all the contingencies that continuously occur originating from our behavioral repertoire and, additionally, the corresponding perceptual experiences that result from our illusionary interventions in the non-existent standard external world. I conclude that, since it is plausible to regard doxastic change as a subclass of the class of entities of the external world, and since causal facts and other qualities are putatively involved in beliefs about such entities, knowledge about doxastic change is substantial knowledge about aspects of an external world.

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An Argument against Skepticism

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1. The Skeptical Argument

Consider the following skeptical argument, made popular by Nozick (1981). Let p = I have hands, q = I'm not a bodiless brain in a vat who is programmed to have precisely the sensory experiences I've had (henceforth a BIV) and K = I know that... . The skeptic argues as follows:

	(1) p	(assumption for reductio)
	(2) (p→q)	(Note that having hands implies being not a handless BIV.)
	(3) (x)(y)[{Kx ∧ K(x→y)} →Ky]	(the closure principle)
So	(4) Kq	(from (1),(2) and (3))
But	(5) ¬Kq	(skeptic's premise)
So	(6) ¬Kp	(from (1), (4) and (5))

The conclusion is that I don't know that I have hands. By analogous reasoning, the skeptic says that I don't know that I have legs, etc. (I owe this presentation of the skeptical argument to Garrett (1999).)

The above argument can be put in the following form.

	(7) ¬Kq	(skeptic's premise)
	(8) ¬Kq → ¬Kp	(which is true under (2) and (3))
So	(9) ¬Kp	(by Modus Ponens)

DeRose (1995) calls it the "argument from ignorance"(AI). Let us represent the skeptical argument in this simpler form.

Dretske (1970) and Nozick (1981) attack (3) which is known as the "closure principle". It says that knowledge is closed under known logical implication; for any proposition x and y, if one knows that x and knows that x entails y, then one knows y. Their strategy is to resist skepticism by denying closure. Unfortunately there are some persuasive criticisms against them (Stine (1975), Forbes (1984), Vogel (1990), DeRose (1995), Lewis (1996)). For example, Nozick uses a counterfactual analysis of knowledge which is not flawless (Forbes, 1984). I don't think that their criticism against closure is successful, but I think their basic strategy against skepticism (to solve the skeptical puzzle by resisting the skeptical hypotheses) is right. In this paper I will propose another anti-skeptical argument. My claim is that we can escape from skepticism whether closure is true or not. In other words, we do not need to determine whether closure is true or not for resisting skepticism.

2. An Argument against Skepticism

Closure is true or not true. If closure is not true, we can escape from skepticism as Dretke and Nozick tell us. Let us consider the other case that closure is true. In this case we can use a part of the above skeptical argument; from (1) to (4). Let us write it again.

	(1) Kp	
	(2) K(p→q)	
	(3) (x)(y)[{Kx K(x→y)} →Ky]	(the closure principle)
So	(4) Kq	

In this argument the closure principle transmits knowledge Kp to another Kq as in AI the closure principle transmitting ignorance ¬Kq to another ignorance ¬Kp. Let us call the above argument the "argument from knowledge"(AK). In the present case (3) (closure principle) is true. So we can focus on the truth of (1) ((2) seems indisputable). Is it true? Do I know that I have hands?

The truth of (1) depends on the definition of knowledge. There are lots of analyses of "I know that p" after Gettier (1963). Their purpose is first to escape the so-called Gettier's paradox and second to capture our ordinary use of the words "to know." It seems natural to require the following for the analysis of knowledge.

(H) Any analysis of knowledge should make at least that "I know that I have hands" is true.

We would not accept the analysis of knowledge that does not satisfy (H). Of course, (1) is true under the definitions of "to know" that satisfies (H). Therefore (4) is true under the same condition, which means (7) in AI is not true under it. So AI can also be rejected in this case. Therefore, we also do not need to accept the skeptical conclusion in this case.

3. What the Above Argument Shows and What It Does Not

It shows that we can escape from skepticism under a natural requirement for knowledge. It does not show that I know I'm not a BIV. It shows just that *if closure is true then I can say that I know I'm not a BIV under the wide range of notions of knowledge*.

Closure was a tool for epistemologists. Gettier (1963) used it in his argument for his paradox (according to him, justification is closed under justified entailment: for any proposition p, if S is justified in believing p and p entails q and S deduces q from p and accepts q as a result of this deduction, then S is justified in believing q). Afterwards skeptics have used it for arguing against them. So closure is used by both non-skeptics and skeptics. I used this fact in my argument against skepticism. Many non-skeptics such as relevant alternatives theorists admit the flaws of closure and use its restricted version (for any relevant alternative q to a proposition p, if one knows that p and knows that p entails not-q, then one knows that not-q. Roth and Ross (1990), p.6). I think we don't need such concession to skepticism for arguing against it.

What makes AI plausible? I think AI should be read as follows: *If "to know" satisfies (7) and (8), then (9) is true under the meaning of "to know."* Which means that the notion of knowledge does not satisfy (H)("I know that I have hands" is false under the notion). So in AI "I know that p" means, for example, that I can exclude all logical possibilities of not-p. Therefore "I don't know that I have

hands" means that I cannot exclude all *logical possibilities* that I don't have hands. I think this does not contradict our intuition. It is logically possible that I am a brain in a vat, merely dreaming, or being deceived by an evil demon.*

* I am grateful to John Gibbons for his suggestive lecture of epistemology at MIT in the fall of 2000.

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Zur Eigenart der Rationalität von Aussagen über Gott. Hinweise zur systematischen Auswertung von Kants KrV

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1. Kants „Gotteslehre“ in der *Kritik der Reinen Vernunft* (KrV)

Kants Auffassung der Rede von Gott in KrV kann auf zweierlei Weisen interpretiert werden. So, dass Kant aufgrund einer Beschränkung der Erkenntnis auf den Bereich der Erfahrung philosophische Gotteslehre aus den Wissenschaften verbannt. Eine zweite Zugangsweise ergibt sich daraus, Kants Auffassung als Begründung einer neuen Art der Rationalität der Rede von Gott zu reflektieren. Ziel vorliegenden Beitrags ist es, KrV entsprechend des zweiten Weg zu deuten, und die Relevanz einer solchen Interpretation für eine systematische Gotteslehre anzudeuten. Dazu zwei Vorbemerkungen. Erstens wird es hier nicht möglich sein, die allgemeinen Charakteristika der theoretischen Philosophie Kants, über eine kurze Skizze hinaus, aufzurollen. Ich muss also sehr viel Kant voraussetzen. Zweitens beanspruche ich hier keine Kant-Exese. Ich möchte mit Kant philosophieren, ihn systematisch auswerten, nicht im Original darstellen. „Das hat Kant so nicht gesagt!“ kann also nur bedingt als Einwand gegen meine Überlegungen vorgebracht werden.

Kants Wende in der Erkenntnistheorie, der zu folge sich unsere Erkenntnis nicht nach Objekten zu richten habe, sondern eben die Objekte nach unserer Erkenntnis, sprich unseren subjektiven Erkenntnisvermögen, bringt die Einschränkung des Gegenstandsbereichs („wissenschaftlicher“) Erkenntnis auf die Erfahrungswelt mit sich. (B XVIIf) Das erkennende Subjekt setzt nicht „Objekte oder Dinge an sich“, sondern gemäß den reinen Formen der Sinnlichkeit und den Kategorien des Verstands aus empirischen Empfindungen Objekte der Erfahrung. Kant gibt allerdings deutlich zu verstehen, dass die damit gegebene Grenzziehung zwischen dem empirischen und dem transempirischen Bereich der Dinge an sich für die Bestimmung des letzteren nicht nur negative, sondern durchaus positive Folgen habe. Er eröffnet eine neue Weise der Rechtfertigung der Rede über diesen Bereich im allgemeinen und über Gott im besonderen (KrV B 395), auch wenn diese nicht durch den (bei Kant sehr engen) Rekurs auf wissenschaftliche Erkenntnis geschieht. Aussagen v.a. über Gott werden nur dann sinnlos, wenn man sie auf derselben Diskursebene wie Urteile ansiedelt, deren Gültigkeitsbereich mit der Welt der Erfahrung beschränkt ist. Kants Unterscheidung zwischen der Welt der Erfahrung und dem transzendenten Bereich führt also keineswegs zum Verzicht auf philosophische Aussagen über den letzteren. Genau das Gegenteil ist der Fall. Seine Kritik trifft vielmehr solche Auffassungen, die nur ein einziges Maß der Rationalität anerkennen. Dies führt in „geschwätzige Seichtigkeit“. Durch eine Untersuchung des Erkenntnisvermögens kann aber, wie Kant sagt, derselben „die Wurzel abgeschnitten werden.“(KrV B XXXIV) KrV kann somit als Versuch gewertet werden, die Rationalität der Rede über Gott von jener (natur-)wissenschaftlicher Untersuchungen abzugrenzen und ihr so einen neuen Stellenwert zu sichern.

Um dies fortzuführen, müssen wir dem Gottesbegriff der KrV („transzendentales Ideal“, TI) kurz nachgehen. TI ist eine konkretisierte oder „hypostasierte“ Idee. Ideen sind Leitprinzipien der Vernunft, die dazu beitragen, die Vielfalt einzelner Erkenntnisse in einen systematischen Zusammenhang zu bringen. Wie wohl Kant betont, dass TI nicht als Gegenstand der Erfahrung, somit als Erkenntnisobjekt aufgefasst werden dürfe, hebt er seine epistemischen Funktionen hervor. Zwei Aspekte sollen hier angesprochen werden: 1) gilt Kant die Bestimmung eines Gegenstands nur dann als vollständig, wenn von *jeder* möglichen Eigenschaft geklärt ist, ob sie ihm zukommt oder nicht. Ein Ding muss in Hinsicht auf *alle* Eigenschaften untersucht werden. Dies setzt aber voraus die Idee eines Alls von Eigenschaften. Die aber entspricht TI, einem „Ding“, dem alle Eigenschaften zukommen, das „omnitudo realitatis“ ist. Somit ist TI Voraussetzung einer vollständigen Gegenstandsbestimmung (KrV B 604). 2) Zur *Systematisierung* von theoretischen Erkenntnissen sind Ideen im allgemeinen und TI im besonderen unabdingbar. Am ausführlichsten erörtert dies Kant im „Anhang zur transzendentalen Dialektik“. Dort wird zunächst einmal deutlich, dass der System-Gedanke im Kontext der KrV eine entscheidende Rolle spielt (B 673f). Ohne Systematisierung keine Einheit von Wissen, ohne Einheit kein Zusammenhang einzelner Erkenntnisse, ohne Zusammenhang einzelner Erkenntnisse keine Wissenschaft(, ja nicht einmal einzelne Theorien, verstanden als systematische Verbindung von Erkenntnissen). Und es wird deutlich, dass ohne TI keine Systematisierung von Wissen möglich ist. Und zwar deshalb, weil TI der einzig möglicher Grund eines solchen Systems ist (als „Urgrund systematischer Einheit des Mannigfaltigen im Weltganzen“, siehe B 706). Damit wird TI oder „Gott“ zum Zentralbegriff von Kants Erkenntnistheorie, ohne dass Gott jemals erfahren, erkannt oder Aussagen über ihn Elemente des Systems selbst sein könnten.

2. Was können wir daraus lernen?

Kants Lehre kann zu einer differenzierenden Sicht von Wissen bzw. Wissenschaften und zu deren jeweils gesondert zu betrachtender Rechtfertigung führen. Seine „Gotteslehre“ gibt deutliche Hinweise sowohl zur Trennung der einzelnen Wissensbereiche als auch für ihren Dialog, ohne den Anspruch auf Rationalität für einen davon zu reservieren. Dies soll im folgenden unter drei Rücksichten kurz angedeutet werden.

2.1 „Erfahrung“

In der KrV wird Erfahrung verstanden als „strukturierte sinnliche Empfindung“. Da aber jene (subjektiven) Strukturen, die Empfindungen im allgemeinen ordnen, jene sind, welche nach Kant die Apriorität, somit die Notwendigkeit naturwissenschaftlicher Erkenntnisse bedingen, kann man Kants Erfahrungsbegriff auch als „naturwissenschaftlichen“ verstehen. Kant verwendet diesen Begriff strikt univok. Es gibt keinen anderen Erfahrungsbegriff in der KrV. Damit schließt er, aus begrifflichen Gründen, „Gotteserfahrung“ oder „religiöse Erfahrung“ aus.

Dennoch kann man über diesen („naturwissenschaftlichen") Erfahrungsbegriff in der KrV wichtige Differenzierungen zwischen den Wissensbereichen Naturwissenschaft und Gotteslehre in den Blick bekommen. Und zwar deshalb, weil jene subjektiven Erkenntnisvermögen, welche für Naturwissenschaft, und jene, die für Gotteslehre maßgeblich sind, für das theoretische Verständnis von Erfahrung unterschiedliche Funktion haben. Der eine Aspekt einer Erfahrungstheorie ist jener der „Konstitution" von Erfahrung. Wie kommt Erfahrung überhaupt zustande? Wenn man so will, ist dieser Aspekt der Anteil der Naturwissenschaften. Was nämlich nach Kant Erfahrung ermöglicht, sind jene apriorischen Voraussetzungen von Urteilen („Kategorien", v.a. Kausalität und Wechselwirkung), welche für die Naturwissenschaften eine entscheidende Rolle spielen. Und zwar deshalb, weil sie deren allgemeingültigen („notwendigen") Charakter ausmachen. So gibt jede naturwissenschaftliche Theorie, bei Kant hauptsächlich die Newtonsche Physik, Aufschluss über die Konstitution von Erfahrung. Und zwar deshalb, weil ihre apriorischen Voraussetzungen, wie gesagt, Erfahrungskonstitutiv sind. Unsere Empfindungen sind nach apriorischen Voraussetzungen der Newtonschen Mechanik strukturiert. Wir können die Welt gar nicht anders erfahren denn als „Newtonsche" Welt.

Aufgabe der Gotteslehre, bzw. jener für sie maßgeblichen subjektiven Vermögen, ist keinesfalls eine Klärung von Erfahrungs*konstitution*. Ihre Sache ist aber, die Möglichkeit einer Systematisierung von Erfahrungen zu begründen. Diese Systematisierung braucht es, weil wir ohne eine solche „projektierte Einheit" aller Erfahrung (B 675) auch die systematische Verbindung von Erfahrung, folglich auch von Urteilen über Erfahrungen, nicht verstehen könnten. Unser theoretisches Verstehen von Erfahrung, auch im Sinne von naturwissenschaftlicher Erfahrung, bliebe unvollständig. TI ist aber, aufgrund seiner bereits erwähnten besonderen Funktion als „Urgrund systematischer Einheit alles Mannigfaltigen", einzig möglicher Grund eines solchen Systems. Somit kommt ihm für das theoretische Verstehen von Erfahrung eine irreduzible, d.h. von den einzelnen Naturwissenschaften nicht zu leistende Funktion zu.

Die Grundlegung sowohl der Naturwissenschaft als auch der Gotteslehre münden also in eine Theorie der Erfahrung. So gesehen stehen Naturwissenschaft und philosophische Gotteslehre hier in keinem Konkurrenzverhältnis, sondern fungieren als dialogfähige „Partner" ohne exklusiven Rationalitätsanspruch.

2.2. Formale Struktur und epistemische Rechtfertigung der Rede von Gott

Um die formale Struktur und die epistemische Rechtfertigung der Rede von Gott nach KrV in den Blick zu bekommen, möchte ich sie in Kontrast setzen zu Kants Auffassung der Rede über den Bereich der sinnlichen Erfahrung. Grundlegend für letztere ist, dass Erfahrungsurteile formal nach den reinen Verstandesbegriffen („Kategorien") strukturiert sind. Diese sind Instanzen in unserem Verstand, die, vorab („a priori") der Anwendung auf sinnliche Empfindungen, die „reine" Form von Urteilen bedingen. So sind sie logische Voraussetzung dafür, die Vielfalt der sinnlichen Anschauung zur Einheit der Erkenntnis in einem Urteil zu bringen. Für die Naturwissenschaften besonders maßgeblich ist hier die Kategorie der Kausalität (siehe B 106). Die formale Struktur naturwissenschaftlicher Kausalurteile beruht auf diesem Verstandesbegriff, nach dem verschiedene Sinneseindrücke zu Erkenntnissen über kausale Zusammenhänge synthetisiert werden. „Die laufende Billardkugel verursacht den Abprall der ruhenden" beruht, logisch gesehen, darauf, dass unser Verstand in der Lage ist, bestimmte Eindrücke, etwa zweier Kugeln und der Bewegung, im Sinne einer Kausalrelation zu ordnen. Logische Voraussetzung dieser Ordnung oder dieser Synthesis ist der reine Verstandesbegriff der Kausalität.

Wie ist das aber mit der Rechtfertigung von solchen Erfahrungsurteilen, z.B. den angesprochenen Kausalurteilen? Kants Augenmerk liegt dabei nicht auf der Frage der Verifikation einzelner Urteile. Das ist Sache der empirischen Einzelwissenschaften. In der philosophischen Erkenntnistheorie geht es vielmehr darum zu zeigen, dass Urteile über Erfahrungszusammenhänge überhaupt allgemeingültig oder „notwendig" sein können, wie es nach Kant ihre Wissenschaftlichkeit erfordert. Kants Antwortstrategie ist die der transzendentalen Deduktion (B 129-169). Urteile über Erfahrungen sind allgemeingültig, weil jene Instanzen, eben die Kategorien, welche Erfahrungen konstituieren, ihrerseits allgemeingültige, weil apriorische Strukturen dieser Urteile sind. Die Allgemeingültigkeit von Erfahrungsurteilen liegt also in ihren Strukturen, d.h. in ihrer Form begründet. Etwas genauer: Ohne apriorische Strukturen von Erfahrungsurteilen keine Erfahrung. Es gibt aber Erfahrung, also muss es auch apriorische Strukturen von Erfahrungsurteilen geben. Gibt es apriorische Strukturen von Erfahrungsurteilen, so auch allgemeingültige Erfahrungsurteile, weil Apriorität der Strukturen der Erfahrungsurteilen deren Allgemeingültigkeit notwendig bedingt. Warum ist z.B. das Urteil „Immer wenn eine laufende Billardkugel x auf eine ruhende Kugel y trifft, prallt y ab" allgemeingültig? – Dieses Urteil ist allgemeingültig, weil die Erfahrung der Kugeln und ihrer Bewegung durch eine Kategorie konstituiert ist, die ihrerseits allgemeingültig, weil apriorisch ist.

Wie können wir aber die Rede von Gott oder vom TI verstehen? Über ihre formale Struktur können wir, ausgehend von KrV, zunächst negative Aussagen machen. Aussagen über Gott sind nicht Sache des Verstandes, wenn wir mit Kant unter „Verstand" das Vermögen zu urteilen nach Kategorien verstehen. Urteile kann es in Kants Sinn nur über Erfahrungszusammenhänge geben. So gesehen sind Aussagen über Gott auch keine Urteile. Heute würden wir sagen, sie haben nicht die Form deskriptiver Aussagen. (Zu dieser These siehe Muck 1999, u.a. 28ff) Wenn wir die Rede über Gott wie deskriptive Aussagen verstehen, machen wir, so Kant, einen schweren logischen Fehler. Sprechen wir, um bei Kausalität zu bleiben, von Gott z.B. als *Ursache* der Schöpfung und verstehen diese Aussage im Sinne einer (naturwissenschaftlichen) Kausalaussage, ist das weder wahr noch falsch, sondern aus logischen Gründen sinnlos. Hat die Rede über Gott oder über das TI deshalb überhaupt keine logische Struktur? Ist sie sinnlos? Diesen Schluss kann man nach KrV nicht ziehen. Die Rede über Gott hat nach KrV eine eigene Struktur, eine spezifische „logische Form" (B 386). Entscheidend ist, dass die Rede über Gott bzw. das TI nicht auf Begriffen des Verstandes, sondern der Vernunft beruht. Sache der Vernunft bzw. von Vernunftbegriffen aber ist es, (syllogistisch) zu schließen (B 386), und, nach bestimmten Regeln, episyllogistische Reihen fortzusetzen. Diese können aber nicht ins Unendliche gehen. Auf diese Weise kommt sie von einzelnen bedingten Erkenntnissen („Prämissen"), entsprechend der Regeln der Vernunft (ihrer „Begriffe" Seele, Welt, Gott, siehe B 391), auf das Unbedingte. Im Hinblick auf TI eben auf eine „absolute Einheit der Bedingung aller Gegenstände des Denkens überhaupt" (ebd.). Reden wir

theoretisch von Gott, sprechen wir also von der Bedingung der Einheit aller Erkenntnisse („Gegenstände des Denkens"). Aber nicht in dem Sinne, dass wir über Gott urteilen. Wir erkennen Gott nicht. Wir sagen nichts von ihm aus. Führen wir Gott in unsere wissenschaftliche Terminologie ein, tun wir das, weil wir annehmen, dass alle Gegenstände unseres Denkens in einer letzten Einheit verbunden sein müssen, z.B. um systematisch erfasst werden zu können.

Hinsichtlich der Rechtfertigungsproblematik ist zu vermerken, dass Kant durchaus auch davon spricht, Vernunftbegriffe, somit auch TI, hätten „objektive Gültigkeit" (B 368). Es geht aber auch hier nicht um die Verifikation einzelner Aussagen über Gott. Das mag Sache der Theologie sein. Es geht um eine allgemeine „Deduktion" von TI. Um eine solche Deduktion zu bekommen, muss man auf die angesprochene epistemische Funktion rekurrieren. Diese liegt, wie gesagt, nicht auf der Konstitution von einzelnen Erkenntnissen, sondern deren Einheit und Ordnung. Aussagen über TI können also insofern epistemisch gerechtfertigt werden, als sie der Funktion von TI in diesem Ordnungsvorgang entsprechen. (In Analogie zu Verstandesbegriffen, die „deduziert" werden, wenn ihre Funktion für die Urteilskonstitution gezeigt ist). So gesehen ist eine Gotteslehre dann gerechtfertigt, wenn sie berücksichtigt, dass „Gott", in seiner theoretischen Funktion gesehen, letzte Bedingung der Möglichkeit der Einheit aller Erkenntnisse („Gegenstände des Denkens") ist. (Zur modernen Diskussion der Eigenart der Verifikation der Rede über Gott: Muck 1999, u.a. 20-25.)

Wir können festhalten, dass KrV Aufschlüsse darüber erlaubt, inwiefern sich die Struktur von Aussagen über Gott von jenen der Erfahrungsurteile abhebt. Aus dieser Diskrepanz folgt freilich nicht, dass Aussagen über Gott nicht die Form sinnvoller Sätze hätten. Dieser Sinn ist nur anders zu bestimmen. Genauso verhält es sich mit deren Rechtfertigung. Die Sätze einer Gotteslehre sind nicht so zu rechtfertigen wie naturwissenschaftliche Sätze. Daraus folgt nicht, dass sie überhaupt nicht gerechtfertigt werden könnten.

2.3 Erklärungen durch Rekurs auf Gott

Als dritten Aspekt möchte ich die Weise, wie man durch Rückgriff auf TI zu Erklärungen kommen kann, ansprechen; und zwar wieder in der Art eines Vergleiches damit, wie man nach KrV naturwissenschaftlich erklärt.

Hinsichtlich naturwissenschaftlicher Erklärungen ist er'stens zu sagen, dass sie nach Kant auf der Bezugsetzung von Erfahrungen zu Naturgesetzen beruhen. Ich sehe, dass der Apfel vom Baum fällt. Ich erkläre dies daraus, dass Newtons Gravitationsgesetz auf das Verhältnis Apfel – Erde anwendbar ist. Naturwissenschaftliche Erklärungen sind, zweitens, (wenn sie zutreffen, d.h. wenn der Bezug zu einem Naturgesetz tatsächlich gelingt) notwendigerweise wahr, weil Naturgesetze allgemeingültig sind. Warum das so ist, haben wir gesehen: Sie beruhen auf apriorischen Strukturen unseres Verstandes. Und naturwissenschaftliche Erklärungen sind, drittens, (deshalb) prognostisch, in dem Sinne, dass sich der Verlauf natürlicher Ereignisse vorhersagen lässt. Weil Newtons Gesetz gilt, wird dieser Apfel vom Baum zur Erde fallen, sobald sich sein Stiel vom Ast löst. In Zusammenfassung dieser drei Aspekte könnte man naturwissenschaftliche Erklärungen auch (frei nach Muck 1999, u.a. 247) als „funktionale" bezeichnen.

Erklärungen unter Rekurs auf den Gottesbegriff können in diesem Sinne nicht funktional sein. Hat „Gott" oder die Anführung des TI somit überhaupt keinen Erklärungswert? Auch dieser Schluss ist m.E. unzulässig. Berücksichtigt man die bereits dargestellten epistemischen Funktionen von TI, kann man eine eigentümliche Weise, wie man durch Bezug auf TI zu erklären vermag, feststellen. Gewährleistet nämlich TI Einheit und Ordnung allen Wissens, kann man daraus folgern, dass durch Bezug auf TI jede Wissenschaft, letztlich auch jeder Teilbereich derselben, ja sogar jede einzelne Theorie ihren „Ort" im Ganzen des Wissens erhält. Erklären unter Bezug auf TI kann man somit nicht einzelne empirische Fakten. Aber man kann erklären, warum z.B. naturwissenschaftliche Theorien über diese Fakten einen anderen „Ort" im System des Wissens haben als etwa metaphysische Theorien darüber, wie Fakten überhaupt als Erfahrungen wahrgenommen werden können. Darüber hinaus kann man erklären, wie sich etwa physikalische Theorien zu ethischen verhalten (das kann man v.a. auch in Kants praktischen Schriften nachlesen), wie ethische Auffassungen zu ästhetischen in Verhältnis zu setzen sind (darüber handelt die *Kritik der Urteilskraft*). Den „Ort" einer Theorie im Ganzen des Wissens kann man nur durch Bezug auf das durch TI fundierte System allein bestimmen. Unter dieser Rücksicht ist TI theoretisch unverzichtbar. Die Art von Erklärungen unter Bezug auf TI aber mag man, unter Berücksichtigung dieser Überlegungen, auch (frei, weil nur auf den Bereich theoretischer Erkenntnis beschränkt, nach Muck 1999, u.a. 227, 250) „integrativ" nennen. Einzelnes Wissen wird ins Ganze eingefügt, und so sowohl in seiner Eigenart bestimmt als auch in seinem Verhältnis zu anderem Wissen.

Im Anschluss an Kants Ausführungen über „Gott" lassen sich Unterscheidungen hinsichtlich Erklärungsweisen gewinnen. Es sollte deutlich werden, dass der Naturwissenschaft eine Erklärungsweise entspricht, die sich nicht auf den Bereich der Gotteslehre übertragen lässt. Daraus folgt nicht, dass nicht auch der letzteren eine eigentümliche, nämlich „integrative" Erklärungskraft zukommt.

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Forms of Knowledge and Attestation: Wittgenstein's Incomplete Paradigm of Certainty

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Imagine, Wittgenstein once suggested, that I have two friends who share the "same name", and imagine further that I were to write one of them a letter:

> ich schreibe einem von ihnen einen Brief; woran liegt es, dass ich ihn nicht dem anderen schreibe? Am Inhalt? Aber der könnte für beide passen. (Die Adressen habe ich noch nicht geschrieben.) [...] Wenn mich nun jemand fragt 'An welchen der beiden schreibst du?' und ich antworte ihm, schließe ich die Antwort aus der Vorgeschichte? Gebe ich sie nicht beinah, wie ich sage 'Ich habe Zahnschmerzen'? – Könnte ich im Zweifel darüber sein, welchem von beiden ich schreibe? Und wie sieht so ein Zweifelsfall aus? – Ja, wäre nicht auch der Fall einer Täuschung möglich: ich glaube dem Einen zu schreiben und schreibe dem Andern? Und wie sähe der Fall einer solchen Täuschung aus? (Wittgenstein 1967, § 7)

Wittgenstein's many questions are not easy to answer, especially considering what he implicitly presupposes. The epistemological difficulties explicitly mentioned and for which he attempts an answer are much more profound than they appear.

The difficulties start before we even try to answer the explicit question, "To which of your friends are you writing?" They start with his belief that he can, and indeed does, answer this question. This belief presupposes, moreover, that he *believes* he has – or better: *knows what it means* to have – "two friends" of "the same name" ("gleichen Namens"). This directly involves his belief that he *knows* that he is writing – or perhaps better: *knows what it means* to be writing – "one letter". Let us briefly investigate this.

Wittgenstein claims to have written *one* letter. It is important to understand that he claims to be able to have done this *before* addressing the envelope. It seems that a condition for these claims, indeed for the entire story Wittgenstein wants to tell here, lies in a further belief, namely, that the content of his letter could "fit" or make sense to "both" of his friends.

What exactly this "fitting" fully implies will need, of course, more explanation than Wittgenstein, or I, can give here. Perhaps it means something along the lines of the way that advertisements or mass mailings could be said to "fit" different people. A letter about a washing machine or a lottery ticket might fit me as well as it fits you, assuming it "fits" anyone at all. The criteria for determining in which way Wittgenstein's letter "fits" his friends can obviously be much different and much more complex than even the most clever marketing strategy. But they could also be very simple. When I write a letter to a friend describing the activities I undertook on the weekend, how do I know this "fits" many of my friends? What does it mean for any content, phrases, or descriptions to "fit" even one person (and, considering the variety of contexts in which we communicate: one particular person at one particular time)? Do the addressees have to be "interested" (and what exactly does that mean?) in what I have to say? Must they interpret the illocutionary and perlocutionary aspects of my letter in a particular way – does a mass mailing letter "fit" those people who actually buy a washing machine better than those who do not, do my friends have to be pleased with my letter for it to fit? I do not want to attempt an answer to this conundrum here, since it is a peripheral, albeit important, element of my main topic.

In any case, let us now try to answer one of Wittgenstein's questions. If the letter really could be said to "fit" to either of two people, then *addressing* the envelope itself must be conceived as the last step in the language game of what it means to write s*omeone* a letter. I would like to claim that "writing a letter" involves a different degree of attestation than "writing *someone* a letter". A letter which is not written to anyone in particular can certainly still be called a letter (consider a message in a bottle, a plea for help, a poster, a wanted sign, etc.). But is that the same as writing a letter to a specific person – say, to a friend? Whichever way we will interpret whether and how a letter "fits" a person, *addressing it* concretizes the act; it is a way of saying: "I am speaking to you [Bertrand]". As I hope to show, Wittgenstein might *believe* that he is writing a letter to someone (say, Bertrand Russell), but he can't *know* to whom, because he has not yet *actually written* a letter to anyone without having first *attested* to this fact, either implicitly or explicitly.

A letter without an address in not yet a letter to someone, even if Wittgenstein claims to have already started the letter with a greeting (such as "Dear Bertrand"). To understand why his alleged belief that he is writing to one or both of his friends is not valid without attestation, it is important to understand how proper names work. In one important, albeit counterintuitive sense, one has to say that nobody has two friends of the same name.

Two people called "Ludwig" do not share the same name in at least this sense: Knowing what it means to successfully use the term "Ludwig" to refer to Ludwig is *radically different* than knowing what it means to use the term "horse" to refer to a horse. Being "called" Ludwig is much different than being (or being "called") a horse.

I *know* how to use "horse" to refer to a horse when I know that the sign "horse" can be used (in English) to refer to a horse (or: horses) and, most importantly, when I *know what horses are*. This latter bit of knowledge is based on criteria of descriptive-judgmental nature; it involves mastering (propositional) knowledge of the way the world is, the way things in the world are, and how we tend to differentiated and reify these various things under various conditions. It involves, in metaphysical language, the recognition of certain characteristics or qualia in certain entities as the condition to being able to recognize these entities as such; it involves *knowing* what characteristics belong to which entities as the basis for their being recognizable as such. This latter knowledge (e.g., what horses, donuts, daydreams, fairies, quarks, etc. are) is different from the knowledge I would like to dub an "axiom of reference", namely: mastering how to correctly use the term "horse" (in English). Mastering this bit of knowledge by no means needs to be in an explicitly propositional form. I would like to refer to this type of knowledge as being able to speak about things by using "concepts" or appellatives. Knowing how to use words like "horse"

implies mastering the (non-propositional knowledge) "axiom of reference" for appellatives, or A_1.

This axiom of reference is different for propria: A_2: I know how to use "Ludwig" to refer to Ludwig when I know that the sign "Ludwig" can be used (in English) to refer to Ludwig; but, most importantly, I must also *be familiar* with Ludwig, I must know *who* he is, and this means, quite simply, that I know that a certain reifiable entity has been dubbed "Ludwig". I cannot *know* what "a Ludwig" is or what "Ludwigs" are, since they will all share different characteristics. The only characteristic which one Ludwig may share with another for certain is that they were both dubbed "Ludwig".

There is, in other words, no such thing as "a Ludwig", since *knowing* what a Ludwig is would be identical to knowing that a specific entity has been dubbed "Ludwig" in an appropriate naming situation. The crux here is that this "knowledge" is not of any characteristics an entity may or may not possess; I identify Ludwigs *not* according to any characteristics the basis of which qualifies them as Ludwig, but because of my familiarity with name-giving and spatio-temporal reification of those named entities. Upon entering a room, I cannot know which of the entities, if any, are called Ludwig – the paperweight on the desk, the lamp, or any one of the people in the room may or may not be called Ludwig. I might (correctly) assume that certain (very contingent) onomastic customs in many of our cultures cause exemplifications of the species *homo sapiens sapiens* of the male gender and with certain (difficult to generalize) ethnic ties to the German culture to be dubbed "Ludwig" more often than other entities. But unless I know *whether* they were *named* Ludwig, I cannot know *who* a particular entity is. I might guess as to who is named Ludwig, but I will more often than not be wrong, and likewise, upon hearing "Ludwig", I will not know *what* that entity is (Allport 1979, Kaplow 2002). Mastering A_2 is similar to mastering the axiom A_1, but successfully using A_2 involves the antecedent reification of entities (or better: events) without necessary recourse to particular characteristics. I can know *who* something or someone is (I can know "Ludwig is 42 years old") without knowing *what* Ludwig is at all. *Knowing who* takes recourse to familiarity (knowledge, if you will, of contingent socio-onomastic affairs), while *knowing what* involves descriptive-judgmental interpretation (Abel 1999). Using lingual signs proprially (as proper names) thus means knowing how I can use contingently homonymic or homographic signs to refer to a particular entity the reification of which may be completely independent of the criteria used in applying that sign to the entity.

One can thus have two (or more) friends to whom one can successfully refer by using homonymic signs, each of which functions *proprially*. This means that the story told in my opening quotation is not a good, coherent, story. If Wittgenstein believed the story he told was good, he was, in at least this sense, fooling himself – that he really could have been writing a letter to one of his two friends of the same name. Writing "Dear Bertrand" at the top of his letter does not mean that Wittgenstein necessarily wrote the name of a particular friend; he has written a sign which does not yet function completely proprially; he does not yet know to whom he is writing. The categories of "content" and of "fitting" are relevant to *knowing what* characteristics the addressee (whoever he might be) might have, but these are not enough to *know who* he is.

Wittgenstein, in writing the "name" of his friend(s), was using a homographic *placeholder* for a "real" proper name (a sign used truly proprially, for one individual). *Knowing* to whom he is writing entails writing the proper name, and this will entail a certain degree of *attestation*. By attesting – by making explicit the speech act: "I am hereby writing a letter to you, Bertrand", and addressing this at one particular person named Bertrand – Wittgenstein must write the address and stand to his commitment that he is writing a letter, if that is in fact what he is doing, *to one particular friend*.

This can be understood analogously to how a signature is used. I attest that the letter I have written is mine by explicitly consummating the speech act: "I, Ian Kaplow, have written this." The name written at the bottom of a letter attests to the identity of the author; the form of attestation here also does not primarily involve *knowledge* (although it can, such as when someone wants to determine whether a letter has been forged and the attestation of the name is challenged). My signature attests to my identity. But what is this? I can never completely describe *what* I am (although many descriptions will fit: an American, a brother, a husband, a philosopher, a short guy with brown hair and blue eyes, a person who usually likes beer but prefers Merlot with lamb, etc.); but *knowledge of me* in terms of descriptive judgments can never exhaust my identity. Knowing *who* I am – that is, having acquaintance with me – can be summed up perfectly in being acquainted with my name. My signature attests to my identity in much the same way as my name attests to me as reifiable object.

The address on a letter is a form of counterpart to the author's signature. It is a way of contextualizing the homonymic sign, such as "Bertrand" in "Dear Bertrand", into a proprium. Two people named Bertrand will not have the same name because they have different signatures (no matter how "similar" these might appear graphically).

Writing a letter contains a myriad of epistemological presuppositions, none of which are met in Wittgenstein's brief thought experiment. Just as exclaiming "Two beers, please!" does not necessarily entail ordering two beers (such as when, for example, I shout this while driving my car alone down a deserted highway), writing a number of meaningful phrases and precluding these with a greeting (such as "Dear Bertrand") does not necessarily entail writing *someone* (such as Bertrand) a letter.

Thus, to answer Wittgenstein's question, I would attest that before an addressee has been determined, before a name is used proprially and not just as a placeholder, before a counterpart-signature has been written, that Wittgenstein has not yet written a letter *to someone* and thus cannot have been "deceived" ("getäuscht") one way or another. Knowing to whom he is writing cannot lie only in particular "intentions", no matter how concrete or diffuse these might be (Wittgenstein 1984). Knowing to whom he is writing – or, contrarily, failing to know – will not primarily involve knowledge of characteristics, or knowing what criteria might make his contents "fit" certain people. Wittgenstein can be in "doubt", but not primarily because of lack of knowledge – rather, because of lack of attestation.

Understanding what it means to be certain (to have a lack of doubt) will not only entail differentiating between the different forms of *knowledge* I sketched here (knowledge of who-familiarity, knowledge of what-characteristics, knowledge of the different axioms of reference), but of *attestation* as well: attestation to the addressed proprium and its counterpart, the signature.

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Indefensibility, Skepticism and Conceptual Truth

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It is true of many truths that I do not believe them. It is equally true that I cannot rationally assert of any such truth that it is true and that I do not believe it. Such a claim is indefensible, i.e. for internal reasons unable to convince. I claim that such is the skeptic's predicament, trying to convince us to bracket knowledge claims we have good grounds to take ourselves to be entitled to. An analysis of skepticism as an epidemic rather than epistemic challenge will shed new light on what it is to doubt a proposition and provide us with an analysis of conceptual truths as those which cannot rationally be doubted.

The puzzle of `Moore's paradox', as I understand it, is to explain why the following sentence, while true for many values of *p*, is inappropriate to assert;

(1) *p*, but I do not believe that *p*

I will discuss two approaches to the puzzle which identify conversational maxims they take to be flouted, criticise them and then present an alternative solution.

The *belief approach* takes "*p*, but I do not believe that *p*" to violate the maxim that one should believe what one asserts and then argues that the quoted sentence is unbelievable. The problem with this approach is that it has to claim that believing that one does not believe that *p* entails that one does not believe that *p.*

The *knowledge approach*, on the other hand, takes it to violate the maxim that one should only assert what one knows and then argues for its unknowability.

The alternative solution I favour presupposes only that one should believe what one asserts and does not have to rely on the dubious principle that one cannot have false beliefs about what beliefs one lacks.

For any sentence *p*, to believe that *p* is to take the actual world to be a possible world where *p* is true. For any sentence *p*, to disbelieve that *p* is to consider it possible that a world which verifies ¬*p* is actual. What does this considering it possible that ¬*p* amount to? Call *doxastic alternatives* for *a* at *t* scenarios the actuality of which *a* cannot (indeed should not) rule out given what he takes himself to know at *t* about the world he takes to be actual (which may or may not be his real actual world). A doxastic alternative for *a* at *t*, then, is a way the world might be *a* cannot exclude at *t* to be a way the world actually is. If *a* believes that *p*, all his doxastic alternatives make *p* true; if he disbelieves *p*, one of his doxastic alternatives makes *p* false, i.e.~they make ¬*p* true. We do not assume that *p* has a truth-value in all of *a*'s doxastic alternatives, neither do we assume that no doxastic alternatives make *p* both true and false and hence are impossible.

Whenever we say of ourselves that we believe that *p*, we incur a commitment to the truth that *p* -- we claim that the real actual world (not only the ones we take to be our actual world) is among our doxastic alternatives. Whenever we learn further truths and acquire true beliefs, we narrow down the range of alternatives, hopefully to an ideal limit where the actual world would be our only last alternative left and we would believe some proposition iff it is true. A self-ascription of knowledge or belief is a claim to the effect that we are prepared to use some proposition as a premise in this process of narrowing down the realm of what is left open by what we take ourselves to know. A crucial feature of beliefs we claim to have, then, is that they must entertainable in worlds which are their only doxastic alternative. Any proposition that cannot be believed in such a world immediately disqualifies from the role conferred to it by a self-ascription of belief in it.

What lies at the bottom of indefensibility of *"p*, but I do not believe that *p"* is not the transitivity of doxastic alternativeness but the commonly made presupposition that what one says might be true even in a state of complete information. If I utter *p*, I therefore commit myself to the claim that *p* might be true even if I knew everything about the actual world there is to know, that is, even if the actual world were my only doxastic alternative.

If you utter *p*, you must consider it possible that you would believe *p* even if you had a maximally specific belief set, i.e.~if you would believe all the truths (or, equivalently, disbelieve all the falsehoods). If the world in which we believe them were our only doxastic alternative, belief in *"p, but I do not believe that p"*would make that world inaccessible to us. A belief in (1) makes the world in which it is held either doxastically inaccessible to itself or contradictory. (1) cannot be rationally believed in worlds which are doxastic alternatives of themselves. Taking a doxastic alternative to be possibly actual as opposed to just merely possible, however, means taking it to be doxastically accessible to itself. So no one can take a doxastic alternative in which (1) is true to be a possible way *his* actual world, the world of the believer, might be. It is instructive to compare "*p*, but I do not believe that *p*" to the following:

(2) *p*, but I do not disbelieve that ¬*p*.

(2) can only be believed in worlds which have only non-reflexive doxastic alternatives. So the believer cannot take the world he takes to be actual to be one of its doxastic alternatives, not even, as in the case of (1), at the price of acknowledging that it is contradictory. He cannot take any world to be its doxastic alternative without foresacking that it may be possibly actual (for if it *were* actual, he could not take it to be actual).

The pragmatic maxim violated by an utterance of (2) is not, as in the case of Moore's paradox, that one should believe what one says but something weaker, i.e. that one should disbelieve what one believes to be false. It is thus unbelievable in a weaker sense than Moore's paradox.

The problem with (2) is not the inappropriateness of uttering it, but that belief in it cannot be taken to be true. The problem is that is can only be true *and* believed in worlds which are 'anti-symmetric', i.e. which are such that every doxastic alternative to them does not have them among its doxastic alternatives.

I think that this interpretation of (2) helps us with what I still take to be the main problem of epistemology: not whether the sceptic is right but why he is wrong. Scepticism seems to have found its niche in philosophical multiculturalism. While still unfashionable, it has become tolerated, or rather ignored. I think sceptics earn better than that. Even given that they cannot be proven wrong, their challenge still demands an answer, if not a treatment. I will argue that the cure to skepticism lies in epidemiology

rather than epistemology: instead of attacking the sceptic head-long, I commend vaccinating our fellow non-sceptics against the virus. The way to go is not to argue that the sceptic is wrong, necessarily wrong or that he cannot be believed, but to show that he cannot convince. Scepticism requires a leap of faith: something we may justifiably refrain from even on the sceptic's own standards.

Sceptics are not very good at mounting positive claims. Instead, they ask questions. I take the skeptic of concern to us to be someone who believes that no one ever knows anything. As we assume him to be rational, he will not qualify this belief of his as knowledge. The sceptic thus thinks that all our beliefs that we know something are false. The question he asks us is the following: ``How do you know that you know something?'' By taking his question to be rhetorical, he challenges our entitlement to any knowledge claims (claims of the form ``I know that *p*'') whatsoever. To meet the sceptic's challenge, we have to develop an account of knowledge that gives us the resources to defend against the sceptic the claim that we know something.

The question of what to say to the sceptic lands us in a dilemma. The sceptic sketches a sceptical scenario, *p*, furnishes a description of what he takes to be a possible world in which we would not know what we claim to know. He then challenges us to explain to him why we think we are justified in excluding that scenario, i.e. to exclude its possible actuality. Given that we steadily stay non-sceptics, we have to choose between two equally uncomfortable options: either we find a hidden contradiction in what the sceptic presents as possible (which has turned out very difficult, if not impossible in many cases) or else we simply declare our psychological inability to believe him and thereby end the discussion before it even got started.

A medium between these extremes, I think, is to take scepticism to be an epidemic: a contagious superstition, which, for fear of infection, we do better to isolate than to confront directly. Such a epidemiological rather than epistemological response requires some redefinition of what it means to meet the sceptical challenge: we do not have to convince those among us who are already infected with the sceptical virus; instead, we have to prevent the sceptical disease from propagating, i.e. to detain the sceptics among us of convincing others. In order to do this, we cannot stay with our own inability to believe the sceptics: we have to justify and to explain to others why we cannot get ourselves into believing them. Our inability to waive our knowledge claims has to be argued for -- in a way that *shows* (displays, not demonstrates) that it is not idiosyncratic, not prejudiced and not just a symptom of our unwillingness to consider their arguments. To meet the sceptical challenge, therefore, I have to win a three-person game: I, the antisceptic, have to convince you, the innocent bystander, that you should not believe the sceptic who is trying to convince you of the epistemic possibility of the scenario he sketches. I have to convince you that the reasons I have for not being a sceptic carry over, if you are not a sceptic already, to your case. Taking scepticism seriously, then, is to take it seriously as a threat. It is not necessarily trying to refute it: it is enough to show that what the sceptic takes to be possible is not possible *for the two of us*.

I want to argue that one of the best known scenarios sceptics and anti-sceptics have produced so far is, *for the sceptic*, relevantly similar to the way Moore's paradox is *for us*: both of us are unable, by the very structure of our respective utterances, to produce conviction. Though they may be true and even believed to be true, the sceptic trying to convince us has to show more: he has to show that we are not epistemically required to disbelieve them to be false. Assuming that we are not deluded ($\neg p$), the sceptic has to show us both that we are able to believe that we are deluded (p) and that we do not disbelieve that we are not deluded ($\neg D\neg p$). If belief in delusion would require disbelief in non-delusion, we would be justified in not wanting to give him his chance. Given that we already believe that we are not deluded, he would demand the epistemically impossible: to believe and disbelieve the same proposition. So the sceptic has to convince us of (2), i.e. that we are not deluded, but at the same time do not disbelieve we are not deluded. Only in this way he can overcome our cognitive resistance. I will argue that his task is hopeless.

It is this commitment to a locally anti-symmetric alternativeness relation that justifies our reluctance to believe, even if it is for the sake of the sceptic's argument, that we do not disbelieve that his counterfactual sceptical scenario is actual. What the sceptic asks us to do, in effect, is to suspend our confidence in our knowledge claims, i.e. to accept the following as true:

> (3) I know that *p*, but I believe (for the sake of the argument) that I do not disbelieve that I do not know that *p*.

If the second conjunct is true and I have the belief that I am lacking the confidence I actually have in my knowledge claims, then the first conjunct is true only in worlds which are not doxastic alternatives to any of my doxastic alternatives. Thus (3) asks us to epistemically place ourselves in worlds from which there is no road back to the world where we take ourselves to be. The suspension of my confidence is only problematic if I actually endorse the knowledge claims I have confidence in. That is why (3) is a problem for me, being a non-skeptic, but not for someone who is a skeptic already.

If skepticism requires a leap of faith we have good reasons not to take, we treat the skeptic fairly in disbelieving him without proving him wrong.

Zwischen Wissen und Glauben: Karl Mannheims Rekonstruktion des Konservatismus

Endre Kiss, Budapest

Dass Karl Mannheim ein paradigmenbildender, normgebender Klassiker der Disziplin der *Soziologie des Wissens* war, ist weitgehend bekannt. Der Großmeister der Wissenssoziologie, dessen Meisterschaft auf dem klassischen Werke *Ideologie und Utopie* beruht, muss nun einem anderen Großmeister der Wissenssoziologie Karl Mannheim weichen, dessen Ruhm und Bedeutung mit demselben Recht auf seine erst 1980 aufgefundenen *Konservatismus*-Arbeit aufgebaut werden soll.

Die Gemeinde der Wissenssoziologen kannte die 1927 erschienene Fassung der *Konservatismus*-Studie (*Archiv für Sozialwissenschaft und Sozialpolitik*, Band 57), ein kaum geringeres Aufsehen erwarb sich die posthum erschienene Detailfassung des *Conservative Thought.* Es war auch allgemein bekannt, dass beide Fassungen auf ein umfangreicheres Original zurückgingen, und zwar auf die Habilitationsdissertation Karl Mannheims, die er unter dem Titel *Altkonservatismus: Ein Beitrag zur Soziologie des Wissens* 1925 an der Philosophischen Fakultät der Karl-Ruprecht-Universität in Heidelberg eingereicht hatte.

Es besteht kein Zweifel darüber, dass die Habilschrift auch im Falle Karl Mannheims der pragmatischen Zielsetzung jeder Habilitation untergeordnet war. Der ungarische Emigrant der historischen Jahre 1918-1919 wollte wie viele andere habilitieren, um an einer seriösen Universität die *venia legendi* zu erhalten und wenn möglich, auch eine weitere akademische Karriere anzutreten, für welche er - und dies durfte er mit vollem Recht von sich denken - professionell geeignet war. Gleichzeitig benutzte aber Karl Mannheim die eher äußerliche und wie erwähnt, zweifellos "pragmatische" Gelegenheit, durch seine Habilitationsschrift auch eine *dreifache* höchst komplexe Zielsetzung zu verwirklichen. Erstens entwarf er eine der ersten Fundierungen der Disziplin einer "Soziologie des Wissens", welche in vielen Einzelheiten auch über die darauf folgenden Fundierungen weit hinausging.[1] Zweitens exemplifizierte er diese Fundierung der Disziplin der "Wissenssoziologie" am Beispiel des *konservativen* Denkens in Deutschland bis etwa zu den vierziger Jahren des neunzehnten Jahrhunderts. Dies heißt, dass Karl Mannheim nicht nur eine normbildende und paradigmatische Arbeit der Disziplin "Wissenssoziologie", sondern auch eine der etwas engeren Disziplin der Konservativismus-Forschung geschaffen hat. Drittens, er benutzte diese äußerliche Gelegenheit der Habilitation (nicht zuletzt gerade *durch* den Entwurf eines Paradigmas der Wissenssoziologie, bzw. Konservativismus-Forschung) dazu, um eine geschichtsphilosophische Bilanz zu ziehen, die in einem engeren Sinne die Problemkreise des Ersten Weltkrieges und der darauf folgenden Revolutionen und in einem etwas breiteren Sinne die Horizonte der neuzeitlichen Rationalisierung reflektiert. Mannheims Konzeption ist also alles andere als "konventionell" oder nur durch existentielle Motivation geleitet. In der Form einer Habilitation will er also eine historische Bilanz aufstellen, er glaubt es aber nur ausführen zu können, wenn er dazu im wesentlichen zwei neue Paradigmen aufstellt.

Karl Mannheims geschichtsphilosophische Bilanz ist durch die *"ungarische Erfahrung"* motiviert. Diese auf eine erstaunliche Weise bis heute kaum noch adäquat aufgearbeitete Erfahrung bestand in der Aufarbeitung eines rasend schnellen Nacheinanders von drei Revolutionen, bzw. Gegenrevolutionen. Nach dem Zusammenbruch Österreich-Ungarns trat zunächst die bürgerlich-demokratische politische Einrichtung, die im westlichen Sinne genommene ungarische Republik von Mihály Károlyi und Oszkár Jászi auf. Ihr folgte die ungarische Räterepublik von Béla Kun und Tibor Szamuely, eine zeitgemäße Form der Kommüne, d.h. des Bolschewismus. Diese löste nach 133 Tagen der "weiße" Terror des Admirals Horthy ab. Das soeben untergegangenes Österreich-Ungarn war von vielen Zeitgenossen als "Versuchstation der Zukunft" (die Formulierung stammt von Karl Kraus) anvisiert. Es besteht kein Zweifel, dass gerade die soeben aufkommende ungarische Erfahrung es war, die ebenfalls und mit dem gleichen Recht als "Versuchstation" alles antizipierte, was man später als die Essenz des zwanzigsten Jahrhunderts anzusehen gezwungen war.

Die Habilitationsschrift *Altkonservatismus: Ein Beitrag zur Soziologie des Wissens* wurde seitens der Heidelberger Philosophischen Fakultät von Emil Lederer, Alfred Weber und Carl Brinkmann mehrheitlich positiv begutachtet. Manche weitere Schwierigkeiten blieben Mannheim trotzdem nicht erspart, wobei der nicht ganz unwirksame Einwand der ungarischen Staatsbürgerschaft Mannheims durch die Tatsache der deutschen Herkunft seiner Mutter wieder ausgeglichen werden konnte. Der Habilitationsprozess nahm letztlich doch ein glückliches Ende, an dem außer der ins Auge springend überzeugenden Qualität der Dissertation auch die einflussreichen Beförderer Mannheims,[2] sowie Mannheims professionelles, zielbewusstes und diszipliniertes Verhalten beigetragen haben. Karl Mannheim erhielt seine Ernennung zum Privatdozenten der Fakultät am 12. Juni 1926 und hielt seinen ersten Vortrag schon an demselben Tag mit dem Titel "Über den gegenwärtigen Stand der Soziologie in Deutschland".

Der Gesamtkorpus der Habilitationsschrift spielte in Karl Mannheims ganzer Laufbahn keine Rolle. Er blieb in jeder Hinsicht unbekannt. Für die Geschichte der Disziplin der Wissenssoziologie hat es eine vielleicht noch größere Bedeutung, dass es ebenfalls unmöglich war, aus den anderen prinzipiellen Texten über die Fundamente oder die Methodologie der Wissenssoziologie auf den Inhalt des Gesamtkorpus der *Konservatismus*-Arbeit zu schließen. Warum sich Mannheim selber zu seinem Manuskript auf diese Weise verhielt, können wir heute vorläufig noch intuitiv einschätzen. Uns scheint, dass Mannheim den Text der Habilitationsschrift auf der einen Seite für noch nicht ganz reif, während auf der anderen Seite für zu "abstrakt" und noch nicht ganz verständlich gehalten haben mochte.

[1] Wir wollen selbstverständlich die Werte der späteren fundierenden Werke Mannheims nicht absichtlich zugunsten der *Konservatismus*-Arbeit nicht herunterspielen. Die angesprochene Differenz zwischen dieser Arbeit und den späteren prinzipiellen Versuchen besteht vor allem in dem theoretischen Ansatz. Während Mannheim in der Periode der *Konservatismus*-Arbeit sich praktisch jeder theoretischen Herausforderung öffnet, verfährt er später viel vorsichtiger und dies führt zu einer geringeren theoretischen Schärfe und einer geringeren theoretischen Plastizität der Behandlung der Probleme.

[2] Emil Lederer erwies sich in dieser Tätigkeit der Beförderung als sehr effektiv. Wir können es auch nicht ganz ausschließen, dass Alfred Weber gewisse Einzelheiten der Heidelberger Habilitationsgeschichte von Georg Lukács während dieses Prozesses gegenwärtig geworden sind.

Für die erste Seite der These sprechen manche sprachliche Eigenschaften des Korpus, die von den Redakteuren der ersten Ausgabe auch entsprechend aufgebessert worden sind. Für die zweite Seite der These spricht vor allem die Tatsache, dass Mannheims spätere, prinzipielle Texte an Komplexität und Abstraktionsfähigkeit deutlich hinter der *Konservatismus*-Arbeit zurückbleiben. [3] So konnte es geschehen, dass erst 1980, aus dem Nachlass Pál Kecskeméti's, die vollständige Schreibmaschinenfassung der Habilitationsarbeit auftauchte. Diese Fassung wurde dann von David Kettler, Volker Meja und Nico Stehr redigiert und herausgegeben. [4]

Die Erforschung des spezifischen "konservativen" Denkens wirft spezifische Probleme auf. Das schwerwiegendste ist vielleicht, dass das konservative Denken, die konservative Ideologie in den verschiedensten historischen Kontexten auftreten kann. Bald sehen wir einen "Konservativismus", der sich als "reaktionärer Quasitotalitarismus" stilisiert (oder von anderen in dieser Stilisation gesehen wird). Bald erscheint ein Konservativismus, der für ein unentbehrliches Korrektiv jedes denkbaren Fortschritts erlebt wird. Bald entrüsten sich die siegreichen rechten Totalitarismen über die "ewig Gestrigen" der konservativen Lebens- und Denkhaltung, bald sucht die saturierte Elite eines real existierenden Sozialismus Kontakte und Ideen bei neuen und "modernen" Konservativen, höchstwahrscheinlich, weil sie in den Besitz von Verhaltens- und Denkmustern kommen will, die ihren wirklichen, d.h. nicht ideologischen "existentiellen" Lebensbedingungen entspricht.

Mit großer methodischer Erudition und theoretischer Bewusstheit weicht Karl Mannheim jenen Schwierigkeiten aus, die sich aus der Verflochtenheit dieser drei Eigenschaftskomplexe für eine Rekonstruktion des Konservativismus bedeutete. Einerseits wählt er zum Gegenstand seiner Analyse den *deutschen* Konservativismus der postrevolutionären Ära, womit er die Fixation der Problematik auf die Französische Revolution gleich thematisch macht. Darüber hinaus "idealtypisiert" er die ausgewählte konkrete historische Periode, und zwar so, dass er führende Gesichtspunkte in dieser konkreteren historischen Epoche gelten lässt, die theoretisch auch erst etwas später entstanden sind. Er sucht ferner zwischen einer "metaphysischen" und einer sich in der steten "Reaktivität" erschöpfenden Auffassung durch seine theoretische Option des "Strukturzusammenhanges" eine Brücke zu bauen. [5]

Vor allem war es das Hintergrundmotiv, der Anspruch auf geschichtsphilosophische Bilanz, welches bei diesem Werk von Karl Mannheim sowohl die Fundierung der Wissenssoziologie, wie auch die Rekonstruktion des Konservativismus untrennbar mit der Problematik der modernen neuzeitlichen *Rationalität* untrennbar verwachsen ließ. Es war auch die heuristische Perspektive, die ebenfalls ganz neu war. Die Generation Mittel-Europas, in deren Reflexion hier dieser welthistorische Ablauf sich artikuliert, war eine, die zum ersten Mal in der mittel-europäischen Region moderne europäische Kultur und Identität als Selbstverständlichkeit erlebt und genossen hatte. Kein Wunder, dass der Untergang dieser triumphalen Modernisation nicht nur ihr größtes existentielles Erlebnis, sondern auch ihre vitalste theoretische Motivation war. [6]

Karl Mannheim formuliert sehr exakt: "Das Grundinteresse besteht für uns in der Erforschung des Strukturzusammenhanges, in dem der geistige Kosmos und in ihm der Denkkosmos sich bildet und gestaltet". [7] Die Termini "Strukturzusammenhang", "geistiger Kosmos", "Denkkosmos" weisen etwa topographisch auf dieses sozialontologische Interesse hin. Sowohl der "geistige Kosmos" wie auch der "Denkkosmos" haben direkte und unmissdeutliche sozialontologische Implikationen.

Die einzelnen gedanklichen Elemente werden auch nicht gleich "soziologisch" geordnet, bzw. kategorisiert, meistens werden sie auch in immer breiter sich kreisenden Kreisen eingeordnet, deren *Outputs* sozialontologisch ausgerichtet sind: "Denn so viel scheint sicher zu sein, dass Beobachtungen, Denkgehalte, Denkformen, nicht isoliert, nicht vereinzelt, nicht in Form von Einzeleinfällen aufkommen, sondern dass sie von Kollektivintentionen getragen, stets als Teile, als =Elemente= einer umfassenden Willensintention einer einheitlichen Beobachtungsrichtung zustandekommen. Nicht isolierte Gedankenelemente wollen also in ihrem Aufkommen und Schicksal beobachtet werden, sondern Gedankenmassen (!) (Inhalte und Formen, etc.), die kohärent um eine bestimmte Problematik des Lebens herum gruppiert aufkommen und sich fortbilden". [8]

Karl Mannheims konkrete Bestimmungen der Residuen und der sozialen Orte des Irrationalen ergeben das folgende Bild:

a) Individuum
b) Lokalität
c) Die Anwendung
d) Irrationalität der Bewegung
e) Persönlichkeit
f) das Qualitative
g) die Totalität
h) das Göttliche (das Mystische, die Offenbarung)
i) das Organische. [9]

Diese Aufzählung der Residuen des Irrationalen ist gewiss eines der bleibendsten wissenschaftlichen Ergebnisse Karl Mannheims, aber auch eine der herausfordernden konkreten Konzeptionen einer sozialontologischen Bestimmung des Denkens. Wir können es nur bedauern, dass es Mannheim an dieser Stelle nicht so sehr darum ging, die einzelnen Überbleibsel und geistigen Orte des Irrationalen eingehend analysiert zu haben. Mannheim selber ist aber auch unmissverständlich stolz auf dieses Ergebnis: "... nichts ist wichtiger als ... diese verdeckende Hülle, diesen alles auf einen Nenner reduzierenden Begriff 'irrational'

[3] Im wesentlichen wiederholt diese These das, was in der Anmerkung 1) einmal schon berührt worden ist. Von einer wieder anderen Hinsicht her ist es leicht ersichtlich, dass die Anzahl der theoretischen Entwürfe und Fragestellungen in der *Konservatismus*-Arbeit viel größer als etwa in der *Ideologie und Utopie* war.
[4] Karl Mannheim, *Konservatismus*. Ein Beitrag zur Soziologie des Wissens. Herausgegeben von David Kettler, Volker Meja und Nico Stehr. Frankfurt am Main, 1984.
[5] Die Aufarbeitung des Komplexes des Strukturzusammenhanges ist ein treffender Beweis für die Kreativität dieses Ansatzes. Hier versucht Mannheim dasselbe Problem zu stellen und zu lösen, welches durch den Strukturalismus etwa 30 Jahre später als Konflikt zwischen "Struktur" und "Geschichte" auf den bekannten Bahnen die philosophische Diskussion beherrscht hatte. Trotzdem ist unser Eindruck, dass Mannheim seine Hoffnungen in Verbindung mit dem heuristischen Möglichkeiten des Begriffs des Strukturzusammenhanges nicht eingelöst sah.
[6] In diesem Fall erwies sich eine selten gelungene Modernisation als existentielles Erlebnis, welches ja zur späteren Beurteilung der Konflikte der Modernisation entscheidend beigetragen hat. - Dieses Moment kann uns daran erinnern, dass die Einstellung über die Moderne sehr stark von den unmittelbarsten persönlichen Erfahrungen bestimmt wird.
[7] Karl Mannheim, *Der Konservatismus*. Frankfurt am Main, 1984. 66. - Es ist sehr einleuchtend, wie dieses Zitat auch weitergeht: Hierbei ist sowohl für die Ideengeschichte wie für die Wissenssoziologie das leitende Problem herauszubekommen: wie und in welcher Gestalt alle jene Denkmethoden, Denkstandorte, Begriffsdeutungen, Denkkategorien zustandegekommen sind, die den gegenwärtigen Zustand unseres Wissens und unsere Weltanschauungstotalität ausmachen" (*ebenda*). - Uns scheint, dass in dieser Formulierung die reale Reihenfolge und Priorität der einzelnen Fragestellungen und dementsprechend den einzelnen philosophischen Wissenschaften durchaus klar zum Ausdruck gebracht wird.
[8] *Der Konservatismus*, 68.
[9] Ebenda, 199-200.

abzustreifen".[10] Dies heißt im Klartext, dass er es als einen deutlichen Erkenntnisvorstoß ansieht, dass es ihm gelungen ist, an der unqualifizierten Homogenität des üblichen Begriffs des Irrationalen zu rütteln, ihn "sozialontologisch" zu konkretisieren.

Eine der bleibendsten Errungenschaften der Konservativismus-Analyse Mannheims ist die mehr als skizzenhafte, wiewohl doch nicht ganz detaillierte Ausarbeitung des "liberalen" und des "proletarischen" Denkens neben dem "konservativen". In dieser Klassifizierung erscheint das proletarische Denken als eines, das in seiner Opposition zum bürgerlichen Liberalismus mit dem Konservativismus verwandt ist. Das proletarische Denken ist in Mannheims Vision *sui generis* rationalistisch, denn - und dies liegt ganz in der Linie der Mannheimschen Wissenssoziologie selber - das Proletariat als Klasse sich überhaupt im Medium der modernen Industrialisierung, d.h. in dem der Rationalität konstituiert. Das Proletariat ist andererseits "irrationalistisch", dass sein chiliastischer Messianismus, genährt von seinem historischen Optimismus, die Kalkülen der Rationalität stets umwirft. Wir brauchen an dieser Stelle gewiss nicht besonders zu betonen, dass diese Auffassung diametral gegen Georg Lukács *Geschichte und Klassenbewusstsein* gerichtet ist.

Trotz jeder früheren Nähe zwischen Lukács und Mannheim treten die beiden Denker in die von uns beschriebene historische Phase mit vollkommen verschiedenen Voraussetzungen. Während für Karl Mannheim, wie wir es in diesem Text vielschichtig nachzuweisen suchten, diese Periode eine der Bilanzziehung und der aus ihr folgenden *Rekonstruktion* der europäischen Geistigkeit, der Rationalisierung, der Modernisierung, des liberalen Gedankengutes nach den Erschütterungen des Weltkrieges und der Revolutionen war, trat Georg Lukács gerade in dieser Zeit durch seinen messianistischen Bolschewismus in eine bereits *jenseits* der von Mannheim zu rekonstruierende Sphäre der "bürgerlichen" Rationalität und Modernisierung liegt. Sie sind also trotz ihrer engen Beziehung in dieser Zeit geschichtsphilosophisch nicht mehr "gleichzeitig". Während Mannheim ein Plädoyer für die Möglichkeit des *Rekonstruktion* schreibt (realisiert man die sozialontologische Dimension der Rationalisierung, so kann man so eine Strategie rational gestalten, die eine neue Rationalisierung mit der Chance des Erfolges starten konnte), ist diese Idee für Lukács vollkommen reaktionär, wenn nicht gerade das prächtigste Beispiel für jenes "verdinglichte" bürgerliche Klassenbewusstsein, welches das Ziel seiner vernichtenden Kritik war.

Georg Lukács' Konzeption über das proletarische Klassenbewusstsein enthält also eine von der Ferne gesehen ähnliche Ontologisierung des Ideologischen wie wir es im Falle Mannheims gesehen hatten. Seine Charakterisierung des proletarischen Klassenbewusstseins vereint ein Marxsches und ein Hegelsches Element, er tut es aber "direkt", d.h. ohne dass er - wie etwa Mannheim es mit der "Rationalisierung" macht - ein Kriterium für die "Richtigkeit" oder die "Unrichtigkeit" eines Bewusstseins angeben konnte, mit Ausnahme selbstverständlich der unkonkretisierbaren These der "Übereinstimmung mit der Wirklichkeit". Das Marxsche Element ist die Qualifizierung des bürgerlichen Bewusstseins als "klassengebunden" und somit als unfähig, die Wirklichkeit "adäquat" zu verstehen. Dieses Marxsche Element ist eine traditionelle wissenssoziologische Annahme, welche den klassischen (und trivialen) Ideologieverdacht formuliert. Dieses "negative" Element, welches übrigens für jede öffentlich-politische Position auszusagen ist und auf diese Weise nichts Spezifisches enthält, wird mit der - dem Universalhistoriker Hegel am nächsten stehenden - "positiven" Einsicht in die Adäquanz des revolutionären proletarischen Klassenbewusstseins ergänzt. An sich ist aber auch dieses Element problematisch, denn nicht das "proletarische Klassenbewusstsein" generell wissenssoziologisch so erhöht wird, sondern das proletarische Klassenbewusstsein der historischen Ausnahmesituationen (d.h. der Revolutionen). Kein Wunder, dass im Gegensatz zu Lukács Mannheim das generell aufgefasste Klassenbewusstsein in den Mittelpunkt seines Interesses steht (in der Form von der Kombination von Rationalität und Irrationalität).

Denkpolitisch ist Karl Mannheims *Konservatismus*-Arbeit durch ihre *sozialontologische* Fundierung der Wissenssoziologie und der neuzeitlichen Rationalität, ein Werk der Rekonstruktion, des *Wiederaufbaus*. Es ist bestrebt, die Erschütterungen des Ersten Weltkrieges und der danach folgenden Revolutionen und Gegenrevolutionen in dem Sinne einen "Wiederaufbau" zu erzielen, wie im ganzen damaligen geistigen Leben dieselbe Idee des geistigen Wiederaufbaus von den verschiedensten avantgardistischen Strömungen bis etwa der "neuen Sachlichkeit" oder zum Neopositivismus des Wiener Kreises in zahlreichen Varianten vertreten worden ist.

[10] Ebenda, 200.

Reasoning Competence

Jonathan Knowles, Trondheim

In the 1970s, various experiments were carried out on ordinary people's reasoning powers suggesting our natural ability to reason does not match up to the normative standards endorsed in logic and probability theory. The two most famous of these have come to be termed *the selection experiment*, and *the conjunction experiment (*or *Linda experiment)*. In the first, Peter Wason asked subjects to test a rule for cards with numbers on one side and letters on the other, such as 'If the card has a vowel on one side, it has an odd number on the other' (Wason 1971). Wason's basic finding was that very few subjects selected the two cards that are necessary to test such a rule, suggesting that they do not understand the logic of conditionals (that they are false just if the antecedent is true and the consequent false). In the second experiment, Kahneman and Tversky told subjects a story about a woman called Linda, and then gave them a list of statements about Linda concerning what kind of occupation she has and/or what she does in her free time, and asked them to rank the statements from most to least likely. Nearly all subjects ranked the statement *Linda is a bank teller and active in the feminist movement* as more likely than *Linda is a bank teller*, which contravenes a fundamental theorem of statistics to the effect that the probability of any single event A can never be lower than the probability of both A and some other event B. (Cf. Tversky & Kahneman 1983.)

Both of these experiments suggest that people naturally reason in ways which flout normative principles of reasoning. However, that this is indeed the case has never been accepted by all parties to the debate. A lot of energy has been spent over the last thirty years in trying to sort out the implications of the findings (and others along the same lines): At the most empirical end of the debate, there has been effort to ascertain the real nature of the thought processes underlying the answers given. At the most philosophical level, many have claimed that showing we are irrational is a conceptual impossibility; a central figure of reference here is Donald Davidson, who argues that principles of rationality are constitutive of the mental (cf. Davidson 1980, 1984). At a level perhaps intermediate between these two, psychologists influenced by evolutionary thinking have argued that an ecological understanding of the cognitive challenges we face and of the cognitive resources at our disposal reveals that human strategies are for the most part fast, effective and even correct in relation to traditional norms. That we in certain experimental situations fail to reason optimally is no more an indictment of the reliability of our reasoning powers than visual illusions are of the visual capacity.

These findings and ideas will be familiar to those who have followed the so-called 'rationality debate' over the past 20-30 years. In this paper, I want to take up a particular way of framing the issues that became prominent in the wake of an article by Jonathan L. Cohen (Cohen 1981), and which has informed a recent, critically-acclaimed book by Edward Stein (Stein 1996). In the article in question, Cohen introduces the notion of *cognitive competence*, to be understood by analogy with our *linguistic competence* as postulated by Noam Chomsky. Linguistic competence embodies the speaker's knowledge of the principles of grammar that characterise her language, but her language behaviour – her *performance* – may exhibit divergences from this as a result of interfering factors in the process whereby the knowledge is put to use (cf. Chomsky 1965, ch. 1).[1] Utterances of ungrammatical sentences etc. are thus known as *performance errors* – the implication being that they do not reflect the speaker's underlying competence.

Cohen's central gambit is that the examples of *prima facie* irrational behaviour uncovered in experiments like the above can likewise be viewed as performance errors: as interference of an underlying body of knowledge fully in accord with the correct rules of inference. Moreover, argues Cohen, such *prima facie* irrational behaviour *must* be so viewed, for there is a *constitutive* link between the concrete intuitions of ordinary people and what the correct rules of inference are; in particular, normative standards of inference are determined in relation to judgements about concrete cases through a process of *reflective equilibrium* (RE).[2] In a process of RE, one attempts to bring general principles into accord with intuitions about particular cases, making adjustments on both sides until the principles and intuitions harmonise with one another. Cohen sees a striking resemblances between this method and that standardly used in linguistics to uncover grammatical competence, whereby one probes ordinary speakers' intuitions about the grammaticality of sentences, but also rejects some if they conflict with well-established grammatical principles. On this basis, Cohen argues for the impossibility of irrationality as follows: Given that the method in linguistics for uncovering an underlying grammatical competence is also the method used for uncovering the correct rules of rational inference, we should see the latter as apt to uncover the nature of an underlying reasoning competence (as I shall call it). Hence, our reasoning competence will of necessity be characterised by the correct rules of inference, and any deviations from it viewed as performance errors.

As Stein points out, there is something rather fishy about this argument (Stein op. cit., ch. 2 and p. 139). There seems to be a strong disanalogy between Chomsky's understanding of grammar, and reasoning: crudely put, whereas the latter is a normative matter, the former is not. Rules of inference or reasoning concern first and foremost what one *ought* to do – how one ought to reason; tacitly known rules of grammar do not state how one ought to use language, but rather are part of the complex psychological processes underlying our linguistic ability. Exactly what positing unconscious, descriptive rules amounts to is a vexed issue in its own right. But even if we accept the idea, it would seem a leap of faith to apply the notion of competence in linguistics directly to questions about reasoning, where normative matters are at stake.

In light of this, what is striking about Stein's presentation of Cohen – indeed, of his whole book – is that this does not lead him to question the idea of rational competence that Cohen introduces. Rather, he proceeds to analyse in detail the debate between defenders and opponents of what he calls 'the rationality thesis' – the claim that

[1] For present purposes, I am not committed to the principles being *known*, in the everyday sense. For discussion of the speaker-grammar relationship, cf. Knowles (2000).

[2] The idea has its origins in Goodman (1965, pp. 63-4). The term 'reflective equilibrium' stems from Rawls' work on ethics

humans are fundamentally rational – precisely in terms of whether our underlying competence is 'rational' or not, i.e. embodies principles that match up to the normatively correct ones.

It is this supposition – that the rationality debate can or should be posed in relation to the idea of reasoning competence – that I will question here. In the rest of this short paper (essentially work in progress), I will sketch my two main lines of scepticism towards the notion, hoping they can serve as a springboard to discussion and reflection.

Line I: The first problem with the idea of reasoning competence stems from the fact that Cohen's analogy with linguistics does not forge the constitutive link between ordinary people's judgements and what is rational that he seeks to vindicate. Cohen seems to want, like those influenced by Davidson, to cast aspersions on the very idea of an experimental demonstration of human irrationality. Davidsoneans do this by stressing what they see as constitutive links between the concept of belief and that of rationality; attributing beliefs to someone commits one to seeing them as fundamentally rational – or rather, since of course people do commit fallacies occasionally, what we cannot make sense of is them doing this generally. Thus, the constitutive link between rational norms and attributability of belief applies, not first and foremost at the level of particular utterances or actions, but rather at the level of a person's behaviour as a whole.

Having made this concession, one might think that deviations from rational norms observed in behaviour could be classed as performance errors, and that the Davidsonean argument could be seen as applying at the level of reasoning competence, to the effect that this competence must contain the normatively correct principles. This is how Stein interprets the Davidsonean argument (op. cit., ch. 4) – even though he goes on to reject it as a defence of the rationality thesis (since, for him, there are no strongly apriori constraints on actually possessing beliefs). However, it strikes me that this must be misguided as a way of understanding the Davidsonean argument. For Davidson, it is apriori that we find other people rational, at least according to our standards. There is no conceptual distance or slack between our standards – the rational standards, there being no others – and those of other people, such that it might be meaningful to say that the rational competence of these others actually coincides with these standards. What anyone's rational competence is is, by contrast, an empirical question, and we cannot know apriori that any such cognitive structure does or does not embody any particular principles. It might be retorted that Davidson's argument amounts to saying that we must all possess fundamentally the same principles in our rational competence. But this is clearly *not* what is meant. Rather, the idea of rationality depends on reaching agreement on what is correct; there is something essentially public about rationality. As Davidson has often stressed, the existence of psychological structures is quite irrelevant to his thesis, and cannot be used to express it.

As far as I understand him, Cohen has something similar in mind insofar as he thinks there are apriori limits to what science can show, and one of these is demonstrating human irrationality. But if so, then surely the notion of a reasoning competence must likewise be unsuited to expressing his idea, for it is *anything but* apriori what the nature of any such competence is.[3]

[3] A possible way out here would be to simply identify the correct reasoning norms with the principles in our reasoning competence. For criticism of this idea, cf. Knowles (2003, ch. 5).

Line II: Whether or not one thinks there are apriori bounds to what can be shown scientifically, it seems clear that, empirically, we are *in some sense* less than fully optimal in our reasoning, taken across all possible contexts. The question now arises as to whether a notion of reasoning competence might be of use in articulating a debate concerning human rationality at this more empirical level.

In the most recent defences of the rationality thesis, no particular play with the idea of reasoning competence seems to be made. This is reflected in the arguments of many evolutionary psychologists, such as Cosmides, Pinker and Gigerenzer, whose plaint is to point out that too little attention has been paid to the kinds of tasks that we are evolved to solve in assessing questions of human rationality. Cosmides' work (e.g. 1989) promotes the idea of conditional reasoning as keyed to the socially vital task of cheater-detection: when conditional reasoning concerns the detection of a violation of a social contract, we reason logically, otherwise not. Gigerenzer has argued that the reason humans perform badly in relation to 'Linda' kinds of tasks is that our cognitive mechanisms for assessing chance events have not evolved in environments in which it is meaningful to assess probabilities in this way (Gigerenzer 1997). We naturally think of probability in terms of frequencies, and make estimates of probabilities on this basis, for the most part in ways which statistics would countenance, and in any case quickly and effectively. This may lead, under the 'right' kinds of conditions, to faulty probability estimates, in particular those in which probability does not have much to do with past observations (e.g. in roulette). But that this should render us irrational seems just as perverse as accusing the visual system of faultiness because we are subject to illusions.

The details underlying these defences of human rationality are complicated and controversial; nor is the only possible conclusion that we, after all, are as rational as we could be. The point I want to emphasize is simply that these debates do not rest on a distinction between competence and performance. Take the analogy with the visual system: its functionality does not consist in the fact that we embody an underlying body of principles that only under certain circumstances are properly manifested. Rather, the visual system is a mechanism which operates in a certain way, serving, for the most part, rapidly to deliver veridical information about external surfaces in our environment relevant to potential action. In other environments, unlike those in which it was evolved, the visual system will not serve us well. But it will still be essentially operating as it should: there will be no meaningful sense in which its errors are merely a matter of 'performance'. Something similar would seem to be the case with our reasoning abilities, as understood by evolutionary psychology: They are evolved in certain contexts for certain purposes, and will deliver us useful and reliable information in those contexts. Outwith those contexts, their functioning may still be triggered, but then we cannot rely on them.

Contrast this with the case of knowledge of grammar. Here, it is not the case that someone who fails to parse, say, a garden-path sentence is using a capacity in a context in which it fails to have application. The problem is not with the linguistic ability, in the sense of our competence, but with the systems that use that knowledge – or, perhaps, with the interaction between the two. There is a kind of *internal* dysfunctioning in the overall cognitive system – as there is not when we, say, see one line as longer in the Müller-Lyer illusion. To put the point somewhat differently: The visionist has nothing to study beyond

the output of the *visual input-system*, be this veridical or not; whereas the linguist precisely does want to go further: to determine which aspects of the output delivered by the *linguistic input-system* – the parser – are reflective of the grammar and which not.[4]

I do not mean to suggest that our reasoning capacities should be classed as precisely *input*-systems in the way vision is (for one thing, we can learn to overcome the limitations of the former). The important point of analogy between them, however, is that they are functional mechanisms whose operation is felicitous or not depending on whether the relevant environmental conditions obtain. If we are reasoning about ordinary, repeatable events exhibiting a pattern over time, our probabilistic judgements will probably be close the mark; if we are reasoning about situations involving contracts our ability to understand *if-so*-constructions will be largely correct. In other, 'artificial' contexts, we can expect less optimal performance. However, in neither of these cases, nor in the general approach to reasoning adopted by most psychologists today, would there seem to be scope for something further to be determined beyond the output of these mechanisms – an underlying competence of known principles.

In this piece, I have sketched my reasons for rejecting this construct in discussions of human rationality. On the one hand, for those who see a conceptual, apriori barrier to demonstrations of human irrationality, questions about our psychological make-up, at whatever level of abstraction, must be irrelevant. On the other hand, for those who want to assess our rationality in relation to a more ecological conception of our cognitive challenges, the relevant psychological structures for evaluation are not bodies of knowledge that are more or less imperfectly applied in performance.

[4] Here I adopt Fodor's (1983) terminology, though not, importantly, his conception of the subject matter of linguistics, which for him is precisely an input-module (and possibly output-module; cf. p. 135, note 29). For why he must be wrong about this, see Knowles (2000).

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Glaube und Wissenschaft beim Frankfurter Hegel

Anne-Kristina Kwade, Mainz

Wissenschaft und Glauben sind für den frühen Hegel keine Gegensätze. Dies zeige ich in drei Schritten: Ich stelle den ‚vernünftigen Glauben' des Frankfurter Hegel dar, zeige den Bezug von Hegels Erkenntnisbegriff zu Kants ‚ästhetischer Idee' und rekonstruiere Hegels Frankfurter Urteilstheorie. Sie beruht auf der ursprünglichen Beziehung von Glaube, Kunst und Denken.

Diese Beziehung löst das Erkenntnisproblem aus einseitig theologischem Zusammenhang und stellt es in den sprachphilosophischen. Ferner erhält dadurch Sprache ihren ursprünglichen Charakter zurück, den sie als Erkenntnis rein aus Begriffen verliert, und es kann ein ‚Dialog' zwischen Wissenschaft und Metaphysischem stattfinden. Nach Hegels Ansicht muss das geschehen, damit Wissenschaft nicht einseitig, voreingenommen und enggleisig werde.

In der Differenz-Schrift unterscheidet Hegel ‚Kenntnisse' von ‚Wissenschaft'. Während ‚Kenntnis' etwas objektiv Gegenüberstehendes ist, das man ‚hat', findet ‚Wissenschaft' nur im kreativen Forschungsprozess statt, mit dem man sich vollständig identifiziert – das Verstandesdenken bleibt dabei notwendig. Zudem hat ‚Wissenschaft' das Ziel der Mitgestaltung des politisch-gesellschaftlichen Lebens, zu dem sie mit innerer Notwendigkeit führt, während ‚Kenntnisse' unverbindlich sind.

Dieser Wissenschaftsbegriff Hegels steht nicht im Gegensatz zu seinem Glaubensbegriff.

Für ‚Reflexionsphilosophien' ist Glaube objektive, vom ‚Eigenwillen' geprägte Form des Verhältnisses zwischen Mensch und Gott, die „Liebe zwischen ganz Ungleichen", hat „keine Ähnlichkeit" mit dem wahren Verhältnis zwischen Göttlichem und Menschlichem, dargestellt in Jesus. Dieses „Verhältnis (...) kann in Wahrheit nur mit dem Glauben aufgefaßt werden", der keinen ‚wirklichen' Gegenstand hat, sondern eine Übereinstimmung im Geist ist, die Hegel ‚erkennen' nennt: „Wie könnte dasjenige einen Geist erkennen, was nicht selbst ein Geist wäre? Die Beziehung eines Geistes zu einem Geiste ist Gefühl der Harmonie, ihre Vereinigung; wie könnte Heterogenes sich vereinigen?" (Nohl, 312)

Erlebbare Einheit des Lebens, unendlicher Lebenszusammenhang, vom Frankfurter Hegel ‚reines Leben', ‚Selbstbewusstsein' ‚Sein' oder auch ‚Absolutes' genannt (Nohl, 302), ist Verhältnis. Hegel bestreitet, dass man von einem Verhältnis zwischen Lebendigem objektive ‚Kenntnis' im oben definierten Sinn haben kann. Dennoch sieht er die Aufgabe der Philosophie darin, dieses Verhältnis zu *denken* (ebd.). Zwar sprechen die Frankfurter Fragmente eindeutig vom ‚Fühlen' des Lebendigen / der Harmonie, aber ebenso eindeutig von dem den Gesetzen der Logik unterstehenden Verstandesdenken als notwendiger Voraussetzung.

Um das besondere Verhältnis zwischen Unendlichem und Endlichem geistig zu erfassen, muss man das ‚simile' in sich selbst erfassen, das ist Geist, Vernunft auf höchster Ebene: „Glaube an Göttliches ist nur dadurch möglich, daß im Glaubenden selbst Göttliches ist, welches in dem, woran es glaubt, sich selbst, seine eigene Natur wiederfindet, wenn es auch nicht das Bewußtsein hat, daß dies Gefundene seine eigene Natur wäre" (ebd.). Das, woran man ‚glaubt', ist also dem eigenen Wesen analog, diese Analogie muss nur bewusst werden. Mystische Verzückung, Offenbarung, Wunder können dazu nichts beitragen: Bewusstwerdung ist Arbeit. Der bereits ‚vernünftige Glaube' des Wissenden, an sich schon eine Art Erkenntnis, ist nur eine erste Phase im Prozess der Bewusstwerdung, von höchster Erkenntnis unterschieden, aber nur gradweise: „Der Mittelzustand zwischen der Finsternis, dem Fernsein von dem Göttlichen, dem Gefangenliegen unter der Wirklichkeit, – und zwischen einem eigenen ganz göttlichen Leben, einer Zuversicht auf sich selbst, ist der Glauben an das Göttliche; er ist das Ahnden, das Erkennen des Göttlichen und das Verlangen der Vereinigung mit ihm, die Begierde gleichen Lebens; aber er ist noch nicht die Stärke des Göttlichen, das alle Fäden seines Bewußtseins durchdrungen, alle seine Beziehungen zu der Welt berichtigt hat (...). Nur die Modifikation der Gottheit kann sie erkennen" (ebd.).

Der Grad der Bewusstheit unterscheidet diesen auf Grund von geistiger Gleichartigkeit, ανα λογον, erkennenden Glauben nicht nur von einem ‚eigenen, ganz göttlichen' Leben, etwa dem von Johannes dem Täufer, sondern auch vom ausschließlich fühlenden Erleben des göttlichen Verhältnisses. Die sich ihrer selbst nicht bewussten Bereiche wie das Fühlen dürfen nicht abgetrennt werden vom bewussten, geistvollen Leben, soll dieses und damit das Denken, Forschen und Wissenschaft-Treiben nicht einseitig werden.

Die nächste Phase im Prozess der Bewusstwerdung besteht in zunehmender Eigenständigkeit, Unabhängigkeit von einem äußeren Fokus für die eigenen Anschauungen. Am Beispiel Jesu und seiner Jünger: „Solange er unter ihnen lebte, blieben sie *nur Gläubige*; denn sie beruhten nicht auf sich selbst; Jesus war ihr Lehrer und Meister, ein individueller Mittelpunkt, von dem sie abhingen; sie hatten noch nicht eigenes, unabhängiges Leben" (Nohl, 314). Als sie das Göttliche in ihnen selbst nicht mehr auf einen äußeren Mittelpunkt projizieren konnten, wurden sie ‚selbstbewusster' und konnten tiefer in das erkennend zu glaubende Verhältnis eindringen.

Im erkennenden Glauben, bei der Bewusstwerdung, fällt die Subjekt-Objekt-Trennung nicht einfach weg wie bei der ‚unio mystica', sondern wird begriffen als „nur eine Möglichkeit der Trennung; ein Mensch, der ganz in die Anschauung der Sonne versunken wäre, wäre nur ein Gefühl des Lichts, ein Lichtgefühl als Wesen. Der ganz in der Anschauung eines andern Menschen lebte, wäre ganz dieser andere selbst, nur mit der Möglichkeit ein anderer zu sein" (Nohl, 316).

In ‚versunken' deutet sich keineswegs mystisches Gefühl der Einheit an, dem der polarisierende Verstand entgegengesetzt wäre. Die unio mystica beinhaltet im Gegensatz zu Hegels bewusst zu erkennendem Verhältnis weder die ‚Möglichkeit, ein anderer zu sein', noch höchstes Bewusstsein seiner selbst. ‚Unio' ist nicht ‚Analogie'.

Die dritte Phase, sich dieser Analogie, des göttlichen Verhältnisses bewusst zu werden und dieses also dem geistigen Erfassen zugänglich und für die Wissenschaft fruchtbar zu machen, besteht im ‚Symbolisieren' und ‚Repräsentieren' der Übereinstimmung zwischen Endli-

chem und Unendlichem durch sprachliche Bilder. Diese vermitteln zwischen der Bilderwelt der Seele und der formalen Logik und führen, ohne das durch sie Veranschaulichte ‚auf den Begriff zu bringen', zu Erkenntnis. Welche Erkenntnis sie vermitteln, zeige ich unten.

Kant, der Hauptvertreter der in ‚Glauben und Wissen' kritisierten Philosophien, für die die Grenzen des Erkennbaren im Endlichen liegen, hat eine festgefügte Vorstellung von dem, was als ‚Erkenntnis' zu gelten habe: Es muss sich auf Verstandesbegriffe bringen und zugleich sinnlich veranschaulichen lassen. Diese Definition findet Hegel formal und damit einseitig. Die Inkonsequenz, alle Möglichkeiten zum vernünftigen Erfassen von echter Unendlichkeit bereitzustellen, ohne sie zu nutzen, erscheint ihm unerklärlich.

Isoliertes Verstandesdenken ist unwissenschaftlich, weil es vom Leben, von der Empirie abstrahiert, und schematisiertes Verstandesdenken würde Hegel nicht mehr als Verstandesdenken auffassen, sondern als vernünftige Einsicht auf der Grundlage von Intuition. Hegels Kritik in ‚Glauben und Wissen' bezieht sich im Grunde darauf, dass Kant die Resultate seiner *Kritik der Urteilskraft* von seiner theoretischen Philosophie abgetrennt hat. Dadurch läuft im Schematismus-Kapitel unbewusst, also die Darstellung verdunkelnd, einiges zusammen, was man nach Hegel bewusst auseinanderhalten und dann beziehen muss und kann.

Kant gestehe zu, dass es eigentlich notwendig wäre, die ‚reinere Idee' und ‚absolute Mitte' eines „zugleich aposteriorischen oder anschauenden Verstandes", zu *denken,* und er sehe auch noch, wie diese Idee *auszusprechen* wäre, aber dann vernichte er sie bewusst (GW 4, 336 u. 343), indem er sie für inhaltslos erkläre (GW 4, 343).

Seine eigene Kritik ins Positive wendend, vergleicht Hegel zunächst intuitiven Verstand mit transzendentaler Einbildungskraft und anschauender Tätigkeit (GW 4, 340 f.) und stellt die Übereinstimmung beider fest. Sodann erfasst Hegel vermutlich (es ist unübersehbar), dass Kant dem Genie per analogiam einen urbildlichen Verstand zubilligt. Denn wenn Kant ‚Weltursache' analog dem menschlichen Verstand denkt und ihre ‚Produkte' mit den Werken eines künstlerischen Genies vergleicht (KU 431), dann kann man die Analogie auch umkehren und den menschlichen Geist eines Genies per analogiam als intuitus originarius sehen, zumal Kant das Genie als Vermögen der Urbilder definiert (KU 260), bei deren Entwickeln die Einbildungskraft ‚schöpferisch' sei (KU 268).

Also erweitert er drittens Kants Erkenntnisbegriff um die Intuition und macht ihn dann zu seinem eigenen. Kant selbst billigt dem Genie die Fähigkeit zu, ‚ästhetische Ideen' sprachlich mitteilbar, also allgemein zugänglich zu machen, ohne sie auf den Verstandesbegriff zu bringen; er sieht also, dass es Ausdrücke gibt, die das bewerkstelligen können. Hegel schlägt hierfür die Kantische Idee vor. Dass Kant selbst bei der produktiven Einbildungskraft der reflektierenden Urteilskraft, also in der Mitte der Mitte (GW 4, 343 u. 339), wieder ausschließlich trennt, statt Zusammenhang zu sehen, ist unbegreiflich: „Eine ästhetische Idee kann nach Kant keine Erkenntniß werden, weil sie eine Anschauung der Einbildungskraft ist, der niemals ein Begriff adäquat gefunden werden kann; eine Vernunftidee kann nie Erkenntniß werden, weil sie einen Begriff vom Uebersinnlichen enthält, dem niemals eine Anschauung angemessen gefunden werden kann, als ob nicht die ästhetische Idee in der Vernunftidee ihre Exposition, die Vernunftidee in der Schönheit dasjenige, was Kant Demonstration nennt, nämlich Darstellung des Begriffs in der Anschauung, hätte" (GW 4, 339). Da Kant selbst den Lösungsweg über die Analogie erwähnt und sich zu dem Satz hinreißen lässt, wenn man eine bloße Vorstellungsart schon Erkenntnis nennen dürfe, sei alle unsere Erkenntnis von Gott bloß symbolisch" (KU 296), da er später (KU 431), nach der langen Abhandlung über den intuitiven Verstand, sehr genau erläutert, inwiefern eine solche symbolische Erkenntnis der höchsten Weltursache als Erkenntnis per analogiam einen Wissenszuwachs bedeute, da er schließlich (im Zusammenhang mit seinen Bemerkungen zum Genie als Vermögen der archetypischen Ideen und der Erkenntnis per analogiam) zugibt: „Das Schöne ist das Symbol des Sittlichguten. Geschmack ist ein Beurteilungsvermögen der Versinnlichung sittlicher Ideen mittels Analogie der Reflexion über beide" (KU 297) –, sieht Hegel kein Problem, die ästhetische Idee für die Erkenntnis fruchtbar werden zu lassen. Das Genie stellt, so Kant, bei der Darstellung eines Begriffes Übereinstimmung, Proportion und Harmonie zwischen Verstand und Sinnlichkeit her, was zwar „frei von aller Anleitung der Regeln", aber doch in „freier Übereinstimmung mit den Gesetzen des Verstandes" geschieht (KU 254): Dessen Gesetze bleiben durchaus gültig. Warum also, würde Hegel sagen, könnte er Wittgenstein, soll man schweigen, wenn eine geniale Darstellung des Metaphysischen Erkenntnisse liefern kann?

Eine solche Darstellung dürfte nichts Entgegengesetztes enthalten (Nohl, 304); logische S-P-Urteile scheinen sich also nicht dafür zu eignen. Da das Johannesevangelium vom Göttlichen spricht, untersucht Hegel dessen Sprache. Er findet dort den Gedanken des unendlichen Lebenszusammenhanges auf geniale Weise sprachlich ausgedrückt.

Sätze wie ‚Am Anfang war der Logos', ‚Der Logos war bei Gott', Gott war der Logos', ‚In ihm war Leben' wären auf rein logischer Ebene „widersinnig" (Nohl, 306). Der Satz ‚Gott war der Logos' bedeutete dann: S, Gott, wird P, also der umfassenden Allgemeinstruktur ‚Logos', untergeordnet. Dem widerspricht das bei dem Wort ‚Gott' ‚unnennbar Mitgedachte'. Wenn aber das Prädikat in Aussagen über Göttliches als lebendiges Seiendes begriffen wird, das durch das Prädikats-Wort auf schöpferische Weise seinen Namen erhält, ein Prozess, der vom Leser nachvollzogen wird, dann entspricht es diesem ausgedrückten Verhältnis. Unsere „immer objektive Sprache findet daher allein im Geiste des Lesers Sinn und Gewicht" (ebd.).

Werden die beiden extremen Auffassungen, die 'objektivste Art', ‚Logos' als Individuelles, Wirkliches, und die 'subjektivste' Art, ‚Logos' als gedachte Allgemeinstrukturheit, einander entgegengesetzt, widerspricht dem das ‚unnennbar Mitgedachte' des Subjekts: Gott kann nichts sich gegenseitig Widersprechendes, von einander absolut Getrenntes sein. Eine Werbung für einen Öltank in neuer, kugelförmiger Gestalt lautete: „Ich bin zwei Öltanks." Dieser Satz zeigt für das Subjekt ‚ich' das Gleiche. Es geht also darum, die reale Verbundenheit der beiden extremen Auffassungen des Prädikats zu zeigen, die nur die Reflexion trennt.

Hegel überwindet die Trennung in eindeutig bewusster Anwendung einer systematischen Methode.

Die erste Überwindung geschieht von der ‚subjektiven' Auffassung her. Durch sprachliches Bild (vom Lebensbaum) und Beispiel (von Johannes dem Täufer) wird eine Analogie hergestellt, die zugleich die Überwindung der

Trennung und das noch Unvollkommene der Überwindung zur Erkenntnis bringt:

Wie der einzelne, dem Ganzen entgegengesetzte Zweig als Teil zwar nicht das Ganze des Baumes ist, aber es doch verkörpert, so verhält sich das vom endlichen Bewusstsein aufgefasste Prädikat qua Leben (φως, Wahrheit) zum Ganzen des Lebens (ζωη) (Nohl, 307). Ebensowenig *war* Johannes der Täufer das aufgefasste Prädikat, φως, sondern „er zeugte nur von ihm, er *fühlte* das Einige (...), er *glaubte* daran, aber" (jetzt zeigt sich Hegels Auffassung von ‚Glauben':) "sein Bewusstsein war nicht gleich dem Leben; nur ein Bewußtsein, das dem Leben gleich, und 'die' nur darin verschieden sind, daß dieses das Seiende, jenes dies Seiende als Reflektiertes ist, ist φως" (Nohl, 307). Er war das Licht noch nicht, aber dieses ist in ihm, er ist ein ανθρωπος φωτος, Hegel übersetzt: ein ‚sich entwickelnder Mensch' (Nohl, 307), denkt also bei φωτος keineswegs an mystische Erleuchtung, sondern, wie sich gleich zeigt, an das ‚große Individuum'. Die im Bild des Lebensbaumes anklingende Analogie wird durch das Beispiel erweitert zur viergliedrigen Proportion: Tritt nämlich ein solches sich entwickelndes Bewusstsein in die Welt, bringt es das Licht in sie, alle ihre Beziehungen und Bestimmungen sind das Werk eines solchen Menschen, aber nicht diese ganze Welt erkennt die in ihm zum Bewusstsein kommende Natur, sondern nur Einzelne erkennen seine Bedeutung, und indem sie sich ihrer Beziehung zu diesem sich entwickelnden Menschen bewusst werden: indem sie sehen, dass sie ‚von gleicher Natur' sind wie er, ‚erkennen' sie Gott, „ihr Wesen in nichts Fremdem, sondern in Gott findend" (Nohl, 307). So, wie der das Leben auffassende Mensch bewusst wird und Gott erkennt durch das simile in sich selbst, so erkennen auch die Einzelnen Gott, indem sie sich der Tatsache bewusst werden, dass sie von gleicher Natur sind wie dieser ανθρωπος φωτος.

Damit ist der Übergang gegeben zur zweiten Überwindung der Verstandestrennung, die von der Auffassungsweise des 'lebendigen Prädikats' als Individuum ausgeht. Sie ist möglich durch die Wesensgleichheit des zu Bewusstsein kommenden Menschen, denn ein solcher ist auch das ‚lebendige Prädikat' ‚Logos' als Individuum: 'Gottes Sohn' (Nohl, 307). Es gibt innerhalb der Auffassung des lebendigen Prädikats als Individuum wieder zwei Auffassungen, die aber jetzt nicht vom menschlichen Verstandesdenken, sondern von diesem lebendigen Prädikat selbst unterschieden werden: Jesus als Sohn Gottes und als Menschensohn. Im Prädikat ‚Sohn Gottes' drückt sich eine „lebendige Beziehung Lebendiger, gleiches Leben; nur Modifikationen desselben Lebens", des Göttlichen, aus, Wesensgleichheit, in der „dieser Einzelne nicht bloß ein Teil des Ganzen (...), sondern er selbst eben das Ganze" (Nohl, 308) ist. In der Bezeichnung ‚Sohn des Menschen' liegt dagegen *keine Modifikation* (des Menschlichen) vor, sondern eine *Subsumtion* (unter den Begriff ‚Mensch') (Nohl, 309): Die objektive Auffassung des Prädikats ‚Logos' als eines lebendigen ist hier in die subjektive übergegangen, thetischer Satz in logisches Urteil, in dem das Prädikat zur Allgemeinstruktur wurde (ebd). Durch diesen Übergang ist die Trennung der Reflexion beim Auffassen des lebendigen Prädikats überwunden: Beide Ansichten des lebendigen Prädikats bestehen gleichzeitig, gerade weil es lebendiges Prädikat, Name eines Lebendigen ist. Beide Aussageweisen bilden keinen Gegensatz. Ihre innere Verbunenheit im Erkennen des Lebenszusammenhangs nennt Hegel ‚mystisch' sprechen (Nohl, 308) ‚in Be-geisterung', in Beziehung von Geist zu Geist, die für Hegel der Vernunfterkenntnis analog ist.

Zwar kann der Begriff, die Vorstellung ‚Gott' durch Verknüpfung seiner ‚Namen' und ‚Vollkommenheiten' *definiert werden*, aber die vollkommene Einheit des göttlichen Lebenszusammenhanges kann nicht rein logische Verbindung von Eigenschaften *sein* und also nicht in ausschließlich logischen S-P-Urteilen adäquat dargestellt werden. Hegel fand Thomas von Aquins Analogie-Gedanken in Kants *Kritik der Urteilskraft* systematisch aufgearbeitet. So wird eine für die Erkenntnis fruchtbare Verbindung von Glauben und Wissen möglich durch die Auffassung des gesamten Lebenszusammenhanges als ‚ästhetische Idee', die das Genie darstellen und damit allgemein rational zugänglich machen kann.

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Supervenience and Meta-Justification

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The central coherentist critique of foundationalism brings forward a requirement of meta-justification for putative basic beliefs, which means that the beliefs are not basic after all. The foundationalist response denies this requirement, because it is in conflict with the doctrine of supervenience. Recently, one of the principal members of the coherentist camp, Keith Lehrer (1997, 60-77), suggested coherentists should reject this doctrine in order to maintain their advantage over foundationalist theories of justification.

I will argue that coherentists need not go so far as to reject the doctrine of supervenience. The denial of this very plausible doctrine would, on the contrary, decrease the attractiveness of coherentism. Even if we assume that such a doctrine is true, and that justification does not in itself require meta-justification, there is still a need for meta-justification when we try to determine which beliefs really are justified, and what the non-epistemic base is on which justification supervenes. I will argue that coherentism provides us with a better account of this meta-justification. In other words, I will argue that the resolution of the problem of the criterion requires coherentism, but that this sort of meta-epistemic coherentism is in fact compatible with epistemic foundationalism. There is room for a compromise in the debate between foundationalism and coherentism.

1. The Need for Meta-Justification

The strongest coherentist critique of foundationalism is directed against the possibility of basic beliefs – beliefs that are justified independently supporting reasons. It is claimed to be irresponsible, dogmatic, or arbitrary to adopt beliefs without reasons. Laurence BonJour (1985, 30-33), for example, used to argue that, in order to be basic, *S*'s belief must have a feature in virtue of which it qualifies as basic, and this feature must also constitute a good reason for thinking that the belief is true. In other words, there must be the following justificatory argument:

(1) *S*'s belief that *p* has feature *F*.

(2) Beliefs having feature *F* are highly likely to be true.

Therefore, *S*'s belief that *p* is highly likely to be true.

But it is not enough that this sort of meta-justification exists in the abstract. In order to be justified in believing that *p*, *S* must also believe the premises of the argument and must be *justified* in believing them. This means that *S*'s belief that *p* is not basic after all, because *S*'s being justified in believing that *p* depends on other justified beliefs.

The foundationalists respond that such an argument violates the doctrine of supervenience, which says that, for any justified belief, there must be non-epistemic conditions that are sufficient for its being justified. The premises of this argument entail that there cannot be such sufficient conditions of justification, because all sufficient conditions include as a necessary component some justified beliefs (Sosa 1991, 183). Therefore, there must be something wrong with the argument. Perhaps it is sufficient for justification that *S*'s belief simply has a feature that makes it probably true. *S* need not have additional justified beliefs about the matter. This, at least, is the position of a reliabilist foundationalist.

Another line of coherentist critique focuses on epistemic principles rather than reliability. It is argued that, in order to have justified beliefs, one must be justified in accepting the relevant epistemic principles, which implies that there cannot be basic beliefs. Yet, once again, this cannot be so if the doctrine of supervenience is true. (Van Cleve finds such a critique in Sellars and Lehrer. See Van Cleve 1979, 76.)

If the doctrine of supervenience is true, there are epistemic principles of the form "If ... then *S* is justified in believing that *p*", in which the antecedent specifies some non-epistemic condition. They say that the obtaining of the non-epistemic condition is sufficient for justification. It is thus unnecessary for S to be also justified in believing in the principle. Neither is it necessary for *S* to be justified in believing that the antecedent obtains. (Van Cleve 1979, 77-78.)

William Alston (1989, 153-171) argues that these sorts of coherentist critiques suffer from a level confusion. The requirement of meta-justification is raised at the wrong level. To have a justified belief about non-epistemic matters does not require justified beliefs about epistemic principles or the obtaining of their antecedents. Yet, to have a justified belief that a belief is justified does require this. Alston claims that adopting a basic belief is not arbitrary, because one can have this sort of inferential justification for the higher-level belief that the lower-level basic belief is justified.

Alston accepts one type of meta-epistemic foundationalism. There are other types as well. But they should all be rejected, because they are unable to solve the problem of the criterion – or so I will argue.

2. The Problem of the Criterion

The debate between foundationalism and coherentism concerns the conditions of justification. Yet, there is also the question of *which particular beliefs* satisfy the conditions, and are, therefore, justified. The problem of the criterion, as Roderick Chisholm (1982, 61-75) describes it, is the problem of how to answer both of the following two questions:

(A) Which beliefs are justified? What is the extent of justified belief?

(B) What makes beliefs justified? What are the criteria or conditions of justification?

The problem is that we do not seem to be able to answer question A unless we have already answered question B – and we do not seem to be able to answer question B unless we have already answered question A. So we do not seem to be able to answer either question.

According to Chisholm, there are only two ways of avoiding this problem: We answer question A first, and then use this answer to figure out the answer to question B. Or we answer B first, and then use this answer to figure out the answer to A. Chisholm calls the former alternative

particularism, because in this case we begin with particular cases. He calls the latter one methodism, because it suggests we start instead from a general method, criterion, or principle.

There are two sides to this problem: one is psychological, the other epistemic. The psychological side concerns the temporal order in which we arrive at our answers to the two previous questions. The particularist strategy is to begin with our beliefs (or intuitions) concerning particular cases, and then to reason from them to beliefs about principles. The methodist one is to start from beliefs (or intuitions) about right principles, and then to reason to beliefs about particular cases.

The epistemic side of the problem concerns the justification of results. Of course, we do not want the results of our epistemological inquiry to be arbitrary. We want results that we can be justified in accepting. It seems clear that both particularists and methodists would give foundationalist answers to this question of meta-justification. Their answer to one of Chisholm's questions is not only causally but epistemically dependent on their answer to the other. The epistemic order reflects the temporal order of inquiry, or at least, this is what I take to be the position of meta-epistemic foundationalism.

We can gain a clearer picture of the foundationalist structure of meta-justification by distinguishing three kinds of beliefs:

(1) Beliefs in singular epistemic propositions

(2) Beliefs in non-epistemic propositions (including beliefs in the antecedents of epistemic principles)

(3) Beliefs in epistemic principles

Singular epistemic propositions attribute justification to singular beliefs. Epistemic principles attribute justification to certain kinds of beliefs. And to infer one from the other, we need beliefs in the non-epistemic antecedents of epistemic principles. The particularist's suggestion is that we infer from 1 and 2 to 3. The methodist, in turn, suggests that we infer from 2 and 3 to 1. Let's assume that these inferences are indeed able to transmit justification from the premises to the conclusion. The central question remains: What justifies the premises?

If we rule out infinite regresses and circles as incapable of providing justification, some the premises must be accepted as basic. Both the particularist and the methodist may try to avoid postulating basic epistemic beliefs, and to derive their epistemic premises from non-epistemic propositions. However, this would require there to be definitions of epistemic concepts in terms of non-epistemic concepts, which may be dubious. Even if there were such definitions, they would still take the role of epistemic principles, which means that such a derivation cannot after all succeed. All such derivations would require some epistemic principle as a premise.

Thus, there seems to be no alternative to regarding either epistemic propositions or epistemic principles as basic. Coherentists, such as Keith Lehrer (1974, 143-144), object to this maneuver, because it makes the choice of epistemic premises arbitrary. James Van Cleve (1979, 86), who defends foundationalism, complains that this objection begs the question. It just presupposes that all justification is inferential, and that there cannot be basic beliefs.

The coherentist objection should be understood differently. It is not the question-begging claim that there cannot be basic epistemic beliefs, because coherentism is true. Coherentists may very well accept for the sake of argument that there can be such beliefs. They just want to raise the question: Which particular epistemic beliefs are basic? Foundationalists can hardly avoid this question, because these are the beliefs they intend to use as their starting point. Yet, when they ask the question, they confront the problem of the criterion again – raised on a higher level. They may supply a foundationalist response to this higher-level problem, but it simply raises the problematic on a still higher level, and so forth. There is no real way for foundationalists to stop the regress.

This regress is not the result of level-confusion. It is created instead by quite sensible questions about ourselves: Which of our beliefs are justified? What makes them justified? We may start answering them from what we believe about particular instances of justified belief, or about the criteria of justified belief. Yet, to avoid arbitrariness, we must first ask the same questions about these epistemic beliefs: Are they justified, and what justifies them? Yet, when we try to answer these questions, we face the same questions again on a higher level, and so on *ad infinitum*. We cannot answer the original questions satisfactorily, because this requires that we have already answered an infinite number of questions of increasing complexity.

For meta-epistemic foundationalists, the psychological starting point of epistemological reflection is the source of justification for the resulting epistemology. That is why they cannot avoid the question of the arbitrariness of the starting point, and once this question is raised, it cannot be satisfactorily answered.

3. Coherentism and Scepticism

Meta-epistemic coherentism avoids the problem of the criterion, because it allows the arbitrariness of its starting point. For coherentism, the psychological starting point of epistemological reflection is not the source of justification for its results. What justifies the results is their mutual coherence. The method used is often called the method of reflective equilibrium. According to it, we start from whichever beliefs we happen to have, and then try to put them into a state of reflective equilibrium.

When we follow this method and try to put our beliefs in (1) singular epistemic propositions, (2) non-epistemic propositions, and (3) epistemic principles into reflective equilibrium, we will most probably end up advocating some form of epistemic foundationalism. This is so for the simple reason that we lack beliefs about the overall coherence of our beliefs. So it is epistemic foundationalism rather than epistemic coherentism that should be in a state of reflective equilibrium. (See Lammenranta 1986.)

It is important to notice that the method of reflective equilibrium does not require us to have beliefs about the overall coherence of our view. Neither does it require that we have beliefs that our beliefs are at some point in a state of reflective equilibrium. It merely requires us to resolve conflicts among our beliefs when they occur. There are no guarantees that all of the conflicts will be resolved at some point, or that no new beliefs will be in conflict with the ones already acquired. It is the open-ended nature of the method that stops the level regress.

Because we are now endorsing two different (and even conflicting) theories of justification, we must accept them as theories of different concepts or properties. Perhaps it is better to say that foundationalism is the best theory of

epistemic justification, while coherence is the end we hope to achieve through philosophical reflection.

Yet, what does that say about the classical problem of coherentism: the multiplicity of incompatible but equally coherent systems of beliefs? Coherentism does not provide any means for choosing between them. This problem disappears when we take coherence itself to be the end of epistemological reflection. In so far as we set forward truth as the aim, and have realized that our methods at best ensure only coherence, we ended up with this problem. Yet, now that we have stopped worrying about truth and have settled for coherence, we do not have the problem any more.

To be sure, our position is a sceptical one – in the traditional Pyrrhonian sense. Having been unable to find criteria by which to distinguish truth from error, we subsequently settle for appearances. To live by appearances is to be guided by our native and acquired belief-forming dispositions. To be guided in this way is, among other things, to be guided toward revising our beliefs when they seem to contradict each other, and to replace less plausible beliefs with more plausible ones. It is thus nature itself that guides us towards reflective equilibrium and coherence.

In addition, the open-ended character of the method fits this brand of scepticism. A sceptic – in the original meaning of the word – is an inquirer. As inquirers, we should always be ready to revise our view. Our position can never be anything other than a provisional one.

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Grundlagen der Logik und Mathematik – Der Standpunkt Wittgensteins

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Einleitung

Auf der 2. Tagung für Erkenntnislehre der exakten Wissenschaft in Königsberg 1930 sollten die unterschiedlichen Ansätze in den Grundlagen der Mathematik dargestellt werden: Carnap referierte über den Logizismus, Heyting über den Intuitionismus, Neumann über den Formalismus (vgl. Hahn *et al*. 1931). Interessanterweise wurde neben diesen Ansätzen noch ein vierter Ansatz dargestellt: Der Standpunkt Wittgensteins, über den Friedrich Waismann vortrug. Waismann tat dies mit der Unterstützung Wittgensteins, was zeigt, dass Wittgenstein keineswegs den Anspruch ablehnte, eine alternative Position in den Grundlagenfragen der Mathematik einzunehmen. Das Schicksal, das Waismanns Versuch erfuhr, Wittgensteins Standpunkt zu kommunizieren, ist symptomatisch: Waismann gelang es im Unterschied zu den anderen Referenten nicht, seinen Vortrag in eine publizierfähige Form zu bringen. Ein erhaltenes Skript (vgl. Waismann 1982) ist unvollständig und beschäftigt sich vornehmlich mit Wittgensteins Kritik am Logizismus; eine eigenständige Motivation für einen alternativen Standpunkt entfaltet Waismann nicht. In der anschliessenden Diskussion der Referate wurde Wittgensteins Standpunkt übergangen, da er noch nicht in einer „spruchreifen Form“ (Hahn *et al.* 1931, S. 141) vorlag. Die Rezeption von Wittgensteins Standpunkt scheiterte auch bei gutwilligen und mit der Materie vertrauten Forschern, da es nicht gelang, diesen als eine konstruktive Alternative zu identifizieren und verständlich zu machen.

Im Unterschied zu der Wahrnehmung der Zeitgenossen Wittgensteins, wird in der Sekundärliteratur Wittgensteins Position meist so verstanden, dass er keine echte Alternative zu bestehenden Ansätzen in der Grundlegung der Mathematik bietet: Baker und Hacker meinen, Wittgensteins Philosophie der Mathematik beträfe ausschliesslich die Kritik der Voraussetzungen grundlagentheoretischer Ansätze und impliziere keine konstruktive Alternative (z.B. Baker & Hacker 1985, S. 345); andere prominente Interpreten verstehen Wittgensteins Position hingegen als eine Form des Konstruktivismus (z.B. Frascolla 1994, Marion 1998, Mancosu & Marion 2002).

Demgegenüber soll im Folgenden der Erwartungshaltung von Wittgensteins Zeitgenossen um 1930 Recht gegeben werden: Wittgensteins Standpunkt lässt sich als eine Alternative zu Grundlegungsversuchen in der Logik und Mathematik verstehen – allerdings blieb sein Ansatz Programm. Wittgenstein arbeitete sein Programm nicht aus, sondern beschäftige sich unter Voraussetzung der Durchführbarkeit seines Programmes ab Ende der 20er Jahre vornehmlich mit der Kritik alternativer Positionen und der Frage der Interpretation mathematischer Theoreme und Beweise.

Der Schlüssel zum Verständnis der Position Wittgensteins als einem alternativen grund-lagentheoretischen Ansatz liegt in seinem Verständnis logischer Beweise, das er in seiner Frühphilosophie in kritischer Auseinandersetzung mit Freges und Russells axiomatischem Beweisverständnis entwickelt. Dies soll im Folgenden skizziert werden.

1. Alte vs. Neue Logik

Wittgenstein unterscheidet bereits in den *Notes on Logic* (NL) und den *Moore Notes* (MN) eine „alte“ und eine „neue Logik”. Er markiert hiermit keineswegs die einschneidenden Entwicklungen in der Logik seit Peano, Frege und Russell; vielmehr charakterisiert er durch die „alte Logik“ die auf einem axiomatischen Beweisverständnis beruhenden Kalküle Freges und Russells, und grenzt von diesen sein eigenes Verständnis der Logik ab. In den MN, S. 109[5] beschreibt Wittgenstein das „Vorgehen der alten Logik“:

> This is the actual procedure of [the] *old Logic*: it gives so-called primitive propositions; so-called rules of deduction; and then says that what you get by applying the rules to the propositions is a *logical* proposition that you have *proved*.

Was Wittgenstein hier beschreibt, ist das gewöhnliche Verständnis logischer Beweise im Sinne von Ableitungen innerhalb eines Axiomensystems: Dass eine Formel allgemeingültig ist, wird bewiesen, indem sie aus Axiomen mittels Schlussregeln abgeleitet wird. Wittgenstein leugnet nicht, dass durch dieses Verfahren allgemeingültige Formeln (Tautologien) *identifiziert* werden können, aber er stellt in Frage, dass auf diese Weise ihre Allgemeingültigkeit (d.i. *logische Wahrheit*) *bewiesen* werden kann. Direkt im Anschluss an das angegebene Zitat, fährt er fort (MN, S. 109[5]):

> The truth is, it tells you something *about* the kind of proposition you have got, viz that it can be derived from the first symbols by these rules of combination (= is a tautology).[…] The so-called *proof* of a logical proposition does not prove its *truth* […].

Alles, was bewiesen wird, ist die *Ableitbarkeit* der Formeln aus den Axiomen. Nur unter der Voraussetzung der logischen Wahrheit der Axiome kann hieraus auf die logische Wahrheit der Formeln geschlossen werden: Diese Voraussetzung ist aber nicht mehr innerhalb des Axiomensystems beweisbar, da es innerhalb dieses Systems kein unabhängiges Kriterium gibt, durch das Axiome von anderen, nicht logisch wahren Formeln unterschieden werden können – die Axiome lassen sich nur durch willkürliche Festlegung als logisch wahre Formeln identifizieren. Das Problem axiomatischer Beweise besteht darin, kein syntaktisches Kriterium für logische Eigenschaften *beliebiger* Formeln eines Formelsystems anzugeben. Nach dem gewöhnlichen Verständnis logischer Beweise im Sinne von Ableitungen bleibt man auf Beweise der logischen Wahrheit der Axiome angewiesen, die nicht mehr innerhalb der formalen Logik geführt werden können. Hierdurch stellt sich die Frage nach einer ausserlogischen oder metalogischen Grundlegung der Axiome. Eine derartige Grundlegung überschreitet nach Wittgenstein aber notgedrungen den Rahmen zulässiger Beweisgründe in der Logik: Ziel einer derartigen Grundlegung ist letztlich, die logische Wahrheit oder Widerspruchsfreiheit durch die subjektive Evidenz inhaltlicher Beweisführungen zu sichern – die Bezugnahme auf eine subjektive Evidenz ist

jedoch kein zulässiges Kriterium der logischen Wahrheit oder der Widerspruchsfreiheit der Axiome (*Philosophische Grammatik* (PG), S.297) :

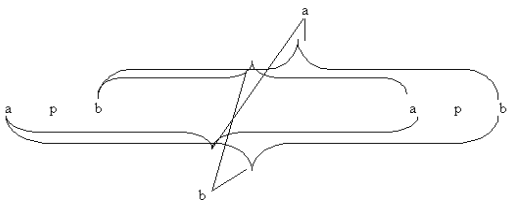
> Die Logik und die Mathematik *ruht* nicht auf Axiomen; […]. Hierin liegt der Fehler, das *Einleuchten*, die Evidenz, der Grundgesetze als Kriterium der Richtigkeit in der Logik zu betrachten.

Zielsetzung von Wittgensteins „neuer Logik" ist es, axiomatische Beweisverfahren durch Beweisverfahren zu ersetzen, die nicht auf eine Grundlegung von Axiomen angewiesen sind. In Bemerkung 6.1265f. des *Tractatus* (TLP) schreibt er:

> Immer kann man die Logik so auffassen, dass jeder Satz sein eigener Beweis ist.
>
> Alle Sätze der Logik sind gleichberechtigt, es gibt unter ihnen nicht wesentlich Grundgesetze und abgeleitete Sätze.
>
> Jede Tautologie zeigt selbst, dass sie eine Tautologie ist.

Diese kryptische und zirkulär klingende Formulierung einer nicht-axiomatischen Beweisführung wird erst verständlich, wenn man sich das von Wittgenstein entwickelte logische Beweisverfahren vor Augen führt. Dies ist nicht etwa, wie oft angenommen wird, die gängige Methode der Wahrheitswerttabellen, sondern die Transformation logischer Formeln in die ab-Notation: Dieses Verfahren entwickelte Wittgenstein 1913 – es stellt für ihn das Beweisverfahren der „neuen Logik" dar. Wittgenstein beschreibt dieses Verfahren an keiner Stelle eingehend. Er gibt allerdings einige Beispiele, die deutlich machen, wie prädikatenlogische Formeln in die ab-Notation zu transformieren sind, und einige Bemerkungen belegen, welchen Stellenwert er der ab-Notation zuschrieb.

In seinem Brief vom November und Dezember 1913 an Russell (*Cambridge Letters* (CL), Brief 32) gibt Wittgenstein als ab-Zeichen der aussagenlogischen Formel $p \leftrightarrow p$ an:



Allgemein wird ein ab-Zeichen einer aussagenlogischen Formel gebildet, indem man alle in der Formel vorkommenden Satzbuchstaben – seien sie identisch oder unterschiedlich – links mit einem a- und rechts mit b-Pol versieht, und die Wahrheitsfunktionen zwischen den Satzbuchstaben durch ab-Funktionen widergibt. Ab-Funktionen sind Funktionen, die den a- bzw. b-Polen bzw. Polpaaren wiederum a- bzw. b-Pole zuordnen. Es gibt eine ab-Funktion, die einem Pol wiederum einen Pol zuordnet: Dem a-Pol den b-Pol und dem b-Pol den a-Pol – durch diese wird die Negation abgebildet. Es gibt 14 ab-Funktionen, die den 4 Polpaaren aa, ab, ba, bb wiederum a- bzw. b-Pole zuordnen. Diese 14 Funktionen bilden dyadische Wahrheitsfunktionen ab. Da keine ab-Funktion allen 4 Polpaaren nur einen Pol zuordnet, und da stets Zuordnungen zu demselben Pol zusammengefasst werden, erhält man durch die erneute Verknüpfung der Pole (dargestellt durch Klammern) stets die vier möglichen Polpaare aa, ab, ba, bb als Argumente.

Als Regel für die Entscheidung darüber, ob eine beliebige aussagenlogische Formel eine logisch wahre oder logische falsche Formel ist, nennt Wittgenstein Russell gegenüber die folgende (CL, Brief 30):

> […] write the prop[osition] down in the ab-Notation, trace all Connections (of Poles) from the outside to the inside Poles: Then if the b-Pole is connected to such *groups of inside Poles* ONLY *as contain opposite poles of* ONE *prop*[*osition*], the whole prop[osition] is a true, logical prop[osition]. If on the other hand this is the case with the a-Pole the prop[osition] is false and logical.

Demnach ist anhand des ab-Zeichens der Formel $p \leftrightarrow p$ zu entscheiden, dass die Formel logisch wahr ist, da der äussere b-Pol des ab-Zeichens nur entgegengesetzten innersten Polen desselben Satzbuchstabens *p* zugeordnet ist.

Wittgenstein betont Russell gegenüber, dass es nicht auf die besonderen Regeln der ab-Notation ankommt, sondern darauf, dass es möglich ist, ein allgemeines Transformationsverfahren zu definieren, durch das für eine *beliebige* aussagenlogische Formel entschieden werden kann, ob diese logisch wahr oder logisch falsch ist (CL, Brief 30):

> That means that there is *one* Method of proving or disproving all logical prop[osition]s and this is: writing them down in the ab-Notation and looking at the connections and applying the above rule.

Wittgenstein interpretiert sein Transformationsverfahren aussagenlogischer Formeln in ab-Zeichen als Entscheidungsverfahren: Im Unterschied zu Ableitungen handelt es sich nicht um ein Transformationsverfahren innerhalb ein und derselben Formelsprache, sondern um die Transformation von Formeln einer Formelsprache (im beschriebenen Fall der Aussagenlogik), anhand von deren Merkmalen es nicht möglich ist, logische Eigenschaften der Formeln zu identifizieren, in Formeln einer anderen Formelsprache (im beschriebenen Fall in ab-Zeichen), anhand von deren äusseren Merkmalen es möglich ist, die logischen Eigenschaften der Formeln zu identifizieren. Ein derartiges Beweisverfahren ist weder auf Axiome angewiesen, noch bedarf es der Bezugnahme auf Interpretationen der Formeln. Es liefert ein *allgemeines* syntaktisches Identifikationskriterium logisch wahrer und logisch falscher Sätze, das ausschliesslich auf objektive Beweisgründe – Merkmale von Formeln einer beweisenden Notation – rekurriert.

Wenn Wittgenstein schreibt, dass jeder logische Satz sein „eigener Beweis" ist und dass jede Tautologie „selbst zeigt, dass sie eine Tautologie ist", dann setzt er hierbei die Transformation logischer Formeln in eine zum Zwecke der Identifikation logischer Eigenschaften definierten Notation voraus (vgl. TLP 6.122).

Wittgensteins Motiv, ein gegenüber dem klassischen, axiomatischen Beweisverständnis alternatives Beweisverfahren zu entwickeln, ist ein grund-lagentheoretisches: Er will jegliche ausserlogischen und metalogischen Fundierungsversuche durch eine Definition von Transformationsverfahren überflüssig machen, durch die für beliebige Formeln eines Formelsystems anhand syntaktischer Merkmale entschieden werden kann, ob sie bestimmte logische Eigenschaften haben oder nicht. Nach diesem Ansatz ist die Zielsetzung grundlagentheoretischer Ansätze verfehlt, das Fundament von Beweisverfahren (die Axiome) zu rechtfertigen, und stattdessen die grundlagentheoretische Aufgabe darin zu sehen, mechanisierbare Transformationsverfahren von Formelsystemen

zu definieren, die auf keinerlei inhaltliche Beweisführungen angewiesen bleiben.

2. Prädikatenlogik

Wittgensteins Ansatz steht und fällt nach diesem Verständnis damit, ob sich das Programm der Definition von Entscheidungsverfahren im Sinne von Transformationsverfahren über die Aussagenlogik hinaus realisieren lässt. Wiederholt erwähnt Wittgenstein gegenüber Russell in seinen Briefen, dass er nicht daran zweifelt, dass die ab-Notation auch ein Entscheidungsverfahren für die Prädikatenlogik liefert. Es gibt jedoch nur eine einzige Bemerkung, in der er die ab-Notation einer prädikatenlogischen Formel angibt (NL, S. 11[3]):

> The application of the *ab* notation to apparent variable propositions becomes clear if we consider that, for instance, the proposition "for all x, ϕx" is to be true when ϕx ist true for all x's and false when ϕx is false for some x's. We see that *some* and *all* occur simultaneously in the proper apparent variable notation.
>
> The notation is:
>
> for (x)ϕx: a-(x)-aϕxb-(∃x)-b and
>
> for (∃x)ϕx: a-(∃x)-aϕxb-(x)-b
>
> Old definitions now become tautologous.

Wittgenstein hält auch für die Prädikatenlogik an einer Polschreibweise fest. Im Unterschied zur Aussagenlogik enthalten die Pole auch Quantoren. Die Entscheidungsregeln für logische Wahrheit und logische Falschheit quantorenlogischer Formeln sind dementsprechend für komplexere Pole zu definieren. Wittgenstein setzt eine derartige Entscheidungsregel voraus, wenn er anschliessend konstatiert, dass „alte Definitionen" durch die ab-Notation als Tautologien identifiziert werden können. Er bezieht sich hierbei auf Quantorendefinitionen, die Russell und Whitehead in den *Principia Mathematica* (PM) einführen. Proposition 9.01 *der Principia* lautet (PM, S. 130):

> *9.01 ~(x).ϕx . = . (∃x).~ϕx Df
>
> Die ab-Notation für ~(x).ϕx ist: b-a-(x)-aϕxb-(∃x)-b-a
>
> Die ab-Notation für (∃x).~ϕx ist: a-(∃x)-baϕxba-(x)-b

Hier ist jeweils der äusserste a-Pol über den Existenzquantor dem inneren b-Pol von ϕx, und der äusserste b-Pol über den Allquantor dem inneren a-Pol von ϕx zugeordnet: Die Äquivalenz der Formeln lässt sich durch Bezugnahme auf den äussersten Pol, dem jeweiligen Quantor, der zwischen den äusseren und den inneren Polen steht, sowie dem inneren Pol, d.i. dem äussersten Pol der Polreihe, die zwischen Aussagefunktion und Quantor steht, identifizieren. Der entscheidende Punkt ist hier wiederum der, dass durch die ab-Notation für quantorenlogische Formeln Grundgesetze (vgl. für *9.1 und *9.11 der PM CL, Brief 30) und Definitionen, die innerhalb eines axiomatischen Kalküls ohne Beweis eingeführt werden, beweisbar sind.

Es stellt sich die Frage, ob eine allgemeine Transformationsregel prädikatenlogischer Formeln in die ab-Notation und eine allgemeine Entscheidungsregel für logische Wahrheit und logische Falschheit in Bezug auf die ab-Zeichen definiert werden kann. Dass Wittgenstein derartige Regeln im *Tractatus* nicht angibt, ist kein Beweis dafür, dass ihm Zweifel an der ab-Notation bzw. allgemein an der Durchführbarkeit seines Programmes kamen – im Gegenteil seine Ausführungen zu logischen Beweisen im *Tractatus* (TLP 6.1ff.) setzen die Durchführbarkeit seines Programmes im Rahmen der Quantorenlogik voraus. Es wäre unmöglich, etwaige Regeln im Rahmen der Quantorenlogik in ähnlich knapper Weise wie für die Aussagenlogik anzugeben. Die Form des *Tractatus* würde gesprengt, wenn Wittgenstein seine ab-Notation hier ausgeführt hätte. Schon in der publizierten Form fällt die erst im Gefangenenlager von ihm hinzugefügte Bemerkung 6.1203, die eine der ab-Notation analoge Klammernotation für aussagenlogische Formeln einführt, auf Grund ihrer Länge aus dem Rahmen.

3. Identität

Im Unterschied zur Prädikatenlogik ohne Identität, für die Wittgenstein eine Definition der ab-Notation offensichtlich für unproblematisch hielt, spricht er in den Briefen an Russell wiederholt von dem Problem, die ab-Notation auch für die Identität zu definieren (CL, Brief 30 und 32, vgl. auch 24 auch 34). Aber auch hier betont er, dass er nicht daran zweifelt, dass sich eine Notation finden lässt, durch die auch die logische Wahrheit und logische Falschheit von Formeln der erweiterten Prädikatenlogik entschieden werden kann. Das Problem der Identität löst Wittgenstein im *Tractatus* aber schliesslich nicht auf die Weise, dass er ein Transformationsverfahren für *beliebige* Formeln der klassischen erweiterten Quantorenlogik voraussetzt, sondern durch die Voraussetzung einer exklusiven Deutung der Quantoren, durch die die Verwendung des Identitätszeichens für eine grosse Klasse von Formeln überflüssig wird: z.B. kann die Formel $\exists xFx \,\&\, \forall x,y\,(Fx \,\&\, Fy \,\Pi\, x = y)$ unter Voraussetzung einer exklusiven Formalisierung durch $\exists x\, Fx \,\&\, \neg\exists x,y\,(Fx \,\&\, Fy)$ wiedergegeben werden (vgl. TLP 5.5321). Andere Formeln, die nicht unter Voraussetzung einer exklusiven Deutung der Quantoren wiedergegeben werden können – z.B. $a = a$ oder $\forall x\, x = x$ – verwirft er unter der Annahme, dass diese keine sinnvolle Interpretation besitzen (TLP 5.534). Unter Voraussetzung einer exklusiven Deutung eliminiert Wittgenstein das Identitätszeichen aus inklusiv gedeuteten prädikatenlogischen Formeln: Eines speziellen Transformationsverfahrens für Formeln, die das Identitätszeichen enthalten, bedarf es unter dieser Voraussetzung nicht mehr – das Problem ist reduziert auf das der Definition eines Transformations- bzw. Entscheidungsverfahrens für exklusiv gedeutete prädikatenlogische Formeln. Auch Wittgensteins exklusive Deutung der Quantoren ist im Rahmen des Programms zu verstehen, nicht-axiomatische Beweisverfahren zu definieren.

4. Ausblick: Metamathematik und Grundlagen der Mathematik

Wittgensteins Standpunkt steht im Gegensatz zu den Ergebnissen der Metamathematik und den unterschiedlichen Ansätzen in der Grundlegung der Mathematik. Es gilt als bewiesen, dass die Prädikatenlogik unentscheidbar ist (Church1936). Die Ansätze zur Grundlegung der Mathematik gehen von einem axiomatischen Beweisverständnis aus, und beantworten die Frage nach der Grundlegung von Axiomen entweder durch Reduktion auf andere Axiome, die nicht weiter begründet werden (Logizismus), oder durch eine ausserlogische Grundlage (Intutionismus bzw. Konstruktivismus) oder durch eine metamathematische Begründung (Formalismus). Wittgensteins Standpunkt würde demgegenüber in Anwendung auf Grundlagenfragen der Mathematik fordern, dass auch für arithmetische Formelsysteme Entscheidungsverfahren im Sinne

von Transformationsverfahren zu definieren sind – Wittgensteins Bemerkungen zu Beweisen mathematischer Gleichungen im *Tractatus* (vgl. 6.2ff.) setzen die Realisierbarkeit dieses Programmes voraus und enthalten Andeutungen (vgl. 6.241), wie es unter Voraussetzung seiner Zahldefinition (vgl. 6.02ff.) in dem einfachen Fall von Zahlgleichungen, die nur das Additions- und Multiplikationszeichen enthalten, durchzuführen ist. Die Annahme der Durchführbarkeit des Programmes für *beliebige* arithmetische Systeme, die nicht nur Ziffern und Operationssymbole, sondern auch freie Variablen enthalten, widerspricht den arithmetischen Unentscheidbarkeitsbeweisen (vgl. z.B. Hilbert 1970, S. 433).

Es liegt nahe, Wittgensteins Ansatz unter Voraussetzung der metamathematischen Beweise als undurchführbar abzulehnen. Die einzige Alternative, die es unter Voraussetzung von Wittgensteins Standpunkt hierzu gibt, ist eine Kritik der Metamathematik. Wittgenstein ging diesen Weg, ohne dabei die Ausarbeitung von Entscheidungsverfahren weiter zu verfolgen.

Der direktere Weg, dem Standpunkt Wittgensteins gegenüber den Resultaten der Metamathematik Recht zu geben, bestände darin, durch Definition eines Entscheidungsverfahrens für die Prädikatenlogik im Sinne Wittgensteins Churchs Unentscheidbarkeitsbeweis der Prädikatenlogik sowie den diesem Unentscheidbarkeitsbeweis zugrunde liegenden Unentscheidbarkeitsbeweis der Arithmetik direkt zu widerlegen. Nur unter dieser Voraussetzung kehrte sich die Beweislast um: Nicht mehr die Durchführbarkeit von Wittgensteins Programm, sondern die Beweiskraft metamathematischer Beweise stünde in Frage.

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The Normativity of Semantic Correctness: A Davidsonian Perspective

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1. Three Kinds of Normativity?

Kripke (1982: 37) famously contrasts norms with mere dispositions: although the manifest dispositions of a person can tell us what she thought the right way of following a rule was, they cannot point to what she should have done. This implies that to be normative, the meaning of a term must have consequences for how we *should* use it. My concern is not the sceptical problem of how there can be meaning-facts in the first place, but what sense can be made of the claim that meanings have nromative consequences for use. I start by examining three cases, and asking which, if any, is analogical to speaking a language.

Imagine a person who, descending from her apartment, invents a rule for which stairs one can step on. To engage in this activity, one should try not to step on certain stairs, but even a person making mistakes can be said to be playing the game. Compare this with chess. The rules of chess are constitutive in the sense that a failure to follow them is a failure to play chess, but of course, making legitimate moves is not a sufficient condition for playing, at least not for playing well. To contrast these games with a third example, imagine that a staircase is defective so that certain stairs collapse when stepped on. If someone wants to get to the apartment on the highest floor, and there is no other way of getting there, we would say that one should not step on certain stairs, but this 'norm' is not arbitrary as in the two games: someone who moves the king like the queen is not playing chess, but we can always stipulate a new game which is defined by this move (see Wittgenstein 1974: X, 133). Compare these examples with using words. Obviously, being understood by others sets limits to the utterances we can make, but does this imply that it is a *norm* to use a word in accordance with its meaning, or that there are some further obligations to speak in ways that are 'semantically correct'?

An obvious suggestion concerning the normativity of meaning is provided by Paul Boghossian (1989: 513): it is "simply a new name for the familiar fact that, regardless of whether one thinks of meaning in truth-theoretic or assertion-theoretic terms, meaningful expressions possess conditions of *correct use*". There need not be any convention or norm dictating what particular words can be used to mean, since this condition simply requires that if, at a certain time, 'green' means *green*, it is correctly applicable only to those things that are green (*ibid*.). On this picture, then, normativity is a name for the fact that uses can be categorized into correct and incorrect ones. The problem with this account is that we can always ask why we *should* apply 'green' to green things. As Kathrin Glüer (2001: 60) remarks, it is far from clear that a condition of semantic correctness providing means for categorizing utterances into true and false, or justified and unjustified ones, has any normative consequences for the use of a term.

A conditional stating that unless I use a word correctly, it cannot have the meaning I intend, would have action-guiding force akin to the rules of chess. The following conditional might serve this purpose:

> A speaker *s* can mean green by 'green' (or any other word) at *t* iff she applies 'green' only to those things that are green.

There is also a stronger picture of the normativity of language, on which words carry certain meanings and conditions of correctness with them. Roughly, the idea is that languages are governed by rules, and speaking a certain language demands grasping these rules and applying them correctly. Dummett (1986, 473–474) expresses this idea when he insists that there are conventions governing what meanings words have in a language, and these meanings are independent of the intentions of particular speakers.

Both of these views are primarily concerned with semantic rather than syntactic correctness. Semantic correctness, on the second picture, is a result of two factors. When applying a word correctly, I both apply the right word and make the right judgment about reality. But on any plausible conception of meaning, failing to apply a word correctly does not imply failing to mean something by it: I can claim that the grass outside is green when, in reality, it is yellow or brown, and still mean green by 'green' (cf. Glüer 2001: 61; Bilgrami 1993: 143). Hence, in individual cases, succeeding to apply 'green' to green things is not constitutive of being able to mean green by 'green', as castling correctly is constitutive of playing chess.

Davidson rejects the second, Dummettian picture of meaning normativity on the grounds that using words in accordance with their standard meanings is not essential for communication. Avoiding broken stairs may be necessary for getting to highest floor of an apartment building, but doing so is not constitutive of the goal: it is not as if we could *give no content* to it except in terms of the broken staircase, as we can't give content to the idea of playing chess except in terms of the rules of chess. Davidson (1994: 11) insists that the whole point of language is communication, being understood, and any philosophically interesting norm has to spring from this goal. The same critique can be extended to the weaker picture of meaning normativity: it is possible to use an expression no-one has ever used, incorrectly, and still be understood.

But just as one has to at least try not to step on certain stairs to play the stair-game, is *trying* to use words correctly, in accordance with their meaning, constitutive for meaning something by a word? It is difficult to deny that semantic correctness – whether understood in terms of truth- or justification-conditions – is constitutive of meaning: if 'green' correctly applied to objects that are green before 2005 and yellow after, it would not mean green. This need not present a problem, as long as we distinguish having a meaning and meaning something by a word. Davidson seems to think that only something constitutive of the latter could have any normative, deontological force. He offers a conditional along the following lines:

> (D) A speaker *s* can mean green by 'green' at *t* iff she is justified in believing that she will be understood as

meaning green by 'green', and speaks with the intention of being so understood. (Cf. Davidson 1994: 12).[1]

The demand that one need merely to produce utterances that are interpretable, and be justified in believing this, is best seen as a constitutive criterion for having a language. But Davidson also gives an externalist account of conditions that must be satisfied for an individual to meet this criterion.[2] Moreover, he acknowledges that successful communication is grounded by numerous empirical constraints, for the speaker must be aware of a whole nexus of factors underlying the possibility of being understood in particular cases. Among these is knowledge of the literal meanings of one's words – that is, their 'normal' conditions of semantic correctness – knowledge of one's hearer or interpreter, and regularity or consistency on the part of the speaker (see Davidson 1986: 442–443). However, Davidson (2001b: 297) holds that there is nothing essentially normative about the constraints mentioned – they are perfectly analogical with the constraint of avoiding broken stairs to climb a staircase.

2. Conflicting Norms?

In addition to (D), Davidson is committed to the following two theses. In this section I try to resolve what at first sight seems like a tension between them and (D).

(E) It is possible to think of and refer to something, e.g. water, only against a causal history of relations to water.

(W) Consciousness of the norm between semantically correct and incorrect use is prerequisite for having a language, and it demands that one go on as before.

The tension results from the fact that, on the one hand, (D) states that semantic correctness is not a norm for meaning something by a word. Moreover, regularity or consistency in the use of a word, or going on as before, is merely an empirical constraint on understanding. On the other, (E) implies that semantic correctness – a history of correct application and awareness of the truth conditions of one's words – is constitutive of meaning water by 'water', and (W) states the necessity of going on as before. At least there is nothing *prima facie* contradictory about a situation where these two sets of norms conflict. I will argue that the contradiction is resolved by noting that (E) and (W) are built into the possibility of intending to mean green by 'green'.

Despite his commitment to (D), Davidson (1994: 10) wants to engage in the enterprise of drawing the "distinction Wittgenstein has made central to the study of meaning, the distinction between using words correctly and merely thinking one is using them correctly". The idea is that the only possible check for using a word correctly is provided by realizing that my use of an expression is similar to your use of another expression, and this, of course, demands a pattern of regularity (see Davidson 1993, 118–119). This need not conflict with the idea that using a word as before is not a norm, as long as we distinguish between a child learning her earliest, basic sentences, and adult speakers. Nevertheless, we cannot escape the fact that according to (W), awareness of conditions of correct use is essential for meaning.

The gist of Davidson's externalism is that in basic, observational cases, what we apply a concept to – what causes us to assent to a word or utterance – determines its content. Because the relevant, content-endowing cause is individuated in a triangular situation, built in with awareness, on the part of the triangulating beings, of the shared cause, knowledge of what our words refer to in basic cases is guaranteed. Davidson most explicitly applies this idea to radical interpretation, which is possible precisely because "the situations which normally cause a belief determine the conditions in which it is true" (Davidson 2001a: 197). Essentially the same holds for first acquiring a concept. Correct application is tied together with having a concept or meaning something by a word, since "we do not first form concepts and then discover what they apply to" (Davidson 2001a: 196). But Davidson's externalism reaches beyond the earliest stages of language-acquisition: he approves Burge's idea that generally, what makes it possible for a person to mean something by 'water' while failing to apply it correctly is her history of causal relations to water (Davidson 2001a: 200). The crucial question is, if largely correct application is necessary for meaning something by a word, why does Davidson deny it is a norm?

Perhaps the trouble is in speaking of words, rather than concepts. After having acquired a first language, surely we can refer to water by numerous words, just by being told that they all mean water. Similarly, a competent speaker could use any word, intending it to mean water, and still be understood by her hearer. In a sense, I 'go on in the same way' when referring to water by 'water' and 'eau', since both words have the same conditions of semantic correctness. But this does not render semantic correctness, or awareness of its conditions, otiose: it is plausible to say that had I never managed to correctly apply 'water' to water, neither could I mean water by 'eau'[3]; to mean something by a word, I must be able to think of and refer to whatever the word correctly applies to.

But in fact, this is implicit in (D), which states that a speaker can mean green by 'green' only if she is justified in believing that she will be understood as meaning *green*. To see this, imagine a child who has been taught to use the word 'cow' by a person who is otherwise a competent speaker, but for some reason, completely unable to distinguish between cardboard-cows and real ones. If the child has been taught to utter 'cow' in the presence of real cows *or* Gettier-cows, then *that* is what her word 'cow' refers to. Let us say, in the metalanguage, that her 'cow' means cow*. Strictly speaking, then, such a speaker could not believe she will be understood as meaning *cow* by an utterance she makes.

The modified suggestion concerning the normativity of semantically correct application above was that because a speaker can make mistakes and still mean cow by 'cow', it is enough that she should try to apply 'cow' to cows, or, perhaps, at least know what her words correctly apply to. But against (D), a norm stating how one can succeed to mean green by 'green' in terms of conditions of semantic correctness seems to be beset with circularity. Consider hypothetical norms of the form "To do *x*, one should do *y*". For instance, to play chess, one should make moves that are legitimate by the rules of chess. These rules are constitutive of chess, but what is common to all such

[1] Davidson (1994: 13) remarks that it is a necessary condition of meaning something that there are "endless cases of successful communication", which of course does not follow directly from (D). Moreover, he (*ibid*.) makes the qualification that "there must be people who would understand the speaker as he intends, and the speaker reasonably believes he is speaking to such a person".

[2] It seems to me that one can accept the public criterion without accepting Davidson's (partly) social views of what communication presupposes (I have in mind mainly the idea of triangulation and the intrinsically social nature of language it implies). But I will not argue for this point here.

[3] Someone might interpret me as speaking of water, but I couldn't intend to be understood as meaning *water*, since I wouldn't know what water is.

norms is that someone should be able to intend to or want to play chess even if not in command of these rules.[4] Similarly for a norm stating that to speak English, 'water' should be used to refer to water: intending to, or believing that one is speaking English, is a distinct activity from actually speaking English.

But consider intending that some word or utterance 'x' means green, or using it to mean green. Against the above discussion of Davidson's externalism, this presupposes knowing what 'x' correctly applies to, as well as a background of correctly speaking of and referring to green things. Because intending to and believing that one will be understood as meaning green by 'green' presupposes that that the speaker is aware of what it is for something to be green – the conditions of semantic correctness of her word – this cannot be a norm for meaning green by 'green'. Failing in the intention to mean green by 'green' is distinct from failing to know what it is for something to be green.

In asking what is essential for successful communication, Davidson's starting point is to examine speakers who already, to some extent, ascribe to conditions of semantic correctness. If someone were to ask what is necessary for winning a game of chess, it would not be helpful to answer "following the rules of chess", since following the rules of chess defines what a game of chess is – the rules are presupposed in the question. Trivially, following the rules correctly is a necessary condition for winning, but this is quite a different answer than saying that winning demands a sufficiently good game tactic. I have argued that if we accept (D), answering the question "What is essential or necessary for succeeding to mean green by 'green'?" by appealing to a grasp of conditions of semantic correctness is just like telling someone that to win a game of chess, he should follow the rules of chess – that is, play chess and not some other game.

[4] Whether a person who does not know the rules of chess can fully know what chess is is another question, but such a person can still have the intention of playing chess without knowing the rules, that is, an intention to play the game that is defined by the rules of chess, whatever these rules are.

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The Space of Reasons and the Realm of Freedom

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"The essential point", according to Wilfrid Sellars, "is that in characterizing an episode or a state as that of *knowing*, we are not giving an empirical description of that episode or state; we are placing it in the logical space of reasons, of justifying and being able to justify what one says". (Sellars 1997, 76) The traditional empiricism maintains that all of our knowledge rests basically on a foundation of truths about sensory experience, assuming that sense data is the junction at which external reality or the empirical world gets in touch with the epistemic world. Even Quine's attack on the dogmas of empiricism does not call this presupposition into question. What he pleads for is a holistic modification of the dogma: "our statements about the external world face the tribunal of sense experience not individually but only as a corporate body" (Quine 1964, 41).

In the spirit of Wittgenstein's *Philosophical Investigations*, Sellars points out that there is a categorical difference between sensing and knowing, i.e., between the so-called "space of causes" and the "space of reasons". At the heart of Sellars' well-known criticism of the "Myth of the Given" is the recognition of the irreducibly normative character of epistemic discourse. Experience is certainly not irrelevant to knowledge, it may be a necessary condition of empirical knowledge, but not one that is constitutive of it, since the relevance of experience is primarily of a causal sort instead of a justificatory one. Davidson makes it clear that "a causal explanation of a belief does not show how or why the belief is justified" (Davidson 2001a, 143) and therefore "nothing can count as a reason for holding a belief except another belief" (Davidson 2001a, 141). Telling a "justificatory story" is, in Wittgensteinian terms, a language-game on its own to which one can contribute nothing by introducing a "causal story" (Rorty 1991, 148).

Nevertheless, rejecting the myth of the given unavoidably gives rise to the question whether or in what way the space of reasons, which is then free from all constraints from outside, still has any bearing on external reality. In this paper, we approach the problem the other way round: what we are concerned with is the question whether it is justified to assume a "space of reasons" at all. The problem is that if we accept that we are living in the "space of causes" in which everything that happens is determined in a causal chain, it is hard to see where there is place for us to engage in cognitive activities. For "the space of reasons is", as McDowell remarks, "the realm of freedom" (McDowell 1994, 5).

The epistemic discourse is founded on the possibility of distinguishing between "true" and "false" beliefs, between "correct" and "incorrect" inferences and so on. However, it would not make sense at all to speak of "truth" or "correctness", if cognitive activities were not free from causal necessitation, since, in this case, every mental process would simply be a mechanical process which can neither be correct nor incorrect. Only where there is a possibility of disobeying a rule is there the possibility of being correct. Our epistemic discourse presupposes that we can be taken responsible for what we say and believe. Therefore, the possibility of holding true beliefs and making correct inferences depends on the capacity of our mind to use reason on our own, independent of the causal necessitation from outside. We human beings must be free in a way that other objects are not, if it is justified to call ourselves rational beings. We must attribute to our mind a capacity of what Kant calls *spontaneity*.

In fact, Sellars' distinction between the "space of causes" and the "space of reasons" is anticipated by Kant. In response to Hume's challenge of the rationalistic conception of causality, Kant recognizes that the objectivity of knowledge claims cannot be based on what is given in sensation, but rather it is a matter of applying concepts in accordance with the normative principles derived from the categories of understanding. Knowing or thinking, therefore, must be regarded as an "achievement" of the spontaneity of our mind, which is governed by principles of reason instead of natural causes. This autonomous sphere is referred to by Kant as the "*realm of freedom*", the "*world of understanding*" or the "*intelligible world*", in contrast to the "*realm of nature*" or the "*world of sense*". Indeed Kant's framework seems to be particularly suitable for bringing the problem we are interested in to a head because of the particularly intractable form of the conflict he is confronted with, i.e., the so-called *antinomy* between causality and freedom (A 444 ff./B 472 ff.).[1]

As far as the "realm of nature" is concerned, Kant endorses a strict version of causal determinism, maintaining that everything that happens is, without exception, determined by natural laws. "One can therefore grant that if it were possible for us to have such deep insight into a human being's cast of mind, ... we could calculate a human being's conduct for the future with as much certainty as a lunar or solar eclipse". (Kant 1996a, 219) Kant, however, believes on the other hand that "it is just as impossible for the most subtle philosophy as for the most common human reason to argue freedom away" (Kant 1996b, 102). Kant's main concern is that if human beings were not capable of acting freely it would make no sense to speak of moral responsibility. Nevertheless, Kant also recognizes that the problem of freedom is not only crucial for the possibility of moral imputation but also for that of epistemic claim. Kant's distinction between sensibility and understanding or between the faculty of receptivity and that of spontaneity is drawn based on the recognition that the objectivity of knowledge cannot be sought in what is given from the space of causes, but rather in the concepts "produced" by ourselves. In order to make sense of epistemic claims, the "world of understanding" must be presupposed as an autonomous realm in which causal determinations are out of place.

In the Third Antinomy of Pure Reason, Kant tries to show that there is no logical contradiction between taking something as determined and as free at the same time, insofar as a distinction between *phenomena* and *noumena* is accepted. Arguably, this distinction need not be understood as a metaphysical one, as if there were a world of things-in-themselves existing "behind" the world of appearance. Allison, for example, argues that the difference is rather a logical or methodological one, depending on whether something is *considered* as an object of experience or considered apart from the conditions of being an

[1] References to Kant's *Critique of Pure Reason* appearing in the text are to the standard pagination of the first and second editions, indicated as A and B, respectively. English translations are from P. Guyer and A. W. Wood's translation (Cambridge: Cambridge University Press, 1998).

empirical object (Allison 1983). Accordingly, causality and freedom refer to two different ways of viewing things. Under the "phenomenal perspective", even our mental activities are determined by natural causes. However, to engage in cognitive activities means to consider ourselves no longer as "objects", but as "subjects" of experience, i.e., to consider ourselves apart from the conditions to which all objects of experience are subject. Under this "noumenal perspective", we regard ourselves as capable of using reason independently of non-cognitive causal factors.

However, it is doubtful whether it is justified to view ourselves from the noumenal perspective. Obviously, it does not follow from the fact that we are compelled to regard ourselves as free for the sake of the epistemic discourse that we are really so. Although we believe ourselves to be capable of cognitive activities, this belief may be wrong. The whole story of spontaneity may be an illusion. As Sellars suggests, "we can conceive Kant to argue that although we are conscious of ourselves as *spontaneous* in the synthesizing of empirical objects, this spontaneity is still only a *relative* spontaneity, a spontaneity 'set in motion' by 'foreign causes'" (Sellars 1974, 79). What Sellars means by "relative spontaneity" is the idea of an "*automaton spirituale*, a mind which conceptualizes, but only in response to challenges from without, and in ways which, however varied, realize set dispositions." (Sellars 1974, 81) For such a thinking machine, all cognitive activities are nothing but causal processes which are initiated by perceptive inputs and the result of which are generated according to the dispositions programmed in the machine.

Nevertheless, the idea of "relative spontaneity" does not undermine the assumption of freedom. The crucial point in Kant's idea is that how we *consider* ourselves under noumenal perspective has nothing to do with what we *are* under the phenomenal perspective. One may object that if we regard ourselves as free, but we, *in fact*, are not, then this is nothing but a mere phantom. This objection, however, would only stand if freedom were a "matter of fact" that could either "be the case or not the case". But, as shown in the resolution of the Third Antinomy, freedom *ex hypothesi* does not belong to the phenomenal or factual world at all. Therefore, whether *there is* freedom or not is the wrong question to ask. Admitting a realm of freedom or a world of understanding says nothing about what the empirical world is like. Kant makes it clear that "the concept of a world of understanding is … only a *standpoint* that reason sees itself constrained to take outside appearances *in order to think of itself as practical*". (Kant 1996b, 104)

In re-interpreting Kant's ideas, Brandom tries to reinforce the crucial point by introducing another pair of concepts, namely "objective" and "social". With the objective/social distinction, Brandom succeeds in figuring out positively what it means by saying that freedom is not a matter of fact. "The social/objective distinction is social rather than objective. If we now transfer this account of the distinction between the Realm of Nature (fact, description, cause) and the Realm of Freedom (norm, evaluation, practice) back to Kant's original suggestion that freedom consists in constraint by norms rather than simply by causes, the difference between being free and not being free becomes a social rather than an objective difference." (Brandom 1979, 192)[2] For Brandom, it is up to a social community to decide on the matter of freedom. An unwelcome consequence of this interpretation, however, is that the distinction becomes more or less arbitrary. As Brandom himself concedes, even "a tree or a rock can become subject to norms insofar as we consider it as engaging in social practices." (Brandom 1979, 192)[3]

Nevertheless, we need not follow Brandom up to this point. We can distinguish between the *Positive* and the *Negative Thesis* of Brandom's interpretation, i.e., between the thesis that the distinction between the realm of nature and the realm of freedom *is* a social practice and that the distinction *is not* objective or factual. Indeed the negative thesis makes good sense within Kant's framework, for it is just another way to say that the difference between the two realms is not an ontological one. Lacking an "objective" ground, however, by no means implies that the distinction can be arbitrarily decided by a community. Indeed, according to Kant, freedom is *necessary* because it cannot be coherently argued away. For the price of rejecting freedom would be the price of abandoning the possibility of epistemic claims and cognitive activities at the same time. In this connection, someone who tries to argue against it would have to deny that he is engaging in the cognitive activity of reasoning. He would have to deny the very condition on the basis of which his argumentation operates, or, so to speak, to erode the very ground on which he stands. Therefore, we cannot coherently deny that we are capable of reasoning and operating in the space of reasons. Such a self-referential argumentation strategy is called "transcendental argument" (Strawson 1959, 40).

Moreover, even the space of causes would not make sense without presupposing the space of reasons. By saying that the social/objective distinction is social rather than objective, Brandom brings up another crucial point that is implicit in Kant's idea: the spaces of reasons is a "*meta-space*" in respect to the space of causes. Where the space of causes begins and ends is itself not an objective matter. Instead it lies in the hands of reason to determine what objective is and what the space of causes is like. According to Kant, the categories that constitute the objectivity of the phenomenal world are "products" of our understanding. The world would not be a causally connected whole, if we did not presuppose a space of reasons which determines what causality means. The causal order of phenomena would have no objectivity, if we were not capable for applying the concept of causality independently of non-cognitive causal factors. In this respect, we must regard ourselves as free not only in order to make sense of ourselves as rational beings, but also to account for the facticity of the causally determined world.

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[2] Brandom believes that the objective/social distinction is superior to the traditional one between fact and norm with which the possibility of such a new perspective would hardly come readily to mind, since it seems unintelligible to say that the fact/norm distinction is itself not factual, but normative (Brandom 1979, 192).

[3] It might be inconvenient to develop the appropriate measures to include such things in our social practices, but this would be, for Brandom, "just the sort of issue that the community could not coherently be claimed to be wrong about." (Brandom 1979, 191)

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The Rationality of Faith

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1. Introduction

According to Franklin (1998, 109) Pascal's (1952) wager and Leibniz's theory that this is the best of all possible worlds are latecomers in the Faith-and-Reason tradition. Yet they have remained interlopers; for they have never been taken as seriously as the older arguments for the existence of God and other themes related to faith and reason. Yet Pascal's wager is of interest for historians of probability and decision theorists for its first instance of explicitly decision theoretic reasoning in print and its invocation of infinite utility. Moreover, it is of interest for psychologists for its discussion of voluntarism and for philosophers of religion and theologians as a putative proof that belief in God is an obligation of rationality (Hajek 2000, 1). Furthermore, as decision theory and the mathematics of infinities are flourishing and have advanced rapidly over the last couple of years (McClennen 1994, 115; Sobel 1996, 23; Vallentyne 2000) and as belief in God has grown over the last terrorist attacks and religions have multiplied over the last decades - just look at the new world religion of the Bahai's -, it might be worthwhile to look at Pascal's wager to get a new evaluation of the situation.

So let's have a look at one version of Pascal's wager: suppose you are confronted with the following decision problem. There are two actions to choose from: either to bet on God, that is, a_1, or to bet against God, that is, a_2. Two states of the world can be the case: either God exists, that is, s_1, or God doesn't exist, that is, s_2. If one combines the respective actions with the respective states of the world, the following outcomes ensue: infinite life, that is, o_{11}, wretchedness, that is, o_{21}, the life of a Christian, that is, o_{12}, and the life of a non-Christian, that is, o_{22}. So how should one decide rationally in this kind of a problem?

	s_1: God exists.	s_2: God doesn't exist.
a_1: to bet on God.	o_{11}: infinite life (∞)	o_{12}: the life of a Christian (-10)
a_2: to bet against God.	o_{21}: wretchedness (-1000)	o_{22}: the life of a non-Christian (+10)

Figure 1. Decision matrix for Pascal's wager.

According to Rescher (1985, 7) - and I agree with him - Pascal's wager doesn't answer the question whether God exists, but whether we should accept that he exists. Moreover, this version of the wager also doesn't deal with the question which kind of God exists; whether it is the God of the Protestants, of the Catholics, of Islam, of Judaism, of the Bahai's, of a God who punishes those who bet on him and who supports those who don't bet on him, whether the nontheistic view of Hinduism is true or the pantheism of Spinoza, etc. Yet this important issue which deals with the adequacy of the states of the world leads to the many-Gods objection (Jordan 1994). Furthermore, one might also want to question whether the actions are the right ones. For one might want to question the moral adequacy of these actions (Quinn 1994) and claim that adequate actions might be to belief in God and not to belief in God. Yet as Armour (1993, 2) has already observed: „We must constantly remember that one makes one's bet in this case not by putting one's money down at the two-dollar window but by *acting as if* God exists." Moreover, Morris (1994, 57) has pointed out that „Belief is not under our direct voluntary control." So the decision maker cannot simply choose to believe or not to believe, but has to bet on God's existence or non-existence and act as if God exists. Yet whether this is true has to be discussed. Hence for decision problems like Pascal's wager decision theory has two problems to solve: (1) which states of the world and which actions should figure in decision situations. (2) after having specified the states of the world and the actions which action should the decision maker decide for.

Yet because of space restrictions I start with the above formulation of Pascal's wager and take it as granted. Now the question arises how is one supposed to argue in this decision problem? One solution is to follow the principle of maximizing expected utility, where the expected utility for the respective actions can be calculated as follows (Savage 1954/1972): $U(a_i) = \sum_{j=1}^{m} p(s_j)u(o_{ij})$, that is, the utility U of an action a_i is the sum of the weighted utilities of the outcomes $u(o_{ij})$, where the weights are the probabilities of the states of the world $p(s_j)$. The expected utility for a_1 is then the following, if the probability for s_1 is 0.1 and the probability for s_2 is 0.9: $U(a_1)$=0.1x(∞)+0.9x(-10)=infinite. The expected utility for a_2 is: $U(a_2)$=0.1x(-1000)+0.9x(+10)=finite. Because the expected utility for a_1 is much bigger than the expected utility for a_2 (even if the probability for God's existence is very small!), and because it is rational to maximize one's expected utility, one should decide for a_1. Therefore it is rational to bet on God.

2. Objections against Pascal's Wager

The following objections arise against this solution: (1) decision theory only allows for finite utility, so it cannot solve Pascal's wager (Jeffrey 1983, 150; McClennen 1994); (2) Bernoulli's law of the diminishing marginal utility of money precludes infinite utilities (Sorensen 1994, 143); (3) certain assignments of vague probabilities to God's existence scotch the wager (Hajek 2000); (4) satisficing one's utility is better than maximizing one's utility (Slote 1989); (5) the utility of an action doesn't only depend on the utilities of the outcomes, but also on other factors like the decision maker's attitude towards risk and the amount of possible change from the decision maker's reference point (Gärdenfors and Sahlin 1988); (6) the many-Gods objection: there are more and/or other possibilities than God exists and God doesn't exist as states of the world (Jordan 1994); (7) it is morally objectionable to bet on God (Franklin 1998; Quinn 1994).

Because of space restrictions I will only look at objection (3): Hajek (2000, 2-3) has pointed out that Pascal's wager depends on the decision maker assigning a probability greater than zero to God's existence. Hence decision makers who can only assign a zero probability to God's

existence maximize their expected utility by betting against God, and decision makers who cannot assign any probability to God's existence cannot calculate their expected utility at all. One might object the following to these two counterexamples: Pascal neither wants to convince strict theists nor strict atheists by his wager, but those which remain suspended between a state of faith and one of unbelief. Moreover, one might want to ask are there really any strict atheists in this world? For if one is really desperate, doesn't one usually pray to God? If one is at death's door, doesn't one think it is better to believe in God? Even John von Neumann, one of the pioneers of classical game theory, had converted to Catholicism by the time he was confined to bed by an advanced and incurable cancer, and he was reported to have said that Pascal had a point (Macrae 1992, 379). Furthermore, even if the probability the decision maker assigns to God's existence is very small, to bet on God still obtains the best result. However, according to Jordan (1994, 108) the product of an infinitesimal and an infinite number is infinitesimal. If this is true (which it isn't) and if one assigns an infinitesimal to God's existence, then the principle of maximizing expected utility leads to bet against God. Yet Hajek (2000, 3) has said that Pascal's argument is addressed to human beings. And in fact human beings don't assign infinitesimal probabilities to propositions. One may object to that although human beings in fact don't assign infinitesimal probabilities to propositions, they can assign such probabilities. For suppose a dart is thrown at a unit square. Can't I assign an infinitesimal probability to its hitting a particular point in the square? Hence even though one in fact does not, one can also assign an infinitesimal probability to God's existence.

With regard to the case where decision makers cannot assign any probability to God's existence the following can be said: Pascal's wager simply doesn't arise for them. Unfortunately Hajek doesn't tell us which kind of decision makers he has in view. Very young children or mentally retarded people might not be able to assign any probability to God's existence. For they might not have any concept of probability and/or of God yet. With regard to grown ups with a sound mind they might not be willing to assign any probability to God's existence, but if one presses them to do so, I doubt that they cannot come up with some probability assignment. Hence this argument isn't valid.

Hajek (2000, 3) has pointed out that the belief states of humans are vague, that is, humans cannot assign probability, precise to indefinitely many decimal places, to all propositions. Moreover, Hajek (2000, 4) claims that vague beliefs will typically be represented by probability intervals. Yet with the exception of Kyburg (1980) all other decision theorists conceptualize their decision theories not in terms of interval probabilities, but in terms of point probabilities, so that they must have a justification for doing so.

Two reasons for point probabilities and against interval probabilities come to my mind:

(1) one should prefer a simpler decision theory to a more complicated one, if the former theory is as adequate as the latter for solving the problems in its field. Because a decision theory with point probabilities is simpler than a decision theory with interval probabilities, and because there is no reason why a decision theory with point probabilities shouldn't be able to deal with all the problems in its field, whereas a decision theory with interval probabilities is already limited in its applicability, a decision theory with point probabilities should be preferred to a decision theory with interval probabilities.

(2) If one uses interval probabilities one has to provide a justification for both borders, whereas if one uses point probabilities one just has to justify one point. The former can be seen by the following: if the decision maker claims that his knowledge situation that it is very likely that there is good weather tomorrow is best represented by the probability interval (0.7, 0.9), one can ask the decision maker why his knowledge situation isn't best represented by the probability interval (0.69, 0.91)? In the case of point probabilities one can only ask the decision maker why he uses this point, for example, P = 0.9 in the weather example, and not any other one, like P = 0.91. Because in the case of interval probabilities and in the case of point probabilities it is difficult to provide justifications, and because it is better to need as few justifications as possible, point probabilities should be preferred to interval probabilities.

Moreover, Kyburg (1974, 264-267) admits in opposition to point probabilities interval probabilities only fulfil in certain special cases the axioms of a generalized mathematical probability calculus for intervals. This is a serious defect of interval probabilities. For it is a minimal requirement in decision theory that the decision maker's probabilities are coherent. This can be achieved by fulfilling the axioms of the mathematical probability calculus. If the decision maker's probabilities are incoherent, he is in a position to face a betting situation which has become known as "Dutch book". Therefore Kyburg's interval probabilities are limited in their applicability to certain special cases. Yet Hajek (2000, 5-6) objects that a sure way to avoid being Dutch booked is to remain totally vague, which is true, but has as a consequence that the decision maker isn't willing to bet on anything anymore, which leads to complete inaction. I don't think it is ideally rational never to decide anything in your whole life. However, one might be able to rewrite the axioms of the mathematical probability calculus in such a way that they can accommodate interval probabilities. Moreover, Dutch books might be avoided, if there is a suitable decision rule for use of interval-valued probabilities. Decision rules can look at bets already made and stay away from new bets that would make a Dutch book.

Yet if one uses interval probabilities instead of point probabilities, why doesn't one also use interval utilities instead of point utilities? After all in the game show *The Price Is Right*, humans have problems assigning prices to everyday goods, too, that is, they have vague conceptions which kind of price might be the right one with respect to particular goods. In my opinion using interval utilities instead of using point utilities leads to unnecessary complications of decision theory. That's probably also the reason why one doesn't find any decision theory with interval utilities. [1]

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Depth Grammar and Surface Grammar of Religious Belief

Dorit Lemberger, Ramat Gan

In his book *Philosophical Investigations* Wittgenstein demonstrates a methodology by which language can be observed and investigated. The investigation's focus is on grammar since "*essence* is expressed in grammar" and "grammar tells what kind of object anything is" (Wittgenstein 2001, §371, §373). Yet, what does the concept 'grammar' mean? Terms such as Depth Grammar and Surface Grammar that Wittgenstein uses may be hinting to the fact that there are (at least) two grammar levels, however, in fact, he does not provide us with a full and clear definition of these terms.

Wittgenstein repeatedly warns against the tendency to formulate theories whose goal is to explain the linguistic operation. Instead, he suggests focusing on the description.[1] However, while closely examining the *Investigations*, one can point to a central tension revealed throughout the investigation between refraining to define and moral judgment on the one hand, and the very existence of human communication within which people agree upon definitions and judgments. A person chooses his words, and sometimes does not even know how to do it because "it is only in normal cases that the use of a word is clearly prescribed; we know, are in no doubt, what to say in this or that case. The more abnormal the case, the more doubtful it becomes what we are to say"(Wittgenstein 2001, §142). Despite the fact that "every sentence in our language 'is in order as it is" (Wittgenstein 2001, §98), Nevertheless, there is room for doubt and error: "so you are saying that human agreement decides what is true and what is false? It is what human beings *say* that is true and false and they agree in the *language* they use" (Wittgenstein 2001, §241-242).

When language is actually used we apply, in fact, double judgment: The person 'decides' what to say under certain circumstances and the people he converses with judge whether what has been said is 'true' or 'false': "the sense of a sentence… may, of course, leave this or that open, but the sentence must nevertheless have *a* definite sense. An indefinite sense, that would really not be a sense *at all*. This is like: an indefinite boundary is not really a boundary at all" (Wittgenstein 2001, §99). This double judgment is done based on a mutual agreement on a certain form of life. There is no book in which the agreed upon rules of definitions and judgments are included (unlike grammar book). Living within a certain form of life provides the background needed for communication and for judging the linguistic use.

This instruction raises two questions that may be answered by distinguishing between DG and SG. The first question is: what can be defined as grammatical characteristics? The second question is: How does Wittgenstein's distinction between the two types of grammar assist when one needs to clarify and describe a state of mind as religious belief? Such a state of mind is a distinct test-case of 'language work' in two ways: First, translating the state of mind into words; the other refers to the unique characteristic a believer pours into the religious linguistic game: "the way you use the word 'God' does not show *whom* you mean, but what you mean" (Wittgenstein 1998, p.58).

The following process is two-fold. First, it follows Wittgenstein's statements that can clarify and shed light on his distinction between Depth Grammar and Surface Grammar. Later on, in the second stage, it introduces Wittgenstein's religious perception's major characteristics from their Depth Grammar perspective. The major claim is that Wittgenstein actually formulates a grammatical method to be used when investigating religious belief, yet it includes an inner contradiction: On the one hand, he formulates certain religious belief criteria while negating others; on the other hand, he formulates an investigation method based upon tolerance and pluralism. However, his method stipulates that a certain linguistic term can be understood when one understands the specific form of life in which it has been created although it should not be adapted to existing grammatical rules (in complete opposition to the scientific discourse). It seems to me that the tension between the two forms of reference to religious belief is actually the existing tension between Depth Grammar and Surface Grammar, the one that exists between an external observation of a language and a deep one that tries to comprehend what words are trying to say, what words 'mean'.

Wittgenstein described how frustrating can the grammatical investigation be when trying to distinguish between surface and depth since "the *deep* aspect of this matter readily eludes us" (Wittgenstein 2001, §387). Man is bothered by the difficulty to understand language's depth: "the problems arising though a misinterpretation of our forms of language have the character of *depth*. They are deep disquietudes; their roots are as deep in us as the forms of our language and their significance is as great as the importance of our language" (Wittgenstein 2001, §111). Wittgenstein compares the significant of the worries to the importance of language since the need to fully understand how a language functions is central and important as much as the need for the language's existence.

Wittgenstein points out a number of the grammatical study characteristics. First, it derives from the wish to understand the basis upon which language is founded; second, the study is carried out by examining analogies between words that sometimes results in exchanging one word for the other, a process that best clarifies the difficulty we are facing. The third point is that grammatical analysis entails simultaneously taking apart the grammatical unit and the anxiety it arises.

Wittgenstein refers directly to the 'depth grammar' only in two articles, yet they are invaluable: "'but the words, significantly utterd, have after all not only a surface, but also the dimension of depth!' After all, it just is the case that something different takes place when they are uttered significantly from when they are merely uttered. How do I express this is not the point. Whether I say that in the first case they have depth; or that something goes on in me, inside my mind, as I utter them; or that they have an atmosphere, it always come to the same thing. 'well, if we all agree about it, won't it be true?'" (Wittgenstein 2001, §594). "in the use of words one might distinguish 'surface grammar' from 'depth grammar'. What immediately impresses itself upon us about the use of a word is the way it is used in the construction of the sentence, the part

[1] See for example Wittgenstein 2001, & 91, &109, & 299, &436, &296.

of its use… that can be taken in by the ear. And now compare the depth grammar, say of the word 'to mean', with what its surface grammar lead us to suspect. No wonder we find it difficult to know our way about" (Wittgenstein 2001, §664).

The distinction between depth Grammar and Surface Grammar is not necessarily one perceived by the eye or by one's ear. Gordon P. Baker referred in the most comprehensive article regarding Depth Grammar claims that we are actually investigating the language game in which someone uses a certain word but in fact refers to a wider definition of language game. Following Wittgenstein 2001, §7 Baker emphasizes that we should clarify the circumstances in which a certain sentence is created rather than the grammatical principles upon which it is structured (Baker 2001). It is the investigator's task to examine whether the word has a meaning that plays a role in human activity and in light of the results examine the various ways the given word integrates in such an activity. Such an investigation can be carried out by studying the created picture or the picture that accompanies a certain word and the depth grammar can then be used to emphasize the word's use in its various shapes. The goal is not to offer a certain interpretation to a given sentence the way 'depth grammar' does since according to Wittgenstein one cannot even define what a sentence is (Wittgenstein 2001, §135). This is why such an investigation is open to discussion and to different readings that are dependent upon the interpreter's life experience and form of life.[2] Although what Baker suggests can be referred to as the main road of the Wittgenstein's investigation it does not contribute enough to understanding the distinction between the two grammars since he ignores the reason of use (the meaning) and focuses on result (the variety of use). Wittgenstein does not exemplify the meaning of depth Grammar by using the verb 'mean' accidentally: according to him the context each speaker pours into the 'meaning' of his expression actually is depth Grammar. Thus, I would like to follow a number of descriptions in the *Investigations* that are significant to the clarification of the term 'meaning'. Later, I would like to exemplify how Wittgenstein uses this term when talking about religious belief. As has already been mentioned, Wittgenstein tried to investigate the term 'meaning' from different directions by examining the similarities and detecting family resemblance between 'meaning' and similar concepts: "meaning something is like going up to someone" (Wittgenstein 2001, §457); or "'I am not merely saying this, I mean something by it' when we consider what is going on in us when we *mean* (and don't merely say) words, it seems to us as if there were something coupled to these words, which otherwise would run idle. As if they, so to speak, connected with something in us" (Wittgenstein 2001, §507). Depth Grammar expresses all that accompanies words when a certain person 'approaches' them and uses them. The subjective-human aspect of the speaker is embodied in 'meaning' and the identification of meaning enables us to point out the 'deep meaning' of whatever has been said. Meaning is not the fruit of an unconscious instinct of using grammatical rules but rather expresses the ties that exist between a person's soul, personality and his action: "why do you want to tell him about an intention too, as well as telling him what I did? Not because the intention was also something which was going on at that time. But because I want to tell him something about *myself,* which goes beyond what happened at that time" (Wittgenstein 2001, §659). Deep meaning is understood based upon a whole set of activities into which language is woven and receives its unique design from the speaker's intention: "what is happening now has significance in these surroundings. The surroundings give it its importance… (A smiling mouth *smiles* only in a human face)" (Wittgenstein 2001, §583). 'Surrounding' and 'face' are not created at random but actually are the 'form of life' from which language use and understanding derive: "By Surface Grammar we actually refer to all the formal grammatical rules while by Depth Grammar we refer to the circumstances and relationships that dictate language use" (Kripke 1982, p. 96). This definition stresses the fact that there are early assumptions and applications of use that need to be taken into account when analyzing use (Ibid, p. 120)

Surface Grammar and Depth Grammar of Religious Belief

Thus, religious belief should be examined in context of the form of life in which it is expressed. To that analysis one must add religion's subjective design that is embedded in 'meaning' and that can be defined as 'the deference that dictates use'. Such deference creates the Depth Grammar that can be analyzed only when compared to the Surface Grammar.

In *Lectures on Esthetics, Psychology and Religious belief*, Wittgenstein compares the use of the word 'God' to other expressions of religious belief. He claims that: "the word 'God' is amongst the earliest learnt… the word is used like a word representing a person. God sees, rewards, etc. being shown all these things, did you understand what this word meant? I'd say: yes and no" (Wittgenstein 1966, p. 59). According to Wittgenstein, that one can understand what the word does not stand for and what the different ways to use it are. But understanding how to use the word cannot answer questions regarding religious foundation: Thus, one cannot examine a person's belief in God or invent devices that could assist in such an examination. Even people who claim that their religious belief is based on proof will not be able to see the committing connection between proof and their religious belief. The only common characteristic among all religious beliefs is that they direct and design the believer's way of life, In other words, the use and application of religious belief in one's 'form of life'. However, what does a certain religious unique compared to another? This is where I would like to integrate the term Depth Grammar. In *Culture and Value* there are many of Wittgenstein's statements regarding religious belief according to which it is possible to characterize religious belief's Depth Grammar as he sees it (Wittgenstein 1998). According to Wittgenstein, religious belief includes security (Ibid. p.82), love (Ibid. p. 39), passion (Ibid. p. 61) and goodness (Ibid. p.5). Wittgenstein points out the difference between science and religious belief and stresses the fact that rational doctrines lack the kind of influential power that is capable of designing human's life since they work only on the human-rational domain; they do not have any power on the emotional or the supernatural domains (Ibid. p. 5). Nevertheless, although it seems from what has been

[2]This is the direction that is preferred by Hacker as well. According to Hacker, the clarification of Depth Grammar done by describing the overall use of a relevant expression is done after examining all the possible variations the relevant expression can have, the circumstances in which it is used, and the results of such use. It is important to note that Hacker criticizes the depth metaphor and claims that it suits a Tractatus (in which there is seemingly a distinction between what can be seen externally – suiting the depth grammar definition – and what comes out in the investigation, However, in philosophical investigations, Wittgenstein emphasizes time and again that we can see everything and that nothing has a 'concealed essence' that needs to be uncovered. Thus, the contrast is not between 'surface' and 'geology' but rather between 'local space' and 'topographic space'.

written above that Wittgenstein defines religious belief's characteristics that can apply to any human being, it is necessary to point out that his personal attitude towards religious belief that sharpens the definition of Depth Grammar of religious belief cannot be defined only by the characteristics above mentioned. According to Wittgenstein Depth Grammar of religious belief is each individual's personal mission and has no connection whatsoever that relates to one's collective religious life. Wittgenstein is walking here the same path taken by two famous theologians whom he admired the most: Augustine and Kierkegaard. Wittgenstein claims that *Confessions* is the most serious book ever written and that Kierkegaard was the profound philosopher of the 19th century. Each of these theologians described in his writings the personal process he underwent on the journey to discovering his unique personal religious belief. Despite the fact that Augustine eventually became a monk and Kierkegaard a Protestant believer, they both emphasized the centrality of their personal identification with the religious way of life and their personal position against God and His Will. Augustine is far from trying to convince others or from trying to impart others with his belief. Nevertheless, he distinguishes between one who is reacting to Creation in a religious way to someone who is completely indifferent to it. Such a distinction resembles Wittgenstein's words concerning what he calls 'aspect blindness' (Wittgenstein 2001, p. 182). This concept can be applied to when reading what Augustine wrote: "surely this beauty should be self-evident to all who are of sound mind. Then why does it not speak to everyone in the same way?… if one person sees while another sees and questions, it is not that they appear one way to the first and another way to the second. It is rather that the created order speaks to all, but it understood by those who hear its outward voice and compare it with the truth within themselves" (Augustine 1991, 10, §10). While observing reality, there are people who confront their inner self with the impressions of the world. Such people, claims Augustine, will follow the path of religious belief. On the other hand, those people for reality means nothing or for those who do not compare it to their soul can be defined as 'aspect blind'.[3]

Wittgenstein too, as well as Augustine and Kierkegaard, demonstrates a process of observing the world that brings about a recognition of God and religious belief. Such examples can be found in the *Notebooks 1914-1916* and can be recognized in the *Tractatus* as well.

In conclusion, an understanding and analysis of Depth Grammar of religious belief depend upon our acquaintance with the style of life that gave birth to a certain expression and upon the ability to see the aspect that is brought out in one's personal design of religious belief. Thus, general criteria and personal criteria are tied together when trying to define the term Depth Grammar.

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[3] Kierkegaard made a similar comparison in his book *Two Ages* that describes the period of time he
was living in as passionless and in which people lacked the ability to look into their souls.

Self-Knowledge, Theoretical Knowledge and Science

Yakir Levin, Beer-Sheva

1. As part of his celebrated attack on the "Myth of the Given" Wilfrid Sellars argues for a radical alternative to the orthodox, neo-Cartesian conception of our knowledge of our own minds – *self-knowledge*, for short (Sellars 1997; unless otherwise indicated all references are to this work). The orthodox conception finds a particularly elaborate expression in traditional empiricism. On this conception, it is with our own mental states that we hold the most intimate and direct epistemic relation. Therefore, self-knowledge is a paradigm, indeed *the* paradigm, of non-inferential and non-theoretical knowledge. In contrast, Sellars claims that self-knowledge is akin to theoretical knowledge in science. Indeed, in his view self-knowledge illustrates the continuity of science with ordinary thinking (97). At the same time he takes self-knowledge to illustrate the fact that the distinction between the theoretical and the non-theoretical is merely methodological (84). These general points are made fairly clearly by Sellars. However, the argument that he offers on their behalf is rather obscure. The main purpose of this paper is to provide a clear reconstruction of Sellars' argument. But I shall also provide a brief diagnosis of a crucial weakness in the argument due to which it is, ultimately, unsuccessful.

2. Descartes, famously, considers awareness to be of necessity *discursive* i.e., concept involving: an awareness of something as something. In his view non-discursive beings that lack conceptual capacities must be mere automatons devoid of mental states (Kenny 1981, 243-5). In contrast, although their conception of the mind is in crucial respects Cartesian, traditional empiricists are committed to the possibility of a *non-discursive awareness*, i.e. one that does not involve concepts. Indeed, according to traditional empiricism discursive awareness rests on non-discursive awareness in two respects. First, episodes of non-discursive awareness are our basic means for forming and grasping concepts. Second, episodes of non-discursive awareness by which we acquire concepts warrant the application of these concepts in episodes of discursive awareness - viz. basic, non-inferential empirical beliefs - on which all other empirical justifications rest. I shall call the first thesis *non-discursive formationism,* and the second thesis *non-discursive foundationalism*.

A line of thought that has been taken to support non-discursive foundationalism is the following. If beliefs could be justified only by beliefs then either justification would be viciously circular or it would involve infinite regress. But the only episodes of discursive awareness that may justify beliefs are beliefs. Thus, for justification to be free of either vicious circularity or infinite regress it must rest in the last analysis on episodes of non-discursive awareness. This is particularly true of empirical justification in which case the most natural candidates for such justificatory episodes are non-discursive bits of experience. (Cf., Bonjour 1985, chap. 2 for much further elaboration of these considerations.)

Another line of thought that has been taken to support non-discursive foundationalism is the following (McDowell 1996, 3-7). Unless exercises of empirical concepts are rationally constrained from outside the conceptual sphere they cannot be considered as reaching beyond this sphere. They must be considered as "moves in a self contained game", a mere "play of empty forms", "a frictionless spinning in a void". The conceptual sphere may be thus constrained, it appears, only if non-discursive bits of experience constitute the ground level of empirical justification. But if so, non-discursive foundationalism is entailed by the very possibility of intentionality.

At this point the question arises of how episodes of non-discursive awareness can fulfill the role of "the tortoise on which stands the elephant on which rests the edifice of empirical [justification and] knowledge" (73). The answer suggested by traditional empiricism is based on non-discursive formationism. On this thesis, to be a bit more specific than above, classifications by way of non-discursive awareness of similarities and dissimilarities provide the basis for ostensive definitions that set up rules for the use of the terms applied in our empirical statements. According to traditional empiricism the basic beliefs on which all our other empirical beliefs supposedly rest are true "as a matter of …following [these] rules for … use" (72, 77). As such these beliefs resemble analytic statements, though the latter are true as a matter of following rules for use set up by linguistic definitions – i.e. definitions of linguistic expressions in terms of other linguistic expressions. So "in spite of the … differences between [basic beliefs] and "analytic statements", there is an essential similarity, [according to traditional empiricism,] between the ways in which they come by their authority" (71-2).

The considerations underlying non-discursive foundationalism explain in part the fundamental empiricist thesis that empirical justification and knowledge originate in experience. The account of the epistemic authority of experience in terms of non-discursive formationism explains in part another fundamental empiricist thesis – viz. that our concepts originate in experience. So the foregoing exposition has also unveiled a deep connection between these two fundamental theses.

Non-discursive formationism and non-discursive foundationalism are most familiar with respect to beliefs about the world around us. But they are also supposed to apply to beliefs about our own mental states. According to traditional empiricism these beliefs are basic beliefs grounded in episodes of non-discursive awareness. Moreover, traditional empiricism takes it that some beliefs about our own mental states – viz. beliefs about how things look or appear – are epistemically prior to beliefs about how things are in the world (32-46 passim). So the view that our access to our own mental states is the most immediate is part and parcel of traditional empiricism.

Non-discursive formationism and non-discursive foundationalism constitute the crux of what Sellars calls "The Myth of the Given". His radical alternative to the orthodox conception of self-knowledge stems from his subtle and rich attack on these theses and their implications. It is to relevant aspects of this attack that I shall now turn.

3. Anything with stable dispositions to respond differentially to stimuli can be thought of as classifying the stimuli according to the repeatable responses those stimuli elicit. This is true of a thermostat that responds differentially to the temperature in its vicinity. And it is also true of the honeybee that responds differentially to the location and quality of the food it encounters on a foraging trip.

However, a classification by differential response is not yet a discursive classification by way of concepts. In order to count as discursive a classification must have three closely related features that take it far beyond a mere differential response. First, the classification must enjoy an appropriate distance, to use McDowell's term, from the direct causal influence of the items classified (McDowell 1996, 57). It must not be a mere stimulus-response process. To achieve such a distance the classification must, secondly, take up a position in "the logical space of reasons, of justifying and being able to justify" (40-1, 73-77). By being sensitive to the reasons relevant to a given classification the classifier may classify an item differently from how the direct causal influence of the item disposes her. Finally, the classification must involve language, indeed be a "linguistic affair" (62-64). For the inferential relations that characterize the logical space of reasons may obtain only between linguistic entities.

Classifications by mere differential response belong to the *non-normative* logical space of (causal) law. As such they cannot yield classifications that belong to the *normative* logical space of reasons. This means that for the classificatory processes assumed by the thesis of non-discursive formationism to yield concepts and language, these processes must involve concepts and therefore language. As Sellars puts it, "*all* awareness of *sorts*, *resemblances*, *facts* etc., in short, all awareness of abstract entities – indeed, all awareness even of particulars – is a linguistic affair" (63). But then the thesis of non-discursive formationism is incoherent. For its gist is that the concepts yielding processes it assumes are wholly pre-conceptual and pre-linguistic. Due to the close ties between non-discursive formationism and non-discursive foundationalism, the incoherence of the former thesis also reflects on the latter thesis. But I cannot go into this important point here.

4. The acquisition of concepts requires, then, a prior possession of concepts and language. This raises the question of how concepts can be acquired at all. Aware in part of this problem, traditional rationalists took it that at least some of our concepts, the most basic and general ones, are not acquired but innate. In the innateness debate, however, Sellars sides with the empiricists and assumes that *all* concepts are acquired (20-21). Given this assumption the processes by which we acquire concepts cannot involve concepts that we already own. These processes must therefore involve concepts that others own. They must consist of a training through "publicly reinforced responses to public [things] … in public situations" by others who already possess concepts (86-7).

Obviously, mental concepts that are acquired by such a training must be "introduced in terms of a basic vocabulary pertaining to overt behavior" (100). This behaviorist conclusion – *methodological behaviorism*, as Sellars calls it (98) – may appear to involve a commitment to *analytical* or *philosophical behaviorism* – namely, the view that all proper mental concepts should be definable in terms of overt behavior. If this is indeed the case we would lose our grip on the idea of mental states as *inner episodes* – i.e. episodes that do not consist of overt behavior, and that are private in that each of us has a privileged access to her own. However, methodological behaviorism does not entail analytical behaviorism. This is so since "the behavioristic requirement that all concepts should be *introduced* in terms of a basic vocabulary pertaining to overt behavior is compatible with the idea that some behavioristic concepts are to be introduced as *theoretical* concepts" (100). In other words, even if all mental concepts should be introduced by reference to overt behavior, they need not all refer directly to overt behavior. Some may thus refer only indirectly by referring directly to non-behavioral features that must be inferred in order to explain overt behavior.

It follows that the only way to retain the idea of mental states as inner, non-behavioral episodes is to consider these states as theoretical entities. Contra the positivistic conception of science, this does not mean that mental states qua inner episodes should be considered as of less authenticity than directly observable items, as useful fictions or as mere heuristic devices (83-4). But it implies a radical reorientation of the orthodox conception of self-knowledge, a reorientation that renders this type of knowledge akin to scientific knowledge. As such this reorientation illustrates the continuity of scientific and pre-scientific thinking. It illustrates, in other words, the fact that "the process of devising "theoretical" explanations of observable phenomena did not spring full-blown from the head of modern science" (96), but is "the flowering of a dimension of discourse which already exists in what historians call the 'prescientific stage' " (81).

5. If mental states are theoretical entities they must be intersubjective in that there is no difference between third and first person access to them. But doesn't this mean that if mental states are theoretical entities we lose our grip on the idea that they are private in that each of us has a privileged access to her own? If "privacy" here means "absolute privacy" – i.e. a privileged access that is independent of context – then the intersubjectivity of our mental states does indeed entail that they are not private (107). However, there is a weaker sense of privacy, which is compatible with intersubjectivity; indeed, privacy in this sense presupposes intersubjectivity. Thus, people who have been taught a theory that applies to their behavior "can be trained to give reasonably reliable self-descriptions, using the language of the theory, without having to observe [their own] overt behavior. [This may be brought] about, roughly, by applauding utterances by [the trainee] of [e.g.] 'I am thinking that p' when the behavioral evidence strongly supports the theoretical statement '[The trainee] is thinking that p'; and by frowning on utterances of [e.g.] 'I am thinking that p' when the evidence does not support this theoretical statement" (106-7). But once one has been trained in this way one has gained a sort of privileged access to one's mental states. One may then reliably report on one's mental states without relying on any behavioral evidence, while others cannot do this. "What began as a language with a purely theoretical use has gained a reporting role" (107).

This illustrates a general point about theoretical concepts (79-85; Brandom 1997, 162-166). According to Sellars purely theoretical concepts are ones we can be entitled to apply only as the conclusions of inferences, whereas concepts of observables also have non-inferential, reporting uses. Given these definitions, the line between the theoretical and the observable may shift with time or with the right training. Thus, Pluto was introduced as a purely theoretical object. But the development of more powerful telescopes eventually made it a subject of non-inferential reports. Similarly, physicists with the right training can non-inferentially report the presence of mu mesons in bubble chambers. So "the distinction between theoretical and non-theoretical discourse [is methodological rather than] substantive" (84) .

The notion of observation underlying the orthodox account of self-knowledge is that of direct perceptual or introspective acquaintance. Obviously, this notion is very different from the notion of observation underlying Sellars'

conception of self-knowledge – viz. non-inferential reporting, which is made possible by a training akin to conditioning. In particular, unlike observational concepts in the former, orthodox sense, those in the latter, Sellarsian sense "are primarily and essentially *intersubjective*, … and [their] reporting role … constitutes a dimension of [their] use which is *built on* and *presupposes* this intersubjective status" (107). So although Sellars takes mental concepts to shift status from the theoretical to the observational, this does not narrow the wide gulf between his account of self-knowledge and the orthodox account.

6. Sellars' conception of self-knowledge is principally based, then, on a rejection of a fundamental assumption of the empiricist conception – namely, that concept acquisition is based on non-discursive and non-linguistic processes. As against this assumption Sellars argues that the acquisition of concepts must be a discursive-cum-linguistic affair. From this he draws the conclusion that concept acquisition must be a communal affair – i.e. that we can only acquire concepts by way of training by other subjects of awareness who already possess concepts. Mental concepts acquired in this way must refer first and foremost to overt behavior. So to avoid philosophical behaviorism Sellars concludes that our concepts of mental states qua inner episodes distinct from overt behavior must be theoretical concepts that refer to overt behavior indirectly.

Sellars' crucial step in this ingenious argument - his claim that concept acquisition must be a discursive-cum-linguistic affair - seems correct, or at least I shall grant him this claim. All this claim entails, however, is that the acquisition of concepts must involve the prior possession of *some* concepts, perhaps the most basic and most general ones. On this basis Sellars may conclude *at most* that the acquisition of the latter concepts must be a communal affair. But this conclusion is compatible with the possibility that the acquisition of all other concepts is *not* a communal affair. In particular, insofar as Sellars' argument is concerned the acquisition of basic concepts such as that of property, identity, similarity etc. by way of communal training may enable one to construct mental concepts in a non-communal manner – e.g. by way of introspecting similarities between one's inner episodes in a *discursive* manner that involves the basic concepts. This very brief diagnosis of a crucial weakness in Sellars' argument requires further elaboration. But it suffices to show, I believe, that this argument is, ultimately, unsuccessful. The demise of the Myth of the Given does not entail that self-knowledge is akin to scientific knowledge.

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Wittgenstein und der Quellcode der medialen Moderne

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1. Zwischen Turing-Galaxis und Cyberspace

Wie jede Google-Suche eindrucksvoll zeigt, ist auch und gerade in der Epoche der Neuen Medien „Wittgenstein" mehr denn je eine zentrale Ikone des Modernismus und ein Katalysator für alle Arten modernistische Selbstreflexion.

Das gilt nicht nur für die *Humanities*. In der Cyberculture sind wittgensteinische Schlüsselbegriffe Public Domain geworden: allgemein bekannte Metaphern wie das *Sprachspiel* (via Lyotard), das *Paradigma* (via Kuhn) und das *Netz* der *Familienähnlichkeiten*, aber auch neu entdeckte Metaphern wie die *knowledge landscape* die von konstruktivistischen eLearning-Theoretikern eingeführt wurde (Spiro und Jacobson), bis zur Sprache-ist-eine-Stadt-Metapher, auf die in fortgeschrittenen Konzepten räumlicher Visualisierung von Information und Human-Computer-Interfaces neuerdings zurückgegriffen wird.

Alle diese Metaphern haben eines gemeinsam: Sie erzeugen einen merkwürdigen Wissensraum, der die logozentrische Gutenberg-Galaxis ebenso überschreitet wie die logarithmische Turing-Galaxis – und nicht zuletzt auch den sinnlichen Narzissmus der Cyberspace-Visionäre der 1990er Jahre.

2. Zwischen Wissenschaft und Literatur

Die Faszination und die Kraft der wittgensteinischen Denkmuster scheint, von den Metaphern abgesehen, in einem dreifachen Angriff auf die Selbstsicherheit des Mainstream-Modernismus des 20. Jahrhunderts zu liegen – ein Angriff, der in der Ära der Neuen Medien-Kulturrevolution offensichtlich immer noch wirksam ist:

(1) die Provokation durch das Konzept der *kristallklaren Genauigkeit*, das sich gegen den allzu gesunden Menschenverstand des modernen Bürgers richtet und zugleich die geläufige Vorstellung von „wissenschaftlicher Exaktheit" noch weit überbietet;

(2) die Provokation, durch eben diese Genauigkeit eben da *Unschärfe und Bodenlosigkeit* zu zeigen, wo unsere Zivilisation glaubt, ihre verlässlichsten und belastbarsten Fundamente zu haben;

(3) die Provokation einer Meta-Sprache, die *zugleich* metaphorisch und elliptisch, kühl und abstrakt ist und damit selbst ständig die Regeln der eingeführten Sprachspiele unterläuft.

Diese dreifache Provokation ist etwas, das die Texte Wittgensteins mit bestimmten Tendenzen der modernistischen Literatur gemeinsam haben: mit ‚klassisch-modernen' Autoren seiner eigenen Generation (wie etwa Musil, Kafka und Jünger), aber auch mit neomodernistischen Autoren, deren *linguistic turn* direkt von seiner Sprachspiel-Technik und nicht zuletzt durch seinen besonderen Sound beeinflusst war (etwa Heissenbüttel, Handke, Bichsel, Rosei, Bernhard, Eisendle ...).

3. Jenseits von Medium und Message

Literatur ist ein spezielles Laboratorium, in dem ein soziokulturelles System die möglichen Arten reflektiert, wie ‚Welt' und ‚Subjektivität' aus sprachlichen Zeichen rekonstruiert werden können. In diesem Sinn sind Wittgensteins Schriften sicherlich Literatur: sowohl im narrativen Sinn (insofern hier untersucht wird, wie Welten aus Worten entstehen können) als auch im poetischen Sinn (insofern reiche Unter- und Obertöne zwischen den Zeilen erzeugt werden, die mit der „eigentlichen Botschaft" des Textes Interferenzen erzeugen).

The medium is the message: Als die neue kulturelle Dimension, die man „die Medien" nennt, sich in den letzten 40 Jahren zwischen Wissenschaft und Literatur entfaltete, bedeutete das, so glaubte man, auch eine scharfe Abkehr von einer Kultur, die auf Schriftsprache beruht. Das hat sich dramatisch geändert, seit die Turing-Maschine eine Multimedia-Maschine geworden, die „Programmiersprache" sich ausdifferenziert nach und nach metaphorische Elemente aufnimmt. Aus dieser Perspektive werden nun erst die in und hinter den „Medien" versteckten Texte sichtbar: die komplexen semantischen Strukturen, in die die verschiedenen „Medienobjekte" immer schon eingebunden sind und aus denen heraus sich die metaphorische Zeichensprache des Interface entwickelt.

Darin besteht eine weitere Relevanz der Texte Wittgensteins im 21. Jahrhundert: Sie entdeckten und beschworen eine neue Dimension der Welt, in der wir leben, die technisch und kulturell noch gar nicht realisiert war. Seit das WWW (als *Netz* und als *Landschaft*) die Metapher schlechthin für das menschliche Wissen geworden ist, kann der neue Cyberspace, der zugleich ein *Docuverse* ist (Ted Nelson), unmittelbar als greifbare Wirklichkeit erlebt werden – jenseits der Eindimensionalität der Künstlichen Intelligenz, aber auch jenseits der ebenso überholten pathetischen Verweigerung, die nach 1940/1950 das Verhältnis der neomodernistischen Schriftkultur-Avantgarde zur technischen Zivilisation prägte.

Eternal Truth by Convention

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Within the epistemology of the sciences, conventionalism has been the subject of regular criticism for over six decades. Critics such as W. V. Quine and Morton White, and more recently Nathan Salmon (1992), and Paul Boghossian (1996), have attacked even the most basic tenet of conventionalism, namely its claim that the truth of certain statements is fixed not by stipulation-independent facts, but by the conventions governing the meaning of those statements and their constituents.

One such criticism has been recently leveled by Boghossian, who argues that the conventionalist is in trouble when confronted with the truism that, "for any statement *S*, *S* is true iff for some *p*, *S* means that *p* and *p*." After all, Boghossian argues, "How could the *mere* fact that *S* means that *p* make it the case that *S* is true? Doesn't it also have to be the case that *p*?" (Boghossian 196, 365). The conventionalist will presumably answer by saying that *p* is the case in virtue of our meaning *p* by *S*. But then, Boghossian says, conventionalism looks seriously implausible, for it now seems that

> the *truth of what the sentence expresses* depends on the fact that it is expressed by that sentence, so that we can say that what is expressed wouldn't have been true at all had it not been for the fact that it is expressed by that sentence. Are we really to suppose that, prior to our stipulating a meaning for the sentence
>
> Either snow is white or it isn't
>
> it wasn't the case that either snow was white or it wasn't? (Boghossian 1996, 365)

Boghossian's argument requires a bit of refinement. The conventionalist does not need to assert that *if* there had been no stipulations granting *S* a meaning, then not-*p*. Rather, she requires only a conditional of the form: *if* there had been no stipulations granting *S* a meaning, then *S* would be meaningless, and so would not mean that *p*. But even so, Boghossian is surely justified in pointing out that if a conventionalist thinks that geometrical axioms (see Poincaré 1952), spatial metrics (Schlick, 1985), or even physical laws (Carnap, 1937), are consequences of stipulations made at some particular time, then they ought to have some explanation of why those things appear to be true for all time.

I wish to argue that Boghossian's objection is answerable from within a broadly conventionalist framework. My case will rest in part on an argument suggested by Wittgenstein, and it is consistent with the broadly conventionalist epistemology of science that appears in Poincaré, Schlick, and Carnap. Such a conventionalist epistemology maintains that at least some statements of a scientific theory, such as geometrical, metrical, logical, or mathematical principles, and possibly also physical laws, are themselves either explicitly or implicitly the expressions of linguistic rules, or the consequences of the adoption of linguistic rules. As expressions of linguistic rules, the conventional elements of a theory are held to be partially or wholly constitutive of the meaning of some of the theoretical terms that appear in them, such as "straight line", "simultaneous", "logical consequence", or "iron" (see for instance Carnap 1937, 180 and *passim*).

Conventionalists differ about what types of statements are conventions, with some conventionalists, such as Poincaré, restricting conventions to the geometrical and metrical principles of a physical theory (see Poincaré, 1952), while others, like Carnap, count even logical and physical laws among the possible conventions of a scientific theory. Conventionalists like Carnap recognize important differences among the types and scope of conventions, as with Carnap's distinction between P-rules and L-rules (Carnap 1937, 184). For my purposes, however, these distinctions are not important. What is important is that at least some of the physical principles that are claimed to be conventional appear to be timelessly true, in the sense that we expect them to be true at every time in the past, present, and future. So my reference to "physical principles" in this context is intended to be very broad and to encompass those statements of a physical theory, including geometrical, mathematical, and logical statements, which appear to be timelessly true. The conventionalist epistemologies of science in Poincaré, early Schlick, and Carnap all include at least some such statements, whether from geometry (Poincaré 1952, 150f.), mathematics (Schlick, 1985, 31f.), or geometry, mathematics, logic, and physical science (*cf.* Carnap, 1937, 51 and *passim*). As such, Boghossian's objection that conventionalism wrongly implies that statements like "Either snow is white or it isn't" are not timelessly true applies in *some* form to all three philosophers, even if Boghossian's particular example (of a consequence of the law of the excluded middle) would not be relevant for a conventionalist like Poincaré.

The conventionalist response to Boghossian that I propose is motivated by looking at the role of temporal predicates and certain counterfactual expressions as they function in the context of remarks concerning statements of physical principles. In cases where *S* is an expression held to be timelessly true, statements having a form like:

> (a) Prior to a stipulation of the meaning for *S*, the fact *p* that *S* expresses was still a fact.

or,

> (b) Even if no one had ever stipulated a meaning for *S*, fact *p* that *S* expresses would still have obtained.

evoke our assent, while statements having a form like:

> (c) Fact *p* that is expressed by *S* came into existence at precisely the moment that the meaning of *S* was stipulated.

seem ridiculous. This reaction lends support to the idea that certain facts expressed by statements of physical principle are reports of eternal and convention independent facts, as Boghossian thinks.

However, I believe that our reaction to statements of these forms is instead an expression of the fact that temporal expressions have no conventionally defined function within the context of talk about statements of (at least some) physical principles. That is, I propose that temporal statements like "before," "after," "when," "ever," and "always" have no rule-defined application to expressions of some physical principles. Thus expressions of physical principles or their consequences such as: "Either

snow is white or it isn't," "The shortest distance between two points is an arc," or "The coefficient of thermic expansion for iron is 0.000012 (in the appropriate units)", are simply outside of the conceptual system of temporal expressions. As such, they do not describe any event, and so *a fortiori* they describe no event of infinite duration. Our rejection of the attribution of finite duration to the truth of certain physical principles is therefore more akin to our rejection of category mistakes, such as the ascription of color predicates to *abstracta* like thinking or freedom, than it is akin to our rejection of particular historical claims that we know to be false.

Thus, to say that the fact expressed by a statement like "Either snow is white or it isn't" is true *prior* to our stipulating a meaning for this statement is simply a slightly confusing way of saying that *no sense* has been defined for a statement like: "The statement 'Either snow is white or it isn't' became true at time *t*". Our recognition of the senselessness of such sentences is expressed by our assenting to statements with a form like (a) and (b) above. But we so assent not because we have identified some fact that is timelessly true, but rather because we implicitly realize that no rules have been laid down which license an application of expressions like "became true on... ", or "ceased to be true when ..." to certain statements of physical principles.

The sense in which physical principles may be timelessly true is thus a conceptual one, not a metaphysical one. This position is wholly consonant with that aspect of conventionalism which emphasizes that a part of what the stipulations of the conventions of a physical theory are doing is specifying a descriptive apparatus *in terms of which* descriptions of facts have a sense in the first place. Critics of conventionalism have tended to focus upon the arguments, prominent in Poincaré and Duhem, that conventionalism is required by the under-determination of physical or geometrical theories by empirical observation. But there is another, independent justification for conventionalism in the observation that that any description of the empirical world presupposes a suitable descriptive language, such as a geometry, a metric, or a mathematics, and that in many cases there is no issue of offering a justification for that descriptive language, for the simple reason that the descriptive language is a *precondition* of justification (see for instance Schlick 1985, 337f. I think this is also the upshot of Carnap's attempt to dismiss foundational questions in his 1937, 277ff). My claim that temporal predicates have not been defined over physical principles thus fits nicely with this aspect of conventionalism.

Yet this claim is likely to appear to some to be seriously *ad hoc* nonetheless. Why, after all, do we have the conventions governing temporal expressions that we do? It might well seem that we have the rules governing temporal expressions that we do *because* it is a fact that some physical principles answer to eternal, language-independent facts. If the timelessness of the truth of certain physical principles is *just* a matter of convention, why couldn't we simply change our conventions such that tomorrow it will be false that snow is white or it isn't? Boghossian raises a similar worry by asking: isn't it "the world" or "the facts" that generate the truth of any given class of statements? (1996, 365)

The basic objection here is that we have the conventional rules that we do *because* the world is a certain way. That is, matters of non-conventional fact determine the range of admissible conventions. If this weren't true, the objection continues, then since conventions are just stipulated, nothing prevents the stipulation of intuitively implausible alternatives. The end result appears to be relativism about even the most basic physical principles. However, I think that such relativism can be avoided, and that an under-appreciated argument of Wittgenstein's blocks this relativism objection rather nicely.

In the *Philosophical Remarks*, Wittgenstein wrote:

> If I could describe the point of grammatical conventions by saying they are made necessary by certain properties of the colors (say), then that would make the conventions superfluous, since in that case I would be able to say precisely that which the conventions exclude my saying. (Wittgenstein 1975, 53)

Someone who thinks that linguistic conventions have a justification in non-conventional matters of fact will suppose that a convention about colors is ultimately justified by the relevant facts. Here Wittgenstein is giving a counterargument to this supposition.

I take his argument to work as follows. Suppose one tries to say that *because* of the language independent fact that no two colors can be predicated of the same point in space at the same time (for example), our language, by means of conventions in the form of linguistic rules, stipulates that at a single a time a particular point can be called "red" only if it cannot also be called "green." One thus attempts to justify the rule by reference to a certain *description* of reality. But then the intelligibility of the description is presupposed by the rule-governed linguistic conventions which that description is supposed to be justifying. In other words, as Wittgenstein put it later,

> if something can be said in the justification and is permitted by its grammar -- why shouldn't it also be permitted by the grammar that I am trying to justify? Why shouldn't both forms of expression have the same freedom? And how could what the one says restrict what the other has to say? (Wittgenstein 1978, 186)

If the justification cited as the ground for the claim that the conventions follow from the facts is intelligible, then, *ex hypothesi,* the statement of the justification accords with such conventions. But then there must already be a descriptive language in terms of which we frame our justifications for the constitutive rules of descriptive language. In which case both the conventions *and* their justification are superfluous; if we can already say what we need to in order to justify the conventions, we don't need either the justification or the conventions.

Wittgenstein can thus be read here as challenging the coherence of the supposition that there could be a justification for the conventions constitutive of a system of physical theory that appealed to facts described by *using* the conventions of that theory. Rather, the conventions that stipulate the meanings of certain physical concepts should not be regarded as themselves answerable to reports of facts involving those concepts.

If this line of response to the relativism worry is accepted, then I submit that the attempt to defend the timeless truth of certain physical principles by an appeal to the allegedly convention-independent fact that what those principles state is eternally true falls victim to this same circular reasoning. It is only *given* the conventions governing "not" and "or" that the sentence "Snow is white or it isn't" is an "eternal truth". Adducing the fact that snow is white or it isn't as a *justification* for the meaning-constitutive conventions governing "not" and "or" illicitly uses a description of the allegedly justifying fact. The use is illicit since the required description is only intelligible in terms of the convention itself, and hence presupposes it. All of which exposes an incoherency in attempting to justify conventions in terms of facts in the way that the relativism objection assumes can be done. Conventionalism, I submit, has nothing to fear from the fact that certain truths are timeless, because this fact is itself a point about the use of language.

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Erinnerung – „*kein* Sehen in die Vergangenheit“? Wittgensteins Begriff historischer Ereignisse

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Im § 49 seiner „Philosophischen Bemerkungen“[1]erörtert Wittgenstein einen doppelten Begriff des Gedächtnisses – entsprechend dem doppelten Zeitbegriff der physikalischen Zeit und der Zeit als Form unserer Welt-Vorstellung, unserer Welterlebnisse und unseres Sprechens über die Welt.

Zum einen ist das Gedächtnis gleichsam die „Aufbewahrerin“ der vergangenen „physikalischen Ereignisse“, indem es deren „Bilder“ aufbewahrt. Dieses Gedächtnis schreiben wir Personen zu, es existiert wie diese selber in der Zeit, war also einmal nicht und wird auch einmal nicht mehr sein. Solche Gedächtnis-Bilder oder Gedächtnisspuren im Gehirn können mehr oder weniger deutlich sein, sie können verblassen, sie können falsch sein. Und was wichtig ist: Derartige Gedächtnis-Bilder sind von den Ereignissen der Welt real verschieden. Von solchen historischen Ereignissen gab es in der Vergangenheit auch andere „Kunde“ als in Form des Gedächtnisses und seiner Erinnerungen. Darüber hinaus ist die Rede von einem Gedächtnis-Bild „nur ein Gleichnis“. Und zwar deshalb, weil solche Gedächtnis-Bilder Vorstellungen der wirklichen Ereignisse sein müssen, die tatsächlich stattgefunden haben. Wenn man aber das Gedächtnis als „Aufbewahrerin“ von Bildern auffaßt und Vorstellungen im Sinne derartiger Bilder interpretiert, dann gibt es die wirkliche Welt und ihre Ereignisse einmal in den Bildern des Gedächtnisses und zum anderen unabhängig davon in der Realität.

Doch in unseren Vorstellungen der Welt, die zu „Bildern“ in unserem Gedächtnis herabsinken, erfassen wir diese Realität selber und nicht irgendeine bildliche Stellvertretung derselben in unserem Geiste oder in unserem Gehirn. Wenn aber in unserem Gedächtnis jene Vorstellungen, Wahrnehmungen, Anschauungen usw. gespeichert sind, in denen wir die wirklichen Ereignisse selber erfassen, dann können diese Vorstellungen nicht bloß Bilder dieser Ereignisse sein. Und dann sind es unsere Vorstellungen von den wirklichen Ereignissen selber, die in unserer Erinnerung des Gedächtnisses absinken - ein Gedächtnis, das lediglich von Bildern der wirklichen vergangenen Ereignisse bevölkert wäre und nicht diese selbst darin aufbewahrte, wäre ein merkwürdiges Gedächtnis.

Dies hat aber eine wichtige Konsequenz: Wenn Vorstellungen die gegenwärtige Wirklichkeit selber erfassen, und wenn genau diese Vorstellungen im Gedächtnis gespeichert werden, wenn deshalb das Gedächtnis die historische Wirklichkeit selber enthält, und zwar in seinen Vorstellungen, so daß es die Ereignisse der Vergangenheit nur im Gedächtnis, also nicht auch unabhängig von Gedächtnis-“Bildern“ gibt, dann enthält das Gedächtnis selber den Zeitraum der Vergangenheit, in dem die vergangenen Ereignisse existierten - es wird damit zur „Quelle der Zeit“ (so Wittgenstein), genauerhin der vergangenen Zeit. In diesem Gedächtnis sind deshalb keineswegs bloß die Bilder der vergangenen Ereignisse gespeichert, die unter Umständen verblassen können oder gar falsch. Vielmehr sind die vergangenen Ereignisse darin selber gespeichert. Dann muß das Gedächtnis selber aber Ursprung der vergangenen Zeit sein.

Beide Begriffe des Gedächtnisses sind auseinander zu halten - der psychologische Begriff des Gedächtnisses als Erinnerungsvermögen einer bestimmten innerzeitlichen Person, in der eine Fülle von Bildern der vergangenen Ereignisse gespeichert sind, wobei diese historischen Ereignisse jedoch unabhängig von dieser Speicherung existierten und es auch möglich ist, unabhängig vom Gedächtnis von ihnen Kenntnis zu nehmen, etwa mit Hilfe historischer Zeugnisse. Und zum anderen jener Begriff des Gedächtnisses, das nicht bloß Bilder von vergangenen Ereignissen aufbewahrt, sondern die Ereignisse selber in seinen Vorstellungen. Dieses Gedächtnis kann kein psychologischer Begriff sein. Andernfalls wären nicht in ihm die historischen Ereignisse der Vergangenheit selber aufbewahrt.

Wenn man beide Begriffe miteinander vermischt, dann kommt in der Tat „Unsinn“ raus. Und dieser „Unsinn“ (ebd.) ist darin begründet, daß man für den psychologischen Begriff des Gedächtnisses einer Person, die selber in einer bestimmten Zeit existiert, und zwar real unterschieden von der Welt, geltend macht, daß dieses ihr Gedächtnis die „Quelle der Zeit“ sei. „Unsinnig“ ist dies deshalb, weil ein solches psychologisches, personales Gedächtnis ja selber innerzeitlich existiert.

Darüber hinaus stellt Wittgenstein fest: „Beide Ausdrucksweisen sind in Ordnung und gleichberechtigt“ (ebd.). Zwar ist das Reden vom „Gedächtnis als ein Bild“ ein „Gleichnis“, das leicht in die Irre führt. Und zwar insofern, als es unterstellt, daß wir noch einen anderen Zugang zu historischen Tatsachen und Ereignissen hätten, als über die gedächtnisimmanenten Bilder im Geiste einer Person. Ein solcher Gedächtnisbegriff ist natürlich auch berechtigt, ja gleichwertig mit dem andern. Denn „Gedächtnis“ ist auch ein psychologischer Begriff, den wir zu Recht Personen zuschreiben. Entsprechend können wir zu Recht davon sprechen, daß das Gedächtnis von Personen sich täuschen kann, daß es irren kann, daß es verblaßt, daß es nur eine gewisse Zeitspanne zurückreicht, daß es korrigierbar ist usw. Doch eines dürfen dabei nicht übersehen: Alle Korrekturen, alle Kritik, alle Ergänzungen usw. eines Gedächtnisses einer Person sind nur derart möglich, daß diese Korrektur, Kritik, Ergänzung, aber etwa auch entsprechende Überlegungen usw. nur mit Hilfe des Gedächtnisses von Personen möglich sind. Und in diesem korrigierenden Gedächtnis der Personen ist es dann nicht mehr so, daß auch diese nur über Bilder vergangener Ereignisse verfügten. Andernfalls wäre ihre Überprüfungsfunktion vollkommen sinnlos. Denn auch deren Gedächtnis wäre ja etwas, was erst zu überprüfen wäre – aber auf Grund welcher Überprüfungs-Basis? Wir hätten dann schlicht und einfach überhaupt keinen Zugang zur Vergangenheit mehr!

Es ist dieser Sachverhalt, der dazu nötigt, daß wir einen nichtpsychologischen Begriff des Gedächtnisses, einen transzendentalen Begriff desselben einführen müssen, worin das Gedächtnis als die „Quelle der Zeit“ gilt - eine Modifikation von Kants These der Zeit als „subjektiver Form unserer Anschauung“.

Nur für dieses transzendentale Gedächtnis gilt, daß es „Quelle unserer Erkenntnis“ ist und eine „Verifikation

[1] L. Wittgenstein, Philosophische Bemerkungen, in: Schriften 2, Frankfurt/Main 1964

unserer Sätze“ leistet (ebd.). Denn nur es enthält jene „Vorstellungen“, die nicht bloß Bilder von vergangenen historischen Ereignissen sind, sondern die diese Ereignisse selber enthalten. Dann ist in der Tat ein solches Gedächtnis die verifizierende „Quelle der Erkenntnis“ dieser historischen Ereignisse selber. Und wenn wir einen Satz äußern, wie etwa: „Heute ist Freitag, der 3.12.03, 16:30 Uhr, und wir sitzen hier im Seminarraum und draußen scheint die Sonne“, und wenn wir uns nachher daran erinnern, dann verifizieren wir eine solche Erinnerung in Zukunft mit Hilfe eines Gedächtnisses, welches nicht nur die Bilder der in dem Satz damals beschriebenen Tatsachen aufbewahrt, sondern diese historischen Tatsachen selber. Andernfalls würde ein derartiger Satz kurioser Weise in Zukunft von Erinnerungs-Tatsachen verifiziert, die darin zu bloßen psychologischen Gedächtnisbildern herabgesunken sind und die selber zu verifizieren wären – aber wodurch?

Wenn aber das Gedächtnis „die Quelle der Zeit“ ist, dann kann dieses Gedächtnis selber nicht in der Zeit sein, so daß es etwa in einer Gegenwart existierte, die man von einer vergangenen oder zukünftigen Zeit unterscheidet, worin das Gedächtnis noch nicht existiert hat oder einmal nicht mehr existieren wird. Das Gedächtnis existiert insofern in einer Art alternativloser Gegenwart. So kann man auch das psychologische Gedächtnis einer Person nur so in der Zeit selber lokalisieren, daß man etwa den Zeitraum angibt, in der die Person über ein solches Gedächtnis verfügt – aber man tut dies selber in der Zeit. Und diese Zeit ist die Form unserer innerzeitlichen Lokalisierung, die Art und Weise, wie man die zeitliche Identifikation eines psychologischen Gedächtnisses einer Person vornimmt. Diese zeitliche Form ist selber nicht innerzeitlich, sondern immer, eine alternativlose Gegenwart – aus dieser Gegenwart tritt man nie heraus, und sie sinkt nie in die Vergangenheit ab.

Dieser doppelte Begriff der Zeit, der psychologische und der transzendentale samt dem doppelten Begriff des Gedächtnisses, hat Konsequenzen für unser Verständnis von historischer Vergangenheit, von historischen Fakten und Ereignissen, sowie auch für das, was „Geschichtsschreibung“ besagt. Geht man vom psychologischen Begriff des Gedächtnisses aus, so schreibt man dieses Gedächtnis bestimmten Personen in der Zeit selber zu. Man unterscheidet dann selbstverständlich dieses psychologische Gedächtnis von Personen von dem gesamten Feld der historischen Tatsachen und Ereignisse wie auch der gegenwärtigen Tatsachen und Ereignisse. Und die historischen Fakten sind uns dann auch unabhängig von dem psychologischen Gedächtnis der einzelnen Personen gegeben, etwa in historischen Zeugnissen, Quellen, Berichten, Denkmälern usw. Diese historisch unabhängige Existenz betrifft natürlich auch das Gebiet all jener Tatsachen und Ereignisse, von denen es keine historischen Zeugnisse mehr gibt. Daß all dies existiert hat, steht selbstverständlich völlig außer Frage. Und es gibt eine gute und schlechte Erinnerung an derartige historische Fakten, sowie es dann auch eine gute und schlechte Geschichtsschreibung von derartigen historischen Fakten und Ereignissen gibt. Das Kriterium dafür, ob eine derartige Erinnerung gut oder schlecht ist bzw. eine Geschichtsschreibung richtig oder falsch -, das Kriterium dafür sind die historischen Quellen. Und selbst wenn es keine Personen samt ihren Erinnerungen gäbe, in denen historische Fakten präsent wären, würde dies deren Existenz nicht in Frage stellen. Daraus resultiert schließlich der historische Realismus und Objektivismus der Geschichtsschreibung ebenso wie der des einzelnen Gedächtnisses einer Person. Nicht zuletzt ist der hier herrschende Begriff der historischen Vergangenheit der Begriff der „physikalischen Zeit“, in der historische Fakten und Ereignisse eindeutig lokalisierbar sind und in ihrer Zeit bestimmbar.

Warum ist dann noch ein zusätzlicher zweiter Zeitbegriff erforderlich, ein transzendentaler Zeitbegriff, mit einer alternativlosen Gegenwart und einem Gedächtnis als „Quelle der Zeit“? Wittgensteins Schlüsselfrage an das realistische und objektivistische Verständnis von historischen Tatsachen und Ereignissen müßte lauten: Wie sind uns diese historischen Ereignisse und Tatsachen gerade in ihrer faktischen Existenz in der Vergangenheit in Form von Quellen usw. überhaupt gegeben? Und seine Antwort lautet: Nur in der Gegenwart - denn eine „Reise“ in die Vergangenheit ist uns nicht möglich. Nur in einer bleibend gegenwärtigen historischen Rekonstruktion eines (individuellen und kollektiven) „Gedächtnisses“ und seiner Erinnerungen existieren die historischen Tatsachen und Ereignisse selber. Andernfalls, d. h. könnten wir also weder individuell noch kollektiv die historischen Fakten und Ereignisse selber mit Hilfe unseres Gedächtnisses rekonstruieren, würden wir immer nur eine in der Gegenwart entworfene Bilderwelt der Vergangenheit herstellen, ohne darin eine Beziehung zu dieser Vergangenheit selber unterstellen zu dürfen.

Dieser Begriff des transzendentalen Gedächtnisses hat nun nicht nur eine subjektive und kollektive Relativierung der historischen Wirklichkeit zur Folge; existiert diese doch nur als Inhalt eines derartigen Gedächtnisses. Vielmehr widerspricht dieser subjektiv-relativistische oder konstruktivistische Begriff des historischen Faktums auch jenem zuerst dargestellten, worin die historischen Fakten gerade als unabhängig vom individuellen oder auch kollektiven Gedächtnis von Personen existent begriffen werden. Wir müssen offenbar an beiden Begriffen von „historischer Tatsache“ und „Gedächtnis“ festhalten, obwohl beide irgendwie widersprüchlich zueinander stehen. Der historische Realismus und Objektivismus in der Geschichtsschreibung – etwas so darstellen, „wie es wirklich gewesen ist“ -, ist deswegen ebenso ein unaufgebbares Ideal wie er unerreichbar ist. Dies ist die eigentümliche Dialektik der „historischen Tatsachen“ und des „Gedächtnisses“.

„Erinnerung“ ist „*kein* Sehen in die Vergangenheit“, jedenfalls nicht im Sinne der „physikalischen Zeit“ (§50). Man könnte sagen, Erinnerung ist die Gegenwart der historischen Fakten, und diese sind nur in der Gegenwart der Erinnerung gegeben, und zwar selber, und nicht irgendwelche Erinnerungsbilder oder Stellvertreter von ihnen, so daß „Erinnerung“ nur in diesem Sinne ein „Sehen in die Vergangenheit“ sein kann. Historische Wirklichkeit existiert für uns nur in dieser transzendentalen Form des rekonstruierenden Gedächtnisses. Dann ist in der Tat die Erinnerung zwar „kein“ Sehen in die Vergangenheit, derart, daß wir gleichsam unser Erinnerungsbild in unserem Kopf überschreiten und in die Vergangenheit zurückblicken könnten. Gleichwohl ist die Vergangenheit selber nur im „Sehen“ unserer Erinnerung gegeben – was in der Tat dem physikalischen Zeitbegriff radikal widerspricht sowie dem psychologischen Begriff des Sehens.

Wenn insofern Erinnerung eine Art Wahrnehmung in die Vergangenheit ist (ebd.), in der diese selber wirklich ist, dann bedeutet hier „Vergangenheit“ auch nicht das, was dieses Wort in der physikalischen Zeit bedeutet. Denn für den physikalischen Zeitbegriff ist es vollkommen unsinnig, davon zu sprechen, daß wir gleichsam zurück in das 16. Jahrhundert oder in das 2. Jahrtausend vor Christus „zurücksehen“ könnten. All dies ist - in physikalischen Zeitbegriffen - unsinnig. Die „Vergangenheit“, die wir in

unserer Erinnerung gleichsam wahrnehmen, ist nicht die Vergangenheit des Jahres 2000 oder des Jahres 1518. Doch es ist gerade diese tatsächliche Vergangenheit, in die wir nicht mehr zurück können, die Inhalt unserer erinnernden Wahrnehmung oder Inhalt unseres Gedächtnisses bzw. rekonstruierter Sachverhalt der Geschichtsschreibung ist. Darin besagt der transzendentale Begriff der „Vergangenheit“ eine in der alternativlosen Gegenwart der Erinnerung gegebene historische Wirklichkeit.

Eine der generellen Schwierigkeiten dieser ganzen dualistischen Theorie des Zeitbegriffes, des Begriffes des Gedächtnisses, der Erinnerung, ja der Wirklichkeit der historischen Tatsachen, ist natürlich, daß hier subjektive Ausdrücke verwendet werden wie „Erinnerung“, „Gedächtnis“ usw., die jedoch gerade nicht mehr nur psychologisch gemeint sein und keine bloß psychologische Bedeutung haben können, also nicht nur ein bestimmtes Gedächtnis- oder Erinnerungsvermögen einer Person darstellen. Umgekehrt, hält man an diesen subjektiven Ausdrücken fest, muß man in der Tat den Begriff eines nicht-psychologischen, Kantisch: nicht-empirischen Subjekts und seiner kognitiven Vermögen ausbilden, den Begriff eines transzendentalen Subjekts, als eines „Bewußtseins überhaupt“, das gleichsam mit seiner Zeit-Form des Gedächtnisses das gesamte Feld der Vergangenheit sowie das unserer innerzeitlichen Erfahrungen von ihr, in sich enthält. Genau dies ist die Zeit-These des transzendentalen Idealismus. Und Wittgensteins Zeit-Begriff scheint dem zu entsprechen.

Schließlich stellt sich die Frage, wie beide Zeitbegriffe, der physikalische und der transzendentale, zusammenhängen. Was heißt entsprechend, beide zeitlichen „Ausdrucksweisen“ sind „gleichberechtigt“? In ihrem objektiven Begriff gilt die Zeit als eine Eigenschaft von Ereignissen, Dingen und Personen samt ihrem Gedächtnis in der Welt, wobei diese Eigenschaft ebenso eine objektive innerzeitliche Datierbarkeit ermöglicht – relativ zur Zeitrechnung – wie sie auch die Relation des Früher, Gegenwärtig und Später unterschiedlichen Zeiten zuordnen läßt. Insofern scheint der „Inhalt“ dessen, was wir als Wirklichkeit in der zeitlichen Gegenwarts-Form unserer Wahrnehmungen vorstellen, gegenüber dieser Form neutral zu sein: Die physikalischen Ereignisse existieren in ihrer Zeit unabhängig davon, ob ein Mensch sie in der Gegenwarts-Form seiner Wahrnehmung auch konstatiert oder möglicherweise konstatieren könnte.

Doch diese Überzeugung klammert einen wichtigen Sachverhalt aus. Denn alle innerzeitlich bestimmbaren Ereignisse samt ihrer „objektiven“ Zeit-Eigenschaft, etwa in der Datierungen eines bestimmten Jahres samt ihrer Existenz, sind immer relativ auf ein „Jetzt“ bezogen, genauerhin auf das gegenwärtige Wahrnehmungsfeld der eigenen zeitlich lokalisierenden Person. Daß der Kosmos bereits 15 Milliarden Jahre existiert -, diese Aussage ist nur sinnvoll, wenn man das „Jetzt“ der eigenen Gegenwart und der damit verknüpften Zeitrechnung bezüglich der Vergangenheit zugrunde legt. Offensichtlich gibt es dazu freilich keine Alternative. Wenn wir die Frage beantworten, wie lange der Kosmos schon existiert bzw. wie lange er noch existieren wird, müssen wir diese Frage ausgehend von dem „Jetzt“ unserer Gegenwart beantworten. Dies bedeutet wiederum, daß wir die Zeit als gegenwärtige, alternativlose Form unserer Wahrnehmung von Welt zugrunde legen müssen, um eine derartige Frage nach der Zeit des Universums objektiv beantworten zu können. Die Zeit der eigenen Gegenwart, die selber nicht mehr von einer Vergangenheit oder Zukunft abgrenzbar ist, sofern sie immer vorliegt, ist dann aber eine Möglichkeitsbedingung aller objektiv datierbaren, physikalischen Zeit der Ereignisse. Kantisch gesprochen: Die „Zeit-Form“ unserer Wahrnehmung von Wirklichkeit als alternativlose Gegenwart ist auch die „Zeit-Form“ des „Inhaltes“ unserer Wahrnehmungen, also der physikalischen Ereignisse selber, unabhängig davon, ob diese vergangen, gegenwärtig oder zukünftig sind. Wir beziehen die Zeit der physikalischen Welt, etwa die 15 Milliarden Jahre des Kosmos, nicht auch zusätzlich noch auf die subjektive Zeit unserer Gegenwart, ohne daß dies für die objektive zeitliche Datierung von Bedeutung wäre. Sondern wenn wir davon sprechen, daß 15 Milliarden Jahre „bis jetzt“ vergangen sind, dann ist diese Gegenwartsbezogenheit konstitutiv für die objektive Zeit der physikalischen Erscheinungen. Dies bedeutet wiederum, die Zeit-Form unserer gegenwärtigen Wahrnehmung von Wirklichkeit ist von der objektiven Zeit der physikalischen Ereignisse nicht zu trennen – sie ist die Basis ihrer Bestimmung. Nur unter dieser Voraussetzung gibt es überhaupt eine „objektive“ Zeitbestimmung der bisherigen physikalischen Ereignisse des Kosmos. Das alternativlose „Jetzt“ unserer Gegenwart, als Form unserer Wahrnehmung von Wirklichkeit, ist schließlich dann auch der Grund dafür, daß unser Gedächtnis die „Quelle der Zeit“ – gerade auch der objektiven physikalischen Zeit – ist; eine keineswegs so unsinnige These, wie es auf den ersten Blick scheint. Denn die Paradoxie im dualistischen Begriff der Zeit und des Gedächtnisses samt seinen Erinnerungen ist auch nicht zu übersehen: Ein und dasselbe Gedächtnis ist ebenso zugleich die „Quelle der Zeit“ wie es selber als subjektives Phänomen einer Person selber auch in der Zeit existiert und datierbar ist. Wittgensteins These das beide zeitlichen „Ausdrucksweisen“ „gleichberechtigt“ seien impliziert diese Paradoxie.

Predictive Knowledge in Wittgenstein

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Predictive statements deserve a specific grammatical inquiry, since they have not only an epistemological status, but also appear in Wittgenstein's writings on philosophy of psychology and touch deeply the problem of free will. So predictive knowledge covers a very large spectrum of human experience. This grammatical exploration leads to acknowledge an essential difference between predictive statements, which are expressions or exteriorisations of will (*Willensäusserungen*) and predictions, which are made from the perspective of the third person (although they can be uttered in the first). As Wittgenstein notes: "Two things however, are important: one, that in many cases someone else cannot predict my actions, whereas I foresee them in my intentions; the other, that my prediction (in my expression of intention) has not the same foundation as his prediction of what I shall do, and the conclusions to be drawn from these predictions are quite different" (*PI*, Iixi, 224e). It is the grammatical elucidation of predictive language games that allows us to solve the problem of the incompatibility between predicted and at the same time free choices.

The problem we wish to clarify in this paper is the following: in his *Lecture on Freedom of the Will* Wittgenstein states that "Prediction is incompatible with choice in the case where you yourself predict what you will choose, or I predict and then tell you" (*PO*, 442), on the other hand, he acknowledges the factum of voluntary choice and behaviour in predictive expressions such as "…when it strikes 5, I raise my arm". (*PI* 627). Thus, on the one hand, it seems that the fact that I predict that I will raise my hand within 5 minutes, makes it impossible that that event (the raising of my hand), in that precise moment, be a true choice. On the other hand, if we admit that that movement of the hand was voluntary, we seem to implicitly admit that it has resulted from a choice: I could give up raising my arm. Which therapeutics for this (we'll see if apparent) contradiction? How in this case "to shew the fly the way out of the flybottle" (*PI* 309)? The only way will be to clarify the concept of predictive knowledge and the different meanings in which we use it.

Wittgenstein acknowledged a special statute to language games that express prediction and, curiously, he refers to them almost always with regard to knowledge of volitive activity. Thus, the characteristics of predictive knowledge, obtained by reflexion on different predictive language games are relevant to psychological and cognitive topics, as well as to self-knowledge and to the volitive subject nature. One first and decisive characteristic of predictive sentences is the *asymmetry* between predictions that are expressions of will (example of Wittgenstein himself: "I am going to take two powders" (*PI* 632)) and predictions that are anticipations of events in the 3rd person's perspective.

If we consider the predictions:

> "I will raise my arm within 5 minutes"
>
> "My arm is going to raise itself within 5 minutes, due to an electric current that in that moment will stimulate it",

it becomes easy to characterize more rigorously the asymmetry between (a) and (b).

More precisely, (a) is a predictive statement under the form of an expression or exteriorisation of the 1st person's will (in Wittgenstein's words, a "Willensaüsserung"), while (b) is a pre-knowledge of a future event, and the one who predicts is, in this case, an observer, and not an agent, even though he keeps speaking in the 1st person. (Notice that, the first sentence (a) is equal to "I want to raise my arm within 5minutes"). Thus, the last sentence (b) is truly a prediction of the 3rd person's perspective, even though it is pronounced in the 1st person of the indicative present. Truth is that, in that situation, the subject is someone who places himself in the position of observer of an event that he does not control, even though the prediction concerns the movement of his hand.

An identical asymmetry between these types of prediction was described by Wittgenstein in *PI* 627. There, he offers two possible descriptions of voluntary movement: "Examine the following description of a voluntary action: 'I form the decision to pull the bell at 5 o'clock, and when it strikes 5, my arm makes this movement'. Is that the correct description, and not *this* one: '…and when it strikes 5, I raise my arm'?…". Wittgenstein adds that the correct description of voluntary act does not include surprise, as he writes in the next section (*PI* 628): "So one might say: voluntary movement is marked by the absence of surprise". With this remark, Wittgenstein emphasizes an important characteristic of that kind of acts. There will be surprise only in those predictions where the subject does not verify the accomplishment of the event that he had predicted on the basis of external rules and events. For example, I predict a certain chemical reaction when I assemble two elements because I have verified it every time I made that experiment in laboratory, or I predict the behaviour of someone I know in a certain situation, because I have observed that same behaviour of his several times in identical situations, etc. Any of these predictions will provoke *surprise* in the subject that predicts, if the events predicted do not take place. But when the prediction is a volitive expression of the 1st person, "…and when it strikes 5, I raise my arm", *surprise can not arise* and it makes no sense to say: "See, my arm is going up!".

When Wittgenstein notices that it is the *absence of surprise that characterizes voluntary movement*, it is important to ask if surprise does not exist because in the prediction of a voluntary movement made in the 1st person the subject knows in a completely infallible way his actions. Does the subject, in the prediction of his voluntary acts made by himself have a special knowledge, radically different from the other types of predictions made in the 3rd person's point of view? Our suggestion is that it should not be this the interpretation of the characteristic of absence of surprise that Wittgenstein refers with regard to voluntary action prediction made by the one that predicts. There is surprise when something doesn't happen in the chain of a process we thought we knew. For example, if my arm does not move itself when stimulated by an electric current, I can't help surprising myself. In fact, it was on the basis of the observation of what happened every time my arm was stimulated that I made the prediction which then, *surprisingly*, didn't occur. At first sight, one would say that in the case of predictions in the 3rd person's point of view, it is a knowledge that still allows error and, therefore, surprise:

the subject realizes that, after all, his prediction was fallible. Is it the case, then, that the prediction made in the form of a 1st person expression is infallible and because of that there is no place for surprise? Well, it's not that what happens in these expressions or *Willensäusserungen*. The truth is that type (a) sentences are not more certain than type (b) ones; on the contrary, these are the ones that deserve to be called *knowledge*. In fact, any prediction I make relatively to any voluntary behaviour of mine in the future can fail, and we all have the experience of the contingency of that our kind of predictions. I only have to decide otherwise before the predicted event. But precisely, because it is me who decides, I cannot surprise myself with the fact that the prediction I made about my future behaviour did not fulfil. *The absence of surprise is, then, due to the fact that the predicted event depends on my decision, since the moment of its prediction, until its fulfilment (or not fulfilment)*. Once again, notice how, in fact, it is *grammatically* possible to say that I doubt that my hand will raise itself within 5 minutes (prediction in the perspective of the observer, or the 3rd person), and it makes *grammatically* no sense to say that I doubt that I have the intention of raising my hand within 5 minutes (predictive expression of the 1st person).

The prediction made by myself of my voluntary behaviours is, then, a special case among the totality of predictive knowledge. Wittgenstein attributes two fundamental characteristics to it: 1) the absence of surprise and 2) the fact of not being made on the basis of observation of myself. Such characteristics distinguish the predictive expression (in the sense of *Willensäusserung*) from all the other forms of prediction, which are pre-knowledge in the 3rd person's point of view. Between predictive knowledge based on observation of the others or of myself, and the one that doesn't need that ground, there is a notable difference. "Why do I have doubts about his intentions, but not about mine? To what extent am I indubitably acquainted with my intention? That is, what is the use, the function, of the expression of intention? That is, when is something an expression of intention? Well, when the act follows it, when it is a prediction, I make the prediction, the same one as someone else makes from observation of my behaviour, *without* this observation" (*RPP* I, 788).

But can we speak of knowledge when we refer to this kind of predictions? Volitive predictions, in which the subject announces a behaviour or decision of his, are, after all, expressions or exteriorizations of the will, and because of that, much different from the cognitive point of view, from the other predictions obtained by the observation of states of affairs or behaviours. So that expressions and exteriorizations of the will, intentionality, belief, pain, etc. could be knowledge, they would have to, from the beginning, be subject to the game of certainty and doubt, but it makes no sense to doubt that "I want p" or "I intend p" or "I have a pain". To Wittgenstein, sentences like " 'I know what I want, wish, believe, feel,…..' (and so on through all *the* psychological verbs) is either philosophers' nonsense, or at any rate *not* a judgement *a priori*" (*PI* II, xi, 221e). Likewise, "I can know what someone else is thinking, not what I am thinking. It is correct to say 'I know what you are thinking' and wrong to say 'I know what I am thinking'. (A whole cloud of philosophy condensed into a drop of grammar)" (*PI*, II, xi, 222e). In a similar way, also in the prediction that exteriorises or expresses a future voluntary behaviour of the subject himself, there is no place for doubt. I cannot say with sense that I doubt that I want p, or that I intend p, but I can say with sense that I doubt that it will rain tomorrow or that someone with a certain disease will die, even though a better observation and a more profound knowledge of physical laws might, later, deny such utterances. If knowledge supposes the possibility of doubt, then, it is possible to say that expressive predictions in the 1st person of my acts are pseudo-knowledge, because the term *knowledge* always evolves the game of certainty and doubt. Those predictions are outside the game of knowledge and doubt. Actually, it is grammatically impossible that that game enters in the predictions that are exteriorisations of the 1st person.

From that we conclude that *the asymmetry between sentences of type (a) and type (b) is not epistemological*. In fact it would be epistemological if we assumed that in the first ones the subject *knows* his future decision in a way that the other does not (the one of raising his hand), because it is he who predicts his behaviour and, thus, he cannot be wrong, while in type (b) sentences it will always be possible to there be an error about the physical process that causes the raising of the hand, whether the prediction is made by me or by somebody else. This would be an epistemological asymmetry, which extreme version supposes a kind of cartesian transparency based in an introspective faculty (on this subject, see Hacker, 2001, 133-36). But we have already seen that in the expressive prediction of the 1st person it is not correct to say that the subject *knows* his future decision (to raise or not my arm). Predictive expressions of the type "I'm going to raise my hand within 5 minutes" are exteriorisations of the will, *Willensäusserungen*, and not predictive knowledge like sentence (b) or "it will rain tomorrow". To say that "I want to (or I intend to) raise my hand within 5 minutes" is a pseudo predictive knowledge, but an exteriorisation of the will, which logic is essentially different from a knowledge in which I always place myself as observer of the 3rd person's perspective.

Let's go back to the difficulty enounced in the beginning. How to affirm, on the one hand, that the prediction of my behaviour annuls its voluntary character and, on the other hand, to admit that the raising of my hand, in sentences like "I'm going to raise my hand within 5 minutes", corresponds to a true choice? The contradiction is solved if we admit that, on the one hand, the prediction of voluntary acts can be made from the perspective of the 3rd person and, in this case, the true choice is, in fact, annulled. It will be said, then, that the previous knowledge of my future decision annuls its true choice character. However, in the case in which the prediction is an expression of will or intention in the 1st person of indicative present, the predicted choice is not annulled and it is possible to speak of voluntary behaviour. That's why Wittgenstein in the mentioned *Lecture on freedom of the Will* also says that "As a matter of fact, it is possible we know the whole time what we are going to choose and that nevertheless a process of choice is going on" (*PO*, 442)

In conclusion, predictive knowledge of the 3rd person's point of view is not compatible with free choice, even though a free choice may take place being announced (predicted) by an expression of the will in the 1st person. But as we saw, in this case, we are in presence of a false knowledge.

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If You Really Want to Know What You Mean, Read More Poetry

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This paper is dedicated to viewpoints propositions (VPPs), a (lexically triggered) non-truth conditional component of sentences. A VPP introduced by a sentence denotes a Platonic (non necessarily embodied) viewpoint on the denotatum of this sentence. Unlike conventional implicatures, VPPs are not necessarily consciously processed by speakers and interpreters. The possibility that unconscious processing of VPPs during the utterance retroacts on thoughts is examined.

„The nominatum of a proper name is the object itself which is designated thereby; the image which we may have along with it is quite subjective; the sense lies in between, not subjective as is the image, but not the object either. The following simile may help in elucidating these relationships. Someone observes the moon through a telescope. The moon is comparable with the nominatum: it is the object of the observation which is mediated through the real image projected by the object lens into the interior of the telescope; and through the retinal image of the observer. The first may be compare with the sense, the second with the presentation (or image in the psychological sense). The real image inside the telescope, however, is relative: it depends upon the standpoint, yet, it is objective in that it can serve several observers. (...) But every one of them would have only his own retinal image". Frege, *On Sense and Nominatum*

1. Introduction

Non Truth-Conditional Semantics is nearly entirely dedicated to the study of conversational or conventional implicatures. This paper explores (rather sketchily) another type of non truth-conditional semantic component of sentences. To illustrate the phenomenon, French native speakers were submitted two sentences depicting the scene of telescope viewing that Frege resorts to in the quotation above. Formally, the two sentences differ only by the preposition introducing the locative complement. Following French dictionaries, the two prepositions are synonymous; the use of the second one is more constrained and not easily translated in English:

(1)*Pierre regarde la lune à travers le télescope*.

Peter is-looking-at the moon at through the telescope.

'Peter is looking at the moon right through the telescope'

(2) *Pierre regarde la lune au travers du télescope.*

Peter is-looking-at the moon at-the through of-the telescope.

'Peter is looking at the moon through/despite of the telescope'

At first sight, speakers find (2) quite strange (they do not have problem with (1)). But when provided with a context where the telescope forms a visual obstacle to the moon (because it is dirty for instance), they always judge that the acceptability of (2) increases. Great readers generally find the restriction P imponed by the preposition "*au travers de*" by themselves. P says roughly "The telescope acts as a visual filter the sight must penetrate in order to see the moon" (see Martin & Dominicy 2001a & b for details). P is an adaptation of the more abstract proposition ruling the use of "*au travers de*" ("There is an obstacle to the perception of the object under observation").

The central questions which will be dealt with are the semantic and epistemic status of *P*. Clearly, *P* does not pertain to the truth conditions of the sentence. (2) will be judged true exactly under the same conditions as (1), which does not convey *P*. *P* resembles very much a conventional implicature (CI). Indeed, *P*, like CIs, arises only because of the (non-truth conditional) properties of a word and cannot be explained in terms of conversational rules. *P*, like CIs, is detachable, since it is possible to denote the same thing without conveying *P* (see (1)). P, as CIs, survives under presupposition holes, e.g. negation, (like presuppositions).[1] For instance, the utterance of the sentence (4) containing the hole *possibly* commits the speaker to the CIs (5a-b) triggered by *even* exactly as (3). In the same way, *P* is presumed by the utterance of (6) exactly as for the utterance of (2):

(3) *Even Bill likes Mary.*

(4) *Possibly even Bill likes Mary.*

(5) a. *Other people besides Bill like Mary.*

b. *Of the people under consideration, Bill is the least likely to like Mary.*

(6) *Possibly Peter is looking at the moon* au travers *du telescope.*

But something revealed by the experience reported above prevents from analyzing *P* as a CI. Recall that most speakers do not judge (2) grammatical (since telescopes are not conceived as visual obstacle out of the blue) but find it perfect when provided with a context satisfying *P*. On the contrary, (3) will be judged grammatical even in a context falsifying (5). We explain the spontaneous judgement on the grammaticality of (2) if we conjecture that speakers are not conscious of *P*, neither as producer or interpreter. If they were indeed, we would expect them to find a context satisfying *P* by themselves, as for (3) or (4). On this point, *P* is very different from CIs. The literature is not explicit on it, but it is obvious that CIs are generally not conceived as infraliminar propositions. The fact that CIs are generally consciously interpreted explains why the speaker can use them to convey the main point of the utterance[2] (like conversational implicatures, see Gazdar 1979, 41), which is the case e.g. if he does not want this point to be further discussed, or why CIs can give rise to sarcastic effects (see Karttunen & Peters 1979, hence KP, fn pp. 8-9) – ironizing on the basis of unconscious propositions does not pay very well. Some selectional restrictions of verbs, sometimes classed as CIs (see e.g. KP), sometimes as presuppositions (see e.g. Corblin 2003), can also serve as the main point of the

[1] *Even* has also been analyzed as a presupposition-trigger before and after KP. As the difference between CI and presuppositions does not matter for our line of argumentation, we leave this point apart (see Gazdar 1979 for details).

[2] Potts (t.a. :2) states that CIs are « secondary entailments that cooperative speakers rarely use to express controversial propositions or carry the main themes of a discourse ». Potts seems to neglect here the difference between road regulations and the regularities in drivers' behavior.

utterance or give rise to ironic effects. For instance, one can say *Peter likes Mary* precisely to indicate that Peter is acquainted with Mary, or *I've drunk some cheese* to indicate ironically that the cheese served was really too liquid. This is possible because speakers consciously convey and interpret the selectional restrictions at hand.

The case of "hidden propositions" (cf. Martin 2002, Dominicy & Martin 2003) like *P* is entirely different. As insinuation and suggestion seem to pertain to the deep nature of CIs – a role that cannot be felicitously fulfilled by propositions generally processed unconsciously – we would lose an important generalization in classing propositions as *P* in the set of CIs.

P is not a presupposition either, since the utterance of (2) does not require *P* to be true in order for the utterance to have a truth value. Besides, presuppositions can also convey the main point of the utterance (see e.g. at least some kinds of accomodation).

2. Viewpoint Propositions

As *P* does not enter any existing category, it seems justified to introduce a new subspecies in the typology of non truth-conditional semantic components of sentences. Before proposing a definition, it is worth emphasizing that items triggering propositions like *P* do not reduce to a handful of prepositions. Actually, they seem to pervade all the lexicon. In order to check that, one only needs to notice the laborious efforts lexicographers dedicate to excavating deep selectional restrictions of words.

I shall say that a sentence containing an item like «au travers de» introduce *a compulsory viewpoint* on its denominatum through a *viewpoint proposition* (VPP). I will loosely say that the sentence containing a viewpoint-trigger like «au travers de» *introduces* a VPP (obviously, it does not denote it). The sentence does not need to be uttered (in a certain context) in order to introduce its VPP. The VPP denotes a way of representing certain aspects of the denotatum of the sentence; it impones this viewpoint independently of the subjective representation of the speaker. VPPs do not need a bearer to exist. Other people can obey them in forming their representation of the denotatum as much as the speaker. VPPs determine Platonic stances on the denotatum, social viewpoints that can be embodied or not.

The fact that some semantic components of sentences are not consciously triggered or interpreted is not very surprising. It is common to have a procedural knowledge without having the corresponding propositional knowledge. Speakers can implicitly learn the specific difference of contexts satisfying the introduced VPP, without knowing that the sentence introduces the VPP nor knowing that VPP. Children's utterances illustrate well the point. Everybody has been once confused by the huge gap between the accuracy a child can display while talking about a situation on the one hand, and the implausibility that he can adopt the perspective generally associated with the expression he used on the other. What happens in this case is that the child has formed a generalization upon the use of a given expression on the basis of statistical regularities, and recognizes – rightly or not – an instance as belonging to the type of context which satisfies the expression, but doesn't grasp the corresponding VPP consciously. The enjoyment adults have while attending these events is partly due to the fact that witnessing this gap unveils either what is already there without being noticed (if the child was right), or what could have been there (if the child was wrong with perspicacity). On this point, children are rightly called poets, since poets often try to bring to light the way words pre-construe the representation of reality. They make notice humdrum and thus invisible perspectives in prolonging and extending them (see e. g. (Jaccottet 2002 [1970], 66) – as a musician holding a note – or in using the lexicon in a deviant way (see e.g. (Eikhenbaum 1965, 62)).

The little experiment reported above suggests that the more well-read the subject is, the more he likely is to grasp the VPPs consciously. As we do not want to say that the meaning of words co-varies with the speaker, we are committed to say that if the VPP is consciously processed by some speakers, it is 'introduced' by the sentence even if the speaker does not know it.

3. Do you believe the same thing after having said it?

We may conjecture that when a speaker utters a sentence introducing the VPP *P*, the lexical choices he made, perhaps unconsciously, is caused by, and therefore reflects, his own representation of the state of affairs at hand. However, once a difference is made between the social viewpoint conveyed by the lexicon and the one the speaker entertains as an individual, it is theoretically possible that whereas he introduces *P* unconsciously through its (sincere) utterance of the sentence, he (i) judges *P* false or can discover that *P* is false, or (ii) is agnostic about *P*, or (iii) has no belief about *P*. Let us assume that when *P* is unconsciously introduced, native speakers and interpreters *do* process it at a certain level – in a deaf, dumb, and blind way. In the case (i), the speaker has expressed itself badly, and consequently can feel helplessy troubled. If the interpreter is also in state (i), he can feel a particularly subdued discomfort: as unconscious propositions cannot be explicitly rejected, the troublesome *P* may pass automatically into his commitment store (cf. Hamblin 1970, Corblin 2003). Cases (ii) and (iii) are the most interesting one. We may conjecture that in choosing (perhaps partially by chance) an item triggering *P*, the speaker, while processing its own utterance, eliminates the representations falsifying *P* he entertains before its utterance (case (ii)) or disminishes the probability to entertain them in the future (case (iii)). This is at least what we expect if the system tends to maximize the consistency between what is (unconsciously) meant and represented. The fact that more generally, verbalization retroacts on thoughts is confirmed by an experience reported in (Schooler & Schooler 1990). This experience shows that verbalizing the appearance of previously seen visual stimuli impaired subsequent recognition performance. Subjects who verbalized the face performed less well on a subsequent recognition test than control subjects who did not engage in memory verbalization. Bartlett already reported that subjects who repeatedly described previously seen face drawings were reportedly surprised by the appearance of the original drawings (reported in Schooler & Schooler 1990, 43). If the truth-conditional aspects of verbalized sentences, which are generally consciously processed by the speaker, already alter memory, we can imagine that unconscious components of sentences can also act (even minimally) upon the viewpoint the speaker has on the denotatum of its memorizing. It might be intereresting to consider testimonies on this perspective.

4. Conclusions

Why natural languages would be such that parts of the information conveyed by sentences stay beyond the control of the speakers? On the one hand, it seems counter-adaptative indeed, since viewpoints unconsciously triggered can act upon the interaction in a way contrary to the preferences of the speaker. Culture is in this sense an adaptative tool, since it permits the Private Ego to take over its Inconscious or Social Ego, to manipulate better not so well-read Alters (at least if getting rid of beliefs induced unconsciously is more difficult), and to know how not so well-read Alters conceive the world even better than themselves. On the other hand, it can be argued that the existence of a set of unconscious and thus not easily controlled pre-conceptions of the world strengthens social cohesion[3] and puts an ecological limit on inter-individual cheating.

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[3] The problem of VPP is obviously related to the Sapir-Whorf question. It is very likely that the set of VPP buried in the lexicon varies partly from one natural language to another. But as Marc Dominicy notices, the existence of VPPs would raise the same questions even if there was only one natural language.

The Problem of Communication in the Context of the Language-Games

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Ludwig Wittgenstein is one of the first analytical philosophers who suggested the strategy of solving the communication problem. The communication as an exchange of meanings is supposed to have linguistic and extralinguistic aspects. The explanation of possibilities and conditions of the communication is connected with Wittgenstein's concept "language-game". To my mind the positive decision of the problem depends upon the definite scheme of interpretation of the language-games. The widespread version of the interpretation of this concept has some difficulties, which become more coherent in the social investigations. In this paper I intend to change the focus of interpretation of the language-games in order to avoid the evident paradox in settling of communication problem.

The main peculiarity of the language-games, according to their critics (Apel, Habermas) is their autonomity, self-sufficiency, and independence from each other. The language-game has its own horizon, which can be seen inside. The meaningfulness of using language expressions is established by the language-game's horizon. The diversity of human activity generates the diversity of the language-games. The language-game functions according to its own strict rules. Such facts as knowing and possessing of the rules determine the possibility of the communication. The rules are grasped in the course of one's training. The participants of the language-game don't reflect its moves. They accept the game's rules because they have been taught to act in such way. In the course of the game its participants don't ask themselves the question why they act in such way.

Thus according to such interpretation the language-games are considered to be the autonomous systems of the communication isolated from each other. As a result the situation of translation between different language-games becomes insoluble and/or problematical. The general theory of understanding is unnecessary, so that a separate case of understanding is established by individual language-game. It should be mentioned that such interpretation of the language-game loses its main peculiarity: each language-game – like the language as a whole – is an *open* system. We must remember Wittgenstein doesn't say anywhere that language-games are the interpermeable entities. He never asserted that if we were taking part in one game then we would not be able to understand another person taking part in an absolutely different game. In contrast Wittgenstein underlines the diversity of practices in which each of us is engaged.

If we come from the limits of the present interpretation then the necessary condition for the effective mutual understanding depends upon the communicators' belonging to the same language-game. The verbal communication can be interpreted in the rules of the real language-game to a large extent so that each language expression interpreted by the game's rules become meaningful for the native speakers of this language-game. I speak about the premises concerning the actual or the potential "states of affairs" which are interwoven in linguistic practice on the conceptual level. The conceptual presuppositions of language activity determine its semantic potential and hence the interpretative opportunities of the individuals taking part in definite language-game. So the effective mutual understanding can be realized only in the situation when the communicators have a shared conceptual background, that is they share common presuppositions concerning the states of affairs. It is supposed that in case the native speakers share different conceptual premises the opportunity of any communication among them is questioned. Hence the communicators need to be participants of the same language-game to reach the mutual understanding.

However for Wittgenstein a linguistic behaviour is one's ability to actualize the language in the different language-games. Moreover we operate with words and "in the course of time turn them sometimes into one picture, sometimes into another"(Wittgenstein 1953, 131 § 449).

I think the supposed interpretation of Wittgenstein's concept will not give us a satisfactory explanation how we master the new language. Wittgenstein's researchers reduce a speech activity to operating of the definite set of reactions to the signs. They assume as a basis of each linguistic practice a certain set of correspondences between the words and one's reactions to them. However it is asserted that a new reaction (or new speech behaviour) into the habitual word is impossible, because the breach of rules of the language-game means its ending. Such way of understanding the linguistic behaviour is determined by rule following implicitly contained in our language. The rules of any type of the language fix the appointed native speakers' behaviour. Hence the learning of the new rules by speakers is located out from their linguistic competence. Such model of understanding of the game's rules could not advance the process of predicting the future linguistic behaviour. But according to Wittgenstein the language-games are not stable: the new types of language arise, other become obsolete, they may be forgotten and change their character (PI § 23).

My principle hypothesis is the following: the impossibility to explain the communication phenomenon consists in attributing ontological status to the language-games. The conceptual sovereignty of the language-games is the result of their ontological understanding. An ontological feature of the language-game determines the impossibility of the dialogue between various languages practices. If we regard the language-game not as different aspects of the same language but as the different languages then any attempt to translate from one language to another leads to the loss of its specific content that can be expressed by our own language. I try to present another interpretative version of Wittgenstein's concept of the language-game. I think it is more correct and it allows coming up to the explanation of the possibility effective communication more fruitfully.

If we use the language-game metaphor to designate the numerous aspects (or models) of the speech activity (not as given ontological structures determining the referential opportunities of the native speakers of the language) then we may find the productivity of Wittgenstein's philosophical investigations helping to solve the problem of understanding. It is not of great interest to pronounce the language as mosaic of the precise outlined linguistic practices when we

try to grasp the ways of existence of the native language. It means the lack of communication problem.

The language game is a system of operating rules, which determines the functions of linguistic signs through the applications of these rules (PI § 559). The totality of the language games constitutes the *form of life*. The concept of a language-game is one aspect of the idea that the meaning of words and expressions is found in their use. Wittgenstein emphasizes on the multifarious ways in which words are used, and on the importance of considering the context in which a word is used in order to understand its meaning. Wittgenstein likens language to the tools in a toolbox, and the functions of words to the functions of these objects. That is, we do many different things with words, and in coming to see how they work we come to understand their meaning (PI § 11).

A language-game is a rule-governed activity, and to play such a game is to engage in a social practice. That language-games are governed by rules means that we can distinguish between right and wrong moves in the game. That is, there is an external check on what we do, playing the game; it is possible for others to correct us if we apply a word against the rules of a particular game. But this does not mean that the rule of the game is always explicit; nor that a person who takes part in the game is always able to formulate them when questioned. But in playing the game we do not normally think of the rules; nor do we normally learn language-games by being taught the rules. The game's rules existence beforehand a person is going to take part in the language-game. When the language-game was created the process of the game and its rules are formed simultaneously. Wittgenstein uses the metaphor of the stream and its channel.

The function of the language-game consists in elucidating the word-usage in problematic situations. We can compare the speech activity with a stream of continuous situations in the context of which the speaker needs to make the choice of the definite semantic version of the language. And the speaker has orientated already towards definite model of the language-game. We may qualify such versions as semantic quantity, which help to explain the possibility of the speech varying when we use the native language with diverse intentions and by diverse ways. In speaking of language-games we are brought to consider the contexts in which words and expressions have their life; where we see them, functioning as they do in a network of other words and expressions and actions. If we consider the context in which, say, an order is issued and ask ourselves how we know this was an order, we realize that the words and actions of this language-game, as of others, are interwoven. We must remember that the ways of using the signs are not determined by the "concept". On the contrary our concepts are the generalizations of the diverse usage of the same signs. Wittgenstein has understood the language-game as the practice, the institute, and the form of life. The research of the language-game is an investigation of the primitive linguistic forms. It may be said about the hierarchy of the games' system. Wittgenstein's presupposition consisted in clarifying the genealogy of the language-games, and so to disclose their practical significance.

Sings and their rules are not isolated entities working by themselves, but operations in human behaviour (PI § 454). For Wittgenstein the meaning of singular words is determined only in the context of prepositional moves in the language game, and thus it is from the sense of a proposition that the meanings of its component words are understood (PI §49, 138). Thus our linguistic ability includes knowledge of these meaning structures. Meaning structures are connected with words as combined in a proposition applied by living human beings (PI § 454). Nevertheless, one cannot perform a propositional move in a language game without "knowing" the meaning rules of the proposition's component words. The selection of the relevant meaning structure of a word from a cluster of such structures for a proposition depends upon the purpose of the propositional move in a particular language game. Unfortunately, this "knowledge" and the selecting mechanism remain enigmatic since they remain outside the realm of Wittgenstein's interest in his late philosophy of language. In this way, however, we can understand, according to Wittgenstein, the dependence relation between the sense of the proposition and the meaning of its words. Nevertheless, it seems that we should go further and make a distinction between the speaker and the hearer in ordinary communicational use of language in this regard. For the speaker, this relation is not reflexive, since he cannot determine the sense of his intended prepositional move from the clusters of meanings of its component words. But for the hearer and the learner of language games, the relation between the sense of the proposition and the meaning of its component words must be different (PI #54). Here the person first grasps of the component words, and through them understands the sense of the proposition in the context of its use. We should remember that words have clusters that have of senses, which determine their distinct meanings and therefore their different uses in the language games (Nesher 60).

By means of such interpretation of the language game it is possible to explain the situations of meaningful usage of the same language in various contexts. The natural language doesn't differentiate into the language-games. The language-games are the explanatory hypotheses simulating our real language behaviour. They haven't their own ontological status. The language-game's rules don't exhaust the properties and the possibilities of the actual word-usage. For Wittgenstein "no course of action could be determined by a rule, because every course of action can be made to accord with the rule" (PI § 201). It means the hypothetical character of each rule. According to Wittgenstein the rules are not complete and need to be supported by practice constantly. Rules' indefiniteness and their possibility of new usage in practice make the rules viability. The rule is a product of training. But people can use it differently. The method of training based on principle "do like I" is variable and it is supposed by the private application. It's precisely that the practice determines what the "rule-following" is right or wrong. But the recognition of the private application of the rule is realized by common agreement. The using of any rule is dependent on situation and how the communicators understand this situation. The variation of invariable or the usage of the rule makes the language-game an open system. The human behaviour is an intelligent usage of the rules. But one's "intelligence" consists in his skill to repeat or to use a rule in any new situations, not in his reflection.

The rules of the language-game can be interpreted as one's suppositions about reference intentions of other native speakers of the language. These suppositions are propounded in order to find the definite semantic regularities of the speakers' behaviour and then to predict their future linguistic acts. These suppositions may or not come up one's expectations. In last case a person makes other suppositions, which are radically different from the former. The natural language's rules differ from the rules of the artificial language because the last has the strict established rules. The rules of the language game connect

linguistic expressions with extralinguistic aids: objects, samples, activities, etc. The extralinguistic components of language games are, in the first place, the criteria for the meaning of the linguistics components. They become such meaning criteria only in the learning of grammatical rules. The conspicuous characteristic of the grammatical rules is that they determine the internal relations constituting the grammar of the language game. These relations are the norms of meaning that we learn and apply in our linguistic game. These relations are the norms of meaning that we learn and apply in our linguistic behaviour. Thus, the applications of grammatical rules are the use of related linguistic expressions (Nesher 55).

The rules of the "depth" grammar would not be able codified in principle (PI § 84). Our speech activity does not disintegrate into the multitude (secluded) fragments of the language. The contrary we like the native speakers have the power to realize the language in different ways and with different intentions. This power is our skill to orientate the language behaviour towards one or another model of the language-game. We can use such mode of understanding the language-games to clarify the manipulative function of the language. The specific oriented activity is one's language manipulating. The manipulating by the language is realized in one's skills to use the diverse combinations of the sentences. We should demonstrate our power to adapt the language to the new situations and the contexts, to put the schemes on the content of our experience. Such linguistic creation is the basic condition for any communication. If the individuals conduct themselves orientating into the diverse models of the speech activity then the main condition of the effective mutual understanding would be their ability to reach the common code of the communication. Thus the semantic competence of the native speakers of the language is not limited by the language-game. The contrary they're operating by the language and it allows them to overcome the limits of their actual linguistic experience and to find "common language" even in the case when the communicators belong to the different forms of life. Wittgenstein speaks of the common behaviour of mankind in the *Investigations*: "The common behaviour of mankind is the system of reference by means of which we interpret an unknown language" (PI §206).

Consequently if we regard the Wittgenstein's concept "language-game" as ontological matter then we narrow and even make impossible to solve the problem of communication. The communication is explained if we consider the language-games as mental (theoretical) constructions, or as a special way of experimenting with language mentally.

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Supervenience, Materialism, and Skepticism: Critiquing Some Key Epistemological Underpinnings of Chalmers' Dualistic Philosophy of Mind

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David Chalmers has recently received much attention for arguing against a materialistic theory of mind and for a type of property dualism (see Chalmers 1996). So what exactly is a materialistic theory? According to Chalmers, materialistic theories require, roughly speaking, that all facts, including macrolevel facts, either are microphysical facts or supervene logically on microphysical facts (Chalmers 1996, 41, 128). For instance, biological facts logically supervene on basic physical facts. But how does Chalmers understand supervenience? After explaining the basic idea and discussing some technical problems, he provides the following gloss: „[supervenience is] a thesis about our world (or more generally, about particular worlds)... According to ... [this] definition, B-properties are logically supervenient on A-properties if the B-properties in our world are logically determined by the A-properties in the following sense: in any possible world with the same A-facts, the same B-facts will hold" (Chalmers 1996, 39).[1] Utilizing many creative examples invoking objects such as zombies, he contends that mental phenomena, and conscious experiences in particular, do not supervene on material states of affairs. Consciousness, then, is unlike just about every other natural phenomenon, which does supervene on materialistic states of affairs. Hence consciousness is special, different, and, in accord with his dualism, separate.

In this paper, I shall not explicitly examine the examples and arguments that Chalmers proffers to show that consciousness does not supervene on physical facts; that battle has already been joined by a host of other philosophers. What I want to do instead is to challenge his general claim that (just about) every other macrolevel property does supervene on microphysical facts[2] by attacking one of his key supports for this claim and showing how it contains epistemological presuppositions that actually undermine his general supervenience claim. After setting up the theoretical machinery necessary for him to argue that consciousness does not supervene on physical facts, Chalmers feels the need to address the „frequent response" that „... conscious experience is not alone here, and that all sorts of properties fail to supervene logically on the physical. It is suggested that such diverse properties as tablehood, life, and economic prosperity have no logical relationship to facts about atoms, electromagnetic fields, and so on. Surely those high-level facts could not be logically entailed by microphysical facts" (Chalmers 1996, 71)? He replies that „it is not hard to see" (Chalmers 1996, 71) that this line of reasoning fails and thus he concludes that „[c]onscious experience is almost unique in its failure to supervene logically. The relationship between consciousness and the physical facts is different in kind from the standard relationship between high-level and low-level facts" (Chalmers 1996, 71). Chalmers offers three different types of arguments to support his thesis, which derive from considerations of conceivability, epistemology, and analyzability.

Let us look briefly at the core ideas behind these arguments. The essence of Chalmers' first argument is encapsulated in the following sentence: „A world physically identical to ours, but in which ... [macro] facts differ, is inconceivable" (Chalmers 1996, 73). Epistemologically he contends that „... someone in possession of all the physical facts could in principle come to know all the high level facts ... " (Chalmers 1996, 76). On the flip side, if the macro facts of the world were not logically supervenient then we would have a „special skeptical problem" (Chalmers 1996, 74). Finally, he argues that „... most high-level concepts ... are generally analyzable to the extent that their intensions can be seen to specify functional or structural properties" (Chalmers 1996, 81). Others have attacked Chalmers' case that high-level facts logically supervene on physical facts. Alex Byrne (1999) for example has not only specifically attacked Chalmer's conceivability argument and his argument that knowledge of all microphysical facts could lead one to knowledge of all macro facts, but also maintained that analyzability considerations fail to establish the supervenience claim (although this latter argument does not specifically target Chalmers, it clearly challenges his own appeals to analyzability). While Chalmers has disputed some of Byrne's specific attacks, he also finds Byrne's discussion deficient because it „... passes over the role of epistemological considerations regarding the elimination of skeptical scenarios" (Chalmers and Jackson 2001, 334, note 16). Because no one has to the best of my knowledge discussed this argument that Chalmers suggests is important for his overall strategy, and because this argument actually undermines Chalmers' strategy, it is important to examine it closely.

In short, Chalmers endeavors to push those who deny his thesis into a dark skeptical corner:

> ... if there were a possible world physically identical to ours but biologically distinct, then this would raise radical epistemological problems. How would we know that we were not in that world rather than in this one? How would we know that the biological facts in our world are as they are? To see this, note that if I were in the alternative world, it would certainly look the same as this one. It instantiates the same distribution of particles found in the plants and animals in this world; indistinguishable patterns of photons are reflected from those entities; no difference would be revealed under even the closest examination. It follows that all the external evidence we possess fails to distinguish the possibilities. Insofar as the biological facts about our world are not logically supervenient, there is no way we can know those facts on the basis of external evidence.
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> In actuality, however, there is no deep epistemological problem about biology. We come to know biological facts about our world on the basis of external evidence all the time, and there is no special skeptical problem that arises. It follows that biological facts are logically

[1]. Actually Chalmers gives several different definitions of supervenience, all of which he considers to be roughly equivalent (Chalmers 1996, 71).

[2]. Chalmers entitles one sub chapter (2.5) "Almost Everything is Logically Supervenient on the Physical".

> supervenient on the physical. ... There is no special skeptical problem about knowing these facts on the basis of external evidence, so they must be logically supervenient on the physical (Chalmers 1996, 73-74).

This argument is not entirely perspicuous. But presumably we can state its skeletal structure along the following lines:

(1) If the macrolevel does not supervene on the microphysical, then we would have no perceptual knowledge of macrolevel facts.

(2) We do have perceptual knowledge of macrolevel facts.

He concludes (by modus tollens)

(3) The macrolevel does supervene on the microphysical.

The implication of this argument is that our general perceptual knowledge and our more specific knowledge of the sciences (e.g., biology) rests upon the truth of the logical supervenience thesis.

Let us begin our examination of this argument by asking, What justification does Chalmers give for (1)? Recall his words: „... if I were in the alternative world, it would certainly look the same as this one. ... It follows that all the external evidence we possess fails to distinguish the possibilities. Insofar as the biological facts about our world are not logically supervenient, there is no way we can know those facts on the basis of external evidence“ (Chalmers 1996, 74). Chalmers' case here is unconvincing. Imagine a world that is physically identical to ours yet distinct in the biological realm at only one point; that is, suppose that a biological fact failed to obtain despite an „appropriate“ microphysical base for some isolated bacterium, say, at the bottom of a canal in Bruges, Belgium in 1800. Even one such failure would be enough to show that there is no supervenience because supervenience is an all or nothing affair, like deductive entailments. Nevertheless, suppose that there is a law of nature that 99.999999... % of the time the biological fact is „fixed“/“determined“ by the physical basis. Surely there would be biological knowledge in such a world even though, strictly speaking, biological facts did not supervene on microphysical facts. One can know, via perception for instance, the biological fact that a lady bug crawling on one's plant is alive. So (1) is false.

Moreover, even if Chalmers could respond to this argument, (1) is still not out of the woods. For by contraposition, (1) entails

(1*) If we have knowledge of macrolevel facts (e.g., biological facts), then these facts supervene on the basic microphysical facts.

Consider, though, a possible world very similar to the movie Ghostbusters. In one scene a giant doughboy is stalking the streets of a large city in view of everyone. If I understand the movie correctly, then this giant doughboy is a form of life constituted by ectoplasm,[3] which is not a natural substance even on Chalmers' account.[4] But surely people seeing this giant ectoplasmic entity prowling the streets of their city know that this living being exists and is potentially dangerous just as they would know by perception if a giant, physically constituted, dinosaur-like reptile were stalking their streets. And knowledge of this high-level fact is obtainable despite the lack of supervenience. Thus (1*) is false, as is (1) itself.

Now some might protest that such a world is not possible. After all, just because something appears on a Hollywood screen, it does not mean that it is true or even possibly true. But this response is not open to Chalmers because he allows that it is logically possible that angels and other supernatural entities exist (Chalmers 1996, 39). Moreover, if such entities exist in a world, then presumably they exit in a physical location. And if an entity could have a physical location, then it seems conceivable that it could exert causal influence on the world and thus be detected or seen. It seems safe to say that (1) is in deep trouble and Chalmers' argument from epistemology at the very least needs major repairs or elaborations.

Finally, and most importantly, Chalmers' attempts to „back up“ his points about scepticism seem to backfire and offer us a backdoor way to show how his general supervenience thesis fails by his own standards. Chalmers claims that „ ... in areas where there are epistemological problems, there is an accompanying failure of logical supervenience, and that conversely, in areas where logical supervenience fails there are accompanying epistemological problems“ (Chalmers 1996, 74). Chalmers claims that „two problems exhaust the epistemological problems that arise from failure of logical supervenience on the physical“ (Chalmers 1996, 75): causation and other minds. With regard to the latter he claims that „... the mere prima facie existence of the problem is sufficient to defeat an epistemological argument, parallel to those above, for the logical supervenience of consciousness. By contrast, there is not even a prima facie problem of other biologies, or other economies“ (Chalmers 1996, 74). In short, according to Chalmers there is no prima facie epistemological problem with coming to know most high-level facts, so there must be logical supervenience. Chalmers gives no definition of a prima facie epistemological problem; but if other minds and causation present prima facie problems, then surely the external world does as well. And at least some epistemological worries about biology, say, are just an instance of a more general worry about our perceptual knowledge of the external world. So if Chalmers sticks to his guns and maintains that „ ... in areas where there are epistemological problems, there is an accompanying failure of logical supervenience“ (Chalmers 1996, 74), then the epistemological problem of the external world shows (pace Chalmers) a failure of supervenience.

Chalmers overlooks this problem because he mischaracterizes the essential nature of the problem of the external world. He says that these worries are in some sense prior to the problems of causation and other minds „... because they concern the existence of physical facts themselves... It is compatible with out experiential experience that the world we think we are seeing does not exist; perhaps we are hallucinating, or we are brains in vats“ (Chalmers 1996, 75). He thus thinks that he can do an end run around this problem by giving himself „the physical world for free... thereby assuming that the external world exists“ (Chalmers 1996, 75, 76). But the problem of the external world is not necessarily connected to the possibility that the external world does not exist and thus it cannot be avoided simply by assuming that the external world exists. Brain in vat scenarios (à la The Matrix) for example do not question the existence of an external physical world, but our access to the true facts about it. Even the way that Chalmers attempts to dismiss any deviation from his general supervenience claims tacitly underscores this point. For recall that in considering a

[3]. And even if the movie is silent about the constitution of this entity or specifies some other constituting substance, it is clear that this is a supernatural being by anyone's definition.

[4]. He lists “angels, ectoplasm, and ghosts” as examples of “nonphysical stuff not present in our own world” (Chalmers 1996, 39).

world without his type of logical supervenience, Chalmers asks, „How would we know that we were not in that world rather than in this one“ (Chalmers 1996, 73)? If answering this question is supposed to be a problem for those who would deny his supervenience claims, then it provides a problem for Chalmers as well. For, according to Chalmers' own hypothesis, a world with logical supervenience will appear the same to a cognizer as the world lacking logical supervenience. As he puts it: „... if I were in the alternative world [that lacks logical supervenience], it would certainly look the same as this one“ (Chalmers 1996, 73; Chalmers' emphasis). So how does Chalmers know that he is in the world with logical supervenience? Saying „I clearly have biological knowledge, so there must be logical supervenience“ simply begs the question and fails to address the prima facie problem as even he sets it up. Given that (i) Chalmers claims that even prima facie epistemological problems reveal a lack of logical supervenience, (ii) Chalmers admits that there is at least a prima facie epistemological problem concerning the external world, and (iii) Chalmers's strategy to avoid this problem is based on a misdiagnosis of the true nature of the sceptical threat, we should conclude that Chalmers own epistemological principles lead us to reject his principle of logical supervenience.

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Bonjour's A Priori Justification of Induction

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Justifications of induction, and certainly a priori justifications of induction, are out of fashion these days. In a chapter of his recent book, In Defense of Pure Reason (1998)[1], however, Lawrence Bonjour, the respected American epistemologist, bucks the trend and makes a valiant attempt to revive the latter. What he claims can be justified a priori is that if the premise of a standard inductive argument obtains, then it is likely or probable that the conclusion will hold. A standard inductive premise, for Bonjour, will state that a certain proportion m/n of observed cases of A have been cases of B, as well as specify that there has been "suitable variation of the collateral circumstances" and that the "observed proportion ... converges over time to the fraction m/n" (Bonjour, 206-07). The standard inductive conclusion will state that there is "a corresponding objective regularity in the world" (212), in other words an objective regularity of the form: m/n of all As are Bs.

Since Hume's day a priori justifications of induction have been received with scepticism, but the alternatives are not altogether satisfying to many of us, to say the least.[2] It would be exciting if Bonjour's project were successful. Sadly, as we shall show, his project fails; indeed, once the hidden assumptions are brought to light, we shall see that it seems to fail for all too familiar reasons.

Part 1 of our paper will sketch Bonjour's overall strategy, a two-step procedure, and argue that the first step, the "some-explanation" step, is crucial. Parts 2 and 3 will criticize this crucial step: Bonjour's supposedly a priori inference to some explanation commits the fallacy of false dilemma and Bonjour shows us no way of excluding the intermediate alternatives (2); nor will couching his argument in terms of possible worlds help to make it more persuasive (3).

We need to make two quick preliminary points before we begin. First, for the sake of the discussion we shall go along with Bonjour and assume that there is a workable notion of a priori justification, which is reasonably close to the traditional one of having a reason that does not depend on experience. Second, although Bonjour's standard inductive premise and conclusion are put in terms of the general case of a fraction m/n of As being Bs, for the sake of clarity and simplicity we shall concentrate on the case where m/n = 1, namely the case of all As being Bs. From now on, then, when we refer to the standard inductive premise we shall be focusing on the case in which all observed cases of A have been (observed) cases of B in a wide variety of circumstances (and hence the observed correlation apparently converges to the fraction, m/n = 1); and when we refer to the standard inductive conclusion we shall be focusing on the claim that there is an objective regularity of the form: all As are Bs.

1. Bonjour's Overall Argument

Suppose that without exception copper has been observed to melt at 1083 degrees centigrade in a wide variety of circumstances (which include different times, places, and experimenters). Here we have what Bonjour calls a standard inductive premise: all observed As (copper objects) have been observed to be Bs (to melt at 1083 degrees centigrade). Bonjour's project is to show that from such a premise one can derive *a priori* a standard inductive conclusion, namely the "straight" conclusion that it is an objective regularity (a law-like regularity) that all As are Bs, in this case that it is a law that all copper melts at 1083 degrees centigrade.

Bonjour proposes to move from the standard inductive premise to the standard inductive conclusion in two steps, both of which need of course to be *a priori*. The first step argues that there must be some explanation other than chance to account for the inductive premise, since the chance hypothesis would be so improbable as to be miraculous. The explanation in question will cite some objective regularity, but not necessarily the straight law, As cause Bs. Instead the relevant law might be of the form "Being A + C causes being B" or of the "fork" form "Cs cause both As and Bs" (206-09). The second step argues that the conjunction of the inductive premise with the claim that there is some explanation makes it most likely that the straight explanation obtains (209-13).

Bonjour's two step procedure is reminiscent of the idea suggested by Hume and then further elaborated by philosophers such as Mill and, more recently Mackie (1979: 123), that one might first try to establish something like a principle of the uniformity of nature and second, uniformity having been secured, go on to infer from the empirical data what particular laws there are.[3] Of course, if there is any consensus on Hume's views it is that Hume was sceptical about the possibility of demonstrating *a priori* any uniformity principle.

Bonjour's first step of establishing his claim that there is some explanation for the inductive premise is really the crucial one. We shall be concentrating on it. If we could establish that there is some explanation for the observed regularity we would be well on our way to establishing the straight explanation. But how can we establish, indeed establish *a priori*, that there is some explanation? It is important here to see that Bonjour is not trying to establish *a priori* the categorical claim that for any event that happens there is an objective law that covers it. Rather what he wants to establish is the conditional claim, "In a situation in which a standard inductive premise obtains, it is highly likely that there is some explanation (other than mere coincidence or chance) for the convergence and constancy of the observed proportion …." (208). Let us call this the some-explanation principle.

Can Bonjour's some-explanation principle be justified *a priori*? The rest of our paper will argue that it cannot, or at least that Bonjour has failed to show that it can.

[1] Bonjour gives a simplified and abbreviated version of this chapter in his latest and more introductory book, Bonjour 2002.

[2] We are thinking of such alternatives as ordinary-language, pragmatic, reflective-equilibrium, and reliabilist justificatory attempts, associated with such philosophers as Peter Strawson, Reichenbach, Goodman, and Alvin Goldman.

[3] Indeed, if the uniformity principle were restricted enough, it might even be possible to deduce from such a principle, in conjunction with empirical evidence, that certain particular causal laws hold!

2. Can the Some-Explanation Principle be Justified A Priori?

Bonjour's some-explanation principle, which he thinks can be justified *a priori*, is that if a standard inductive premise holds then it is highly likely that there must be some explanation other than chance for the observed regularity.

How does he think that this principle can be justified *a priori*? His idea is that, helping ourselves to the familiar tools of the probability calculus, including Bayes's Theorem, and assuming that these are *a priori* (under appropriate interpretations), we can reason as follows. Suppose that a standard inductive premise holds, say that all observed As have been observed to be Bs in a wide variety of circumstances. What hypothesis best accounts for this regularity? There are two possibilities. Either the observed correlation is due to chance or there is some explanation, some objective regularity, which accounts for it. "Of course, [says Bonjour] it is logically possible that the results in question represent the operation of nothing more than mere random coincidence or chance, but it seems evident, and as far as I can see evident on a purely *a priori* basis, that it is highly unlikely that only coincidence is at work … " (208).

Here is a simple analogy. I flip a coin 1000 times and it turns up heads every time. Either the coin is a fair, or in other words chance is operating, or the coin is biased (some explanation is at work). It is obvious that it is extremely unlikely that the chance hypothesis holds here. This will be true even if the initial, or prior, probability of the chance hypothesis is high (suppose that before I flipped the coin I had strong evidence that it was freshly government-minted). Since the only other possibility is that the coin is biased, the hypothesis that this is so (and thus that there is some explanation) is highly probable.

This reasoning looks good, does it not? Unfortunately, there are flaws, some of which may be irreparable. At the very least Bonjour gives us little guidance in how to repair them.

The main flaw in Bonjour's reasoning above is that it commits the fallacy of false dilemma. The some-explanation hypothesis, interpreted in the needed way, and the chance hypothesis are not exhaustive. There are many, indeed an infinite number, of intermediate hypotheses. Types of intermediate hypotheses, most quite familiar, include: Goodman's grue-like hypotheses, wild curve-fitting hypotheses (Swinburne, 2001: 83), and hypotheses that invoke temporally or spatially limited objective regularities, e.g. the hypothesis that there is a causal law, As cause Bs, which holds only for a million years starting with 10,000 BC (Mackie, 1979: 125). These intermediate hypotheses are of course more or less "crazy" in the sense that they would be not be entertained, or if entertained then quickly dismissed at the outset, by common sense or science. Bonjour, however, needs not only to dismiss all such intermediate hypotheses, but also to dismiss them *a priori*, if his reasoning is to go through.

But why does Bonjour's some-explanation hypothesis have to be restricted to "sane," or "normal," explanations? Briefly, this is because without such a restriction Bonjour's second step to the "straight" conclusion, namely, that it is an objective regularity that all As are Bs, will not succeed. Suppose that all examined emeralds have been observed to be green in a wide variety of circumstances. Such evidence may well make the "sane" straight explanation --- it is a law that all emeralds are green --- much more probable than the "sane" fork explanation --- there was some third factor present in each case that caused the object to be an emerald and also caused it to be green. That evidence, however, will do nothing to eliminate the "crazy" explanation that it is a law that all emeralds are grue.

Bonjour, then, is going to have to eliminate *a priori* these crazy hypotheses. Can he do so? This is really the old question, for which the probability calculus and Bayes's theorem in themselves give us no help, of how we should assign the initial, or prior, probabilities to possible hypotheses. Traditional suggestions for assigning prior probabilities include appeals to background common-sense or scientific beliefs, to considerations of simplicity, to the principle of indifference, or to various combinations of these. There has been and still is much controversy over how to formulate clearly such suggestions, e.g. how to formulate a criterion of simplicity which squares with our intuitions. Further, there is additional scepticism over the status of the connection between the suggested conditions and probability. It may well be that simpler hypotheses are more likely to be true, but is this *a priori*?[4]

A careful examination of Bonjour's attempt at an *a priori* justification of induction leads us back to these old controversial questions. Well and good. But at this point Bonjour leaves us hanging. The most he gives us in the way of an *a priori* rejection of crazy hypotheses are a footnote dismissal of "grue"-like predicates as having "any major bearing on the classical problem of induction" (189) and a short dismissal of hypotheses that postulate a change in the laws of nature (such as our million-year hypothesis above) by claiming, but not defending, the view that objective regularities are in some sense non-Humean (214-15).

3. Do Possible Worlds Help?

Bonjour at one point tries to couch his argument for the some-explanation principle in terms of possible worlds. "The relevant claim," he says, "would be that it is true in all possible worlds that there is likely to be a non-chance explanation for the truth of a standard inductive premise." In other words, it is a *necessary truth* that the number of possible worlds that satisfy the inductive premise and have some explanation is greater than the number of worlds that satisfy the inductive premise and do not. In fact, he goes on to claim that these latter worlds "are quite rare and unlikely within the total class of possible worlds" (209).

Why should we believe this? First, it seems clear that the number of possible worlds is infinite. How are we to understand Bonjour's claim about the relative rarity of some types of world *vis-à-vis* others? He concedes that he is assuming that it is possible to make sense of the relative sizes of classes of possible worlds even when the classes are themselves infinite, and cites as an intuitive example, Cantor notwithstanding, that there are twice as many positive integers as even integers. Despite his faith in the "intuitive credentials" of such a claim, we remain unpersuaded.

Furthermore, it seems easy to show that among worlds in which the inductive premise is satisfied, there are at least as many worlds in which there are *no* "sane" objective regularities as there are worlds in which there are. Consider a world W in which such regularities hold.

[4] Howson, in 2000 (which has greatly influenced our views on induction), pp. 42-43 considers and nicely rebuts the view that we should reject many of the crazy hypotheses because "these concocted alternatives did not predict the data *independently* …"

For each such world there is some other world W* which is exactly like W except that in some remote unobserved region of W* conditions obtain so as to render false the conclusions of all "sane" standard inductions.[5] So much for the rarity of such "non-explanation" worlds.

Second, even if Bonjour could show that there are more possible worlds in which some explanation holds, it would follow that a given world is *more likely* to be such a world only if we assume that each possible world is equally probable. But this is impossible, since any finite number times infinity will be larger than one.[6] We cannot assign all possible worlds equal prior probability, and any attempt to make an alternative assignment (e.g., lower probabilities to the "crazy" worlds mentioned earlier) will necessarily require additional assumptions, which may well turn out to be empirical.

But the situation is even worse than this. The number of possible worlds is clearly *non-denumerable*. Howson (2000: 75) has shown that in a non-denumerable possibility space, a non-denumerable number of the possibilities must be assigned a prior probability of zero. Which possible worlds are to receive that honor? Bonjour gives us no clue about this.

Bonjour's fresh attempt at an *a priori* solution to the problem of induction, then, is well worth exploring. Sadly, it cannot be counted a success: there are too many issues left unresolved.

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[5] We are indebted to Chase Wren (2000) for this suggestion, which we are paraphrasing almost verbatim.

[6] This principle, despite being obvious, follows from Archimedes's Axiom, which claims that any for any non-zero real number x, there is a *finite* number of times x can be added to itself such that the resulting sum will exceed any finite number specified.

Peirce and Wittgenstein on Doubt: A Comparison

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1. Introduction

There are many areas of Peirce and Wittgenstein's thought which have great affinity for one another such as: the impossibility of a private language, the distinction between believing and knowing, and the role of doubt and certainty in our epistemic practices. I shall focus on the affinity between Peirce and Wittgenstein's thought on the role of doubt in our epistemic practices. I will argue that Peirce and Wittgenstein give us a 'broadly' pragmatic account of the role of doubt and by this I mean, they are interested in the difference doubt makes to our epistemic practices (I do not mean by this that Wittgenstein is part of a philosophical movement called pragmatism). Specifically, Peirce and Wittgenstein argue against the skeptical, or Cartesian, form of doubt that has dominated epistemological discussion. They deny that universal doubt is a genuine doubt; such a 'doubt' is idle, because it does not have any practical consequences for us. Genuine doubt must have a ground and of course there is no rule that can determine whether a ground for doubt is genuine in all circumstances. Doubts occur in a context, with all our prejudices and beliefs in place.

2. Universal Doubt Is Not A Genuine Doubt

One aspect of Peirce's conception of doubt is his persistent rejection of Descartes' universal doubt and his use of universal doubt to further his epistemological ends. Peirce's famous statement of his rejection of universal doubt and the Cartesian method of doubting occurs in his 1868 paper *Some Consequences of Four Incapacities*.

> "We cannot begin with complete doubt. We must begin with all the prejudices which we actually have when we enter upon the study of philosophy. These prejudices are not to be dispelled by a maxim, for they are things which it does not occur to us can be questioned. Hence this initial skepticism will be a mere self-deception, and not real doubt; and no one who follows the Cartesian method will ever be satisfied until he has formally recovered all those beliefs which in form he has given up. It is, therefore, as useless a preliminary as going to the North Pole would be in order to get to Constantinople by coming down regularly upon a meridian. A person may, it is true, in the course of his studies, find reason to doubt what he began by believing; but in that case he doubts because he has a positive reason for it, and not on account of the Cartesian maxim. Let us not pretend to doubt in philosophy what we do not doubt in our hearts." (CP: 5.265)[1]

And again in his 1878 paper *The Fixation of Belief:*

> "Some philosophers have imagined that to start an inquiry it was only necessary to utter a question whether orally or by setting it down upon paper, and have even recommended us to begin our studies with questioning everything! But the mere putting of a proposition into the interrogative form does not stimulate the mind to any struggle after belief. There must be a real and living doubt, and without this all discussion is idle." (CP: 2.376)

The mere utterance of a doubt is not sufficient for there to be a real doubt. Descartes claims to doubt all his beliefs, but it does not follow that he really does doubt them. This is a doubt that makes no difference to our practices and beliefs. Wittgenstein concurs:

> "115. If you tried to doubt everything you would not get as far as doubting anything. The game of doubting itself presupposes certainty."
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> "450. A doubt that doubted everything would not be a doubt."[2]

These statements also indicate that Peirce and Wittgenstein share the claim that our ability to doubt rests upon beliefs and practices which are themselves not open to doubt. Furthermore, such attempts to doubt "what it does not occur to us can be doubted," are merely idle:

> "119. But can it also be said: Everything speaks for, and nothing against the table's still being there when no one sees it? For what does speak for it?
>
> 120. But if anyone were to doubt it, how would his doubt come out in practice? And couldn't we peacefully leave him to doubt it, since it makes no difference at all?"

Here again we can see that Peirce and Wittgenstein share the claim that, a genuine doubt must have consequences for our actions and beliefs, it is not sufficient to merely announce a doubt, as if doing so gave it authority over all our beliefs and practices. A genuine doubt must have practical consequences, it must, for example, stimulate us to inquiry. But now we need to see how Peirce and Wittgenstein think that we can identify a genuine doubt.

3. Genuine Doubt Must Have A Ground

The general doubt of Cartesianism cannot be the basis for inquiry, if I doubt that there is such a place as Cumberland Lodge, because of the possible existence of an evil Demon, I am not giving a specific reason for doubting the existence of the place - such as the Lodge burned down last year. If I doubt that Cumberland Lodge exists because of the possibility of an evil demon, then how can I show you that the Lodge does exist, how can inquiry proceed? Alternatively, if I doubt that there is such a place as Cumberland Lodge because it burned down, then I can proceed with an inquiry to determine whether or not the reason for my doubt is a good one. With the general doubt we have no way of determining whether the reason for doubt is a good one by a process of inquiry, and this is because we have no way to proceed in our inquiry from the starting point of general doubt. Peirce is here claiming that a possible doubt is not a real one; Descartes supposes that he can doubt that he is sitting next to the fire, or Cumberland Lodge does not exist, but it does not mean that he does.

[1] All references to Peirce are taken from *The Collected Papers*. The standard reference format is CP: followed by volume number 5. followed by paragraph number 265.

[2] All references to Wittgenstein are from *On Certainty*. I provide the paragraph number at the start of the quotation, rather than page numbers.

In genuine inquiry we reject a belief, not because it is possible to doubt a belief, but because we genuinely do doubt it and have reasons to doubt it relevant to our inquiry. Let us say that you and I are waiting at Victoria station for Fred. The train he is supposed to be arriving on comes in, we see a figure getting off the train at the far end of the platform, from a distance it looks like Fred - same general height and build, trademark trenchcoat, dark hair, walks like Fred, etc. You point him out and say, "that looks like Fred, but I can't be sure," I reply "yes, at this distance its difficult to be sure." The reasons for doubt are that sight cannot accurately determine, at long distances, whether the fast approaching figure is or is not Fred. Once the figure is a few feet away from us, the doubt is dispelled. At this point I turn to you and say - "Oh, look it is Fred," but you reply, "I still can't be sure." "Why not" I ask with a certain amount of incredulity, now if your answer were to be - "because my senses have deceived me in the past and it is possible that they are deceiving me now"; then this is a very different answer from - "because I forgot my glasses and without them I can't see anything beyond my own nose."

The reasons for the second doubt depend upon the context in which you are currently located; the reasons for the first do not. Descartes concedes that his form of doubt should not be carried over into practical life. Peirce's point is that it is difficult to see what kind of motivation we have for an inquiry based on Descartes' method of doubt.

Wittgenstein agrees with Peirce that there must be grounds for doubt:

> "322. What if the pupil refused to believe that this mountain had been there beyond human memory?
> We should say that he had no *grounds* for this suspicion.
>
> 323. So rational suspicion must have grounds?
> We might also say: 'the reasonable man believes this'."

Peirce tells us that a doubt is something that stimulates an inquiry, by unsettling a stable belief; therefore we should look for the grounds for doubt in the context of an inquiry. Wittgenstein, as we saw in the previous section, tells us that the grounds for doubt can be found in that doubt's practical consequences; what difference will the doubt make to the way we go on? In 120 Wittgenstein shows the idleness of the doubt that a table is still there when nobody sees it. He asks us to consider the difference that such a doubt would make to our beliefs and practices concerning tables. Similarly, Peirce denies that a doubt that has as its ground - an evil demon could be deceiving me - makes any difference at all to how I might conduct an inquiry. The important point that Wittgenstein and Peirce share, is that these doubts make no difference to our actual beliefs and practices, they have no purchase on them. Which allows Peirce and Wittgenstein to consider the more interesting question of how genuine doubts do make a difference to what we think and do,

> "450. I want to say: Our learning has the form 'that is a violet', 'that is a table'. Admittedly, the child might hear the word 'violet' for the first time in the sentence 'perhaps that is a violet', but then he could ask 'what is a violet?' Now this might of course be answered by showing him a picture. But how would it be if one said 'that is a…' only when showing him a picture, but otherwise said nothing but 'perhaps that is a…'- What practical consequences is that supposed to have?"

In 450. Wittgenstein shows that a child could not be taught to use a word by hearing them as expressions of uncertainty. The practice of showing the child a picture and saying "perhaps that is a…" would be an absurd way of trying to teach the child how to use a word, it would not be a recognisable language game, to us. This presupposes that there are language games in which genuine doubt plays a role. In paragraphs 310 – 317 Wittgenstein imagines a pupil who continually interrupts his teacher with doubts about the existence of things and the meanings of words. Just as someone who looks for objects by opening a draw, seeing that the object is not there, closing the draw, waiting and then opening the draw again has not learnt how to look for things; so the pupil who asks questions about the existence of objects when nobody is looking has not learnt how to ask questions.

Wittgenstein is calling for us to suppose that in any act of doubting there must be grounds for doubt. However, he is aware that there is no general rule or guideline which determines when a doubt is unreasonable or groundless.

> "452. It would not be reasonable to doubt if that was a real tree or only…. My finding it beyond doubt is not what counts. If a doubt would be unreasonable, that cannot be seen from what *I* hold. There would therefore have to be a rule that declares doubt to be unreasonable here. But there isn't such a rule either."

The positive account of doubt shows that particular doubts arise in particular contexts, rather than there being an absolute rule that determines when doubts are grounded or not. This is because, particular doubts occur in particular contexts.

4. Doubt Arises in A Context

Doubting occurs within a language game, not outside of it. The act of doubting presupposes the ability to engage in such language games and the language games themselves presuppose certain characteristics of the act of doubting.

> "255. Doubting has certain characteristic manifestations, but they are only characteristic of it in particular circumstances. If someone said that he doubted the existence of his hands, kept looking at them from all sides, tried to make sure it wasn't all done by mirrors, etc. we should not be sure whether we ought to call that doubting. We might describe his way of behaving as like the behaviour of doubt, but his game would not be ours."

Wittgenstein goes on to ask how we would convince someone who professed to doubt that they had hands or a body. What sort of language games would apply here? Doubt with grounds and some practical consequence can now be seen as being part of the language game of doubting, but only relative to particular circumstances.

Peirce concurs, a genuine doubt has the ability to alter our beliefs, whereas sceptical doubts never do. A doubt is motivated by a positive reason for holding it, being directed at a specific belief. This is why a doubt occurs in a particular context and initiates a particular inquiry. Doubt presupposes belief and inquiry, without them there could be no genuine doubt.

5. Conclusion

I have given only a brief sketch of the rich points of comparison between Peirce and Wittgenstein. They both agree that universal doubts are idle, this is because they have no practical consequences, they make no difference to the ways in which we would conduct ourselves. Doubts

require grounds, they must be positive and directed, or reasonable. However, there are no hard and fast rules for determining grounds for doubt in any particular context. But, doubts do arise in a particular context and we do recognise them when they stimulate us to consider our current beliefs.

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Unthinkable Syndromes.
Paradoxa of Relevance and Constraints on Diagnostic Categories

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1. Genesis of Diagnostic Categories

Bodies of collective knowledge evolve through individual action, like all products that have a use. They also can be evaluated from the engineer's optimizing design perspective. But can individual participants in their making recognize local optimality? Can they work to realize it? Are they unable to act seriosly in a way that would ensure acquisition of a certain suboptimal design feature?

One might hope for a simple answer: appeal to innate constraints on the form of categorization. But such constraints cannot wholly pre-empt the need for individual checks and thus for agency. The use of categorial schemes engages facts about the world that do not leap to the eye. They are unlike syntactic or phonological constraints of language, or edge-and orientation-detection algorithms of visual perception.

What we should thus be looking for will be modest: constraints, innate or otherwise, that rule out the choice of categorial schemes which are clearly suboptimal and that are, in principle, open to agents' instant observation. We look to a limited if important domain of systematic knowledge: medical diagnostic knowledge.

2. Basic Bayesian Reasonings

Signs or symptoms are not usually certain signs of diseases. A dry cough or hypertension could each be associated with many diverse diseases. Observing one or several symptoms will perhaps make a certain disease more likely, but it need not be a conclusive sign of it.

Bayesian reasoning with probability constraints is a well-explored framework for dealing with such inconclusive evidential relations. Its laws specify how the impact of evidence E is to transform prior probabilities P(H) of a hypothesis H or its odds P(H)/P(-H) into posterior probabilities P(H|E) or odds P(H|E)/P(-H|E). We obtain posterior odds by multiplying prior odds with the Bayes-Factor, P(E|H)/P(E|-H). Probability constraints represent a belief- or (possibly partial) knowledge-state. Bayesian networks are sets of probability constraints that represent probabilistic dependencies between variables, in our example between indicator variables X[K] whose values represent the truth of complementary propositions, K and –K, respectively. If there is some pair (H1,E1) of values of the variables X[H] and X[E], such that P(H1|E1) > P(H1), then the variables are said to be probabilistically dependent in a doxastic state P. A special case is deterministic dependence, when P(H1) < P(H1|E1) = 1.

To become computationally tractable, Bayesian nets rely on simplifying assumptions, particularly conditional independence assumptions. Propositions A and B are conditionally independent given proposition H under a probability function P iff P(AB|H) = P(A|H)P(B|H). (Unconditional independence is the special case where H is the tautology.) Independence conditional on a variable X[H] is independence conditional on each of the cells of the propositional bipartition {H,-H} of the space of possibilities. Call this doubly conditional independence (DCI). It is this condition which is crucial to Reichenbach's (1956) explication of a Common Cause (CC).

A necessary condition on H being a CC of A and B is that AB are DCI under H and are both positively relevant to H. (Temporal precedence of H is the remaining definitional requirement. Without this requirement we might simply speak of H as a 'common reason' (CR) for A and for B.)

DCI implies that A and B each positive to H are positively relevant also to one another. This suggests a common procedure. We search for common causes on observing a dependence (positive correlation) of A and B. We then infer as a CC or CR some condition H as yet unknown to us that we next go and search for.

Another and immediately obvious formal consequence of DCI is that the relevance of A and B to H, i.e. a measure of their evidential import for A, becomes compositional when assessed by the Bayes Factor: now P(AB|H)/P(AB|-H) = [P(A|H)/P(A|-H)]x[P(B|H)/P(B|-H)]. Taking logarithms we have the relevance of AB as the sum of relevances of A and of B.

Common Cause and Compositionality, both associated with DCI have given rise to a suggestive and, in its way, Kantian hypothesis. We postulate causes H (causal variables X[H])in order to reap the computational advantages of the condition, DCI, which goes into defining CC. The original context of this suggestion was medical diagnosis.

3. Computation, Causes and Syndromes

A syndrome, says the Shorter Oxford English Dictionary of 1983, is "a group of symptoms or pathological signs which consistently occur together, especially with an (originally) unknown cause; a condition characterized by such a set of associated symptoms." It is in this latter, rather liberal sense of "condition" that the epistemological literature on diagnostic categories appears to use the term "syndrome".

Charniak (1983) conjectured that medical diagnostic categories ("syndromes") are formed so as to afford independence of possible observations ("symptoms") conditional on presence of the syndrome [CI]. Pearl (1988:44) amplifies. Conditional independence on a syndrome variable i.e. DCI, allows probabilistic reasoning on dependencies to be decomposed into a set of independent subtasks in stages, using simple vector operations. Such simplicity, surmises Pearl, makes conditional independence a psychological necessity (presumably: wherever it can readily be assumed). "It may be to reap the computational advantages associated with such independence", concludes Pearl, "that we organize most of our knowledge in causal hierarchies."

Pearl's thesis on the structure and evolution of diagnostic categorial schemes is a philosophical hypothesis of the empirical kind. But, as stated and motivated, it is not readily testable. Numerical data are not generally available to verify whether the DCI constraint or at least compositionality of evidence holds in many particular cases. Thus

we could not expect a reliable answer if we asked a physician:

> If A and B are symptoms of H, will the indicator random variable X[H] fully account for the dependence between them?

Indeed, even if we made allowances for erroneous assumptions of conditional independence (in line with a ubiquitous tendency to assume independence where, in fact, it fails to hold), we should most likely draw a blank. This is not a question many physicians will be able to answer decisively. The same will be true for less fastidious and perhaps more intuitable, but reasonably unanswerable questions such as

> If A and B are symptoms of H, will this ensure that A is not a cause of B, nor B a cause of A, yet each is a sign that the other will occur?

A more careful variant, again, is still problematic:

> If A and B are symptoms of H, and if you either know for sure that H or know for sure that -H, will the presence of A or of B neither decrease nor increase your surprise at observing the other?

The condition where H is known might seem palatable as the basis for an exercise of the medical imagination. But the condition -H seems hard to fathom. (At least part of the problem seems to stem from psycholinguistic problems. But we have to contend with them.)

So what is wanted is a scheme of scanning diagnostic categories for possible counterexamples to Pearl's or even Charniak's thesis. Also wanted is a criterion that might guide individual agents of evolution. Syndrome categories are, after all, introduced or at least proposed by individual members of the medical community. And then we must ask: How can individual proponents of a taxonomic decision avoid suboptimal acts of category formation when they lack, as they must, the hindsight of the evolutionary long run which lies ahead of them?

4. Paradoxa of Relevance

The probability calculus admits well-known paradoxa of relevance (Carnap 1950: Ch.6 gives an exhaustive and exhausting discussion). Probability models can be constructed which satisfy one or the other of the following conditions:

> A and B are positive to H, but AB is negative to H.

> A and B are positive to H, but AvB is negative to H.

> AB is positive to H, but AvB is negative to H.

Paradox (i) has non-medical examples readily constructed to model it. Paradox (ii) is less readily imagined on the spot, but is well known as Simpson's Paradox. By De Morgan's equivalence and recalling that negation reverses relevance sign, we find that (i) is the condition -A and -B negative to H, -Av-B positive to H. So, formally, any instance of (i) and (ii) is also an instance of the other modulo sign. Predicament (iii) holds whenever (i) or (ii) holds and will be of no substantive further interest to us. (Its necessary and sufficient conditions allow one of A and B to have zero relevance to H.)

What makes (i) and (ii) counterintuitive? A first answer is that their analogues cannot arise in deductive, i.e conclusive reasoning. A proposition E is negative to a proposition H iff positive to -H. Now recall (i)-(iii) and replace in them "positive to" by "entails", and "negative to" by "entails the contradictory of". None of the conditions thus obtained is satisfiable. If both A and B entail H, then so do AB and AvB. If AB entails H, AvB cannot entail -H. The same will hold analogously when probability is used to explicate a notion of non-vacuous doxastic entailment, $P(H|E) = 1 > P(H)$, of extreme positive relevance of some E to H. Relevance configurations which cannot be retained smoothly when relevance goes to the extreme are presumably unnatural. But there are also prima facie different considerations involved.

5. Doubly Conditional Independence blocks Paradox

Neither of the paradoxa can arise under DCI.

> FACT 1: If A and B are DCI on {H,-H} and both are positive to H, then AB and AvB are also positive to H.

The proof is immediate. DCI ensures multiplicativity of Bayes factors. If both A and B are positive to H, their Bayes factors each exceed 1, and hence their product, equal to the Bayes factor of AB, must exceed 1. That Paradox (ii) is ruled out by DCI is less obvious to immediate intuition. But of course it is, as the structural equivalence to (i) already tells us and direct proof easily confirms. Probability models are also readily constructed to demonstrate

> FACT 2: CI is insufficient to rule out evidential paradox.

> FACT 3: Neither DCI nor even CI is necessary for compositionality (log-Bayes factor additivity) of evidential weight.

Fact 2 tells us that entailment by H, which makes for CI is not enough. Fact 3 would be a little worrisome if DCI were our prime target. (Only a little, though. DCI guarantees compositionality, and, since it can be specified elegantly, having DCI is better than hoping for haphazard compositionality). However, what we are after is additivity of evidence.

Since paradox (i) (hence paradox (ii)) is always a counterexample to additivity of evidence, category creators who failed to avoid it would be performing an act dominated with respect to computational optimality of the conceptual scheme to be extended. They would also ensure that their syndrome could not label a Reichenbach Common Cause of their observables.

6. Individual Intuitions and Natural Categories

Pearl's hypothesis is not readily verified, we noted. However, it is readily falsifiable. A diagnostic categorial scheme which admitted paradox of relevance would be a counterexample.

Now, Simpson's Paradox does affect real-life probabilistic reasoning. But its typical configurations (the Berkeley admissions paradox or inverse effects of medical treatment in sub-populations and their aggregate) are not instances of syndrome and symptoms. They do not involve what might be called 'natural' cultural categories.

Thus we should look at natural categories and doxastic agents in our chosen domain. I have informally checked physicians from a variety of specializations for incidence of paradoxical syndrome-symptom configurations. None could come up with a real medical configuration of

syndrome and symptoms that made for evidential paradox under either formulation (i), (ii) or (iii). None could even make up such a constellation for the nonce.

Perhaps the latter failure simply shows that the physicians queried lack imagination, the kind which philosophers are trained to acquire. Yet (the?) two philosophers who have treated of the paradoxa of relevance in a medical setting, Rudolf Carnap and Wesley Salmon, also exhibit a similar and very sensible blind spot of the imagination. Both authors refer to abstract constellations (i), (ii), Carnap also to (iii). Both make up medical (pseudo)-examples to illustrate paradoxical eviedential situations. But the examples constructed, involving three propositional variables, are never instances of two symptoms each speaking for a syndrome, while their conjunction or disjunction speaks against.

Carnap (1950:367), in ostensible illustration of paradox (ii), considers, with uncharacteristic opacity, two putative syndromes ("virus pneumonia" (H), "bacillus pneumonia" (G)) speaking for a hypothesis that does not itself have either symptom or syndrome status. He does not offer two symptoms speaking for a syndrome. Salmon (1975:27) constructs transparent scenarios where evidence E is positive to each of Carnap's H, G, but is negative to HG or HvG. Substantive plausibility apart, this does not, again, illustrate the syndrome/symptom relation to be tested.

Even philosophers have not so far then, it seems, made up examples violating the "Avoid paradox" constraint on possible syndrome-symptoms configurations. Such configurations look like being unimaginable, as soon as our imagination is informed by constraints of subjective but serious possibility for the specific domain in question.

A significantly sized class of possible instances of diagnostic categorial schemes will thus be ruled out by individual categorizer's inability to entertain or unwillingness to admit schemes which make for paradox. These schemes are bound to violate compositionality of symptomatic evidence for a syndrome, and in doing so they violate DCI, which is a sufficient condition for it. Hence we have a useful constraint on formation of possible categorial schemes. One must suspect that our penchant to search for causes -- common causes -- i.e. for an etiology that reveals an H which can be acted on remedially is the real driving force for this: that we are, as Lichtenberg puts it, causational animals ,"Ursachentiere". Yet whichever of CC or Compositionality we alight upon, paradox-freedom is its tangible signpost.

We can interpret the observed constraint in two ways. First, it might be seen as concrete evidence that human minds are simply built to work in the way that Pearl hypothesizes it does. Secondly, it can be seen as an intuitive check for individuals not so built, against proposals, their own or others', of a categorial scheme which is bound to violate a sufficient condition for evidential compositionality.

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A Gesture of Understanding: Wittgenstein, Moore, and "Therapy"

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Wittgenstein scholarship appears currently to be engaging in a deepening debate over the role of nonsense in Wittgenstein's later philosophical work. For one party to this engagement, Wittgenstein's later work pursues the project of exposing nonsense when it emerges during the course of philosophical discussions, and thereby provides a kind of therapeutic assistance to those philosophers who might otherwise have defended positions whose tenets include nonsensical remarks that "do not say anything" (Crary 5). This therapeutic reading argues in *The New Wittgenstein* and *Wittgenstein in America* particularly in the hands of James Conant that an austere interpretation of the role of nonsense in the Tractatus can be successfully extended to account for the project of Wittgenstein's later writings as well. Opposing this therapeutic reading of Wittgenstein, P.M.S. Hacker has argued that Wittgenstein sees nonsense as arising from our attempts to deny grammatical rules by forming "nonsense which violates the grammar" (Baker 279). When philosophers begin to devolve into nonsensical remarks, Wittgenstein seemingly will not provide the form of therapy Hacker critiques, but rather will remind us of our rules of grammar in a way that *The New Wittgenstein* appears determined to resist. The text of Wittgenstein's later collection *On Certainty* provides one case of a Wittgensteinian engagement with a philosophical discussion of knowledge, certainty, and error, a case for which each of these interpretations might wish, I suggest, to be able to account. *On Certainty* follows Wittgenstein's involvement with G.E. Moore's treatment of knowledge and skepticism, according to which I know I have two hands, and so can debunk a line of skeptical doubt, when I follow for my part along with Moore's reasoning. Wittgenstein presents at least three forms of response to Moore, including accusations of nonsensicality, attempts to locate the sense of Moore's view, and assessments of Moore's understanding of his own remarks. As the interplay of these themes unfolds, I suggest in the end that *On Certainty* pursues a diagnostic engagement with Moore's philosophical discussions whose distinctive character neither the therapeutic reading nor Hacker's interpretation has yet properly to appreciate.

On Certainty presents a record of Wittgenstein's extended entanglement with Moore's treatment of knowledge and doubt in his essays in epistemology, an entanglement formed by the interplay of three primary themes – nonsense, sense, and understanding. Firstly, early in *On Certainty*, Wittgenstein indicates that during the discussions Moore provides of epistemology, he advances apparent knowledge claims that may be viewed as nonsensical. Indeed, these moments within Wittgenstein's treatment appear to manifest just the qualities that the therapeutic reading would lead us to expect. Wittgenstein finds Moore stepping into nonsense during the course of his work in epistemology:

> I know that there is a sick man lying here? Nonsense! I am sitting at his bedside, looking attentively into his face. – So I don't know, then that there is a sick man lying here? Neither the question nor the assertion has sense. (*OC* 10)

Such passages as this confirm the presence of a conception of nonsense in Wittgenstein's treatment of Moore. As Wittgenstein addresses seeming knowledge claims typical of Moore's discussion, he finds both the alleged assertion and denials of knowledge to be characteristically lacking in sense. As Wittgenstein considers it, when we suggest "'The expression "I do not know" makes no sense in this case'…of course it follows from this that 'I *know*' makes no sense either" (*OC* 58). Wittgenstein certainly appears to be employing a conception of nonsense familiar from his earlier writing, according to which nonsense so to speak lacks truth value, and the negation of nonsense yields nonsense. Texts such as these help to support the notion that Wittgenstein is employing nonsense as a term of criticism when he explores the work of other philosophers. This involvement with charges of nonsensicality therefore presents us with a question of whether Wittgenstein proceeds to handle Moore's nonsense in a way that Conant and the therapeutic reading would lead us to expect.

On Certainty does not appear to rest with its conclusion that Moore's epistemology advances nonsense. Wittgenstein instead appears to search for a way of capturing the sense that Moore's references to knowing he has hands, or that he is a human being, might be able to have. The text is relatively direct on this point:

> Anyone who is unable to imagine a case in which one might say "I know this is my hand" (and such cases are rare) might say that these words were nonsense. True, he might also say "Of course I know – how could I not know?" – but then he would possibly be taking the sentence "this is my hand" as an *explanation* of the words "my hand" (*OC* 412).

Wittgenstein suggests that we can find a sense for an expression such as 'I know this is my hand' when we consider that this talk of knowing marks those explanations of our uses of language (sometimes spoken of as descriptions of the grammar) that we ourselves are able to provide. Wittgenstein proposes that the alleged knowledge claims Moore includes in his response to skepticism may carry some sense, although not perhaps in the way we had expected. The presence of a sense arrives as a discovery during Wittgenstein's investigations:

> But now it is correct to say "I know" in the contexts that Moore mentioned, at least *in particular circumstances*. (Indeed, I do not know what "I know I am a human being" means. But even that might be given a sense.)
>
> For each one of these sentences I can imagine circumstances that turn it into a move in one of our language games, and by that it loses everything that is philosophically astonishing.
>
> What is odd is that in such a case I always feel like saying (although it is wrong): "I know that – so far as one can know such a thing." That is incorrect, but something right is hidden behind it (*OC* 622-23).

When Wittgenstein dwells longer over Moore's epistemological comments, he finds that, even in spite of the possible confusions into which Moore may have strayed, a sense can still be found for Moore's employment of selected apparent knowledge claims during his discussions of epistemology. By saying that he knows he has two hands, Moore would, it begins to seem, be saying that his having two hands is not open to doubt in the context in

which he issues this remark, and that he knows how to use the language involved – although why it is that he is not *able* to entertain this seeming doubt still remains for us to resolve. Therefore, while Wittgenstein at the outset of his treatment accuses Moore of issuing nonsense, his more extended discussion begins to recognize the sense that Moore's remarks against skepticism may be able to sustain. What first seems nonsense is now a candidate for sense, albeit a candidate that does not reveal its sense in a straightforward fashion.

On Certainty devotes perhaps the majority of its attention to the specific character of the confusions into which Moore's discussions risk beginning to fall. If Moore's treatment of knowledge were not to have its sense perspicuated, or if Moore were to seem to reject the perspicuations Wittgenstein proffers, Wittgenstein suggests that it may become uncertain whether he and Moore understand each other. The trouble with Moore's contentions, that he knows he has hands, that he knows he is a human being, is that they confer upon Moore the risk that he does not understand his remarks, and the risk that we do not understand him in the context in which he issues them. Wittgenstein indicates that Moore's understanding could possibly be in jeopardy if he were somehow to avoid acknowledging, with Wittgenstein, that knowledge and indubitability often are anathema. To call a statement indubitable in a particular context is to suggest that a speaker who denies it may very well not understand it.

> That I am a man and not a woman can be verified, but if I were to say that I was a woman, and then tried to explain the error by saying I hadn't checked the statement, the explanation would not be accepted.
>
> The *truth* of my statements is the test of my *understanding* of these statements.
>
> That is to say: if I make certain false statements, it becomes uncertain whether I understand them (*OC* 79-81).

In the case of particular remarks, whether about one's hands or humanity, among other things, propounding falsehoods has the potential to speak against one's understanding of these remarks. Whether we convict a speaker of non-understanding may depend on our readiness to allow that he may have momentarily misspoken. If a speaker appears unwilling to retract a falsehood, or even if he seems unwilling to disallow the very possibility of a falsehood, then the shadow of nonunderstanding begins to fall over his case.

> It's not a matter of *Moore's* knowing that there's a hand there, but rather that we should not understand him if he were to say "Of course I may have erred about this". We should ask "What is it like to make such an error as that?" – e.g. what's it like to discover that it was an error? (*OC* 32)

Wittgenstein suggests in passages such as these that certain statements speak quite strongly about a person's understanding, especially those indubitable statements whose denial we attempt either to entertain or to assert. Wittgenstein returns to this issue of nonunderstanding in the case of certainties throughout the text.

> There are cases such that, if someone gives signs of doubt where we do not doubt, we cannot confidently understand his signs as signs of doubt.
>
> I.e.: if we are to understand his signs of doubt as such, he may give them only in particular cases and may not give them in others.
>
> In certain circumstances a man cannot make an *error*. ("Can" is used here logically, and the proposition does not mean that a man cannot say anything false in those circumstances.) If Moore were to pronounce the opposite of those propositions which he declares certain, we should not just not share his opinion: we should regard him as demented (*OC* 154-55).

Wittgenstein contends that certain statements do not lend themselves to our doubt, denial, or even our entertainment of their falsehood, without casting our understanding of these statements under suspicion, and leading others' understanding of us into confusion. Yet Wittgenstein believes that Moore has risked entertaining just these sorts of falsehoods by contending that he knows – that he knows he has hands or is human. Moore's manner of responding to skepticism, while on the one hand possibly making sense as we have seen Wittgenstein suggest earlier, on the other possibly points to a failure of understanding within Moore's account. Wittgenstein does not conclude that Moore is indeed a case of failed understanding. Instead, Wittgenstein acknowledges this prospect as at least a possibility, one that his interpretation appears to take steps to avoid.

How, then, are we to understand the character of Wittgenstein's involvement with Moore's work in epistemology? If we are to believe the therapeutic reading, Wittgenstein should identify the moments of nonsense within Moore's discussions, bringing us to see that Moore's terms "haven't (yet) been given any significant use" (Crary 7) when they appear in his seeming claims to knowledge. The notion that Wittgenstein does find a sense for Moore's remarks makes it difficult to maintain that these "do not say anything" (Crary 7) according to Wittgenstein's more developed account: what they say is, at least possibly, that Moore speaks a language within which certain statements characterize the grammar and can be regarded as true. For Conant, Wittgenstein's therapy involves "recognizing sentences…as nonsensical" (McCarthy 61). Yet Wittgenstein's therapy does not involve throwing away Moore's remarks so much as reclaiming them, offering them a specific way to make sense, albeit not a way we might have expected. On the other hand, if we are to follow Hacker in regarding the negation of grammatical propositions as nonsense, then Wittgenstein's entire discussion of error and understanding becomes difficult to accommodate. Most of Hacker's textual evidence for this treatment of nonsense is drawn from manuscripts *circa* 1930 that do not necessarily match the later developed view (Hacker 12-13). Denying a grammatical proposition is not an error, and *insisting* on its denial is nonunderstanding – but this does not lead the affirmation of these propositions to be nonsensical. Rather, the affirmation of such propositions is a sign of understanding them, and we do not understand nonsense. Affirming a grammatical proposition is not nonsensical, leaving its negation difficult to classify as nonsense in any conclusive sense. So neither Conant nor Hacker appears quite able to account for the character of *On Certainty*, if these issues of sense and understanding unfold in the way I have been suggesting.

In closing, I believe that the genuine character of Wittgenstein's response to Moore is that of diagnosis, but not one of the form the therapeutic reading would expect. Wittgenstein does cry "Nonsense!", but then this seems only to have signaled a search for sense. When a sense is found, it arrives accompanied by a diagnosis:

> Moore's view really comes down to this: the concept 'know' is analogous to the concepts 'believe', 'surmise',

> 'doubt', 'be convinced' in that the statement "I know…" can't be an error (*OC* 21).

To Wittgenstein, Moore came in contact with the themes of error and nonunderstanding, but misassigned these features without acknowledging how knowledge involves the presence and removal of doubt. "I know…" can be an error, and often is. Moore "overlooked" (*OC* 21) this point, and so overlooked the interplay of knowledge, error, and understanding that Wittgenstein helps to perspicuate. Moore has challenged Wittgenstein to understand his remarks, not to throw them away, in the end.

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The Method of the *Tractatus*

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1. Radical Philosophers

A few years ago, a group of American philosophers, Cora Diamond and James Conant among them, suggested a resolute, or radical reading of Wittgenstein's *Tractatus*. These two authors claim that the *Tractatus* has a body, and a frame. Wittgenstein minded the frame seriously, whereas all the remaining propositions of the *Tractatus*, which belong to its body, are written tongue in cheek. To the frame of the work belong the Preface, §§3.32–3.326, 4–4.003, 4.111–4.112 and 6.53–6.54. In it Wittgenstein gave meta-theoretical instructions how to treat the rest of the book. The main idea of the frame is expressed in § 6.54 which reads: "My propositions serve as elucidations in the following way: anyone who understands me eventually recognizes them as nonsensical, when he has used them – as steps – to climb up beyond them. (He must, so to speak, throw away the ladder after he has climbed up it.)." This was the real message of the *Tractatus*.

Further, Diamond and Conant suggest a dialectical reading of the *Tractatus*. In Conant's words, this reading discerns, among other things, two doctrines in the book: (1) that the propositions of philosophy are *misleading nonsense* (it was embraced by the Vienna Circle positivists); (2) that there are many ineffable truths which cannot be articulated but which can be pointed out (it was embraced by Peter Hacker). The propositions of the *Tractatus* advance such *illuminating nonsenses*: bits of nonsense that are useful because they nevertheless clarify important parts of reality and language.

Conant insists that, in fact, "the *Tractatus* ... aims to demonstrate how each of these conceptions is the mirror image of the other, each feeding on and sustaining the other." (Conant 2002, 376) They are the product of two different impulses: "The conceptions to which these impulses give rise figure in the work as dialectical way stations that are to be successively recognized as the antepenultimate and penultimate rungs on the ladder that the reader is invited to ascend and – once having ascended – called upon to throw away." (ibid., 377)

In other words, Diamond and Conant embrace *austere conception of nonsense* which claims that the propositions of the *Tractatus* are plain nonsense and nothing beyond that. They have only therapeutic role, the purpose of which is to cure us from the inclination to embrace philosophical truths of conventional form; once this role is finished, they must be thrown away.

2. To What Extend Did Wittgenstein Follow Frege in the *Tractatus*?

The radical reading of the *Tractatus* was strongly criticised by Peter Hacker (in Hacker 2000). Hacker is insistent that the propositions of the *Tractatus* ascribe, above all, formal properties and relations, and these cannot be said but can only be shown. He explains 6.54 so. In this paragraph Wittgenstein means that his propositions are important nonsense. They say nothing; in this sense we can call them nonsense. They, however, demonstrate something about the language and the world; and this something is important – very important.

Despite this marked difference between the two parties, they have something in common. Both assume that at the bottom of Wittgenstein's *Tractatus* lies Frege's conception of saying/showing. In this, they follow Peter Geach (see Geach 1976). My point of dissent is that, in fact, Wittgenstein's *Tractatus* is rather a study of a completely different kind from both Frege's *Grundgesetzte* and from Russell–Whitehead's *Principia Mathematica*. Its genre is not logic but logical–philosophical meditations, or philosophical reflections on the logical writings of Frege and Russell. This explains, among other things, why typical logicians, such like C.I. Lewis, the Polish logicians, Whitehead, Quine and Hao Wang, didn't held much of Wittgenstein's logical–philosophical inquiries.

The Tractarian theory of saying/showing is also radically different from that of Frege. Above all, the thesis of saying/showing is much more central to Wittgenstein's system: it determines his whole logico-philosophical thinking in the *Tractatus*. Specifically, Wittgenstein embraces a radical form of intuitivism which is the right opposite to Frege's logic that strived to be free from intuition. So in "Notes Dictated to Moore" he sets out: "In 'aRb', 'R' is *not* a symbol, but *that* 'R' is between one name and another symbolizes" (Wittgenstein 1979, 109) – i.e. the spatial relation between them. The corollary is a variant of the theory of intellectual intuition which is the heart of the *Tractatus*: "In a suitable notation [rightly organized geometrically] we can in fact recognize the formal properties of propositions by mere inspection of propositions themselves." (6.122) This intuitivism made it possible to introduce a most radical form of Ockham's Razor, which eliminated all superfluous entities in logic and philosophy such like logical constants, logical objects, epistemological subjects, etc.

Of course, the programme for Conceptual Notation (Wittgenstein widely used this term in the *Tractatus*), the task of which was to rightly express the logical operations of our thinking, was first set out by Frege. In his hands, however, it was not thus radical as in the hands of Wittgenstein. In short, the latter disparaged the discursive thinking and embraced the intuitive one instead. His conclusion was that the logical symbols in the *Tractatus* are just means (an instrument) for recognizing the logical properties of propositions of science and everyday life: "*Logical* so-called propositions shew [the] logical properties of language and therefore of [the] Universe." (Wittgenstein 1979, 108) When we construct the graphically (geometrically) right symbols, all problems of logic are *eo ipso* resolved. It is in this sense that "we cannot make mistakes in logic" (5.473).[1]

A consequence of this position was Wittgenstein's idea that there are no propositions of logic (ibid.), a position that can be called a 'redundancy theory of logic'. In the same manner, Wittgenstein declared that in real life we never need mathematical propositions (6.211). So, it is no

[1] My considerations articulated above see 5.473 as a consequence of 6.12–6.122, not vice versa. In contrast, Conant believes that 5.473 is "the heart of the Tractarian conception of logic" (Conant 2002, 421). (On the roots of this confusion see § 4.) Where I and Conant agree is that there is one conception in the *Tractatus* that can be called its 'heart'.

surprise at all that at the end he set out that there are no philosophical, or logico-philosophical propositions as well.

3. Our Reading of *Tractatus* 6.54

Above all, Conant suggests a mistaken interpretation of the Tractarian term *elucidation* (and the declared purpose of Conant 2002 is just to discuss this term, plus the term *nonsense*) which plays a central role in 6.54. My propositions, so Wittgenstein, are nonsense; but they nevertheless serve as something – as elucidations; they are not simply gibberish. "The elucidatory strategy of the *Tractatus*, so Conant, depends on reader's provisionally taking himself to be participating in the traditional philosophical activity of establishing theses through a procedure of reasoned argument." (ibid., 422) Similarly to the process in a psychoanalytic therapy, the reader is elucidated if he actually undergoes certain experience of believing in philosophical perspectives of the conventional form, after which he understands that they were nonsense.

In contrast, according to my interpretation, Wittgenstein claimed that we elucidate *indefinables*, or data, of any kind whatsoever. Indefinables are aesthetic, logical, religions, or practical objects. These are things that we wonder at, see *sub specie aeternitatis*, or simply beyond time. We cannot express or articulate them (we can articulate only states of affairs). What we can do with indefinables is only to comment them – in the same way in which we comment works of art, or historical events. Exactly such an indefinable was the Tractarian Conceptual Notation.

Now, the propositions of the commentary have not own content: their purpose is simply to bring to light (to clarify) the indefinable under scrutiny, pointing out at new aspects of it. Once we have the new insight into the datum, we do not need these propositions anymore – they are exactly so needless as the ladder with the help of which we have reached a certain height (level) on which we now act and live.

In short, my point is that Wittgenstein's Tractarian propositions are elucidations of the Conceptual Notation and thus, of the logic of language. Being such, they *train* its reader to better see how the propositions of science logically relate one to another, how the logic of our everyday language functions, etc. In this way, they develop our skill to thinking better. They, however, have no own content.

This interpretation of the *Tractatus* fits perfectly well its description as a ladder. To be sure, (1) exactly the instrument for training is what we threw away after we have reached a new level in our development – we have no interest in the instrument which brought us up to it. (2) What is important with such instruments is not their content but their form. Perhaps another person should construct a different type of instrument, with the help of which we will be trained in the same skill. In this sense, the propositions of the *Tractatus* do not express something necessary; they are contingent. Diamond is especially insistent on this point. Unfortunately, from it she made false conclusions.

My reading of 6.54 also casts light on another difficulty in the *Tractatus*, widely discussed by Diamond and Conant. Wittgenstein's insistence (in 4.1272) that objects (but also complexes and facts) are formal concepts evidences that he conceived as part of his task – to set out a right Conceptual Notation – not only the solution of some logical, but also of some ontological problems. This means that the Tractarian ontology is not a pure ontology; it is rather a logico-ontology – a part of Wittgenstein's new Conceptual Notation. This point is clearly stated in the concluding proposition of Wittgenstein's Conceptual Notation, set out in 4.5: "The general form of a proposition [which pertains to *logic*] is: This is how things stand [a statement in *ontology*]."

It is exactly this assimilation of the problems of ontology to these of logic that (1) led Wittgenstein to claim that the ontological propositions in the *Tractatus* are nonsense too – nonsense are not only the logical so-called propositions which are about formal concepts. (2) It made the Tractarian ontology just an instrument for better recognizing the logic of propositions of science and life, and nothing beyond this. After we have grasped this logic, we can cast this instrument aside. – This point rather mesmerizes Diamond and Conant, misleading them to (falsely) believe that the doctrines in the body of the *Tractatus* are suggested only tongue in cheek.

4. The 'Method' of the *Tractatus*: How not to Use a Word

The crisis in the Tractarian Studies, triggered by the recent dialectical reading of this work of Wittgenstein, had a transparent aetiology: for decades the methodological side of the *Tractatus*, which found expression in 4.1213, 5.473 and 6.12–6.122, was not studied seriously. It is not by accident that exactly these paragraphs peak at the centre of Diamond–Conant's argument.

In words, Diamond and Conant investigate 'the method of the Tractatus' – this is also the title of Conant 2002. Unfortunately, what Diamond and Conant really do is not a discussion of the method of the Tractarian ideas; not really. Rather, they discuss its style – the strategy of the narrative of the book. At that, they read the remarks on the method of the Tractarian theories as remarks on the Tractarian narrative.

Indeed, Conant's interpretation of the 'method' of the *Tractatus* is that Wittgenstein wrote the book as an exercise in Kierkegaardian irony: it advanced theses of the conventional type only in order to laugh at them, saying at the end that they are plain nonsense. His hope was that the experience of going through these conventional-type theses will free the reader from the enchantment with such theses.

Be this as it may, this reading of Conant is a thesis on the style of the book – on the method of articulating his ideas. It is not a thesis about the method of the conventional-type thesese themselves. They say nothing about the idiosyncratic way in which Wittgenstein treated the problems of logic, philosophy, mathematics and ethics in these theses – even when he minded them tongue in cheek. Even worse, Conant and his friends read the sections which deal with the method of the Tractarian ideas as sections which contain hints about the architectonic of the *Tractatus*. Here I have in mind above all 5.473 which is quoted by practically all radical readers of the book: "If a sign is possible, then it is also capable of signifying. Whatever is possible in logic is also permitted. In a certain sense, we cannot make mistakes in logic." Now, both Diamond (Diamond 1991, 196) and Conant (Conant 2002, 421) read this section as meaning: everything in logic is possible; so, any proposition expressed in the body of the *Tractatus* logico-*philosophicus* is a plain nonsense.

In truth, this section expresses the main point of the method of Wittgenstein's logico-philosophical (conven-

tional) *theory*: If the sign is well-constructed, it will reveal the logical (formal) properties of the propositions/states of affairs without much ado. This, however, also means that the very possibility of the sign is determined by the proposition/state of affairs itself…

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Is Explaining Intuition Compatible with Trusting it?

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I

First, a summary of anti-naturalist criticism of explanationism, taking Th. Nagel's work (1997) as typical. A common assumption in the debate is the following one: if there is a causal explanation of our intuitions, it will appeal to the design of our mind, and ultimately to the causal-historical forces shaping it. In other words, the thinkers find their intuitions immediately compelling because they, the intuitions, reflect the built-up of thinker's minds. The intuition-contents, on the other hand, tend to be true, since the built-up of the mind reflects the most general structures of reality that has been causally shaping it. Most explanationists offer the design account as the best available explanation-sketch. The anti-explanationists, from Kant (Critique of Pure reason, B 176) through Wittgensteinians (e.g., J: Lear) to Th. Nagel (1997), G. Bealer (1987) and J. Pust (2001), perform a modus tollens on this design-focused account. Since it is self-undermining and has unacceptable normative conesquences it should be rejected, they claim. Here is Nagel's recent formulation of the use of evolutionary hypothesis about the origin of our mind-design:

> But is the hypothesis really *compatible* with continued confidence in reason as a source of knowledge about the nonapparent character of the world? In itself, I believe an evolutionary story tells against such confidence. Without something more, the idea that our rational capacity was the product of natural selection would render reasoning far less trustworthy than Nozick suggests, beyond its original "coping" functions There would be no reason to trust its results in mathematic and science, for example. (And insofar as the evolutionary hypothesis itself depends on reason, it would be self-undermining.)[13]

Unless it is coupled with an *independent* basis for confidence in reason, the evolutionary hypothesis is threatening rather than reassuring. It is consistent with continued confidence only if it amounts to the hypothesis that evolution has led to the existence of creatures, namely us, with a capacity for reasoning in whose validity we can have much *stronger* confidence than would be warranted merely from its having come into existence in that way. I have to be able to believe that the evolutionary explanation is consistent with the proposition that I follow the rules of logic because they are correct – not merely because I am biologically programmed to do so…And one cannot be outside them (*of argumentative thoughts, NM)* and inside them at the same time. (T. Nagel, 1997, 135-136 .)

Nagel goes on to blame every "radically contingent" account of having such disastrous consequences. The general format of anti-explanationist criticism is the following:

1. We have intuitional or reason based knowledge R.

2. Features like rational certainty, justifiedness and rationally binding character are essential (descriptively and normatively) for R.

3. Causal explanation shows that R does not and cannot have these features,

therefore,
4. Causal explanation both descriptively and normatively undermines R.

5. R is crucial for causal explanation C (it uses mathematics and logic).

6. Causal explanation C undermines itself (by 3, i.e. since it undermines R, which it itself uses).

The crucial premises are 2. and 3. I intend to question the incompatibilist premise 3. Since it claims that causal explanation is incompatible with and undermines rational justifiedness, it leads directly to the issue of the right justificational structure to be used in assessing its truth.

II

Fortunately, in this particular issue the common ground is suggested by the format of the question itself: are thinkers justified in trusting their otherwise compelling intuitions? This in turn suggest a distinction of levels: place upon the first level the source of beliefs in question, e.g. intuition. Place upon a second, meta-cognitive level thinker's reflective awareness about the quality of her first-level source, e.g. one's reflective questioning of or trust in one's intuitions. Thinkers, including ourselves, spontaneously find their intuitions true in very compelling manner, and therefore, on a reflexive level, consider their intuition-capacity and their reason generally *de facto* reliable. This reliability of first-order source, if available, yields an external, 3rd person justifiedness. In contrast, the reflexive or meta-cognitive, second-order trust in one's own reliability, if justified, would make us, the thinkers, reflectively justified on the second level. As reflective creatures aiming at truth, we need both levels of justification. Such a two-level view of justification has been probably implicit in classical epistemology (Plato, Descartes, and Spinoza), and is nowadays proposed by various authors, most prominently E. Sosa (1991), but also K. Lehrer, W. Alston and J. van Cleve (with a lot of difference of detail). It can therefore serve as a suitable common ground between the explanationist and the anti-explanationist (the naturalist-explanationist will do well to present the epistemic rules as goal-based, grounded in the naturalistically acceptable truth-goal). I shall follow the most generous variant (of the kind favored by Sosa and Lehrer): the thinker may on the second level of reflexive questioning use *all the available sources* in order to assess the reliability (and other virtues) of a given first-order source, in this case of intuition or reason.

Within such a picture one can distinguish degrees of reflective, meta-cognitive achievement on the second, reflective level. The lowest degree is guaranteed by the immediate compellingness of contents, i.e. of intuitional propositions. If the thinker psychologically cannot doubt some such proposition, then she is *prima facie* allowed to believe it: epistemic ought implies epistemic can. Still, a more conscientious thinker would want to have a coherent meta-cognitive perspective on deliverances of her cognitive abilities, and an explanatory view on functioning of abilities. Again, we may distinguish immediate or folk view (of e.g. perception or intuition ability) from theoretical perspective on these abilities.

This suggests a line of response to Nagel's worries about rational certainty. They allege that if one accepted

harmony pre-established by evolution, one would have to believe logic and mathematics on grounds of evolutionary biology. The naturalist need not and should not pursue the silly line that we should believe truths of elementary arithmetic on the strenght of believing evolutionary theory. In case of naturalism this would indeed lead to additional implausibility, summarized by the incompatibilist in premise (5) above: in order to do evolutionary biology one needs to rely upon logic and mathematics, but in order rationally to rely upon mathematics, one has to believe truths of evolutionary biology. And this is manifestly absurd. So, one should be careful to establish the proper order of justification on the second, reflective or meta-cognitive level.

First, psychological obviousness and indubitability gives the thinker *a prima facie* reason for accepting one's intuitions. No naturalist should deny this, since for a naturalist normative permissibility should follow from descriptive compellingness.

In the next step the thinker tries to achieve a general coherent view of her cognitive abilities and their outputs. It is the interplay of (the deliverances of) all capacities, plus the best explanation of the whole, that indicates whether a particular capacity, in this case intuition is reliable. Merely negative coherence with explanation is sufficient: in other words, if the explanation does not seriously contradict the explanandum (and we have argued that it does not), we have good reasons to trust our intuitions.

The explanation-based doubts about intuition, for example, make it vivid for her that the immediate compellingness of an intuition need not be sufficient. But then, the *indispensability and success* come in. Our intuitions cohere with our empirical hypotheses, and enable these hypotheses to be tested and confirmed. Indispensability and success are thus capable of almost completely justifying the reliance on intuitional knowledge. They come in very handy since they point to the massive empirical success of everyday knowledge and of science in which such beliefs are essentially used. The success does a posteriori vindicate the certainty of elementary logical and mathematical intuitions, for which there is a *massive overlap* with factual domain.

This already shows that in the proper order of justification a reliance on evolution for warrant is subsidiary to and parasitic upon the simpler but more powerful reasons to trust intuitions , i.e. their compelling character and their success. We can say more. There is a reasonable philosophical worry that some flaw in the origin of our intuitions might annihilate their justification. What if they come from a demon, Descartes asked. What if they are just figments of our imagination? How can information coming from within have any "validity" for a mind-independent world, Kant asked (and opted for an anti-realist solution). It is here that the evolutionary explanation comes in. Its role is remedial, i.e. to alleviate or to forestall the subtle, purely philosophical skepticism focusing upon a distantly and merely possible flaw in the causal ancestry of our intuitions. It thus removes the lingering perplexity about the mystery of scientific applicability and success of our logical and mathematical intuitions.

III

Let me address a residual problem. The anti-explanationist might claim that evolution of correct logical abilities is not only contingent (like evolution of any ability, and of mankind as a whole), but very improbable. A breed of people might have evolved, very much like us, but with a completely deviant logic, trusting it with the same compellingness we trust our logic. And might we not actually be this breed?

Here is, in brief, a way for the moderate naturalist explanationist to avert the charge. Assume that minimal practical rationality brings practical advantages. Then, argue that logic is universal, i.e. minimal rationality very probably involves practical understanding of logical constants. How do you aggregate your thoughts without conjunction, how do you infer without implication, and how do you think of incompatibilities without negation? The line is neutral between naturalism (for instance, and famously Quine) and anti-naturalism (see, for instance the recent paper by S. Evnine (2001) who points out the importance of aggregation and incompatibility. So, Being minimally rational very probably involves being minimally logical. Therefore, any process that results in there being minimally rational creatures, also very probably results in there being minimally logical creatures. And, i*f* evolution produces rational creatures, *then* it very probably produces minimally logical creatures. *Given evolutionary naturalism, minimal logical capacities are to be expected.*

Notice that high conditional probability of logic given rationality is enough. Nobody would seriously question causal explanation on the ground that the emergence of life itself is relatively improbable, or that evolution of nervous system is antecedently quite improbable. The challenge is more geared to the alleged possibilities of evolution of intelligent creatures similar to ourselves, but devoid of logical rules. So, although the evolution of rational creatures might in itself "radically contingent" (extremely improbable), the fact that once rational creatures are on their way, minimally logical creatures are on their way is *not* radically contingent. We have no reason to doubt our own rational capacities and basic logical intuitions on the grounds of evolutionary theory. Evolutionary theory does not undermine itself.

The critic might claim, like, for instance, Evnine (2001) that universality of logic is itself provable on a priori grounds, against the claim of naturalists. The answer is that universality of logic is the best explanatory hypothesis available. Witness the connectionism debate, in particular Smolensky vs. Fodor&Pylyshyn debate. E.g. We simply know of no other way, and this is enough for the present argument.

Returning to the normative issues, the naturalist can accept that logic is basic in the way of justification, i.e. that a thinker is *prima facie* justified in following logical rules simple in virtue of their basicness and compellingness. This is the common ground of naturalists and anti-naturalists, briefly visited in section II. Such justificatory basicness is neutral, i.e. compatible with ultimate apriorism and ultimate aposteriorism (e.g. with logical intuitions being ultimately, but not *prima facie* justified by our total theory). The naturalist will add justification by empirical success, thus enhancing and not diminishing the justifiedness of our basic intuitional beliefs.

Let me recap. I have been arguing, although in very sketchy and programmatic manner, that explanationism is compatible with justification of intuition- and reason-based beliefs. Using the model of two-stage justification, acceptable for both parties, one can insure sufficient justifiedness of such beliefs, without having to shun broadly causal explanations of their reliability. And if you can explain your intuitions, you have more reason to trust them. Surprisingly, the explanationist can thus do more justice to the reasonableness of our trust in intuitions, than her opponent, who relegates them to the realm of unexplainable mystery.

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Husserlian Aspects of Wittgenstein's Middle Period

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It is not immediately obvious that there was anything connecting Husserl or phenomenology with Wittgenstein's work, but with an examination of the evidence, this attitude can be changed. I will establish the modest probability that Wittgenstein had contact with the ideas of Husserl, and that the ideas of Husserl were either directly or indirectly influential in Wittgenstein's work. Wittgenstein's concern with phenomenology is most explicitly expressed in his *Philosophical Remarks* (hereafter *Remarks*), however there is tacit concern throughout most of his writing.

The first section of the *Remarks* begins with a discussion of phenomenology. It serves to introduce the idea that Wittgenstein believed himself to be working on phenomenological problems. The issue is with what he calls a "phenomenological language." A phenomenological language is an attempt to construct an ideal, pure, language of thought, that stresses the grammar over the content, form over the particular facts expressed by that form. He says:

> I do not now have phenomenological language, or 'primary language' as I used to call it, in mind as my goal. I no longer hold it to be necessary. All that is possible and necessary is to separate what is essential from what is inessential in *our* language.
> That is, if we so to speak describe the class of languages which serve their purpose, then in so doing we have shown what is essential to them and given an immediate representation of immediate experience…
>
> A recognition of what is essential and what inessential in our language if it is to represent, a recognition of which parts of our language are wheels turning idly, amounts to the construction of a phenomenological language (Wittgenstein 1975).

Before this point, Wittgenstein had a phenomenological, "primary" language as a goal. Where? The *Tractatus*, with its pictorial presentations, draws a limit to the expression of thoughts, and clarifies the logic of our language by elucidating the possibility inherent in any statement that has sense (*Sinn*). This pure grammar, or essentialist definition of language, was sought there. Wittgenstein's *Tractatus* tries to *say* what can be said about the form of thought and language, and to attempts to *show* what cannot be said about the formal structures of our thought.

The early Wittgenstein had said, "Language disguises thought. So much so, that from the outward form of the clothing it is impossible to infer the form of the thought beneath it…"(Wittgenstein 1961). Thus, clarity about the form of a proposition, its "pictorial form," or *grammar*, would clearly display the *possibilities* of language. In defining any possible language *as a language* only in terms of what is required for representation to occur (through establishing the elements essential to any picture), the *Tractatus* presents a purely formal language. Husserl did *not* develop a special language to convey the universal structures, though their description was a primary concern of his. How much, perhaps, did Husserl's management of language influence Wittgenstein's later philosophy in its analysis of ordinary language?

After 1929 Wittgenstein's stated goal was to examine the form of *ordinary* language. It was not to construct a logical, meta-language, like Frege's "language of thought," but to clarify the ordinary one by uncovering the necessary requisites for representation. This is one basic difference between Wittgenstein's early and later periods: the shift from *pure* to *ordinary* language analysis. In place of a language that disguised thought, the picture-language of the *Tractatus* was to have a clinical cleanliness. Wittgenstein's attitude in the *Philosophical Investigations* is different: instead of a "primary" language of thought, which would communicate nothing in the end, a more rough hewn language grips the world better (see Wittgenstein 1968). The hope for a transparent medium through which to transmit our thoughts is now seen to be itself a prejudice. We can see this shift in terms of his stance on phenomenology, on the cusp of his change from the *Tractatus* to the *Philosophical Investigations*.

Wittgenstein's goal is comparable with Husserl's, as Husserl states it in the introduction to Volume II of the *Logical Investigations*. Husserl begins with a discussion of linguistic *expression*, of our attempts to communicate meaningfully. He says:

> Linguistic discussions are certainly among the philosophically indispensable preparations for the building of pure logic: only by their aid can the true *objects* of logical research, …be refined to a clarity that excludes all misunderstanding. We are not concerned with grammatical discussions, *empirically conceived and related to some historically given language*: we are concerned with discussions of a most general sort which cover the wider sphere of an objective *theory of knowledge* and, closely linked with this last, the *pure phenomenology of the experiences of thinking and knowing*… This phenomenology must bring to pure expression, must *describe* in terms of their essential concepts and their governing formulae of essence, the essences which directly make themselves known in intuition…(Husserl 1976)

Husserl did not promote a radical revision of language, but he cannot be said to have "left language alone," as he proceeded to stipulate the "phenomenological" meaning of a glossary of terms. This is precisely what Wittgenstein accuses Husserl of, in his conversations with Schlick (Waismann 1979). Nevertheless, Husserl claims, "Rough reflection on our thoughts and their verbal expression, conducted by us without special schooling, … suffice to indicate a certain parallelism between thinking and speaking." (Husserl 1976) The goal for Husserl's phenomenology was to express, within ordinary language, the essential grammar of thought, a descriptive, *eidetic* (not empirical), science. For Husserl, it was the case from the beginning that the structures of thought could be expressed directly through an ordinary (though modified) language.

We can define Husserlian phenomenology as fundamentally characterized by the following aspects:

> 1. Concern with the faithful *description* of the structure of immediate experience; that all knowledge begins in experience. *Phenomenology provides the grammar of experience*.

2. Phenomenological truths are intuited from immediate experience, insofar as the syntax of immediate experience can be repeatedly confirmed by any conscious entity through reflection that is free from prejudice, thus allowing a *pure* description. This constitutes phenomenological objectivity.

3. Empirical sciences, such as psychology and physics, are *founded* on the grammar of immediate experience and the rules of logical justification. Consequently, phenomenology cannot be generated by the sciences, but serves as the *grounds* for the sciences.

4. Husserl's phenomenological *method* is based on the epoché, the suspension of the "natural attitude." The "natural attitude" is the underlying *prejudice* of an objective world existing independently of experience. The epoché is why phenomenology is unencumbered by the metaphysical mind-body question, allowing for a pure description of experience. This allows phenomenology to uncover essential characteristics of an impersonal abstract Ego via a kind of *Wesenschau.*

5. Like Franz Brentano, Husserl identifies the *intentionality* of consciousness as paramount among these structures. This is the relationship between consciousness and the world.

In examining how many of the above phenomenological aspects are presented in Wittgenstein, we first find a united stance against psychologism. Though this anti-psychologism is shared with Frege, Frege was unconcerned with the given, immediate experience, which he believed to be inherently subjective *Vorstellungen*, and in principle not objective. Attending the phenomena is not enough. It is the recognition that phenomenology is a "first philosophy" which demands the establishment a descriptive grammar of immediate experience, a language of thought. Once one rejects the sciences as the source of this grammar, as a field that already presumes logic, there is nowhere else to turn but to a type of phenomenology.

It is clear that Wittgenstein, like Husserl, also rejected the notion that philosophy could ever become one field amongst others in the sciences, physical or psychological. In the *Tractatus* Wittgenstein claims, "The totality of true propositions is the whole of natural science…," "Philosophy is not one of the natural sciences," and "Psychology is no more closely related to philosophy than any other natural science."(Wittgenstein 1961) In the *Remarks*, Wittgenstein's most substantial analysis of phenomenology, we also find:

> Physics differs from phenomenology in that it is concerned to establish laws. Phenomenology only establishes the possibilities. Thus, phenomenology would be the grammar of the description of those facts on which physics builds its theories. To explain is more than to describe; but every explanation contains a description. (Wittgenstein 1975)

Wittgenstein echoes a conceptual relationship between phenomenology and science that one sees both in the *Tractatus* and in Husserl. Both Husserl and Wittgenstein attempt to grasp the essential rules which allow for the designation of a space of possible states of affairs or experiences; and since this phenomenological logic sets up the scaffold upon which the true facts, or particularizations, of physics hang, we see how physics depends upon phenomenology. Husserl thus claims:

> All natural science is naïve in regard to its point of departure…As a result, the following is clear: should there be decisive arguments to prove that physical natural science cannot be philosophy in the specific sense of the word, can never in any way serve as a foundation for philosophy, and can achieve a philosophical value for the purposes of metaphysics only on the basis of a prior philosophy, then all such arguments must be equally applicable to psychology. Now, there is by no means a lack of such arguments (Husserl 1965).

Both Husserl and Wittgenstein then concur that philosophy, *qua phenomenology*, is non-reducible to neither psychology nor physics.

In that phenomenology establishes the possibility of physics, and thus the physical sciences, which extrapolate their general laws from particular instances, both Husserl and Wittgenstein concur that phenomenology must itself be outside of the arena of physics. How they delineate an area of study that is outside physics is somewhat distinct. Husserl, after the developments set forward in his Ideas I, believed that one could achieve a phenomenological attitude, allowing for a sort of phenomenological perception to occur, by invoking the *epoché.* Wittgenstein, however, in attempting to extrapolate thoughts from language use, believes that:

> All our forms of speech are taken from ordinary, physical language and cannot be used in epistemology or phenomenology without casting a distorting light on their objects.
> The very expression 'I can perceive x' is itself taken from the idioms of physics, and x ought to be a physical object – e.g. a body – here. Things have already gone wrong if this expression is used in phenomenology, where x must refer to a datum. For then 'I' and 'perceive' also cannot have their previous senses. (Wittgenstein 1975)

What is Wittgenstein describing other than the requirement that investigations pursued *under the epoché* be described in a unique, *phenomenological* language? In other words, if phenomenology is not scientific, and if our natural language, like the "natural attitude," is embedded in physicalistic grammar, then when Husserl uses terms that seem ordinary, like "I," "perception," and "object," these words mean something quite different than what we'd normally mean by them. Husserl *needed* a phenomenological language, a 'primary' language, for ordinary language is ill equipped to reflect the fine-grained distinctions Husserl asks of it.

What Wittgenstein is responding to are attempts to describe immediate experience in its purity, without considering the fact that *to describe* requires some kind of medium. Wittgenstein recognizes that medium to be language. Nevertheless, it cannot be *ordinary* language (which remains in the natural attitude), but a primary language, one that can transcend the effects physics has had. In the following, Wittgenstein describes a moving, mechanical reproduction of a visual experience, in order to produce an identical experience in someone else ("you will now see exactly what I saw, *as I saw it*), and then responds:

> Isn't it clear that this would be the most immediate description…? …Anything which tried to be more immediate still would inevitably cease to be a description. Instead of a description, what would then come out would be that inarticulate sound with which many writers would like to begin philosophy. ('*I have, knowing of my knowledge, consciousness of something.*') (Wittgenstein 1975)

Throughout the *Remarks,* Wittgenstein discusses visual space and color, toothaches and pain, the experience of memorial-time and harmony from a phenomenological perspective. He recognizes repeatedly that physics cannot give an account of "subjective" or "qualitative" experience, and also recognizes that phenomenology remains within a descriptive domain of possibilities as a description of the structure, or grammar, of experience. Wittgenstein further claims, "The worst philosophical errors always arise when we try to apply our ordinary –physical– language in the area of the immediately given" (Wittgenstein 1975). Is Wittgenstein calling for a language that can express what is left after a Husserlian style reduction?

Wittgenstein's phenomenological language must also include *intentionality*, for, "If you exclude the element of intentionality from language, its whole function then collapses" (Wittgenstein 1975). The "directedness" of intentionality, therefore, cannot be found in consciousness, nor is it found in objects, but is to be found in the meanings of language. Language doesn't then have a *derivative* intentionality, but is the primary source of reference through its meanings. He says, later in the *Philosophical Grammar* that, "The German word for 'meaning' [*Bedeutung*] is derived from the German word for 'pointing' [*deuten*]" (Wittgenstein 1974). If Wittgenstein remains faithful to Frege, *Bedeutung* names the relationship between words and objects, between a Thought and its truth-value. He rejects the idea that a proposition acts as a proper name, whose object is its truth-value, in the *Tractatus*. Rather a proposition becomes *thought* only as it is written or spoken, whose *Sinn* is its possibility (determined by its grammar) and whose *Bedeutung* is the actual state of affairs. *Bedeutung is* referential, for Wittgenstein, but, as *Bedeutung*, has its existence only in language. Much of his later philosophy is dedicated to dispelling the myth that there is anything particularly mental, or mysterious, about *Bedeutung*, and thus, nothing particularly *mental* about intentionality. So intentionality, the possibility of directedness, is a function of language mapping onto the world; intentionality becomes not the Husserlian "mark of the mental" but the mark of the linguistic.

Wittgenstein's prominent use of "phenomenology" occurred near the zenith of Husserl's phenomenological movement. Consequently, his use of the term would have Husserlian connotations, and would require explicit distinctions for it not to have this connotation. His use is similar in a broad sense to the Husserlian program, including his anti-psychologism, his emphasis on a formal description of immediate experience, his insistence that such a primary description is not found through materialist physics, and the insistence on the intentionality in language. The simplest explanation is that, directly or indirectly, Husserl influenced Wittgenstein in a significant fashion.

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Plädoyer für den transzendentalen Rekurs in der religiösen Epistemologie

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1. Zweimal Anhalt, historisch

Außer Frage steht, dass, wer in theologischem Zusammenhang von Transzendentalität spricht, zuerst an Karl Rahner denkt. Gilt doch als common sense, dass die Idee einer Transzendentaltheologie auf ihn zurückgeht. Dabei erhebt er selbst diesbezüglich keinerlei Anspruch auf Originalität, sofern er selbst überzeugt ist, dass er in Gestalt einer für ihn in ihrer Unbekümmertheit typischen Aufnahme einer philosophischen Terminologie nur einem Sachverhalt Ausdruck verleiht, der „[...] schon immer in der Theologie gegeben war [und jetzt nur; K.M.] reflex erfaßt wird und seinen eigenen Namen erhielt“ (Rahner 2002, 1332-1337). Gleichwohl ist eine historische Reminiszenz in diesem Fall aufschlussreich: Kein Geringerer als Kant spricht von „Transc. Theologie“ (Kant: Opus Postumum, AA 22, 63) als der Kulmination von Transzendentalphilosophie.

Das zentrale Anliegen, das Kant mit der Auszeichnung „transzendentale Theologie“ verbindet, besteht darin, die immer schon auf die Frage der Möglichkeit theologischer Aussagen über Gott justierte Vernunftkritik als ganze „[...] aus einem einzigen Gesichtspuncte faslich zu machen“ (Kant: Nachlaß, R 6317, AA 18, 628) und im Gang dieser Denkbewegung der Theologie transzendentale Prädikate als begrifflich „gereinigte“ (Kant: Kritik der reinen Vernunft, AA 3, 426) zur Verfügung zu stellen. „Gereinigt“ bedeutet dabei: Das transzendentale Verfahren macht die Begriffe zu „sinnenfreye[n]“ (Kant: Nachlaß, R 6348, AA 18, 672) und bestimmt so

> „[...] die Reichweite ihrer Gültigkeit unter Berücksichtigung der Schranken unseres bloß diskursiven Verstandes [...], so daß die theologischen Aussagen über Gott und seine Eigenschaften wissenschaftlichen Ansprüchen genügen können“ (Winter 2000, 406).

So sehr sich dadurch sicher stellen lässt, dass Gott nicht „sensificirt und anthropomorphisirt“ (Kant: Nachlaß, R 6317, AA 18, 623) wird, bedarf es aber, um nicht in einen völlig leeren Deismus zu geraten, eines „*symbolischen* Anthropomorphism“ (Kant: Prolegomena, AA 4, 253-383, hier 357), der – obwohl „[...] nur die Sprache und nicht das Objekt selbst [...]“ (ebd.) betreffend – kraft

> „[...] Analogie [...] doch ein[en] für uns hinlänglich bestimmte[n] Begriff von dem höchsten Wesen übrig [lässt; K.M.], ob wir gleich alles weggelassen haben, was ihn schlechthin und an sich selbst bestimmen könnte; denn wir bestimmen ihn doch respectiv auf die Welt und mithin auf uns, und mehr ist uns auch nicht nöthig“ (Kant: Prolegomena, AA 4, 358).

Transzendentale Theologie im Sinne Kants folgt damit einer Logik der Grenze: Sie beschreibt die Grenze menschlicher Vernunft so, dass dabei das Jenseits dieser Grenze mitthematisiert wird in einer Form, die die Grenzziehung kategorial nicht verletzt. Für transzendentale Theologie qua Kulmination von Transzendentalphilosophie gilt a fortiori, was Kant von Letzterer sagt: „Sie hat ihren Nahmen davon daß sie an das transcendente Grenzt [...]“ (Kant: Opus Postumum, AA 21, 74). Die Wahrnehmung und Anerkennung der Grenze der Vernunft in der Beschränkung ihrer Gegenstände auf solche möglicher Erfahrung liegt keinerlei Hindernis,

> „daß sie uns nicht bis zur objektiven *Grenze* der Erfahrung, nämlich *der Beziehung* auf etwas, was selbst nicht Gegenstand der Erfahrung, aber doch der oberste Grund aller derselben sein muß, führe, ohne uns doch von demselben etwas an sich, sondern nur in Beziehung auf ihren eigenen vollständigen und auf die höchsten Zwecke gerichteten Gebrauch im Felde möglicher Erfahrung zu lehren. Dieses ist aber auch aller Nutzen, den man vernünftigerweise hiebei auch nur wünschen kann, und mit welchem man Ursache hat zufrieden zu sein“ (Kant: Prolegomena, AA 4, 361-362).

In dieser Passage klingt so etwas wie der Appell an ein Ethos transzendentalen Denkens mit; das ist nicht zufällig. Ich hatte vorhin Kants Diktum über die Namensherkunft der Transzendentalphilosophie nur unvollständig zitiert. „Sie hat ihren Nahmen davon daß sie an das transcendente Grenzt“, schreibt er, dann fährt er fort: „[...] und in Gefahr ist nicht blos ins Übersinnliche sondern gar in das Sinnleere zu fallen.“ (Kant: Opus Postumum, AA 21, 74). Genau auf diesem Grat bewegt sich transzendentale Theologie und muss sie sich bewähren. So etwas wie ihr Balanceinstrument auf diesem Grenzgang ist die Analogie als Anthropomorphismus-Korrektiv – nicht als Methode der Erkenntniserweiterung (vgl. dazu Kant: Prolegomena, AA 4, 357-360).

2. Transzendentalität revisited – und erweitert

Damit scheint mir ein Umriss von Transzendentaltheologie gewonnen, der zwar weitaus bescheidener (vgl. Winter 2000, 423) als derjenige Rahners auftritt, jedoch über ungleich größere Präzision verfügt, was natürlich daher rührt, dass es sich der Sache nach um eine philosophische Grammatik theologischen Sprechens handelt. Damit sind Impulse freigesetzt, die mit Kant über Kant hinaus an ein Konzept transzendentaler Theologie denken lassen, das in den Gang seiner Entfaltung im Ausgang von einer Analyse der Subjektstruktur die Bedingungen des linguistic turn, der ja bei Kant im Gedanken der Analogie bereits präsent ist, ausdrücklich und im vollen Umfang mit einbezieht. Damit ist auch schon ein erster Hinweis gegeben, in welche Richtung ich meinen eigenen Vorschlag für einen transzendentalen Ansatz in der Theologie anlege.

Ich halte die Grundstruktur von Selbstbewusstsein für einen besonders aussichtsreichen Einsatzpunkt, weil sich durch die Rezeption einschlägiger zeitgenössischer Theoriebildungen zum Komplex selbstbewusster Subjektivität die transzendentale Reflexion durch sprachphilosophische Analysen so bestätigen und ausdifferenzieren lässt, dass die vorhin aus Kant gewonnene Motivkonstellation einer Transzendentaltheologie als Grammatik theologischer Rede überraschend konkret eingelöst werden kann. Ich nehme dafür nicht nur, aber primär kritisch-produktiv Züge der von Dieter Henrich in etwa den letzten vier Jahrzehnten vorangetriebenen Subjekttheorie in Anspruch, ohne diese auch nur von Ferne an dieser Stelle in allen ihren Entfaltungsstufen, Verzweigungen und theologisch rele-

vanten Folgegedanken in Übersicht zu bringen (vgl. Müller 1994, 457-557; ders. 2000, 33-42; ders. 2001, 159-178; Hindrichs 2001, 1-27; Theunissen 2002, 343-362). Ich beschränke mich hier nur auf die Herausarbeitung des Einsatzpunktes meines Vorschlags eines transzendentalen Ansatzes (vgl. Henrich 1998, 31-44; ders. 1999, 11-73; ders. 2001).

Dieser Einsatzpunkt ist zunächst als existenzphilosophisch zu qualifizieren. Denn aus dem Zusammenhang zwischen dem Gebrauch von Subjekt-Prädikat-Sätzen als elementarer Verstehensform und der Möglichkeit von Selbstbewusstsein, wie ihn Kant seiner Philosophie als ganzer zugrundegelegt hatte, lässt sich – in Orientierung an der analytischen Methode (vgl. Henrich 1982, 125-181) – auf doppelte Weise ein Ausgangspunkt für eine Aufklärung von Selbstbewusstsein gewinnen: Wir beschreiben uns unrückführbar gleichermaßen als Subjekt – als einzigartig und Zentrum unserer Welt – und als Person qua Seiendes unter vielen unseres gleichen und unendlich vielem Anderen, dem gleichermaßen die Auszeichnung „seiend“ zukommt. Und zugleich gehört zu Selbstbewusstsein qua Wirklichkeitswissen um sich die Gewissheit, über das eigene Auftreten nicht zu verfügen, also eines Grundes bedürftig zu sein.

Die Tatsache, dass sich das Ganze von Selbstbewusstsein nicht von einer Analyse seiner Teilmomente her rekonstruieren lässt und auch die etwaige Annahme eines Schöpfungsaktes durch die Unterstellung eines schaffenden Subjekts von grundsätzlich derselben Wissensart unterstellte und das Problem damit nur verschieben würde, legt nahe, Selbstbewusstsein auf eine gründende Instanz noch komplexerer Verfassung als die eigene, zu erklärende Subjektivität zurück zu leiten. Unter dieser Voraussetzung gilt:

> „Wir können in der deskriptiven Einstellung nicht über die Grenzen dessen hinauskommen, was uns durch die Verfassung unseres Wissens vorgegeben ist. In ihr ist aber die wissende Selbstbeziehung von prominenter Bedeutung, [... aber; K.M.] wir können nicht erwarten, daß sie uns dazu instand setzt, sie aus dem Grunde, den wir ihr voraussetzen, Schritt um Schritt herzuleiten. Können wir sie doch, wie sich erwies, schon ihrer Verfassung nach nur annäherungsweise beschreiben. Ein Grund des Wissens von mir, wie immer er zu fassen ist, läßt sich überhaupt nur als eine Hypothese denken, die aber in keiner Verifikation zur erwiesenen Erkenntnis zu wandeln ist“ (Henrich 1998, 65).

Es bedarf – denke ich – keiner weiteren Erläuterung, dass wir uns damit genau im Raum der vorausgehend durch Kant unter dem Titel der „transzendentalen Theologie“ erschlossenen Raum von Grenz-Logik bewegen, denn: Einerseits muss der dem Selbstbewusstsein vorauszusetzende Grund einem gegenständlichen Erkennen entzogen sein, weil sein Auftreten in Gestalt einer Präsenz die wissende Selbstbeziehung ein Hintergangen-werden-Können der wissenden Selbstbeziehung implizierte, also eine Art eben jener adäquaten Aufklärung, die sich ja gerade kraft der Gestalt des Aufkommens und Zusammenspiels der Momente von Selbstbewusstsein als undurchführbar erwiesen hatte (Henrich 2001, 56. vgl. 148). Das ist die eine Seite der Grenz-Logik. Zu ihr gehört aber genauso, dass durch den Gedanken vom gründenden Grund der wissenden Selbstbeziehung

> „[...] eine weitere Klasse von Wirklichem definiert [ist; K.M.], und zwar eine solche, zu der sich das seiner selbst bewußte Leben allein aufgrund dessen in ein Verhältnis setzen kann, daß es sich als nicht seiner selbst schlechthin mächtig versteht“ (Henrich 1998, 69).

Unbeschadet seiner vorhin erläuterten Hypothetizität erweist sich der Gedanke vom Grund kraft der Verfasstheit des ihn notwendig auf sich ziehenden Selbstbewusstseins aufs engste mit dem Wirklichkeitswissen verfugt, das es selbst charakterisiert. Kraft dessen, dass es uns als Subjekte überhaupt nur dadurch gibt,

> „daß wir in unseren Gedanken und kraft ihrer für uns wirklich sind“ (Henrich 2001, 36),

gehört die wissende Selbstbeziehung inklusive ihres Gedankens vom Grund, der – wie erläutert – nur ein „Grund im Bewußtsein“ (vgl. Henrich 1992; ders. 2001, 272-273) sein kann, zu jenen Denkbewegungen, die – wie nach einem Diktum Theodor W. Adornos wohl alles Philosophieren, das wirklich ein solches ist – um den ontologischen Gottesbeweis kreisen (vgl. Adorno 1998, 378; Henrich 1999, 205). Von Kant her, mit Blick auf den Adorno dieses Diktum geprägt hat, versteht sich von selbst, dass dabei a fortiori die kantische Grenz-Logik eingeschlossen ist.

3. Gedanken und die Wirklichkeit von Gedachtem

Henrich selbst erinnert daran, dass er mit seinen Erwägungen zum Grund von Selbstbewusstsein, die nicht einfach die Frage nach der Realität dieses Grundes beantworten, wohl aber ein Nachdenken implizieren, „von woher diese Frage erwogen und beantwortet werden mag“ (Henrich 1997, 12), an eine Debatte anschließt, die schon Kantianer zu Zeiten ihres Namensgebers umtrieb: ob Kants These, dass wir unbeschadet des Ausschlusses gegenständlicher Erkenntnis des Absoluten und entsprechender Beweise zu notwendigen Annahmen über es kommen müssen, nach sich ziehen, dass diese Annahmen unter ein „als ob“ zu stellen und mithin als

> „[...] unausweichliche und zugleich lebensspendende und nur als solche wohlmotivierte *Fiktionen*“ (Henrich 2001, 60)

zu behandeln seien. Oder ob – etwa mit Fichte – dafür zu votieren sei, dass Überzeugungen so tiefreichender Lebensbedeutung, durch die sich überdies alle anderen Überzeugungen zu einem Ganzen fügen, gegen einen solchen Vorbehalt Wahrheit zugesprochen werden müsse.

Diese Debatte steht heute unter dem Vorzeichen des „iconic turn“, dem dritten Paradigmenwechsel nach Kants eigener Kopernikanischer Wendung und dem linguistic turn Anfang des 20. Jahrhunderts unter verschärften Bedingungen von neuem an. Die Verschärfung rührt daher, dass dabei medientheoretisch im Gedanken der Virtualität die Differenz zwischen Sein und Schein ausdrücklich eingezogen und einer Unentscheidbarkeit überantwortet wird (vgl. Müller 1998, 59-70; ders. 1998a, 149-162; ders, 2000a, 160-178). Es macht die Stärke des transzendentalen Ansatzes bei der selbstbewussten Subjektivität aus, vor der Kategorie des Fiktionalen genauso wenig wie gegenüber den semantischen Dekonstruktionsprogrammen des linguistic turn sprachlos zu werden, sondern erneut aus den eigenen Ressourcen das Recht der Wahrheitsfrage als legitim aufrecht zu erhalten. Das geschieht in Gestalt der Frage, ob und inwiefern nicht auch Fiktionen so etwas wie ein Wahrheitssinn zuzusprechen oder – je nachdem – abzuringen sei. Möglich ist das, wenn der Gedanke zugelassen wird, dass es so etwas wie eine Wirklichkeitskontinuierung gibt zwischen dem, was ist und wahr ist, und dem, was um dieses Wahr- und Wirklichseins

willen angenommen wird. Natürlich ist damit keine metaphysische oder gar religiöse Einsicht erschlichen, denn:

> „Ein solcher Wahrheitsbezug, in den sich das bewußte Leben als solches einfügt, kann nur dadurch eintreten, daß es die Synthesis aller seiner Lebenstendenzen, die es zunächst als eigene Leistung zu vollziehen hat und erfährt, zuletzt als Vollzug eines Geschehens begreift und neu orientiert, in das alle seine eigenen Vollzüge einbegriffen sind“ (Henrich 1999, 139-151, hier 148).

Das besagt: Wahrheit kann Fiktionen im Horizont einer holistischen Denkform zugesprochen werden, einer also, die alle theoretischen und praktischen epistemischen Leistungen und damit alle Weisen von Wissen im Letzten in einer Ganzheit von Verstehen zusammenführt (vgl. Henrich 2001, 61-62). Es kann nicht überraschen, dass eine solche Form der Selbstverständigung bewussten Lebens dazu hinleitet, den gründenden Grund von Subjektivität in Gestalt eines wirklichkeitsverbürgenden Gedankens monistischer All-Einheit zu fassen. Jedenfalls ist das die Option von Dieter Henrich, dem ich in den vorausgehenden Überlegungen in wesentlichen Hinsichten gefolgt bin. Dass Kant, der große Theoretiker der Freiheit, der diese als den Schlussstein seines denkerischen Gewölbes zur Geltung zu bringen wusste, dieses Denken inklusive seiner moraltheologisch-existenzphilosophischen Implikationen vom kosmologischen Frühwerk bis in das „Opus postumum“ hinein gegen einen monistischen Tiefenstrom zu erringen sich genötigt sah und das zur Textur seiner Theologien gehört (vgl. Ricoeur 2002, 65-102), erwähne ich hier nur mit Blick darauf, dass seine Postulatenlehre zu den prominentesten Zeugnissen dafür zählt, dass, was als irreal zu beschreiben ist, deswegen nicht einfach als wahrheitsunfähig zu gelten hat.

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Some Further Remarks on the "I"

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1. Introductory Remarks

In Wittgenstein's discussion of first person psychological statements, we find a number of remarks that point to a semantic difficulty in the use of such ascriptions. The meaning ambiguity is due to the fact that one and the same proposition can both be used to state a matter of fact and a metaphysical assumption. Hence a sentence such as, e.g., "Only my pain is real pain" might mean that all others except me are only pretending. In a solipsistic context, however, the claim is supposed to express that nobody except me *can* be in pain.

One of the problems involved in such usages lies, according to Wittgenstein, in our constant confusion and change of these two different cases (cf. Wittgenstein 1993, 288). This paper only concentrates on the plurivalent appliances of the word "I" and a possible way to avoid such ambiguities by introducing semantic rules that provide different linguistic settings for empirical and metaphysical contexts.

Since the discussion of whether "I" is a referring expression has been one of the most important and outstanding questions in the writings on Wittgenstein's philosophy, essential problems have to be left unmentioned. The main part of this contribution is therefore restricted to various uses of the first person pronoun, some of which are modeled on cases where the "I" does refer to some entity and others where the question of reference does not arise.

2. Case differentiations

In *The Blue and Brown Books* Wittgenstein distinguishes a subjective and an objective use of the word "I". Examples of the latter would be sentences like "I am six feet tall", "I broke my arm" etc. Here, identification of a particular person is needed, including possible errors. The former use of "I" is restricted to psychological predications such as "I see so and so", "I am in pain" etc. In this case no particular person is recognized as being the one who is in pain or sees so and so. This difference, however, might lead one to assume that the pronoun refers to some mental substance of a Cartesian kind. Wittgenstein remarks: "We feel then that in the cases in which 'I' is used as subject, we don't use it because we recognize a particular person by his bodily characteristics; and this creates the illusion that we use this word to refer to something bodiless, which, however, has its seat in our body. In fact this seems to be the real ego, the one of which it was said, 'Cogito, ergo sum'" (Wittgenstein, 1972, 69-70). Now, one way to avoid the assumption could be to eliminate the word "I" in subjective usages. This, however, also requires case differentiations *within* such contexts, granted the thesis of a semantic dichotomy equally holds for subjective applications.

The first case we could call a "quasi-objective" one. In the *Blue Book* Wittgenstein argues that there are instances where I say "I" and point to my body *analogous* to situations where we say "she is in pain" when she cries, is covered in blood etc.: "If, in saying 'I', I point to my own body, I model the use of the word 'I' on that of the demonstrative 'this person' or 'he'" (Wittgenstein 1972, 68). But this seems to show that here we have a case, where the first person pronoun is used in order to refer to a particular person. And there are certainly situations where someone wants to inform, say a doctor, about his physical conditions or insists on being the first to be helped because he is in serious pain whereas all the others are only slightly injured. It is important to notice, however, that the I is not reducible to a particular body for I could, e.g., imagine to change my body. Nonetheless, the expression has no sense without reference to a body (cf. Ambrose 1979, 62). This point reminds one of Wittgenstein's discussion of mental predicates. Here, too, he argues that they cannot be replaced by a behaviouristic terminology although they get their sense only by reference to corresponding observable phenomena.

The second use we might call "quasi-expressive". What characterizes these cases of "I"-applications is the assumption that first person predications are not to be taken as descriptions of certain conditions but rather as substitutions of natural expressions such as "ouch" in the case of "I am in pain", or as Wittgenstein puts it: "To say, 'I have pain' is no more a statement about a particular person than moaning is" (Wittgenstein 1972, 67) or "The difference between the propositions 'I have pain' and 'he has pain' is not that of 'L.W. has pain' and 'Smith has pain'. Rather, it corresponds to the difference between moaning and saying that someone moans" (Wittgenstein 1972, 68). Here we can see that this form of subjective use is modeled on contexts of non-descriptive natural expressions, i.e. cases where the question of reference does not arise because no referential terms are involved.

The third and most interesting case of metaphysical usage, however, does not, it seems, correspond to any analogous applications of the above kinds. But as already mentioned, the fact that we apply the word "I" without recognizing a particular person by her bodily features might create the illusion, that instead we indirectly refer to some mental Cartesian substance that *justifies* our saying "I". What is most important here to see is not the denial of such a self but rather that it cannot warrant the use of our first person pronoun. Wittgenstein remarks: "– 'Is there then no mind, but only a body?' Answer: The word 'mind' has meaning, i.e., it has a use in our language; but saying this doesn't yet say what kind of use we make of it" (Wittgenstein 1972, 69). Although this remark does not tell us what kind of use Wittgenstein is appealing to, it seems clear that the meaning of the word "I" in metaphysical contexts is not some bearer it denotes.

Now, to avoid the semantic dichotomy between empirical and metaphysical contexts, Wittgenstein offers a possible solution by introducing a new conceptual framework based on a set of rules different from our everday usage.

3. Introduction of an alternative symbolism

A solipsist who argues that only his pain is real pain is certainly not stating a matter of fact for his point is that it is *logically* impossible for anyone except him to be in pain, or in other words, a sentence that claims that a person A, who is not the solipsist, feels pain is without meaning. In these metaphysical contexts, where the "I" is without a counterpart, it is, however, equally nonsense to say that *I* am in pain, for here the use of the first person pronoun is not a quasi-objective one, i.e. it does not refer to any pos-

sessor having a particular experience as it does in cases of objective use such as "I have 5 Euro in my pocket". In one of his lectures Wittgenstein mentions the following: "To the person who says 'only I have real toothache' the reply should be: 'If only you can have real toothache, there is no sense in saying 'Only I have toothache'. Either you don't need 'I' or you don't need 'real' … 'I' is no longer opposed to anything. You had much better say 'There is toothache'.' 'Only I have real toothache', either has a commonsense meaning, or, if it is a grammatical proposition it is meant to be a statement of a rule" (Ambrose 1979, 22). This last remark obviously points out the meaning ambiguity that is involved in sentences stating personal experiences. Under usual circumstances the one who says that only she is in pain implies that all the others are just pretending. The second part of the quote, however, hints at another problem Wittgenstein ascribes to metaphysical propositions: Whereas the solipsist wants to say something necessarily true about the nature of things, e.g., the soul, all he really does is confusing such statements with grammatical rules that govern the use of words like "I". So, the sentence 'Only I have real pain' is not to be taken as a metaphysical claim about the essence of a self but instead as a grammatical sentence determining the use of our first person pronoun in such contexts.

In his *Notes for Lectures on 'Private Experience' and 'Sense Data'* Wittgenstein remarks: "You can't deny that there is my personal experience and that this in a most important sense *has no neighbour.* – But you don't mean that it *happens* to be alone but that its grammatical position is that of having no neighbour" (Wittgenstein 1993, 229). Here again, we see the distinction between an empirical context where someone happens to be by himself accidentally as opposed to a case where the *use of a word*, say "I", does not have an equivalent counterpart. In the same notes Wittgenstein points out that this asymmetry in our way of speaking misleads us in assuming a similar case for the nature of things, e.g., a Cartesian Ego, as if language functioned as a kind of mirror image of our world (cf. Wittgenstein 1993, 208-209), a position that reminds us of the famous Tractarian Picture theory.

Wittgenstein's view that metaphysical statements are indeed nothing but grammatical sentences about the use of words that differs from our commonsense understanding allows him to introduce the idea of an alternative symbolism in order to avoid such meaning ambiguities. What he therefore proposes is a symbolism where the first person pronoun is omitted from utterances containing self-referential mental ascriptions. So instead of saying, e.g., "I am in pain" or "I think" we could just as well say "There is pain here" or "it thinks", for such changes in our symbolism do not leave anything out at all: "The solipsist wishes to say 'I should like to put, instead of the notation 'I have real toothache' 'There is toothache'.' What the solipsist wants is not a notation in which the ego has a monopoly, but one in which the ego vanishes" (Ambrose 1979, 22).

A famous objection that obviously neglects the idea of such an alternative rule symbolism goes something like this: "To say that there is pain here does not at all tell one who the suffering person is. What this notation lacks is the identification of mental experiences as belonging to the speaker who would usually utter: 'I am in pain'. Only to say that there is pain here could mean that anyone might suffer who is close enough to the talking person. "

Of course, in our *ordinary* way of communication a sentence such as "There's pain here" makes no sense for the just mentioned reasons. But what is important to notice is that the alternative symbolism is only introduced for metaphysical contexts in order to avoid possible meaning ambiguities. Therefore a new set of linguistic rules is introduced that contains grammatical propositions like "Only I have real pain", "Only my experiences are real" etc. On the basis of these rules it is, however, absolutely clear towards what person a sentence like "There is pain here" is directed to, namely the speaker of such an utterance who would commonly say "I am in pain". This is just because the rules determine that there *can* only be one person suffering. Hence expressions such as "I" or "real" are indeed superfluous, or in other words, if there is only one canditate for applying a particular rule to, any mentioning *in* applying it is futile. When in a chess book we read "b1-c3" or "b1-a3" we would never object that the indication of this move is incomplete because it does not tell us what figure is supposed to make it. And this is because according to the rules of chess there is only one piece that is allowed to move in such a way, i.e. the horse.

In one of his lectures, Wittgenstein remarks the following: "We think we describe phenomena incompletely if we leave out personal pronouns, as though we would thus omit pointing to something, the personality, which 'I' in our present language points to. But this is not so. One symbolism is just as good as the next. The word 'I' is one symbol among others having a *practical* use and could be discarded when not necessary for practical speech. It does not stand out among all other words we use in practical life unless we begin using it as Descartes did" (Ambrose 1979, 63). Here again, Wittgenstein emphasizes the misleading temptation to assume that because in using the word "I" we do not point to a particular body we instead refer to some kind of Cartesian Ego seated somewhere in our body. His proposal of an alternative symbolism is obviously an attempt to avoid such inclinations by eliminating the word "I" in contexts where one does not want to claim anything empirical. The reason why Wittgenstein argues that this symbolism is as good as any other is precisely the fact that a mental substance cannot work as a justification for applying the first person pronoun. This is a point that generally holds for any rules, i.e. they are arbitrary in the sense that they are not justifiable by anything in reality (cf. Moore 1993, 70pp.). Wittgenstein remarks: "There is nothing wrong in suggesting that the others should give me an exceptional place in their notation; but the justification which I wish to give for it: that this body is now the seat of that which really lives – is senseless. For admittedly this is not to state anything which in the ordinary sense is a matter of experience" (Wittgenstein 1972, 66).

Hence, it is important to notice that the whole conception of an alternative symbolism is not to deny anything like mental states or substances which would imply that expressions referring to them are nonsensical but rather that the sense of such expressions is not determined by any entity they do or do not refer to. So, to say that the word "mind" has a meaning is not to say that it refers to a mind that justifies its use. What gives the word its meaning is the particular context in which it is applied and to say, e.g., that other people have a self might mean that they are alive (cf. Ambrose 1979, 62).

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Gewißheit und Glaube bei Wittgenstein

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In „Über Gewißheit“ erörtert Wittgenstein menschliches Wissen, welches vom vagen Vermuten bis zum absolut feststehenden, zweifelsfreien Wissen reicht. Religiöser Glaube und, damit verwandt, ideologische Positionen, werden nicht ausdrücklich behandelt, kaum gestreift. Vorliegende Arbeit versucht, Wittgensteins Stellung zu jener anderen Gewißheit, dem religiösen Glauben, aufzuspüren.

In seiner Arbeit „Über Gewißheit“ erläutert Wittgenstein diesen Begriff der Gewißheit, indem er – nach der bei ihm üblichen Vorgangsweise – das Problem immer wieder umkreist und mit Beispielen beleuchtet. Bevor dieser Begriff dem des Glaubens gegenübergestellt werden kann, muß gezeigt werden, was Wittgenstein unter Gewißheit verstanden hat. Da ist zunächst die sehr persönliche Gewißheit, besser als vage persönliche Meinung einzustufen, welche im Alltag - bei aller möglichen Ungenauigkeit - dem Verhalten eines jeden doch Sicherheit gibt und große praktische Bedeutung hat. Diese persönlichen Meinungen können durch naturwissenschaftliche Beobachtung oder Erfahrung zu Gewißheit erhärtet werden. Behauptet z.B. jemand in voller Überzeugung, in einer bestimmten Entfernung von der Sonne befinde sich ein noch unbekannter Planet, so sei das eine Hypothese, deren Richtigkeit erst bewiesen werden müsse. Sagt dagegen jemand: „Das hier ist meine eigene Hand“ und deutet dabei auf diese, so könne man das keine Hypothese nennen, diese Behauptung sei eine der völligen Sicherheit. Die Gewißheit, die der Erste von der Richtigkeit seiner Behauptung hat, ist eine dem Grad nach andere als die, mit der ich meine eigene Hand erkenne. „Aber es gibt keine scharfe Grenze zwischen ihnen.“ (ÜG 53). „Es ist nämlich nicht wahr, daß der Irrtum vom Planeten zu meiner eigenen Hand nur immer unwahrscheinlicher werde. Sondern er ist an einer Stelle auch nicht mehr denkbar“.(ÜG 54). Wittgenstein verwendet viel Mühe darauf zu zeigen, daß die *persönliche* Gewißheit ein breites Spektrum umfaßt, von der oft recht vagen Meinung, auf die wir uns im Alltag stützen, bis zu absoluten Sicherheiten, die jeden Zweifel ausschließen, weil Zweifel sinnlos wäre. Und er zeigt weiter, daß dieses Spektrum zwischen seinen Eckpunkten viele Stufen der persönlichen Gewißheit aufweist, deren jede einzelne für die Handlungen, Überzeugungen, das Weltbild und auch die sozialen Kontakte einer Person von Bedeutung ist.

Behauptet jemand die Richtigkeit eines mathematischen Satzes, kann ich ihm glauben oder nicht. Ist dieser Jemand Mathematiker, wird das mein Vertrauen stärken, auch wenn immer noch Zweifel zulässig sind. Wird der Satz aber bewiesen, ist der Glaube an ihn sozusagen absolut (PU578). Er ist von derselben Sicherheit wie der, mit dem ich meine eigene Hand erkenne. Dies Beispiele für eine von Anbeginn gewonnene absolute Sicherheit. Darum verschwindet im Sprachspiel auch das Wort „glauben“. Ich sage nicht mehr: „Ich glaube daran, daß das meine Hand ist“ sondern: „das ist meine Hand“. Und „die Menschen glauben, daß 2 mal 2 = 4 ist“ und „2 mal 2 = 4“ haben nicht den gleichen Sinn (PU,S.573). „Die Menschen glauben, daß 2 mal 2 = 4 ist“, könnte allenfalls einer Erzählung über Außerirdische entstammen. Sätze der Mathematik und Logik gelten von Beginn an als absolut gewiß.

Wittgenstein bringt als Beispiel für eine durch persönliche Erfahrung gewonnene absolute Gewißheit: Ich weiß, daß ich meine Hand verbrennen werde, wenn ich sie ins Feuer halte. Dieses Wissen, diese feste Gewißheit, vergleichbar der, die ich von der Wirkung der Schwerkraft habe, ist in den Erfahrungen der Vergangenheit begründet und richtet sich auf Zukünftiges (PU 474). Die Gründe für diese Sicherheit „sind hier nicht Sätze, aus denen das Geglaubte logisch folgt“ (PU 481). (Das heißt mit anderen Worten auch, daß ein Induktionsschluß nicht logisch ableitbar ist, selbst wenn er absolute Sicherheit gibt.)

Die Menge der Sätze, die uns Sicherheit geben, sind aber nicht eine ungeordnete Menge starrer Regeln oder Erfahrungen. Man könne sich vorstellen, meint Wittgenstein, „daß gewisse Sätze von der Form der Erfahrungssätze erstarrt wären und als Leitung für die nicht erstarrten, flüssigen Erfahrungssätze funktionieren; und daß sich dies Verhältnis änderte, indem flüssige Sätze erstarrten und feste flüssig würden“ (ÜG 96). Das beschreibt ein Weltbild, das durch Erfahrungen stets ergänzt und korrigiert wird, wobei sich niemand im einzelnen von der Richtigkeit aller Erfahrungen überzeugt. „Sondern es ist der überkommene Hintergrund, auf welchem ich zwischen wahr und falsch unterscheide“ (ÜG 94). Entscheidend ist immer die Brauchbarkeit des Weltbildes für *meine* Handlungen, es muß die *mich* befriedigenden Einsichten und Anleitungen verschaffen, wobei es immer einen Hintergrund geben wird und geben muß, in dem ein Konsens mit anderen besteht. Diesen Hintergrund bilden zueinander passende Überzeugungen; „...meine Überzeugungen bilden ein System, ein Gebäude (ÜG102). Wenn wir eine Erfahrung bestätigen oder entkräften, geschieht das innerhalb eines Systems und dieses „... ist nicht so sehr der Ausgangspunkt als das Lebenselement der Argumente“ (ÜG 105).

Soweit die Darstellung der „Gewißheiten“ in ihrem Spektrum von den absolut festen bis zu jenen „flüssigen“, die sich verändern, aber auch verfestigen, in einem sozialen Konsens bestehen oder auf einzelne Individuen beschränkt sein können. Das System als „Lebenselement der Argumente“ *muß* feste Teile haben, zweifelsfreie, denn „das Spiel des Zweifels selbst setzt schon die Gewißheit voraus“. Das System verlangt aber auch „flüssige“ Teile, weil nur dort neue Einsichten und Erfahrungen möglich sind und auch soziale Kontakte, die auf der Basis identischer Meinungen und Erfahrungen nicht möglich wären. Ich habe an anderer Stelle zu zeigen versucht (Nähr 2001), daß es gerade dieses breite Spektrum der persönlichen Meinungen ist, welches in den meisten Fällen die Handlungsanweisungen im Alltag gibt. Diese Meinungen sind in Informationen, Vermutungen, Erwartungen, Einsichten begründet, die nicht immer „richtig“ sind und auch wechseln können. Sie müssen nur dem Handelnden ein befriedigendes Verständnis der Phänomene und Sachlagen liefern.

„Über Gewißheit“ kann als ein im Wesen epistemologisches Programm angesehen werden. „Glauben“ als Verbum im Sinne von „vermuten“ wird öfters gebraucht, gelegentlich empfindet man eine Unklarheit und ist versucht, „glauben“ in religiösem Sinn zu lesen. Doch finden sich Verbindungen zur Religion nur selten und angedeutet (z.B. ÜG 107). Doch da es unbestritten auch persönliche

Gewißheit im religiösen Glauben gibt, erscheint es merkwürdig, daß Wittgenstein diesen Aspekt nicht weiter verfolgt. Bemerkungen, die sich auf religiösen Glauben beziehen, finden sich eher in „Philosophische Untersuchungen“, in „Bemerkungen über die Philosophie der Psychologie“ und insbesondere in „Vermischte Bemerkungen“. Die Begriffe „Gewißheit“, „fester Standpunkt“ usw. werden mit religiösem Glauben nur einmal beispielhaft in Verbindung gebracht in ÜG 239, wo von einem Glauben die Rede ist, der gegen alle Evidenz bestehen kann. Was Wittgenstein zu Meinen, Glauben, Wissen, Zweifel usw. sagt, läßt den Schluß zu, daß er den religiösen Glauben als einen von den oben aufgezählten Begriffen kategorial verschiedenen aus seinen Überlegungen ausscheidet, beziehungsweise nur am Rande und in Abgrenzung zu „glauben“ im Sinne von „vermuten“ behandelt. Es erscheint daher besonders interessant, Wittgensteins subtile Ausführungen über das menschliche Wissen seiner Einstellung zu Glaubensfragen gegenüber zu stellen.

An dieser Stelle sei ein Blick auf Kant geworfen, der in einer Untersuchung des „Fürwahrhaltens“ dem Glauben von Beginn an einen systematischen Platz zuweist. In der Kritik der Urteilskraft in § 91 „Von der Art des Fürwahrhaltens durch einen praktischen Glauben“ schreibt er, erkennbare Dinge seien von dreifacher Art: Sachen der Meinung (opinabile), Tatsachen (scibile) und Glaubenssachen (mere credibile). „Gegenstände der bloßen Vernunftideen, die ....nicht in irgendeiner möglichen Erfahrung dargestellt werden können“, seien keine erkennbaren Dinge, sondern reine Gedankenkonstruktionen, Gedankenspielereien, die Kant zu den Hirngespinsten rechnet, die man nicht einmal meinen könne. „Meinungssachen“ müßten wenigstens im Prinzip mit einer Erfahrungserkenntnis begründet werden können. (KdU 454ff). Für Tatsachen sei erforderlich, daß deren objektive Realität durch reine Vernunft oder durch Erfahrung bewiesen werden könne. Einzige Ausnahme sei die Idee der Freiheit, die, obwohl keines theoretischen Beweises ihrer Möglichkeit fähig, doch zu den Tatsachen zu zählen sei. (KdU 457). Glaubenssachen schließlich entziehen sich jeder für uns möglichen Erfahrung und können in ihrer objektiven Realität nicht bewiesen werden. Der Glaube (als habitus, nicht als actus, wie Kant sagt) „ist die moralische Denkungsart der Vernunft im Fürwahrhalten desjenigen, was für die theoretische Erkenntnis unzugänglich ist“. (KdU 462).

Kants klassische Einteilung in Sachen der Meinung, Tatsachen und Sachen des Glaubens findet sich im Prinzip auch bei Wittgenstein, doch mit deutlichen Unterschieden. Einmal läßt Wittgenstein, ganz im Sinne des nicht starren Charakters der Sprachspiele, graduelle Unterschiede zu, auch Übergänge und Korrekturen, die zu einem stärkeren oder schwächeren „Glauben“ (das Wort Gewißheit wäre hier besser) führen können. Und zweitens findet sich bei Wittgenstein nie der ausdrückliche Hinweis auf den kategorialen Unterschied, wenn „Glaube“ einmal die durch Erfahrung gewonnene absolute Gewißheit von der Wirkung der Schwerkraft und ein andermal eine religiöse Gewißheit bezeichnet.

Wenn man beobachtet, wie selten und wenig ausführlich Glaubensfragen von Wittgenstein behandelt werden, muß man den Schluß ziehen, daß diese Themen unter den zu einer Veröffentlichung gedachten und über die rein private Sphäre hinausgehenden Arbeiten kein sehr großes Gewicht hatten. Wie weit Wittgenstein sich ganz privat mit solchen Fragen befaßt hat wird aus seinen Schriften wohl nie eindeutig zu ergründen sein. Am häufigsten finden sich Aussagen zu Glaubensfragen in „Vermischte Bemerkungen“, Aufzeichnungen, die am weitesten von der systematischen Behandlung bestimmter Themen entfernt sind, weiter noch, als es der sonstigen aphoristischen Schreibweise entspricht. Ich will versuchen, die verstreuten Bemerkungen zu Glaubensfragen zu einem Bild zu erweitern. Wittgenstein selbst rechtfertigt dieses Vorgehen, wenn er sagt: „Jeder Satz, den ich schreibe, meint immer schon das Ganze, also immer wieder dasselbe und es sind gleichsam nur Ansichten eines Gegenstandes unter verschiedenen Winkeln betrachtet“ (VB,S.459)

Eine flüchtige Meinung, aber auch eine auf den Augenschein gegründete feste Überzeugung, beziehen sich auf ein Objekt. Auch für eine Gemütsbewegung gilt das. Aber: „Der Glaube ist keine Beschäftigung mit dem Gegenstand des Glaubens. Die Furcht, die Sehnsucht, die Hoffnung aber beschäftigen sich mit ihrem Objekt“ (PPII155). Glaube ist keine Gemütsbewegung (PPII154), sondern eine Disposition im Unterschied zu einem Bewußtseinszustand. Eine Disposition wird durch eine Unterbrechung des Bewußtseins, eine Verschiebung der Aufmerksamkeit nicht unterbrochen (PPII45). Der feste Glaube, dieser „Zustand der Seele“ (PU589) ist auch nicht falsifizierbar wie ein naturwissenschaftliches Resultat. „Die historischen Berichte der Evangelien könnten, im historischen Sinn, erweislich falsch sein, und der Glaube verlöre doch nichts dadurch ... weil der historische Beweis den Glauben gar nichts angeht. Diese Nachricht (die Evangelien) wird glaubend (d.i. liebend) vom Menschen ergriffen“ (VB S.495). Hier ist der Unterschied in den Kategorien der Bedeutung von „glauben“ besonders deutlich. Der Glaube kann durch äußere Ereignisse veranlasst, ausgelöst sein, aber er kann nicht in ihnen begründet sein. Darin ist er der „moralischen Intuition“ verwandt, die eine für Jeden, bewußt oder unbewußt bestehende Grundeinstellung seines Verhaltens bestimmt.

Sicherheit im Glauben läßt sich nicht zeigen durch die Frage, was in uns vorgeht, wenn wir sicher sind, oder durch die verbale Erklärung unseres Sicher-seins. Eine Sicherheit, „daß es so ist“ kann sich nur im Handeln des Menschen zeigen. (PU,S.571). Das zeigt den Glauben als eine „private Disposition“ , als einen privaten „Zustand der Seele“. Es finden sich aber keine Hinweise, wie Wittgenstein etwa die Kommunikation über Fragen des Glaubens in einer Glaubensgemeinschaft gedacht haben könnte.

Eine merkwürdige Notiz aus dem Jahre 1929 findet sich in den Vermischten Bemerkungen: „Man kann die Menschen nicht zum Guten führen; man kann sie nur irgendwohin führen. Das Gute liegt außerhalb des Tatsachenraums“.(VB S.454). Und zur etwa gleichen Zeit notiert Wittgenstein: „Wenn etwas gut ist, so ist es auch göttlich. Damit ist seltsamerweise meine Ethik zusammengefaßt“ (VB, S.454). Aus der Verbindung beider Sätze ließe sich folgern, daß man die Menschen auch nicht zum Göttlichen führen könne. Unter Tatsachenraum versteht Wittgenstein den Raum der sinnlichen Wahrnehmungen und rationalen Argumente. Er nimmt für das Gute wie das Göttliche eine im Menschen ruhende, nicht näher erklärbare und ableitbare Grundeinstellung an, die sich als Gutes und Göttliches äußert. An anderer Stelle (VB, S.491) heißt es: „Die Religion sagt: Tu dies! – Denk so! – aber sie kann es nicht begründen, und versucht sie es auch nur, so stößt sie ab; denn zu jedem Grund, den sie gibt, gibt es einen stichhaltigen Gegengrund.“

Das Christentum gründet sich nicht auf historische Wahrheit. Man kann nicht daran glauben, wie man sonst historische Nachrichten glaubt, sondern: „glaube, durch dick und dünn und das kannst Du nur als Resultat eines Lebens.“(VB S.494) Auch hier wieder: Der Glaube liegt nicht im „Tatsachenraum“ historischer Nachrichten. „Und

der Glaube ist Glaube an das, was mein *Herz*, meine *Seele* braucht, nicht mein spekulierender Verstand“(VB S.496).

Aufzeichnungen von 1944 legen nahe, daß Wittgenstein damals über den Glauben nicht bloß in geistiger Distanz nachgedacht, sondern persönlich betroffen war. Es kann hier nicht der gesamte Abschnitt zitiert werden, nur so viel: „Die christliche Religion ist nur für den, der unendliche Hilfe braucht, also nur für den, der unendliche Not fühlt.“... „Der christliche Glaube – so meine ich – ist die Zuflucht in dieser *höchsten* Not“ (VB,S.514)

Spätere Aufzeichnungen zeigen wieder Gedanken zum Wesen des Glaubens aus größerer Distanz. Sagt jemand, er habe früher nie an Gott geglaubt, so sei das verständlich. Nicht verständlich aber sei, wenn er sagt, er habe früher nie *wirklich* an ihn geglaubt.(VB S.525). Glaube ist für Wittgenstein gleichsam etwas absolutes, das da ist oder nicht, aber nicht in abgeschwächter Form bestehen kann. So ist es auch unsinnig, wenn jemand, der zu einem Glauben bekehrt werden soll, diesem Bekehrungsversuch mit den Worten zustimmt: „Nun gut, ich werde es probieren“. Was einen abgeschwächten Glauben vortäuschen kann, sind Handlungen, die nicht dem Glauben folgen. Zum absoluten Charakter des Glaubens noch dies: „Es kommt mir vor, als könne ein religiöser Glaube nur etwas wie das leidenschaftliche Sich-entscheiden für ein Bezugssystem sein. Also obgleich es Glaube ist, doch eine Art des Lebens, oder eine Art das Leben zu beurteilen. Ein leidenschaftliches Ergreifen *dieser* Auffassung.“ (VB S.540/541). „Ein Gottesbeweis sollte eigentlich etwas sein, wodurch man sich von der Existenz Gottes überzeugen kann. Aber ich denke mir, daß die *Gläubigen*, die solche Beweise lieferten, ihren >Glauben< mit ihrem Verstand analysieren und begründen wollten, obgleich sie selbst durch solche Beweise nie zum Glauben gekommen wären.“(VB S.571).

Eine kurze Abweichung sei noch erlaubt: Die Beschreibung der Wesenseigenschaften religiösen Glaubens zeigt eine gewisse Verwandtschaft mit ideologischen Positionen. Auch bei diesen besteht das starre Festhalten, das jede rationale Argumentation ausschließt. Ich verweise auf Untersuchungen, die z.B. im Marxismus zahlreiche religiöse Züge beschrieben haben. Und in der Gegenwart ist es in der westlichen Welt der Demokratiebegriff, der ein dermaßen tabuisiertes Prinzip darstellt, daß niemand auch nur daran dächte, darüber zu argumentieren. Eine Untersuchung solcher, dem religiösen Glauben analoger ideologischer Positionen wäre eine eigene Forschungsaufgabe, die hier natürlich nicht verfolgt werden kann.

Nach dem bisher Gesagten erscheint deutlich, daß das in „Über Gewißheit“ dargestellte Spektrum des Wissens einerseits, welches von „meinen“ und „glauben“ bis zur absoluten Sicherheit reicht, und der religiöse Glaube anderseits dem Wesen nach verschiedene Arten des Wissens sind. Das ist vielleicht auch der Grund dafür, daß Fragen des religiösen Glaubens in „Über Gewißheit“ fehlen und in anderen Schriften behandelt wurden. Auch dort aber bleiben sie gleichsam von außen betrachtete theoretische Fragen und wir werden aus ihnen nicht über Wittgensteins persönliche Einstellung zu religiösen Fragen entscheiden können. Trotzdem leisten sie, wie ich glaube, einen Beitrag, um über den Philosophen hinaus auch den Menschen Wittgenstein besser zu kennen.

Literatur

KdU	Kant, Kritik der Urteilskraft
ÜG	Wittgenstein, Über Gewißheit
PU	Wittgenstein Philosophische Untersuchungen
PP	Wittgenstein Bemerkungen über die Philosophie der Psychologie
VB	Wittgenstein Vermischte Bemerkungen

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On Life and Language: *Limit*, *Context* and *Belief* in Wittgenstein and Ortega y Gasset

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Despite both thinkers belonging to the tragic generation of 1914, Ludwig Wittgenstein (1888-1951) and José Ortega y Gasset (1883-1955) never actually met in their lives or in their texts (neither those they wrote nor those they read). Coming from very separate philosophical traditions – the logical atomism of Wittgenstein and the neo-Kantianism and phenomenology of Ortega – the works of these two philosophers nevertheless show latent conceptual affinities. We shall limit ourselves to suggesting three possible conceptual keys: *limit*, *context* and *belief*. We shall then finally take Wittgenstein's distinction between *sagen* and *zeigen* in the light of the difference Ortega highlights between *talking* and *saying*, reflecting upon the limits of language and the meaning each thinker gives to silence.

With this paper we seek to progress a little further on the hermeneutical construction of a bridge between these two traditions, the analytical and the phenomenological, between these different takes on philosophy, which, despite employing different methods, rely on congruous ideas and intellectual sensibilities. The space of life and the space of language converge in their respective intellectual projects: Wittgenstein started out interested in untangling the logical structure that linguistically configures the world, finding a limit whose opening and transcendence is only *shown* to us by the silent life; Ortega built the architecture of a vital reason from which he would subsequently undertook a lucid reflection on the limits of language. Beyond merely outlining the cultural coordinates of a contemporary *Zeitgeist*, we are seeking to propose a comparative reading of certain texts of both authors, which, in our opinion, reflect a common concern for a series of philosophical problems, synthesised in the following interpretative hypotheses:

LIMIT. Wittgenstein and Ortega walk the same conceptual path, that of the *philosophy of the limit*. Following this frontier philosophy that separates *Erscheinung* from *Dinge an sich* (Kant), *Vorstellung* from *Wille* (Schopenhauer), Wittgenstein also traced an ontological and epistemological limit between what can be *said*, and therefore expressed in language, and what can only be *shown* beyond language, in silence. Ortega seeks to integrate reason and life, yet these two fields are ultimately held captive at the border that separates the rational *method* used from the vital object pursued. Limited life comes face to face with an unlimited world. The limit between *sagen* and *zeigen*, between *razón* and *vida*, between reason and life, thus represents the distance between theory and practice, between logical-linguistic knowledge and life experience. The limit therefore operates as a foundation and a condition for the possibility of the metaphysics of language and of life.

Wittgenstein understands that philosophy must seek the limits of logical-rational language, as it is they that also encode the ontological limits of the world (5.6). However, sense lies beyond the demarcations of language: "Das Gefühl der Welt als begrenztes Ganzes ist das mystische" (6.45). But this sense is not *said* in any linguistic manner – it can only be *shown*, expressed through silence.

For Ortega, the limits of reason become evident in the vital *quehacer* or routine; hence his insistence in the ideas of circumstance (*Meditations on Quixote*, 1914), perspective (*The Theme of our Time*, 1923), horizon (*Man and People*, 1949-1950), which are not only images that display concepts but also an expression of a philosophical space structured on the basis of said demarcatory notions. Thus in the eyes of Ortega the figure of man appears as a *forger of limits*, of foreshortenings, distances, perspectives, landscapes. His task or *quehacer* consists in tracing vital limits to the unlimited and infinite world: "...el hombre (...) tiene que forjar un escorzo finito de la infinitud" […man (…) must forge a finite foreshortening of infinity"] (Ortega. 1980, 227).

For Ortega, the *theme of our time* consists in replacing the domain of pure reason with that of vital reason. This effort at integration between these two spheres (*reason* and *life*) presupposes, however, awareness of a limit that operates as a condition of possibility, since we can only integrate, unite, what is distant, what has been separated by a limit.

From this point of view, it would be worthwhile to read *Tractatus Logico* Philosophicus from Ortega's perspective of *vital reason*. Because the very genesis of Wittgenstein's first book reflects the existence of a limit between the *logical-rational* sphere of *saying* (*sagen*), as expressed in *Notebooks 1914-1916*, and the *vital* sphere of *showing* (*zeigen*), which is reflected in the so-called *Geheime Tagebücher*. As we know, the former was written on the odd pages (right-hand side) and the latter, in code, on the even pages (left-hand side) of the manuscript Wittgenstein carried with him throughout the First World War. It is therefore perhaps unsurprising that this conflict and anxiety over the limit between logic and life felt by the young philosopher was transmitted to Russell, via a letter in 1913, with the following words:

> "Über Logik kann ich Dir heute nichts schreiben. Vielleicht glaubst du dass es Zeitverschwendung ist über mich selbst zu denken; aber wie kann ich Lögiker sein, wenn ich noch nicht Mensch bin!" (Wittgenstein. 1980, 47).

In his famous letter to the editor of *Tractatus*, Ludwig von Ficker, Wittgenstein also wrote that the true sense of the book was ethical, as it transcended what was *said* in its pages. Ever silent, life can only be *shown* beyond the limits of language.

CONTEXT. The two philosophers understand the meaning of words as part of a *language-game* (*Sprachspiel)* in Wittgenstein, and of a series of social *uses* in Ortega. Along separate paths, they criticise traditional referentialist semantics to arrive at a pragmatic semantics that makes them perceive the meaning of language from the dimension of *context* and the vital and social *circumstance*.

The comprehension of language that Wittgenstein brought about in *Philosophische Untersuchungen* (*PU*, 1953) criticises the traditional metaphysical use of the same, according to which concepts are essential mental entities that have a correlate in the outside world. He

contrasts a *metaphysical use* and an *everyday use* of language (*PU*, §116). The linguistic method thus consists in rejecting all types of ontic presuppositions as the semantic foundation of words and placing these, contrasting them, with the greatest possible number of examples and cases in which we make use of them. The presupposed semantic essence is replaced by the *description* of particular circumstances of use, since the manifold language games in which we participate are no more than different and possible *forms of life* (*Lebensform, PU*, §23).

We must bear in mind that in his *PU* Wittgenstein uses three different terms to refer to the situation of use: two of them to refer to the pragmatic space, *context* ("Zussamenhang") and *surrounding* ("Umgebung"), and a third to mention the set of particular conditions that operate within said space, *circumstance* ("Umstand"). The first two therefore function as synonyms, although in most cases the author uses the word "context" (§525, §625, §686) instead of "surrounding" (§583, §584).

The context contributes to clarifying the process of learning a meaning, thus brushing away the old *cobwebs* inherited from subjectivist metaphysics. As opposed to the image of the mental mirror, the point of view of context or surrounding is that which now determines linguistic analysis: "Was jetzt gechietht, hat Bedeutung – in dieser Umgebung. Die Umgebung gibt ihm die Wichtigkeit" (Wittgenstein. 1988, 364).

Ortega also locates the subject of meaning from the perspective of circumstance. The philosophical roots of both thinkers are very different, including those referring to specific reflection on language, with Ortega's meditation on language still influenced by Humboldtian tradition, whose comprehension of the phenomenon of language appears defined as an expression of a certain *Weltanschauung*. Despite divergences with the Wittgensteinian approach, both authors concur in their criticism of referentialist semantics (Ortega. 1983, IX, 643), demand it be replaced with pragmatic semantics.

There would therefore be continuity between vital circumstance and linguistic context. Some texts by Ortega show said affinity, so in *Mission of the Librarian* (1935), for example, we can read: "Nuestras palabras son, en rigor, inseparables de la situación vital en que surgen. Sin ésta carecen de sentido preciso, esto es, de evidencia" ["Our words are, strictly, inseparable from the vital situation in which they arise. Without this they lack precise sense, i.e. evidence"] (Ortega. 1983,V, 233). Because, according to Ortega, life is not made up of "things" but, above all, of *pragmata*: affairs, uses, etc.: "Debemos, pues, contemplar la vida como una articulación de campos pragmáticos" ["We must therefore contemplate life as an articulation of pragmatic fields"] (Ortega. 1983, IX, 642-643).

In *Man and People*, Ortega establishes a distinction between *talking* and *saying*. Speaking refers to a language already formed by society, to a language that has become socially established mechanical *use*. Talking reflects the use of language employed by the Ortegan *hombre-masa*, man-mass. Saying, on the other hand, expresses the attempt to transcend the system of linguistic uses established by talking, with a view to a (re)creation and innovation of language. From this conceptual division would come a *reproductive use* (talking) and a *creative use* (saying) of language.

Like Wittgenstein, Ortega believes that: "*El lenguaje está limitado siempre por una frontera de inefabilidad*. Esta limitación se haya constituida por lo que en absoluto *no se puede* decir en una lengua o en ninguna" ["*Language is always limited by a frontier of ineffability.* This limitation has been formed by what absolutely *cannot* be said in one language or in any"] (Ortega. 1983, IX, 756). The limits of language in the Wittgensteinian *saying* find in Ortega a linguistic expression in the face of the silent and ineffable showing: "El silencio, la inefabilidad, es un factor positivo e intrínseco del lenguaje" ["Silence, ineffability, is a positive and intrinsic factor of language"] (Ortega. 1983, CB, IX, 755). Silence does not therefore mean a negation of language. Compared to the transcendence of language implied by silence in Wittgenstein, in Ortega it has an *immanent* sense.

If for Wittgenstein "logical space" (*Logische Raum*) has its limits, for, *textual space* is also composed of inevitable limits, beyond which appears the silence that haunts its edges. The reader maintains a dialogue not only with the text but also with its context, patent and latent, endeavouring, through interpretation, to rescue the writing from its original silence (Ortega. 1983, IX, 762).

There is also something tacit in saying referred to the vital situation from which this saying arises, since man "no dice esta situación: la deja tácita, la supone" ["does not speak this situation: he leaves it tacit, he supposes it"] (Ortega. 1983, V, 233). In the same way, language games, which Wittgenstein describes as linguistic and cultural contexts, are presupposed by the talker, who must know the "rules" of use of these games, otherwise to participate in them would be impossible. But these linguistic games are not *said*, but simply practiced – they are *used*.

Language and silence are therefore inseparable: all saying implies perspective and limit, which are constructed upon manifold other possible *sayings*, which are silenced (Ortega. 1983, IX, 555; VIII, 396). Languages traces inevitable ellipses, dangling in the silence that which discriminates the talker, having chosen one linguistic perspective, excluding the others. The *perspectivism* of Ortega – ontological and epistemological – is therefore also *linguistic*.

BELIEF. Wittgenstein and Ortega create a theory on the methods of constructing *beliefs*, in individuals and sociolinguistic communities. For Wittgenstein, beyond the framework of the presuppositions of logical-rational language rises the sphere of aesthetic, ethical and religious beliefs. According to Ortega, ideas have a rational and conscious nature unlike beliefs, with which we act on a pre-rational level. They also belong to the sphere of the unutterable. This is why, according to Ortega (*Ideas and Beliefs*, 1934) we *have* ideas (*man gesagt*, in the perspective of Wittgenstein), while we simply *exist* with beliefs (*man gezeigt*).

Ortega gives us an example to illustrate how we exist with a belief: when a man gets ready to go out he does not question the reality of the outside world (streets, buildings, etc.) that awaits him on the other side of the door to his home. This belief is not held as a problematic reality, as a doubt, but he simply exists in this belief, it accompanies us in our day-to-day living.

For Wittgenstein, doubt must also have a limit, since: "Wer an allem zweilfeln wollte, der würde auch nicht bis zum Zweifel kommen. Das Spiel des Zweifelns selbst setzt schon die Gewissheit voraus" (Wittgenstein. 2000, §115, 18), and since: "Ein Zweifel, der an allem zweifelte, wäre kein Zweifel" (§450, 59). And, like Ortega, he adopts a pragmatic position in the face of the Cartesian supposition of all-embracing doubt: "In allen gewöhnlichen Fallen wird ein Zweifel, ob wirklich eine Tür da ist, unmöglich sein" (§391, 50). Life thus becomes the irreducible pragmatic

criterion for keeping certain basic and everyday beliefs out of doubt: “Mein Leben zeigt, dass ich weiss oder sicher bin, dass dort ein Sessel steht, eine Tür ist usf” (§7, 2). Life therefore *shows* (zeigt) what language does not *say*, what it silences.

Ethical and religious beliefs, however, transcend the limits of language, despite our tireless efforts to express them. To express the inexpressible, to say the unsayable. This is the paradox, according to Wittgenstein, surrounding all attempts to want “to write or talk Ethics or Religion”, since they are “*beyond the world*, and that is to say beyond significant language”. But there is the inevitable “tendency in the human mind” that strives to refer rationally and linguistically to beliefs. To persistently “run against the boundaries of language”, however, is hopeless: “The running against the walls of our cage is perfectly, absolutely hopeless” (Wittgenstein, 1965, 12). The obstinate and absurd – yet human – temptation to transcend the limit, to get away the cage of language in which we live.

Logos, language and reason, has always sought to capture the echoes and beats of life, no matter how silent. The philosophical trajectories of the two authors studied here cross inversely. Wittgenstein initially condemned the meaning of life to mystic silence, to subsequently draw life closer to language, thereby converting it into a *form of life*. And Ortega began his philosophical odyssey fully convinced of being able to trap life in the logical-linguistic nets of reason, while his second intellectual *navigation*, however, highlighted the impassable abyss that separates words from the vital situations in which they arise. As if language were ultimately incapable of fully understanding life: life being made up of words, certainly, but also silences, gestures, looks that transcend it.

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On Virtuously Attaining Truth

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1. Introduction

Recently, Linda Zagzebski developed an account of cognizers as agents. “An effective agent is reliably successful in reaching her ends and she does so through the exercise of her own power” (Zagzebski 2001, 151). Knowledge is thought of as the result of virtuous agency. Knowledge is a state of true belief arising out of acts of intellectual virtue. X is an act of intellectual virtue A (for example: thoroughness, open-mindedness) if and only if

(i) x arises from the motivational component of A,

(ii) x is something a person with virtue A would (probably) do in the circumstances,

(iii) x is successful in achieving the end of the A motivation and finally truth, because of the features (i) and (ii) (Zagzebski 1996, 270-271).

Zagzebski claims that her explication of the concept of knowledge is able to exclude Gettier cases from being knowledge. Gettier problems, so we are told, arise for every analysis of knowledge which maintains that knowledge is true belief plus something else that does not entail truth (Zagzebski 1996, 283). In Gettier cases condition (iii) is not satisfied. One reaches a belief because of one’s intellectually virtuous motivations and activities, but one does not reach the truth because of these features of the cognitive situation. Consider the case of the physician Dr. Jones who diagnoses that patient Smith is suffering from a certain virus x on the basis of characteristic symptoms. However, in this case the symptoms are due to something else, but as it happens Smith has indeed contracted very recently virus x, but so recently that he does not yet exhibit symptoms caused by x. If one is prepared to speak of knowledge in such cases the question arises: Why does Dr. Jones in this case not know that Smith suffers from virus x? The answer according to Zagzebski would be: Because Dr. Jones, although motivated to gain knowledge and using methods known reliably to lead to knowledge, does not reach the truth of her belief *because of* her virtuous motivation and procedure. The truth-attainment is not attributable to the agent.

William Alston (2000, 188) speaks of an “ingenious way of handling Gettier problems”. The requirement that “the belief’s being true is due to the virtuous motivation” prevents “the gap between what makes the belief true and what gives rise to its being formed that is characteristic of Gettier cases.”

Ernest Sosa (2002) makes a similar suggestion to Zagzebski’s: “So in order for correct belief to be attributable to you as your doing, the being true of your believing must derive sufficiently from ‘yourself’ ... “ And a bit later: ”What we prefer is the deed of true believing, where not only the believing but also its truth is attributable to the agent as his or her own doing.”

In the article “What is knowledge?” Zagzebski (1999, 111) says that we do have an intuition of what could be meant by the formulation “truth is achieved because of the virtuous motivation and procedure”, but she concedes that she does not know of an analysis of the *because-of*-relation that is adequate.

In this paper I want to raise the questions of what could be meant by such phrases as “attaining the truth”, “attaining the truth because of virtuous motivations and procedures”. My suspicion is that no adequate account of the because-of-relation can be found. I will try to explain why this is so and what it is that misleads to the idea of a causal connection between the virtuous motivation and activities and the truth of the belief.

2. The meaning of the phrase “attaining the truth”

The simplest way to understand the phrase “Dr. Jones attains the truth” would be to say:

(i) Dr. Jones acquires a true belief.

The word “belief” is ambiguous. With the word “belief” one might refer to the intentional content of the belief; or one might refer to the state a person is in, the relation she has towards the content in question. (A third referent of “belief”, which I do not consider here, would be the act of believing or assenting to a proposition.) For the sake of clarity, I will use from now on “belief” only for the state or disposition a person is in; in order to refer to the content I will use “p” for “proposition”. Thus we change (i) and write:

(ii) Dr. Jones acquires the belief that p, and p is true.

Here the Gettier-problem arises. Dr. Jones might virtuously acquire the belief that p, and p might be true, but the being true of p might be unconnected with the virtuous procedure of Dr. Jones. To avoid having to let such cases count as knowledge, Zagzebski demands that there should be a because-of-relation between the virtuous motivation and activities and the truth-attainment. The problem is to spell out the connection between the agency and the being true of a belief.

3. The meaning of the phrase “attaining the truth because of virtuous motivation and procedure”

The phrase could be spelled out in the following way:

(iii) p is true because Dr. Jones virtuously believes that p.

There are two ways one could understand (iii). First in the sense in which one says: The weather changes because the barometer fell. However, this would not be an interpretation of the because-of-relation which Zagzebski needs, because in this interpretation the virtuous believer is only a criterion that p is true. Secondly, one could understand (iii) in terms of an epistemic conception of truth. However, the traditional analysis of the concept of knowledge presupposes a realistic conception of truth. Moreover, in the writings of Zagzebski I have found no signs of commitment to an epistemic conception of truth. On a realistic conception of truth, p is true because it is the case that p. The agent is not the truth-maker. Thus I exclude (iii) as a proper interpretation of the because-of-relation. Another way to understand the phrase would be:

(iv) p is believed by Dr. Jones because of her virtuous motivation and activities.

This interpretation has to be excluded as well because in our case it is exactly that what Dr. Jones is doing. In order to see where the problem lies, we have to look at the particular reasoning process of Dr. Jones:

(a) A patient exhibits symptom X, if and only if the patient suffers from virus x.

(b) Smith exhibits symptom X.

(c) Smith suffers from virus x.

This is one of the Gettier cases which work *via* an explicit or implicit inference (Swinburne 2001, 193). Dr. Jones is justified in believing (a), since no case was known in which a patient exhibited X without having contracted virus x, but (a) is false. Zagzebski would have to say that in the reasoning process of Dr. Jones one non-virtuous act is involved, that is, one act which is not successful in achieving a true belief. However, this amounts just to the old solution that one does not know if one gets a true proposition *via* false propositions. I do not see that the appeal to agency, intellectual virtuous motivation and activity does anything to solve the problem.

4. What leads astray

I want to consider what it could be that leads to the idea that there is a chain, reaching from the agent to the truth of the belief.

We know of the Frankfurt-style counterexamples against the validity of the Principle of Alternate Possibilities (PAP), in which a person P freely brings about a state of affairs S, although there is some mechanism that would have operated to bring it about that P would have brought about S, if P had not done it by herself. The person is judged to be morally responsible for her act. One accounts best for these cases if one introduces agent causality. The person is held responsible because the causal chain starting from her as agent and leading to the event in question is not interrupted.

We know of the tricky cases of wayward causation. Tim wants to kill his uncle, and he believes that he can find him at home. His decision to kill his uncle so agitates him that he drives recklessly. He hits and kills a pedestrian, who by chance is his uncle. The killing was an accidental consequence of what Tim did. If one believes in agent causality one is able to handle such cases in a plausible way (Meixner 2001, 354). If one believes only in event causality one is at pains to explain the difference between the killing which is brought about by Tim intentionally, and the killing which is brought about by Tim only accidentally. The causal chain deriving from Tim as agent does not hook up to the event of the uncle's killing.

Finally, there is another case, inspired by Sosa (2002): Suppose Emma is an archer. She aims to hit the bull's-eye. She is a good archer, she has got the skill of archery. She hits the bull's eye because of a skilful shot. She is a real star at shooting and is 99 % reliably successful. One day she wants again to win the prize. She wants to hit the bull's eye; she uses her skill of archery. However, at the very moment she shoots, an unforeseeable gust drives the arrow to one side. If there had not been this gust, Emma would have hit the bull's eye. But now the arrow goes astray. Now suppose that this incident of bad luck is cancelled out by another incident of good luck: a strange gust from the other direction brings the arrow in line and the arrow lands finally in the bull's eye. Emma achieves a winning shot. But the hitting of the bull's eye would not be attributable to her. She wanted to hit the bull's eye, her shot was just as perfect as ever; but the hitting of the bull's eye did not occur because of these features of the act. She did not hit the bull's eye because of her skill. Other causes, which are not under her control, were at work as well. The hitting of the bull's eye was an accidental consequence of what Emma did.

"Hitting the bull's eye" sounds like "attaining the truth", and one might think that the epistemic case is similar to such cases. The idea would be: The chain which relates the agent to the truth of the belief must not be interrupted, neither through other event-causes, nor through other agents. Why does this sort of reasoning not work for the quoted epistemic case? My answer is already indicated. I distinguish between the mental state of believing and the content of the belief. The mental state is what is brought about by agent causation. However, in the Gettier-case it is not the causal chain which is interrupted, or bypassed. It is the logical relation between the contents which produces the problem. This would explain why one is unable to find an adequate account of the because-of-relation between the cognizer as agent and the achieving of the truth.

5. A useful distinction

When Thomas Aquinas considers the relation between will and intellect, he utilizes the distinction between the exercise of an act and the specification of an act.

> "[...] we must take note that the act of the reason may be considered in two ways. First, as to the exercise of the act. And considered thus, the act of the reason can always be commanded: as when one is told to be attentive, and to use one's reason. Secondly, as to the object; in respect of which two acts of the reason have to be noticed. One is the act whereby it apprehends the truth about something. This act is not in our power: because it happens in virtue of a natural or supernatural light. Consequently in this respect, the act of the reason is not in our power, and cannot be commanded. The other act of the reason is that whereby it assents to what it apprehends. If, therefore, that which the reason apprehends is such that it naturally assents thereto, e.g. the first principles, it is not in our power to assent or dissent to the like: assent follows naturally, and consequently, properly speaking, is not subject to our command. But some things which are apprehended do not convince the intellect to such an extent as not to leave it free to assent or dissent, or at least suspend its assent or dissent, on account of some cause or other; and in such things assent or dissent is in our power, and is subject to our command." (ST I II 17, 6)

The exercise of cognitive powers and virtues is within our power. But the determination of the act is only in some restricted cases within our power. It is within my power to open or shut the eyes. But it is not within my power to determine that I see green instead of red. It is within my power to make a research and to use scientific syllogisms. However, it is not within my power that I get as a result p instead of q. Aquinas thinks that there is a class of objects of cognition which are also *quantum ad determinationem actus* under a certain voluntary control. He thinks that the objects of religious belief are of that kind. Probably he thinks also that some contingent objects of cognition are of that kind, for example the belief that Emma is arrogant.

6. Conclusion

If such distinctions could be intelligibly defended - and I think that they could - one would have to give up the idea that all cognitive virtues are either a subclass of the moral virtues or that all cognitive virtues are entirely different from moral virtues. Secondly, one would have to give up the idea that knowledge is a univocal concept which we try to analyse.

Engaging agent causality in epistemology has some advantages, especially for giving an adequate account for those procedures of belief-acquisition and beliefs which are objects of praise and blame. However, it seems to me that the utilisation of the concept of the agent is of no help for dealing with the case of Dr. Jones.

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Kierkegaard without “Leap of Faith”

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The most popular and even famous phrase attributed to the Danish philosopher and theologian Søren Kierkegaard is the so called “leap of faith”. It is meant to express the conviction, that knowledge cannot grasp the highest truth, but has to be superseded by radically underived religious commitment, namely the passion Kierkegaard calls faith.

It is striking, however, that the expression “leap of faith” (Danish: “Troens Spring”) does not occur even once in the published writings. It furthermore has to be conceded, that the terms ‘faith’ and ‘leap’ rarely appear in the same contexts, nor do variants of these words. The writings, in which the leap is discussed, do not address questions of faith and vice versa. For example in *The Concept of Anxiety* sin is described to be a leap, as no moral considerations, explanations or sufficient reasons ever justify evil deeds. Faith, by contrast, is the individual’s personal relationship to God, the best example is Abraham in *Fear and Trembling*. Surely the explicit wording is not decisive so that the expression “leap of faith” might be seen as an appropriate summary of Kierkegaardian thinking although it cannot be quoted. Therefore it is worth the effort to re-discuss the Kierkegaardian notion of faith provoked by this stunning tension between traditional scholarship and the results of statistical research.

This project has the consequence, that labels frequently attached to Kierkegaard’s approach have to be reconsidered as they are evoked by the fiction of a “leap of faith”: Charges like fideism, voluntarism, decisionism, misologism and irrationalism hinge on a radical disjunction of knowledge and faith which turns out to be a misleading interpretation.

I will argue that according to Kierkegaard faith and knowledge are not measured by the same epistemological standards so that they only differ in degrees of certainty. Rather, they turn out to be different kinds of attitude, involving different dimensions and capacities of human existence. This does not mean, however, that they are mutually exclusive modes, as the central figure of the paradox in Kierkegaardian thinking illuminates: The paradox takes shape, when the limits of reason are reached but it can only be apprehended as such, when reason is involved and understands why faith is the appropriate mode for the truth. At this intersection of knowledge and faith something like a leap would not make sense. Rather, reason is involved although arguments cannot legitimate faith: they can support it in retrospect and help to distinguish it from nonsense, discover mistakes and unmask religious fanaticism.

The framework for Kierkegaard’s notion of faith is constituted by his account of existence (SV VII, 300ff.) : The thinking subject is a fiction, ignorant of the fact that every single human being has a unique life with specific and changing aspects. Constitutive for someone’s personal conditions of existence are his particular circumstances, innate capacities, previous choices and the theoretical framework that prestructure his thinking. The individual’s place in the world is not of his own doing, he is born into it. The determining factors of an existence pre-exist reflection and decision, they have to be taken for granted. Existence does not only mean that all knowledge is perspectival, but that it is affected by factors it cannot control, it is embedded in a factical context.

Kierkegaard plays on the Latin term “inter-esse” (interest, SV VII, 270) to make his point: the existential conditions of human beings are the position between freedom and necessity, time and eternity, body and soul, general and particular etc. These oppositions are never synthesized but coexist in tension; human lives are built on contrary principles. Existing is the task to integrate these poles, Kierkegaard calls this “becoming a self”, which is never fulfilled, as the conditions of an individual life are changing. Man’s identity with himself remains fragile and vulnerable, it is never a stable and fixed entity as the person is unfinished and in process. Likewise, comprehensive knowledge is impossible, as no one knows the future. Finitude and temporality do not allow to see the whole, *sub specie aeternitatis*. “Interesse” means, that this situation cannot be mastered without interest, in the indifferent, distanced and neutral attitude of an observer. According to Kierkegaard, truth cannot be impartial, disinterested and a matter of objective investigation, described by a web of propositions, as it concerns the whole life. The scope of knowledge proves to be too restricted to come to terms with the complexity of the existential constellation. Human conditions do not allow for a indubitable, necessary and universal theory of truth. Thus the classical philosophical endeavour cannot provide the truth for an existing human being: A hypothesis that has been proved to be correct or a coherent intellectual inquiry do not satisfy our existential concern. The crucial term is appropriation (Danish: tilegnelse): the truth must not only be understood, but it has to be accepted including its existential consequences which inform the whole life. Once accepted, the truth provides guidelines for decisions and actions. Therefore, it is integrated into our world as it forms our lives and leads to personal excellence, it is not radically transcendent and beyond our world in a separate realm, like the supernatural.

The question why the existential conditions prevent to reach the truth by reason leads to the religious dimension: sinful individuals are no longer able to activate the truth by recollection, provoked by Sokrates’ maieutic activity. After the fall, the truth is no longer within us because our relationship to God is disturbed. As the story in the book of Genesis describes, sin is a consequence of individuals who insist on their autonomy, who distance themselves from God and disturb their relationship to him by their own fault. The attempt to find the truth in man made theory and doctrines betrays a fundamental self-deception as sin-consciousness is missing. As soon as there is an awareness of the corruption of a fallen individual, the next step would be the insight that only God’s grace can restore the original capacity for truth. Therefore, not knowledge but a religious attitude is appropriate. Kierkegaard claims indeed a radical difference between knowledge and faith: the former is validated by intersubjectively shared standards and must be based on objective evidence to legitimize the claim of correctness. It has to be based on strict demonstration and induced by arguments so that assent is compulsory. It is re-evaluated continually but can only approximate truth as the existential dimension, the conditions after the Fall, are ignored. Faith, by contrast, involves not only the cognitive, but also the volitional, emotional, moral, habitual and other aspects of human existence and must be accepted and lived by each

individual. Hence, it is not designed to compensate lacks of knowledge or solve intellectual riddles, it is no propositional attitude measured by the standards of common epistemology but on a lower level of evidence than knowledge. The requirements of faith are not completely in the power of the believer, but it is a dialogical event, an encounter with God and the gift of grace that transforms the sinner and restores his capacity for the truth. The solution is therefore no act of will on the part of the believer, no voluntary leap, no mere decision without warrant, which would be sinful as it results from human autonomy, like knowledge.

Yet I think Kierkegaard provoked misunderstandings like the “leap of faith”, as his apparent distrust of reason is in the context of a polemics directed against Hegel’s philosophical enterprise. The opposition of knowledge and faith seems to fit in a set of disjunctive relationships like objective-subjective; general-particular; cognitive-passionate; compelled-voluntary; possibility-necessity; reasonable-absurd; conclusion-resolution; logic-conviction; understanding-commitment etc. These pairs of contrary terms, that can be found throughout the Kierkegaardian authorship, remind of Hegelian dialectic, but they remain unresolved. The thrust of these polemical chapters is the refusal of Hegel’s attempt to integrate religion into the system and subordinate it to knowledge as superior mode to deal with absolute truth. According to Kierkegaard, Hegel’s philosophy of the absolute spirit with an ultimate conformity of thought and being extends the philosophical inquiry beyond the capacities of an existing human being. (SV VII, 99) Like Karl Marx, Kierkegaard insists, that the reconciliation of oppositions is by no means realized in our concrete historical situation although it is in thought. According to Kierkegaard, Hegel forgets that he himself is an existing individual and should commit suicide as a consequence from his philosophy. (SV VII, 164)

It is in this context that the crucial figure of the paradox takes shape: Kierkegaard agrees with Hegel when he appreciates Kant’s antinomies, where both sides are equally well founded. Whereas Kant tries to eliminate them, Hegel integrates them by dialectical movement and subsumes them within a higher unity. Kierkegaard, by contrast, leaves the contradictions as they are, he even reinforces them to become paradox (SV VII, 182-196 + SV VII, 328). A negative, cut-off, two-term dialectic without mediation leaves ruptures without resolution in thought.

This type of paradox results from a careful and reasonable process of thinking, it is not nonsensical and unrelated to all types of arguments. Neither is the paradox generated by faith, but it prepares the question of a religious solution of intellectual failure. It signals the crisis of reason as an intellectual difficulty turns out to be an existential and religious problem so that a new mode, faith, has to take over. As religious commitment does not follow as a matter of course from intellectual considerations even if they fail, something like a paradigm shift takes place. The best and most radical example is the incarnation, Kierkegaard calls it the “absolute paradox” (SV IV, p. 204-216, *Philosophical Fragments*, Chapter 3). The eternal appears in a historical situation, under temporal conditions. This is not a formal or logical contradiction, as we do not know what it means to be God, neither do we know completely, what it means to be a human being. The concepts that form the paradox are not clear, as the paradox arises in the experience of a reality our concepts cannot deal with. It reveals that the thinking individual has been on the wrong track as it tried to find a solution by mediating concepts. When we cannot avoid contradictory descriptions of this event, this indicates our lack of conceptual equipment. The reaction to paradox cannot be neutral and indifferent, it offers an alternative in dealing with the limits of human reasoning: Either stay within them (see the title of Kant’s book *Religion within the limits of Reason alone*) so that human standards of cognition provide the framework. From this standpoint, the extraordinary event of incarnation provokes offence (SV VII, 510). The other possible reaction is faith: human intellectual resources fail and the believer allows to transcend them although he is not able to control this process. This is the point where no method is available and passion comes in as possible grounds are not compulsory. In this context of anti-Hegelian polemics the leap occurs to replace the impossible mediating third term of a dialectical movement (SV VII, 85). These polemic passages and chapters suggest labels like “fideism”, which even can be justified by quotations; we find slogans like “sacrifice of reason” or “crucifixion of the understanding” in Kierkegaard’s writings. Unfortunately they have been influential and concealed the rather complex epistemological implications of Kierkegaard’s anthropology.

Unlike the fideists, who claim that faith does not need and should not seek the support of reason, Kierkegaard investigates how far philosophical efforts can reach. Not only the limits but also the achievements of reason are vital for the paradox. Although Kierkegaard agrees with fideists that faith cannot be justified by arguments and that natural theology cannot help to find God, he accepts arguments to support faith and distinguish it from other types of passion and insanity. In *Fear and Trembling* Kierkegaard introduces the traditional formula of the absurdity of Christian faith when he discusses Abraham’s willingness to sacrifice his son while suspending all moral duties. Abraham is obedient to the commanding voice he believes to be God’s and prepares the murder of his only son. The crucial question is, if the absurd quality of Christian faith can be distinguished from mere nonsense, from insanity. Every murderer could claim to be obedient to divine commandments when killing someone else. If religious truth gives its own authenticitation beyond any criteria, misuse cannot be avoided. If there are criteria upon which a justification can be based, however, faith is no longer radically underived and unsharable. When one of Kierkegaard’s colleagues at Copenhagen university claimed to have experienced a revelation from God, Kierkegaard is eager to find criteria in order to unmask this as confusion and madness. Although he never judges someone else’s relationship to God, as he insists that this is a matter of radically hidden inwardness, he diagnosed misled religious passion and fanaticism in one of his books. (*On Authority and Revelation*/*Das Buch über Adler*). Thus, he does not try to elaborate positive criteria for someone else’s relationship to God, but he describes misguided religious attitudes.

There is no choice of faith over reason in Kierkegaard’s authorship; rather the discovery of self-deception leads to recognize, that intellectual efforts do not suffice. Although Kierkegaard’s fundamental anti-rational stance cannot be denied, faith is neither contrary to reason nor incompatible with it. Kierkegaard gives good reasons to mistrust man made ideas about God and helps to understand why the paradox cannot be understood. (SV VII, 505). The apprehension of paradox requires a good deal of understanding as it must be distinguished from nonsense. If human intellect would function properly, Socratic recollection and Hegelian dialectic could be appropriate ways to approach the truth. Kierkegaard emphasizes, that not the truth itself is paradox, but it seems to be paradox when viewed from sinful existence. (SV VII, 172). The passion of

faith has to be accompanied by philosophical inquiry, although it cannot be derived from it. Simone Weil explains why: “L’incompris cache l’incompréhensible, et pour ce motif doit être éliminé.” (150, 1991; Vgl. SV VII, 495) “What is not understood hides what cannot be understood/is beyond understanding and therefore it has to be eliminated”.

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„Wenn das Wahre das Begründete ist, dann ist der Grund nicht wahr, noch falsch.“ Zum epistemischen Status religiöser Überzeugungen

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Mit welchem erkenntnistheoretischen Anspruch können religiöse Überzeugungen heute in der Pluralität der Lebensformen begründet werden? Kann die *Wahrheit* der eigenen Überzeugungen gegenüber anderen Überzeugungen aufgezeigt werden? Oder müssen wir eingestehen, unseren Glauben lediglich als eine *rationale* oder *zumindest nicht unvernünftige* Option unter vielen ausweisen zu können? Schließen sich Glaube und Vernunft gar grundsätzlich aus im Sinne eines fideistischen Ansatzes?

Die Frage nach der Rationalität von religiösen Überzeugungen hängt wesentlich mit dem Wahrheitsbegriff zusammen. Im Folgenden will ich versuchen, die Dichotomien zwischen Realismus und Antirealismus sowie die zwischen Absolutismus und Kulturrelativismus durch ein standpunktgebundenes, diesseits- und praxisorientiertes Wahrheitsverständnis zu überwinden.

1) Wichtige Elemente für eine solche Bearbeitung des Wahrheitsbegriffs bietet in meinen Augen die Spätphilosophie Ludwig Wittgensteins. Dabei muss zunächst festgehalten werden, dass sich Wittgenstein jeglicher Aussage in Bezug auf die Wahrheitsfrage enthält und dass er keine konkrete erkenntnistheoretische Position einnimmt, was seinem Bestreben, grundsätzlich keine Theorie aufstellen zu wollen, entspricht (Vgl. Wittgenstein 1993, Nr. 109, 122, 124; Wittgenstein 1989, 95f.). Die Frage, was Wahrheit in ihrer begrifflichen Bestimmung sei, scheint für Wittgenstein völlig belanglos; es ist lediglich sinnvoll zu fragen, in welcher Bedeutung wir „Wahrheit“ in der Praxis gebrauchen. Mit dieser Haltung eröffnet er die Möglichkeit, die Wahrheitsfrage im Sinne eines kontingenzbewussten Realismus offen zu halten.

Um so mehr widmet sich Wittgenstein der Untersuchung der konkreten praktischen Lebenssituation. Durch seine Einführung der Begriffe des Weltbildes und des Sprachspiels, durch seine Reflexion auf die Konfrontation mit fremden Sprachspielen und Weltbildern, welche zuallererst eine Thematisierung, Hinterfragung und Begründung der eigenen Weltbildsätze, denen wir sonst blind folgen, ermöglicht, bietet er die begrifflichen Möglichkeiten, die Wahrheitsfrage ebenso wie die Frage nach einer Glaubensbegründung differenzierter zu betrachten. Das Weltbild, als Gesamtheit aller regulativen, das Leben regelnden, grammatischen Sätze, bildet den Grund, die Bedingung der Möglichkeit für alles wahr/falsch-Urteilen in den einzelnen Sprachspielen. Aufgrund der in dem jeweiligen Weltbild bzw. Sprachspiel gültigen Regeln und Kriterien läßt sich weltbild- bzw. sprachspielintern problemlos zwischen wahr und falsch unterscheiden. Das Weltbild *als Ganzes* kann aufgrund der menschlichen Unmöglichkeit, aus der eigenen Sprach- und Weltbildgebundenheit herauszutreten, nicht weiter hinterfragt werden (Wittgenstein 1997, Nr. 253). Dies bedeutet jedoch nicht, dass nicht die Wahrheit eines jeden einzelnen dieser Weltbildsätze in Zweifel gezogen werden könnte; denn – so erfahren wir in der zunehmend pluralen Gesellschaft immer wieder – die einzelnen Weltbildsätze stehen nicht alternativenlos da und sind daher sowohl weltbildintern als auch -extern begründungsfähig und daher auch begründungspflichtig (Stosch 2001, 258-320). Der Status der Weltbildebene als Ganzer kann als Bedingung der Möglichkeit für alles Urteilen zwar als wahrheitsneutral bezeichnet werden (Lütterfelds 1990, 174), damit wird jedoch die Wahrheitsfrage im strengen korrespondenztheoretischen Sinne erst gar nicht berührt. Die Frage nach der Wahrheit wird bei Wittgenstein ganz auf die Weltbild- und Sprachspielebene gehoben und dort durch eine interne Korrespondenz beantwortet. Dies führt bei Wittgenstein jedoch nicht zu einem epistemischen Wahrheitsbegriff, sondern er hält an einem nicht-epistemischen Wahrheitsverständnis trotz unseres immer nur perspektivisch imprägnierten Zugangs zur Welt fest: „Daß es mir – oder allen – so *scheint*, daraus folgt nicht, daß es so *ist*“ (Wittgenstein 1997, Nr. 2). Daher kann seine Position am ehesten in die Nähe von Hilary Putnams *weiterentwickeltem internen Realismus* gerückt werden, der im Folgenden kurz thematisiert wird.

2) Putnam lehnt wie auch Wittgenstein die Korrespondenztheorie deshalb ab, weil sie einen für uns unmöglichen externen Gottesgesichtspunkt voraussetze. Er bezeichnet diese Perspektive als „metaphysischen Realismus“ und kennzeichnet sie als *„externalistische“* (Putnam 1995, 75). Putnam wählt deshalb den Standpunkt eines internen Realismus, weil er wie Wittgenstein davon ausgeht, dass die menschliche Sicht immer perspektivisch ist, dass alle „Inputs“ der Erfahrung immer schon durch unsere eigenen Begriffe „kontaminiert“ sind. Für die *„internalistische* Perspektive“ sei kennzeichnend, dass die Frage, aus welchen Gegenständen die Welt bestehe, nur im *Rahmen* einer Theorie bzw. einer Beschreibung sinnvoll sei (Putnam 1995, 81f.). Aber natürlich seien Entsprechungen *innerhalb* eines Begriffsschemas möglich, wobei Putnam Wittgensteins Zweistufigkeit von Weltbild- und Sprachspielebene übernommen hat und hier voraussetzt (Putnam 1995, 104ff.,148-151; Putnam 1997, 201-226). Anders als bei Wittgenstein sind nach Putnam unsere Auffassungen, obwohl sie nicht ‚wertfrei‘ sind, dennoch „Auffassungen von etwas Realem“ (Putnam 1995, 82). Damit versucht Putnam, einer realistischen Sicht Rechnung zu tragen. Nach internalistischer Auffassung sei ‚Wahrheit‘ so etwas wie „(idealisierte) rationale Akzeptierbarkeit“ (Putnam 1995, 75). Durch die Betonung der *Idealisierung* der rationalen Akzeptierbarkeit will Putnam den Invarianzcharakter der Wahrheit und die Möglichkeit eines Bedeutungsüberschusses der Wahrheit gegenüber unseren Verifikationsmöglichkeiten garantieren. Indem er als Beispiel die heutzutage erwiesene Falschheit der vormals für wahr gehaltenen Aussage, die Erde sei eine Scheibe, aufgreift, erweist Putnam sowohl die Zeit als auch die von meiner eigenen Interpretation abweichende Interpretation des Anderen als Faktoren, die immer wieder aufzeigen, dass Wahrheit, wenn es sie gibt, mehr sein muss als das, was sich innerhalb meiner Interpretationswelt als passend bewährt (Putnam 1995, 82f.).

M.E. bleibt Putnams Position zu Zeiten seines reinen internen Realismus problematisch, wenn er einerseits am Invarianzcharakter der Wahrheit festhalten will, andererseits jedoch ideale rationale Akzeptierbarkeit mit Wahrheit identifiziert und meint, in einer idealen Kohärenz die Wahrheit wirklich treffen zu können, bzw. in Ablehnung

eines radikal nichtepistemischen Wahrheitsbegriffs an der prinzipiellen Zugänglichkeit der Wahrheit für den Menschen festhalten will.

So hat er in der Folgezeit seine Theorie vom internen Realismus zu einem *natürlichen Realismus* hin weiterentwickelt. In diesem macht er nun zu Recht deutlich, dass aus unserem immer nur konzeptualisierten Zugang zur Welt nicht auch schon die Abhängigkeit der Dinge von dieser unserer Sichtweise folgt (Putnam 1997; Schantz 1996, 358-375). Damit verwirft er seine Identifikation von Wahrheit mit Rechtfertigbarkeit unter idealen Bedingungen wieder. Putnam schließt jetzt zumindest nicht mehr aus, dass es Wahrheiten geben könnte, die für uns prinzipiell unerkennbar bleiben. Um nicht erneut in einen metaphysischen Realismus zu fallen, betont Putnam, so Schantz (1996, 362), weiterhin die „grundlegenden und tiefen Beziehungen zwischen Wahrheit und gerechtfertigter Behauptbarkeit“. Wahrheit könne „zwar manchmal, aber [...] nicht in der überwiegenden Mehrzahl der Fälle, unsere kognitiven Fähigkeiten überschreiten“. Wie allerdings Putnam diese „grundlegenden und tiefen Beziehungen“ aufweisen oder kriterial einlösen will, bleibt letztlich unklar. Konsequenter sind in meinen Augen an dieser Stelle Philosophen wie Nietzsche, der postuliert, letztlich immer wieder mit dem Einbruch des Skeptizismus leben zu müssen, oder solche wie Wittgenstein, der diesen Schritt der positiven Formulierung einer Beziehung zwischen idealer Kohärenz und Wahrheit deshalb nicht mitgehen würde, weil es sowohl unmöglich als auch lebenspraktisch irrelevant ist, eine solche festzustellen. Dennoch scheint mir Putnams weiterentwickelter interner Realismus als Wahrheitskonzeption die Lösung zu bieten, sowohl unserem Verwiesensein auf unsere Weltbildgebundenheit und damit letzlich der Pluralität gerecht werden zu können, als auch die Hoffnung auf eine mögliche letzte Wahrheit nicht aufgeben zu müssen.

3) Der entscheidende Fortschritt in der Wahrheitskonzeption Wittgensteins und Putnams scheint mir darin zu liegen, dass sich ausgehend von ihren begrifflichen Unterscheidungen verschiedene Ebenen im Wahrheitsbegriff unterscheiden lassen, die es erlauben, den epistemischen Status und die Begründungsfähigkeit religiöser Sätze zu klären. Zunächst sind, wie im Wittgenstein-Teil angedeutet, die lebensnotwendigen regulativen Weltbildsätze in ihrem Status von sachhaltigen Sätzen, die auf der diskursiven Ebene als logische oder Urteilswahrheiten auf der Grundlage von Weltbildsätzen formuliert werden, zu unterscheiden. Zwischen der Weltbildebene und den einzelnen sachhaltigen Sätzen in den jeweiligen Sprachspielen besteht eine interne - schwache - Korrespondenzbeziehung, die geradezu tautologisch ist, insofern die Bedeutung der sachhaltigen Sätze durch die regulativen Weltbildsätze bestimmt wird. „Innerhalb der Sprache, der ein Wort angehört, ist es eine triviale Angelegenheit, seinen Bezug anzugeben, nämlich indem man das Wort selbst verwendet. Worauf bezieht sich ‚Kaninchen‘? Na, auf Kaninchen natürlich!“ (Putnam 1995, 78).

Darüber hinaus lassen sich Wittgensteins Überlegungen dahingehend weiterdenken, dass die *definitorische Bestimmung* von Wahrheit von ihrer *kriterialen Einlösbarkeit* unterschieden wird. In dieser Stoßrichtung schlage ich vor, zwar in Bezug auf die Definition von Wahrheit an der klassischen Korrespondenztheorie der Wahrheit festzuhalten, um nicht durch die Depotenzierung der Wahrheit das „Ende der Wahrheit“ (A. Kreiner) herbeizuführen. Andererseits scheint mir jedoch in jeder Philosophie, die - wie insbesondere Wittgenstein in seiner Rede von der Autonomie der Grammatik - die kopernikanische Wende vollzogen hat, die Einsicht unabdingbar zu sein, dass wir kein Kriterium besitzen, die Wahrheit im *starken* korrespondenztheoretischen Sinn festzustellen. Bei aller Wertschätzung, die die Korrespondenztheorie auf defintitorischer Ebene verdient, führt kein Weg an der Einsicht vorbei, dass sie kriterial nicht einlösbar ist. Konsequenterweise muss demnach jeglicher Wahrheitsanspruch im Sinne eines absoluten Wahrheitsanspruchs aufgegeben werden. Man könnte diese Position als eine *negative* Korrespondenztheorie der Wahrheit charakterisieren.

Allerdings darf zugleich die *Möglichkeit* des Wahrseins des von uns für wahr Gehaltenen nicht ausgeschlossen werden. Denn die Vertreter einer radikal antirealistischen bzw. epistemischen Wahrheitskonzeption behaupten in der Aussage, dass es die Wahrheit nicht gebe, mehr, als sie sich selbst zu sagen zugestehen dürften.

Indem also die Position des Realismus nicht ausgeschlossen, sondern in einem *erkenntnistheoretischen Agnostizismus* offengehalten wird, wird in diesem Ansatz sowohl der menschlichen Erfahrung von Endlichkeit und Perspektivengebundenheit als auch der menschlichen Suche nach Wahrheit und der Intuition des Realismus, in der Wahrnehmung eines Gegenstandes oder in einer Erfahrung nicht getäuscht zu werden, Rechnung getragen. Denn aus der Tatsache, dass wir nur Zugang zur Realität innerhalb unserer Sprache bzw. unseres Weltbildes haben, folgt nicht, dass die Dinge abhängig von unserer Weltsicht sind bzw. nicht unabhängig von uns sein können. Auch bei Einsicht in diese conditio humana ist es nicht inkonsistent, die Frage nach einer letzten Wahrheit, nach einem letzten Grund für unseren Glauben offenzuhalten, bzw. die – allerdings nicht verifizierbare – *Möglichkeit* offenzuhalten, dass das von uns Für-wahr-Gehaltene auch tatsächlich wahr ist.

In Bezug auf den Vorwurf des performativen Selbstwiderspruchs gegenüber dem Skeptiker ist zu erwidern: Der skeptische Zweifel führt zwar in pragmatische Inkonsistenzen, theoretisch widerlegbar ist er jedoch nicht, wenn er in die Form ‚Es ist nicht sicher, dass und ob nichts sicher gilt‘ gebracht wird (vgl. Kreiner 1992, 68). Vor allem aber belegt die Kluft, die im Skeptiker zwischen lebenspraktischer Handlungsnotwendigkeit des Position-Beziehen-Müssens und der erkenntnistheoretischen Position des Sich-jeglicher-Position Enthalten-Wollens bestehen bleibt, nicht die Richtigkeit der Gegenposition, zumal der konsequente Skeptiker das Prinzip des Zweifels auch auf sich selbst anwendet und keine Wahrheitsgarantie für die eigene These beansprucht. Eine Reflexion auf die Unterscheidung von Wahrheitsbegriff einerseits und Begründbarkeit, Rationalität und auch Gewißheit andererseits kann helfen, diese Aporien, denen die skeptische Position unterliegt, in einem anderen Licht zu sehen. Denn durch diese Unterscheidung kann deutlich gemacht werden, dass der radikale Skeptizismus zwar theoretisch nicht ausgeschlossen werden kann, dass er aber in der Praxis nicht zuletzt aufgrund seiner Undurchführbarkeit jede Bedeutung verliert. Friedrich Nietzsche analysiert scharf diese in sich paradoxe und tragische Grundstruktur des Menschen: Einerseits kann der Mensch die Wahrheit nicht als Wahrheit erkennen oder feststellen und er erkennt dies; andererseits jedoch kann er nicht leben ohne zumindest vorläufig feststehende Wahrheiten, um handlungsfähig zu bleiben (vgl. Hofmann 1994, 25). Nietzsche bezeichnet Wahrheit daher auch als *lebensnothwendigen Irrtum* (Nietzsche 1988, 506).

Gerade mit Blick auf die Praxis wird deutlich, dass die von mir vorgestellte Wahrheitskonzeption weder dem Relativismus noch dem Fideismus Vorschub leisten will. Im Gegenteil: Aus der Erkenntnis, dass wir die Wahrheit nicht wissen können, folgt zwar, dass zunächst einmal theoretisch alle Überzeugungen wahr sein könnten, aber

gerade darum ist, mit Nietzsche gesprochen, der Horizont wieder frei, und es lohnt sich, mit rationalen Argumenten um die, wie Putnam zu Recht sagt, größte rationale Akzeptierbarkeit zu streiten. Je widerspruchsfreier, konsistenter, kohärenter, evidenter, pragmatischer oder auch nützlicher sprich, je vernünftiger ein Ansatz ist, desto konsensfähiger ist er, desto eher ist er aus rationalen Gründen als handlungsleitende Instanz akzeptierbar. Jedoch darf eine solche rationale Akzeptierbarkeit nicht mit dem Wahrheitsbegriff gleichgesetzt werden; denn unsere Überzeugungen bleiben immer dem Stachel der Kontingenz ausgesetzt, so dass eine eschatologische Verifikation zu erwarten bleibt.

4) In Bezug auf den Status religiöser Überzeugungen wird in dem dargestellten Ansatz somit ebenfalls eine Mittelstellung eingenommen: Viele religiöse Überzeugungen liegen Wittgenstein zufolge zwar als Regeln am Grunde unseres Weltbildes allen Begründungsversuchen bereits regulativ voraus, bleiben aber dennoch durch die doppelte, weltbildextern und -intern gegebene Kontingenz dieses regulativen Status‘ bezweifelbar, und sind somit - anders als Wittgenstein gemeint zu haben scheint - begründungsfähig sowie begründungspflichtig.

Auf der Weltbild- und Sprachspielebene ist es also richtig und notwendig, Glaubensbegündungen auf der Grundlage von mehreren unterschiedlichen der oben genannten Kriterien zu leisten. Auf dieser Ebene sind Glaubenssätze durchaus in einer *internen – schwachen – Korrespondenz* oder Kohärenz als mehr oder weniger rational bzw. vernünftig ausweisbar, was uns berechtigt, gegen bestimmte Glaubenssätze, deren Nicht-Vernünftigkeit herausgestellt werden kann, ein Veto einzulegen und so der Beliebigkeit einen Riegel vorzuschieben. Allerdings meine ich, dass wegen des grundsätzlichen Kontingenzvorbehaltes auf dieser Ebene nicht mehr von „Wahrheit“, sondern höchstens von *„interner Wahrheit“* gesprochen werden darf, um die ursprüngliche Bedeutung und bleibende Intuition von Wahrheit nicht zu unterminieren. Aus der kriterialen Nichteinlösbarkeit dieser ursprünglichen Bedeutung ergibt sich für die Frage nach der Wahrheit von Glaubenssätzen im externen korrespondenztheoretischen Sinn, dass weder die Wahrheit noch die Falschheit von Glaubenssätzen im Letzten ausgewiesen werden kann.

Aus der dargestellten Position ergeben sich zusammenfassend drei Konsequenzen: Erstens muss das Ernstnehmen des Kontingenzvorbehaltes bezüglich der Glaubenssätze zu einer grundsätzlichen hermeneutischen Selbstrelativierung führen. Zweitens sichert auf der anderen Seite aber gerade dieser Kontingenzvorbehalt die Möglichkeit, dass es theoretisch eine alles begründende Realität geben könnte; denn er zerstört erfolgreich alle absolut gesetzten Aussagen und theoretischen Letztbegründungsversuche und damit auch die Aussagen derjenigen, die in absolut gesetzter Weise behaupten, dass es keine Letztbegründung geben kann, bzw. dass es *die* Wahrheit nicht gebe. Darum lohnt es sich aber drittens, um die eigenen geglaubten – und niemals gewussten – Glaubensüberzeugungen zu kämpfen und zu streiten – allerdings in stetigem Eingedenken des Kontingenzvorbehaltes, im Eingedenken dessen, dass eine Gottesperspektive nicht eingenommen werden kann.

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Wittgenstein´s Critique of Gödel´s Incompleteness Results

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Motto: "Don´t treat your common sense like an umbrella. When you come into a room to philosophize, don´t leave it outside but bring it in with you" (Wittgenstein 1939 LFM Unit VI page 68)

It is often said that Gödel´s famous theorem of 1931 is equal to the Cretian Liar, who says that everything that he says is a lie. But Gödel´s result is only similar to this sophism and not equivalent to it. When mathematicians deal with Gödel´s theorem, then it is often the case that they become poetical or even emotional: some of them show a high esteem of it and others despise it. Wittgenstein sees the famous Liar as a useless language game which doesn´t excite anybody. Gödel´s first incompleteness theorem shows us that in mathematics there are puzzles which have no solution at all and therefore in mathematics one should be very careful when one chooses a puzzle on which one wants to work. Gödel´s second imcompleteness theorem deals with hidden contradictions – Wittgenstein shows a paradigmatic solution: he simply shrugs his shoulders on this problem and many mathematicians do so today as well. Wittgenstein says than Gödel´s results should not be treated as mathematical theorems, but as elements of the humanistic sciences. Wittgenstein sees them as something which should be worked on in a creative manner.

1. Gödel in 1931 worked near the abyss of contradiction

Let me first give a brief overview on Gödel´s results of 1931 – because when I speak of Gödel I am always only thinking of this year. Gödel has achieved many other results, but they are not discussed in literature to the same degree as his result of 1931.

Gödel has proved in a formal manner that mathematics has gaps. His result is very tricky. In secondary literature I have found the statement, that Gödel works near the abyss of contradiction (see my book on the Heptagon, Ohmacht 1997, page 88). I want to show this closeness to contradiction by exposing two statements to you, both of which bear a close resemblance to Gödel´s result, but the two are different in the sense that one renders a contradiction and the other renders the desired result, and this situation exists even though these two sentences are very similar in their structure.

The first statement was and always has been very popular within philosophy. The sentence is attributed to Epimenides. (Taschner (2002, page 17) maintains that it was reported by a Sophist named Eubulides). It has something puzzling in it. It runs as follows:

„I am lying“

A friend of mine, who is a computer specialist is always saying that Gödel´s result stemmed from this utterance, and he is right in the sense that Gödel was inspired by this sentence. One can read on page 149 of the first volume of Gödel´s “Collected Works”: “It [the incompleteness result] is closely related to the “Liar”” . But it is wrong to say that Gödel´s argument is equivalent to the Liar, because Gödel used a slightly different statement for his proof. The reason for this slight shift is, that the Liar´s confession renders a contradiction, whereas the statement which was used by Gödel in his proof is not contradictory, although it looks as if it is. Gödel´s statement runs as follows:

This statement cannot be proved

It is of utmost importance to see the point: that the Liar´s confession leads to a contradiction, whereas this statement does not!

2. Mathematicians become emotional when they comment on Gödel´s result

Now let me, before I present the kernel of Wittgenstein´s reaction to Gödel, embark on the reactions of mathematician to this important contribution to mathematics. There is an important author, whom some of you may already know : I am talking of Stuart Shanker. He contributes a paper of more than a hundred pages on „Wittgenstein and Gödel“. There are two important points, which I want to quote to you.

One of the most important facts in this long paper is that Shanker compares Gödel´s result with a symphony (1988 page 156). (He quotes the idea from Nagel&Newman 1958 page 94f).

It is quite remarkable that a philosopher of mathematics should become poetical about a mathematical result; one could even say that Shanker becomes emotional about this result of the year 1931. There is a strong positive connotation in his evaluation. There is a rule in the philosophy of science that one should not make value judgements about scientific results - yet that is exactly what Shanker does: he expresses his high esteem of Gödel´s theorems without shyness. The direction of his statement is a positive one: you will see in a moment why I have to stress this.

There are, as well, negative statements about Gödel – for example in „Collier´s encyclopaedia“. I quote from the edition of the year 1969. In an article on the philosophy of mathematics, it is said that Gödel has „unfortunately“ (1969 Vol 15, page 550a) proved his result. It is quite an unprecedented expression in the philosophy of mathematics to say that a result has been achieved „unfortunately“. I want to engrave this on your minds and this is why I want to repeat myself: the anonymous author within this encylcopaedia says that Gödel has „unfortunately“ proved this result.

So here is my conclusion in this section: there is a contradiction about Gödel. Some authors are quite delighted about the ingenuity of Gödel´s proof – and others are disgusted by it.

3. Wittgenstein sees the Liar´s Paradox as a useless language game

This contradiction on the level of attitudes towards Gödel warns us that an investigation on the reception of this result is not such an easy task.

I have found a quotation in an essay by a mathematician who is in error about Wittgenstein and Gödel: he states

(wrongly) that Wittgenstein never made a single remark about Gödel. Karl Sigmund writes: "Another remarkable parallel between Hahn and Wittgenstein is that both never mentioned Gödel in their philosophical writings" (DePauli-Schimanovich/Köhler/Stadler 1995 page 240). This statement annoys me: Wittgenstein has, on the contrary, done quite a lot of work on Gödel, his LFM (VGM in German), which is in the long version called „Lectures on the Foundations of Mathematics Cambridge 1939“ are mainly devoted to Gödel.

In this book Wittgenstein makes a remark, which is central to our topic. Wittgenstein's position is as following:

> "„I am lying“ [...] it is just a useless language game and why should anybody be excited" (Wittgenstein LFM Unit XXI page 207)

Indeed, Wittgenstein´s statement accurately reflects the attitude of mathematicians of around 1900 towards our problem. Some researchers knew very well about the contradictions which arise when one mathematicizes the known paradoxes. Especially Cantor did know that there were „inconsistent sets“, like the well known set of all sets.

The problem with Wittgenstein´s statement is that it is dis-integrative; the Liar´s paradox is excluded from mathematics, and here Wittgenstein works right against Gödel, whose ingenious idea was, on the contrary, to mathematicize the liar´s paradox by using this Gödel numbering technique. This had beforehand seemed to be impossible.

4. To give up the solving of a puzzle

My fourth paragraph concerns puzzles, especially unsolvable puzzles. This paragraph is a central point in my presentation; now when I talk on puzzles, I could also chose the word „enigma“, which means essentially the same. It is the Greek word and the reason why I shall use it is, that a puzzle might be confused with a jigsaw puzzle. A jigsaw puzzle contains a collection of pieces made from cardboard. It is for children and it has a remarkable property: if one has enough time and motivation, then a jigsaw puzzle always has a solution. (Unless if a part of cardboard has been lost.) When I talk about enigmata, then I want to use a concept which arises for example, when one reads Thomas Samuel Kuhn.

Here, it is not known whether the enigma has a solution or not. Here, when I discuss this property hopefully in a clear manner, then there is an acute logical distinction: there are enigmata that have a solution and there are enigmata that do not.

When one studies the history of science, whereby the history of mathematics is meant here, a lot of fuss is made about such puzzles – Kuhn uses the word “crisis”. Kuhn´s point is: ”Failure to achieve a solution discredits only the scientist and not the theory” (1996 page 80). If one wants to be a normal scientist, it is advisable not to tackle unsolvable puzzles.

Wittgenstein´s central point in his LFM is the following: if several researchers try to solve the enigma and many researchers fail to be successful, this does not mean that the puzzle is unsolvable. Wittgenstein uses the word "we" which is a short form of what Kuhn later calls the scientific community: "We ... perhaps gave up the problem altogether" (LFM Unit IX page 88) It might even be the case that some researchers suspect that the puzzle may be unsolvable, while others are still entangled in fruitless research. Those who are suspicious will stop participating in research, but as long as they cannot frame their suspicious attitude into a proof, the others will continue in their search.

5. The question of a hidden contradiction

Wittgenstein´s critique of Gödel´s results of 1931 must be subdivided into his reception of Gödel´s 1st Incompleteness Theorem and his reception of Gödel´s 2nd Incompleteness Theorem. What I have said about unsolvable puzzles refers to the first incompleteness theorem – now let us embark on the second. The question of hidden contradictions arises here.

The problem here is the principle of "ex falso sequitur quodlibet": from a contradictory proposition anything can be concluded. It is exactly this point that makes Gödel´s second Incompleteness Theorem a little bit confusing: If mathematics should contain a contradiction, then it can be proved that mathematics is free from contradictions!

Wittgenstein has a simple solution for this "horror contradictionis" from which mathematicians suffer: he says "Well then, just don´t draw any conclusions from a contradiction".(LFM Unit XXII page 220). Now I want to refer to Collier´s Encyclopaedia again and we shall see that mathematicians have adopted Wittgenstein´s method:

> "... no contradiction has ever been detected during that period. So most mathematicians have simply stopped worrying about these matters and go on with their work as if they believed that no contradiction will ever occur" (Vol 15 page 550 column a). So, we can conclude from this statement that mathematicians just shrug their shoulders and – they largely ignore Gödel´s result.

6. Gödel´s reaction to Wittgenstein´s reaction to the Incompleteness Theorems

Now I must warn you, this paragraph contains a frustrating bit of literature. When it comes to research work done on Gödel, Hao Wang is an important author: his book, "Reflections on Kurt Gödel", is a voluminous account of the talks which he had with Gödel. The miracle which becomes apparent here is, that Gödel allowed Hao Wang to come into contact with him. On page 48, under the title "Relation to the Schlick Circle", Hao Wang begins to report on Wittgenstein. Wittgenstein occurs relatively often in this book – from the Index, it can be seen, that he occurs more than 40 times.

Hao Wang shows that Gödel studied Wittgenstein´s Tractatus in 1927, and the later reading of Wittgenstein was presented to him by Hao Wang. Hao Wang and Gödel discussed Wittgenstein on the 5th of April 1972, but the material which Hao Wang produces in his book in enriched by a letter which Gödel sent to the mathematician Menger on the 20th of May in the same year. I want to present the quotation from Hao Wangs book in full, because it is so important. Here, Gödel writes:

> "As far as my theorem about undecidable propositions is concerned, it is indeed clear ... that Wittgenstein did *not* understand it (or pretended not to understand it). He interprets it as a kind of logical paradox, while in fact it is just the opposite, namely a mathematical theorem within an absolutely uncontroversial part on mathematics (finitary number theory or combinatorics)" (page 49).

When I first encountered this quotation about two years ago, this was a severe attack on my personal comfort – and even when I read it now, it is torture for me.

Now I would like to bring in Thomas Samuel Kuhn – in his famous essay he says that when revolutions occur, then the researchers among each other produce many misunderstandings. What I do think about Gödel´s statement is the following: Gödel said that Wittgenstein did not understand him, but did Gödel understand Wittgenstein?? I think that the question of whether Wittgenstein has understood Gödel is controversial in character and the side which I want to take here is, that Wittgenstein did understand Gödel, though in a creative manner "in einer geisteswissenschaftlichen Art" (as a part of the humanities).

7. Wittgensteins Remarks on Gödel´s Results

Wittgenstein´s "Remarks on the Foundations of Mathematics" were published in 1956, but then in 1978 an enlarged edition was published. I want to quote from section VII of this edition, most of which was written by Wittgenstein in January of the year 1941 (see page 31 for this point). Although Wittgenstein´s remark on Gödel does not contain the appropriate respect, which Gödel would have deserved, but it is a very clear statement, which produces in bewilderment on the part of the logicians. Wittgenstein notes:

> "My task is, not to talk about ... Gödel´s proof, but to bypass it." (1978 page 383) This statement is not very polite, and it is not entirely clear what Wittgenstein is heading for when he articulates it. I would like to give an interpretation, but I am not very firm here: I am weak. Wittgenstein should have been more serious about Gödel´s results.

Gödel´s proof of 1931 is a firm mathematical result – there do not arise any questions about it. It is an utterly uncontroversial result and Wittgenstein rather should accept it than to make unclear statements about it. When, about a year ago, I wanted to quote this passage from memory I paraphrased it in the following way: Wittgenstein said, that we should *ignore* Gödel´s result. This expression “ignore” is definitely too strong to be a correct interpretation of what Wittgenstein really says.

But Gödel´s proof is not only a mathematical result. It is also a philosophical result, which circumscribes mathematics from the outside. One can approach – and I think, this is what Wittgenstein intends to do – Gödel´s result from a standpoint which lies within the humanities. Wittgenstein wants to look at Gödel´s proof not as a mathematical result, but as a part of the humanities ("Geisteswissenschaften") . This is what he means with his statement about bypassing Gödel.

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Worldhood Competence and Performance: The Site for Wittgenstein's Religious Language

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1

It is common knowledge that Wittgenstein cannot be called fundamentally a religious writer. All the same, he did not dismiss the reality 'religion' as nonsense. It is opined here that, Wittgenstein was very consistent in his references to it. We strongly claim that religion was a subject of his philosophical preoccupation positioned among his general striking similes, arresting moments and connections of his general methods. Religion gained occasional and/or scattered referencing in his works (e.g. the notes of 1938, the positioning of religion and/or theology as grammar in the 'Philosophical Investigations (PI: 373; p.283), Zettel and the later work 'Culture and Value). Despite the above, we have to agree, with Wittgenstein, that his poetic compositions are to be understood and seen in consistent connections (PI: 122) even when they look disconnected. One therefore, has every ground to connect 'religion' with:

(a) The ways of looking at things (cf. PI: 144);

(b) As an aspect of presenting things in plain view (cf. PI : 89);

(c) As part of the state of affairs we should not overlook (cf. PI: 89).

In order to avoid every misunderstanding, Wittgenstein presents a methodology that guarantees active and practical understanding of this social physics, which he calls the world. At the same time his work provides an understanding of the world that allows us to 'go on' with or without much confusion within the given social practice. We may not forget that Wittgenstein's achievement gives us the disposition and toolbox with which we have to review our human behavior as connected with the totality of the world and the facts of the state of affairs (cf. Tractatus: 1-1.2). In the views of Wittgenstein, human behavior is made out of sensible follower-ship of sociality. This is only possible through the stances of what we have called in this paper 'worldhood'. This paper posits that even the question of religion can be answered with Wittgenstein's worldhood conception. This is possible especially when we try to see facts of being-in-the-world through the ability to make use of the phenomenon of the 'reminders' (cf. PI: 127) and the reality of living our lives in the practice of everyday language-mental-state and reservoir. To 'go on' into the background of Wittgenstein's worldhood experiment, we would like to inform ourselves about the language-entwined practice of the concept. It was Sapir (1929: 207) who once said that:

> "Human beings do not live in the objective world alone... but are very much at the mercy of the particular language which has become the medium of expression for their society... The fact of the matter is that the real world is to a large extent unconsciously built upon the language habits of the group... We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation".

The above position takes us now to the issues of Wittgenstein's concept of world, and the implied 'worldhood'. The first reminder is that the Wittgensteinian world and its leitmotif 'worldhood' are language-games tested in social practice and rules of sociality- since *'ubi societas ibi jus'.*

2

It is the language (I use) that limits the world since 'the limit of my language becomes the limit of my world' (Tractatus: 5.6; 5.62; 5.621; 5.632). The world is this world made manifest through the facts of the language I understand and this world and my life are one and I am therefore my world -the microcosm. To expand this issue more, King (1963:73) states that:

> "The world is not a thing, but man himself is worldish: he is, at the bottom of his being, world disclosing, and world forming."

The Wittgensteinian world is that which can be mirrored in and through language. Wittgenstein's expression of the 'signal', 'understanding' and the conviction and/or knowledge that 'one knows he/she can go on' is a worldhood followable responsibility indicative of a situated and socially conducted and/or constituted form of life. Worldhood is the after-effect of environmentality, historicity, cooperative engagement, relationship and the interplay of activity commonly shared in the family (speech community) focus. 'The world is all that is the case' (cf. Tractatus: 1). For Wittgenstein worldhood is practically onto-linguistic. Sefler (1974:188f) in this case says that:

> "Language and the world are two sides of the same reality. The world I know is known inseparably from the language I use. One cannot split the two and discuss them in isolation without some literal misrepresentation... An investigation of the structure of language is at the same time an investigation of the formal aspects of the world. To give the essence of propositions means to give the essence ... of the world".

Worldhood, therefore, is ontolinguistic *sui generis.* This is what Heidegger noted as the 'Being of Entities' which according his '*Dasein*'s' conception belongs essentially to a world. Thus an understanding of *Dasein* pertains with entities that become accessible within the world. Under this ontolinguistic approach, we have to emphasize that man-hood is world-hood and worldhood must be found within the toolbox of language. Our talks, says Wittgenstein, get their meaning from our proceedings and we cannot use language to get out of language. We can only find a 'world-about-ness' inside our own language forms of life. Our worldhood is the state of affairs in a landscape of grammatical and social geography. Worldhood is not a theoretical stance but a forum for acute practice. It is the practice of 'going on' with one another in a social setting. We are in the world of 'rule follow-able fellowship'. It is an interactive moment of participation in even a possible blind obedience to the rule (cf. PI: 219). Obeying the set rules means pure practice (cf. PI: 202) jointly regulated through the language 'use'.

3

One important question that now follows the above issue is that of the Wittgensteinian balance between language as a social nature and that of language as an individual nature. The so-called 'private language argument' (PI: 244-272, especially 256) strikes this balance question. Under this balance we hereby present our concept of competence and performance in this paper. We can understand Wittgenstein's position that language is a 'sharable game' that is made manifest in praxis and expression, acquaintance and action. We understand in this regard that a language user can name and/or express, *stricto sensu*, sense data he/she is acquainted with since one can not use language to get out of language. The sharp implication here is that language on the individual nature can, to some extent, be considered 'private' and this is the competence sphere and on the social nature, language must be 'public' as to contain the performance sphere. From this framework we shall be looking at language competence and performance as communicative act within the 'rule' of the game.

"Communicative competence...can be seen as the innate knowledge which permits the user of a language to create and comprehend utterances, to issue the communicative tokens of speech acts, in which language operates as an open system in constant interaction with its environment ... A specification of communicative competence can be recognized as an attempt to define not only how a user is able to judge grammatically but also how he is able to recognize what is acceptable as a speech act in a social situation" (Bell 1983:207).

Communicative competence means the individual innate disposition, capacity and basic qualification in comprehensive functionality of the given socially constituted symbolic forms. It is the mastery of an ideal speech situation (cf. Habermas 1970:138). Performance on the other hand, is the practical and/or 'acting out' of the said competence. This includes the appropriated 'doing of the language'. In this case, the performing individual is no longer talking about the knowledge of the language but doing the language within the following outfit:

Language -

Setting and scene,	(S)
Participation,	(P)
Ends,	(E)
Act sequence,	(A)
Key,	(K)
Instrumentalities,	(I)
Norms,	(N)
Genres	(G)

On the grounds of the above, Hymes (1972:269-293) developed the acronym "speaking". This is performance clearly identified. In the views of Chomsky(1965:10-15), for example, competence and performance depend on the following issues:

The formal framework with respect to the norms of the particular language and culture;

The extent of feasibility for immediate comprehension;

The appropriate performance factors;

The transformational and/or generative possibilities of doing through the language.

In the light of the above, we can once more look at Wittgenstein's worldhood conception from his language/ linguistic cognitive aspirations. The world and language are the comprehensive data for being-in-the-world. Puhl (1994:340) says to this effect that:

> "Wittgenstein stresses the dispositional character of self-ascriptions of intentional states. Their truth seems to be dependent on what the subject in question later does and says... What counts as fulfillment of an intentional state seems to be constituted by the way speakers react, not what is 'in their heads'".

What really matters for Wittgenstein is the language 'use' (Okonkwo 2003:111-129) and its socio-linguistic content (Okonkwo 2002: 451-467) imbued in action and reaction of sharable (religious) 'belief' practices and acquaintances. When Wittgenstein says 'I can go on', there are two serious options to underline. One is that the expression 'I' implies the individual act of competence, and, two the applied 'can go on' is indicative of the complexities of performance since 'obeying a rule is a practice' (cf. PI: 202).

4

What we have termed 'worldhood' stands as the practice, which paves the way to the possibilities of creating ways of 'going on' to religion. The issue here is not directed towards the phenomenon called religion but, as Wittgenstein might say, towards the possibilities of this phenomenon (cf. PI: 90). At the same time we may not forget that we must 'let the use of words teach us their meaning' (PI: p.220e). Religion and religious beliefs (practices) fall within the phenomena of worldhood complexities. But at the same time when we read from the Tractatus (6.432) 'God does not reveal himself in the world' there seems to be a contradiction to the major issue of this paper. There is no doubt that Wittgenstein does not speak about religion and religious belief *in vacuo.* Religion and religious belief are words that teach 'meaning'. They are conceptual equipments dealing with the world and also determining worldish roles played within the landscape of experience and worldview. In this context one can conveniently assert that there is a 'use' and a 'need' for religious language. Religion and religious belief belong to everyday - ordinary language of the 'riddle of life in the world'. Tractatus (6.5) tells us that when an answer cannot be put into words, neither can the question about the issue be put into words. The riddle in this case does not exist. If a question can be framed at all about religion and religious belief, it is also very possible to answer it. The answer to the questions about religion and beliefs is possibly answerable through the worldview landscape, sharable in language (game) and/or everyday practice. Religion is not definable outside the worldhood conception. It is (language) grammar that tells about the essence of a thing or phenomenon (PI: 371; 373). Language has both connotative and denotative reminders. As a caveat, we have to say that every high-tension of religious 'mythicalness' can only be downloaded by the low-tension of worldhood (cf. Zettel: 717).

5

The site of all religious practices (knowledge and beliefs) and all the 'mythicalness' involved gain existence and manifestation in the world of language where games are open to interaction (PI: 584). Competence and performance in worldhood means that religious belief is a contextual, sharable and knowledgeable experience. We can remember that Wittgenstein (Zettel: 144) says that 'how words are understood is not told by words alone' but by the context of application we can understand the meaning of the word. Religious knowledge (belief) belongs to the ethics and/or *ethos* of worldhood as *'modus cum munus'* of seeing the world aright (cf. Tractatus: 6.521; 654). It is in this case certain that it is the worldhood competence and performance (*mundus sensibilis*) that make our religious knowledge (belief) complete. We may not forget that the religious subject (the microcosm) knows his religious world and the language thereof. It will at the same time be quite wrong to see religion as an aspect of the problem of solipsism (cf.Schulte 2001:193-212). We may conclude with Schoenbaumsfeld (2001:190) that:

> "Der Glaube ist die Säule der religiösen Lebensform... Rüttelt man daran, zerstört man ein ganzes Weltbild und nicht bloß eine einzelne Überzeugung".

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Holism and the Underlying Structure of Our Acceptance Criteria

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1. It is a common place that the way we live is founded largely on the way we choose to think. It is a significant element of our practices that there should be at least a specific relation connecting thought to each other. These relations are what enable one to speak about *reasons* to accept a given belief. This paper aims to gain some understanding of how our beliefs influence each other. Put in another way, my interest here is to improve our understanding of what is behind the acceptance criteria that make us inclined to hold or reject a belief.

A possible way to handle this preoccupation is to accept the position that emerges from the last two sections of Quine's *Two Dogmas of Empiricism.* There he presents a point of view that tries to argue against the idea, common to several logical empiricists, that we have means to hold a distinction between analytic and synthetic statements. Quine aims to reject the idea that experience could on its own tell us something about how it should be incorporated in the web of our beliefs. He comments:

> No particular experiences are linked with any particular statements in the interior of the field, except indirectly through considerations of equilibrium affecting the field as a whole. (Quine 1953)

Quine focuses on how a non-conceptual content[1] – the given originated in our sensorial stimuli – can interfere in the articulation of our concepts. However, his way of thinking about how non-conceptual content relate to conceptual states could also be applied to the connections between different conceptual states.

The argument in the *Two Dogmas* that I believe that leads to the above holism is the recognition that nothing prevents us to take as true any belief "if we make drastic enough adjustments elsewhere in the system". In other words, we have indefinite ways to take seriously whatever is given through our senses; we can even face it as an episode of hallucination. My view is that this argument, as I commented before, would hold no matter if we are concerned with conceptual or non-conceptual contents. If I am right about this, it follows that if we accept, on this ground, that the given alone tells us nothing, it seems inevitable to accept also that a belief, by itself, tells us nothing. Accordingly, the argument of the *Two Dogmas* can be used even if we are inclined to reject what Davidson once called the third dogma.[2]

In this form, holism tells us that non-conceptual contents can disturb, as much as conceptual content, *any* region of our thought. Therefore the Quinean argument tells us nothing about the very possibility to draw a line that bounds the influence of whatever content. Someone could accept his argument and say something like: «When we question whether the Newtonian theory is consistent to a certain experience of an inclined plane we place outside the sphere of doubt beliefs like 'I like waterfalls more than beaches' or 'these computers are faster than those'. When we take seriously a certain belief we always place some set of beliefs outside the range of doubt. Perhaps we have problems deciding if some beliefs are outside the sphere of doubt but, certainly, we can do this to many others». (I will henceforth refer to this line of argument as the 'standard line').

Thus it seems reasonable to affirm that the argument found in the *Two Dogmas* gives no argument against the idea of postulated analytic statements. The kind of analytic/synthetic distinction against which Quine argues is one that claims only that there are statements that suffer no influence by experience whatsoever. But once we can draw the line of influence that a thinkable content exerts in our thought, someone could accept the Quinean argument and, at the same time, defend the existence of analytic statements if *we* can postulate them to be so.

Thus, the message that holism presented along these lines seems to offer is that when we takes a new content into consideration we can in principle change any belief but, in practice, we can have a very different picture. We can be presented with statements that are to be held as postulates. In other words, Quine's arguments have very little to prevent the possibility that we take some statements as not to be revised by *fiat*.

2. If we are inclined to accept the Wittgensteinian argument concerning rule following, any talk of non-conceptual content makes no sense. A non-conceptual content is independent of whatever other content that could constitute a *rule*. I understand the rule following argument (RFA) as presenting reasons against the possibility of a thinkable content determined by anything other a public practice. That is to say, rules can only be understood in relation to a set of shared practices. A statement can therefore make sense only within a set of statements and those have to refer to its role within a set of practices – its role is context- dependent. Contexts, themselves, cannot be defined without a reference to conceptual practices. Non-conceptual content is therefore in direct opposition to the very message of Wittgenstein's RFA.

Therefore it follows that first, the RFA gives us good reasons to abandon the third dogma that Quine is committed to and, second, the Quinean argument in favor of holism is independent of accepting or not the third dogma. Another sort of holism seems to come up from the RFA; a holism that incorporates the critique to the notion of non-conceptual content. I would like to further argue that accepting the RFA has more to contribute to a sound version of holism.

3. I believe there is no inconsistency in rejecting the third dogma while accepting the first two. In other words, I believe we can abandon the non-conceptual content idea while taking the consequences of holding the analytic/synthetic distinction. I would like to examine now whether a holism along the lines I sketched above – one that is grounded on Wittgenstein's RFA – leads us to a rejection of the third dogma and further makes it harder that we take some analytic statements as postulates. The issue here is to compare the consequences of these two

[1] By 'non-conceptual content' I aimed to refer to thought contents that are expected to be intelligible independently of whatever other thought content. An empiricist like Quine, for example, holds a non-conceptual content in the sense that he believes that our senses inform us about the world independently of any other content we happen to possess – our senses themselves make a difference.

[2] That is, the idea that we can separate out conceptual scheme from empirical content (Davidson 1980)

versions of holism so that we can gain insight about how they differ.

The talk on analytic statements as postulates bears on the assumption that the standard line holds. The standard line, in its turn, depends on an amount of control over the consequences of accepting some beliefs: that we could draw a line that would determine the reach of influence of these beliefs. The question here is to establish whether some criteria of acceptability of some statements, namely analytic statements that are postulate, are somehow influenced by empirical beliefs. I believe that accepting RFA leads to an image of our practices according to which our capacity to establish the consequences of what we think is far more limited than what the standard line seems to suggest.

Moreover, those postulate analytic statements are understood differently against a background where the RFA holds and against a more strictly Quinean one. If we accept the RFA, a statement can only play an epistemic role within a specific context. As a consequence, to talk about analytic statements against this background is to imply that they act as such with respect to some contexts. (Surely, these contexts could involve several practices.) If any statement is to be taken as analytic within this RFA background, several others would have to follow it: no statement can be considered analytic in isolation.

4. The RFA repels an image that seems *prima facie* attractive: the image that we can separate out our beliefs from the course of our practices. The image implies that we could have the same web of beliefs organized by our practices in different ways. The RFA goes against this idea in the sense that it faces this dualism as an instance of the dualism between the institution and the application of rules. If this latter dualism is rejected, the course of our practices cannot be distinguished from what we believe. Whatever makes us take a specific course of practices is determined by our beliefs.

The alternative image that emerges from the RFA has that our criteria of acceptance are determined by our practices themselves and by nothing further. Changes in our ways of thinking are not independent from our practices; our beliefs do not constitute a separate realm isolated from our practices in general nor could they have a self-standing mechanism of evolution. It is therefore more appropriate to talk about relations among practices than about relations among beliefs for beliefs can only be understood if we can locate them in a practice.

I have observed that against the background of the RFA no statement can be taken as analytic in isolation. This, in itself, constitutes no problem for the standard line. Within the standard line, we could argue that the statements that ground the one that is a candidate analytic statement are presuppositions behind this very statement and we have at least some capacity to make them explicit given a context. In a context of argument, we exercise precisely this capacity to recognize deductive relations among our beliefs in order to make sure that what we are putting forward is coherent. The RFA, on the other hand, entails that the statements that ground the candidate analytic statement are not only presuppositions.

Accepting RFA leads us towards the idea that the use of any term must be reflected on previous practices where the term appears. A term has nothing else to it – our current use of the term can make reference to nothing but previous use. When we understand a term, we do not grasp a rule from a set of rules itself devoid of any practice. In fact, the rejection of a distinction between instances where the use is instituted and instances where it is applied leads us to take any new application of a concept as a slight change in the underlying meaning.

When we use a term, we relate it to other terms, in a specific way (or, according to a rule). In any of our practices we make several connections among terms. Let us suppose, for example, that one attributes a specific image to the majority of children one sees. Suppose further that it is an image which discredits completely what these children say. It wouldn't be strange if, in the future, this person attributes this same image again to an unseen child. In this case, she would not do that because she knew how to understand a rule in a given moment and something else was added to her understanding in a later moment. The attribution of the image is not a decision taken after her understanding of the meaning of “child”. Nothing less than all our understanding is originated from our practices.

However, the above example concerns a specific relation. Actually the use of terms within our practices assumes a more intricate structure. The more a vocabulary relates to a greater number of heterogeneous terms the more it is hard to draw a line of influence for this vocabulary. My claim is that the empirical beliefs are formed by a vocabulary of this kind. Empirical beliefs – and therefore empirical vocabularies – are present in a diversity of moments in our lives. [3]The very capacity of detect all consequences of our empirical beliefs is not supported by argument.

So I think that we have no more than a partial capacity to detect the impact of our empirical beliefs. Thus, if we accept the RFA an analytic statement could be considered as such only as a conjecture. However, someone could question if the RFA has any force against the idea of analytic statements as postulate if interpreted in a instrumentalist way. I believe that it has nothing to say about this. However, a Wittgensteinian route to holism, more than a Quinean one, seems to encourage a strong suspicion towards any attempt to split our thinking in compartments. Whatever our thinking does, it does because it establishes connections.

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[3] One way to recognize this is to think in the constant presence of a kind of empirical propositions what once Wittgenstein called ‘propositions that stand fast’ (Wittgenstein 1969).

On Wittgenstein's "One of the Most Fundamental Language Games"

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My interest in this topic springs from the controversy that Wittgenstein's language games have sparked in game-theoretic approaches to logic. Hintikka (1996) has argued that semantic games and language games share a mutual concern on how language and the world are related. Such links are codified in the practices of language games, and are operationalised in semantic games by the mathematical theory of games.

Others have rushed to deny such connection. Hodges (2001, p.19) claims that no one wins or loses Wittgenstein's language games. This is wrong: "It is true in the game there isn't any "true" and "false" but then in arithmetic there isn't any "winning" and "losing" (Wittgenstein 1978, p. 293). To Wittgenstein, competition, cooperation and strategic thinking were familiar elements of language games. He even noted:

> Augustine describes, we might say, a system of communication; not everything, however, that we call language is this system. (And this one must say in so many cases when the question arises: "is this an appropriate description or not?". The answer is, "Yes, it is appropriate; but only for this narrowly restricted field, not everything that you professed to describe by it." *Think of the theories of economists*.) It is as though someone explained: "Playing a game consists in moving things about on a surface according to certain rules...", and we answered him: You seem to be thinking of games on a board; but these aren't all the games there are. You can put your description right by confining it explicitly to those games. (*Nachlaß* 226: 2, 1939, emphasis added)

Wittgenstein omitted the reference to economic theories when he made final revisions to *Philosophical Investigations*. I have argued in Pietarinen (2003) that he did this because prospects for the application of the theory of games in economic issues began during the immediate post-*Theory-of-Games-and-Economic-Behavior* era to appear under much more positive light.

The question that arises is what, in fact, are these practices that codify the language-world relationships? Several suggestions have been made. For instance, such practices may refer to the activities of verifying and falsifying a sentence. They may also refer to the activities of seeking and finding the objects that language speaks about (Hintikka, 1973). In both senses, language is seen as a contextual system evaluated and learned against the backdrop of a situation in which it is used, however social, non-social, structural or non-structural such a situation or ethnographic environment may be.

What I would like to argue is that there is a perspective to this questions that deserves mention, not least because it derives from the recently published *Nachlaß*, but also because it appears to be less dependent on the previous controversies concerning the notion of a language game. One consequence that I wish to point out is that notions of showing and saying converge in his late philosophy.

The point of view that I have in mind is the following. In *Nachlaß*, there is a reference that puts more weight on language games as the philosophical basis of semantics. For over and above the idea that at least some of the games are those of verification and falsification, and that some of these are games of seeking and finding, the activities and purposes of the players can be made clarified in terms of the activities whose nature Wittgenstein was, in so many words, struggling to spell out in his philosophy. They refer to the activities of *showing or telling what one sees*:

> "Surely if he knows anything he must know that he sees!" – It is true that the game of "showing or telling what one sees" is one of the most fundamental language games, which means that what we in ordinary life call using language mostly presupposes this game (*Nachlaß* 149: 1, 1935-36).

What this means in the context of semantic games is this. The players try to bring to the fore what they see to be the case in the context of an assertion. They have been prompted to do this by the utterance in question, and they aim at showing or saying what is the case by instantiating elements of the universe of discourse as suitable values for individual, incomplete predicate term expressions. The merit of such activities is assessed by what is understood to be present in the propositional content of assertions. What Wittgenstein can thus be seen to argue for is that to seize linguistic meaning requires a prior grasp of its use-governed machinery.

This explication is so interesting as to warrant a number of explanations and qualifications. First, what does the language game of showing or telling what one sees have to do with the language game of seeking and finding, given that the latter also draws its main motivation from some general notion of language games? There is not much difference as to whether we use one or the other of these two notions of conceptualising the practices implicit in, say, quantificational expressions and predicate terms. Finding something comes very close to seeing that something is the case, and here we must of course recognise that seeing is by no means confined to visual perception, and also refers to all kinds of ways of coming to understand, realise, recognise, and so on. After all, the process of seeing has to begin with something, such as active thinking, and this is what a search tries to encompass. As soon as we think of the process of seeking and finding as a principle of human cognition, then the notion of search seems to be not very different from the processes of seeing that something is the case.

However, to show or to say that something is the case is to carry out something more than just the activation of the search process and the eventual finding of suitable individuals. It is something more than just the discovery or production of some such elements from the universe of discourse in question. What it also means is actively communicating those findings. What are these other activities? In some cases they may consist of the naming of objects, but that would not be the whole story. For, to name something is not yet a very complex or effectual activity. It does not, to follow Wittgenstein's remarks, constitute a genuine move in a language game:

> Within naming something we haven't yet made a move in the language game, – any more than you made a move in chess by putting a piece on the board. We may say: by giving a thing a name *nothing* [has] yet been done. It *hasn't* a name, – except in the game. This is what Frege meant by saying that a word has meaning only in [~~its connection with~~] the context of a sentence. (*Nachlaß* 226: 36, 1939)

Together with the principle of seeing that something is the case, naming may be useful, however. It often suffices to give something a name, and to rest content with that. This nonetheless does not take us very far in the analysis of quantified statements or other logical expressions. Nor is it something that is endorsed in the foundations of game theory, because players are typically assumed to be able to observe their available actions in an effective way.

What is also worth noting is Wittgenstein's reference to word's meaning "in its connection with" or in "the context of" a sentence. This idea came later to be called the 'Frege Principle'. As Wittgenstein notes, naming is not a move. It becomes one when it is actively communicated to other players or phases of the mind in the context of a play of the game or, analogously, of a sentence of the language.

Therefore, in order to see the true state of affairs in Wittgenstein's "one of the most fundamental language games", we need to absorb the fact that language games consist of the activities of saying or telling what one sees, and of showing what one sees. Both saying and showing are seen to involve some sense of the notion of communication. Here, two rather fundamental concepts that he tried to keep strictly apart in his earlier philosophy, are made different aspects of one and the same conceptual activity.

Why is it not necessary to distinguish these two notions here? Why do the activities of saying and showing both serve as explications of at least one part of one of the most fundamental language games, the game of showing or saying what one sees? Let us look more closely at what quantified statements are. Their meaning is established in two different stages. First, I (or You) have to find an individual from the domain of discourse, and possibly name it if it does not have a name. Second, I have to instantiate the name of the individual to the bound variable in question. It is this latter step that relates to saying and showing. Just seeking and finding an individual does not make information public, but communicating what this individual is constitutes an act of publicising and making it accessible to other parties of the relevant language game. This accessibility is important in order for genuine interaction to emerge.

Yet, it makes no difference, especially from the point of view of the meaning of quantified statements, how the communicative activity is realised in the end. As far as communicative purposes are concerned, it does not seem to matter whether I am able to show that the names of the individuals I have found provide some names to work for indexical expressions of 'this' or 'that', or whether I simply utter 'this and that are the names of the individuals that I have been looking for'. The oft-noted difference between these activities, as referred to in early Wittgenstein and *Tractatus*, is the difference between saying and *zeigen* ('ostension', see Geach 1976). On the whole, however, this untimely contrast is no longer of substantial interest in the context of the most fundamental language games, because both activities are indexical modes of communicational practice.

The notion of communication that holds in the "most fundamental language games" may prompt someone to argue that, contrary to what Hintikka argued to be the case in the theory of semantic games, here, in fact, is a clear example of activities that have to be extra-linguistic, games that need to relate to socially constrained contexts of language use. For if semantic games presuppose an explicit testimonial to what one sees, they no longer represent private activities confined to tasks of establishing the meaning of expressions within a single person or a self. Wittgenstein's own remarks add preliminary grist to the mill:

> "Surely seeing is one thing, & showing that I see is another thing". – This certainly is like saying "skipping is one thing & jumping another". But there is a supplement to this statement "skipping is this (showing it) & jumping this (showing it)". (*Nachlaß* 149: 19, 1935-36)

Such an attempted counterargument rests on a fallacy, however. Utterances, in the same sense as interpretations of the expressions uttered, do not call for social environments in which they may be uttered and are interpreted in order to be understood and effectively employed according to principles of the correct use of language.

There is thus another way of putting a related counterargument. One could try to argue that the notions of saying and showing still differ in late Wittgenstein, because according to him, one cannot describe correct uses of a rule, while it is possible to know with certainty that one acts according to the rule. To what extent does this kind of knowledge, presupposed in any correct use of language, overlap with the kind of showing Wittgenstein argued for earlier, while it does not overlap with saying?

The key lies in the fact that non-verbal knowledge in language games as recognised by Wittgenstein is still a form of communication. The communication of observations about states of affairs, while presupposing rudiments of language that are inevitably present in the common ground of the communicators, does not need to be interpersonal. The epistemic element of certainty connected with rule following pertains to games that do not work by way of appealing to spontaneous or habitual responses to actions. To wit, there are games that cannot be trimmed down to rules, typically symbolic instructions (such as ones that, in computational terms, are found in denotational semantics), and the following of them. The language games of showing what one sees (or what one experiences) are examples, as Wittgenstein emphasised, of the most vital of such irreducible games.

Therefore, showing and saying do not portray any fundamental variation in Wittgenstein's later views on language games. Seeing that something is the case with respect to an assertion is itself an element of an irreducibility claim for their public character.

It is almost as if Wittgenstein was punning his earlier self.

For these reasons, the correct understanding of the principles and precepts of language does not have to be societal or something that is found among the rules that are in some way socially constrained, because language games will continue to function without further ado irrespective of any such assumptions. Even if some sense of understanding was, to some extent, influenced by rules and principles of language use, the social context or environment provided for various expressions would not affect the most important aspect of language, the grasp and observance of the individuals and primitive propositions of what the language speaks about. These individuals and primitive propositions are, of course, what quantifi-

cational expressions and underlying interpreted languages aim at presenting, contexts of use or interpersonal parameters notwithstanding. What an instantiation of individuals from the logical perspective accomplishes is, after the detection and selection of suitable individuals from the domain of discourse, to make the information about these publicly available. This is not the same thing as actively communicating these individuals in a social context, nor does it entail it.

Furthermore, there is always the option of *not* communicating what one sees by not showing it, but this happens in the context of more limited types of games of revealing and hiding (*Nachlaß* 148: 45v, 1934-35).

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Does Emergence Help in Defending Religious Belief?

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1. The concept of *emergence* has gained some popularity in the philosophy of mind and in metaphysico-epistemological explorations of our current scientific worldview. This concept is used to indicate that the "higher" levels of reality (e.g., mentality, normativity) cannot be reduced to the "lower" ones (particularly the physical or physico-chemical level, as studied by physics and other natural sciences). Emergent properties are properties of a complex system that cannot be deduced from (what is known about) the properties of the parts of the system. Roughly, the idea is to save such things as mentality (consciousness), normativity, and cultural entities from the threatening reduction or elimination dreamed of by more extreme physicalists.[1]

Some recent authors have suggested that the concept of emergence might be helpful in the epistemology of religious belief, rendering a theistic world-view scientifically acceptable. Given the generally naturalistic trend of contemporary scientific and philosophical thought, it is hardly surprising that theologians and other scholars examining religious phenomena have – even if they are theists – taken seriously the naturalistic lessons taught by science. Few people doubt the dependence of mentality or conscious experience on brain states and eventually on the physical world. While it has been suggested that a form of emergent dualism (though not Cartesian substance dualism) is defensible (Hasker 1999) and even, in the classical emergence discussion in the 1920s, that deity itself might be seen as the emergent evolutionary stage following consciousness (Alexander [1920]1979), several religiously inclined thinkers explore the epistemic credentials of theism in the framework of nonreductive physicalism or naturalism (Drees 1996, McGrath 1998), thus reviving a form of natural theology. Even the Christian doctrine of bodily survival after death can, it has been claimed, be combined with nonreductive physicalism, or at least antidualism (Stump 1995; Forrest 1996; Barbour 1999; Murphy 1999a, 1999b; Clayton 2000; Schouten 2001). This is partly because the dualistic picture of a disembodied mind is *not* Christian: the Bible urges us to believe in an embodied self, a total person (Barbour 1999, 363). Thus, a religious view of the self need not be dualistic; alternatively, one might attempt to develop a non-Cartesian dualism compatible with materialism.[2] Debates over these matters have been active in the interdisciplinary journal *Zygon*. The contributors' views differ in details, but the general thrust is that the dialogue between science and religion can be enhanced by taking due notice of the antireductionist, emergentist world-picture painted by the new sciences of complexity, and of nondualistic yet nonreductive theories of mind.

The purpose of this paper is to take a brief critical look at this discussion. It is not easy to see how theism could be established on an emergentist basis in a manner compatible with physicalism. I argue that appeals to the notion of emergence are hardly helpful in the epistemology of religious belief. I finally end up with Wittgensteinian considerations.

2. While emergence is a popular theoretical concept in the above-mentioned debates, some contributors believe that a mere supervenience physicalism (or emergence construed as mind-body supervenience) is sufficient for a naturalistically acceptable theism that avoids dualism (Murphy 1999a, Clayton 2000, Schouten 2001). Those who rely on the idea of emergence tend to leave the notion unspecified, simply referring to the level structure of reality and to the arising of "new" properties (Polkinghorne 1991). The following is a typical formulation: "Traditional materialistic thinking is replaced by an emergent, holistic approach in which the worldview of science is infused with a new subjectivity and with rich macroqualities." (Sperry 1991, 251.) "Downward causation" is, however, often mentioned as a key feature of emergentism (*ibid*., 245; Peterson 1999, 291; Murphy 1999a, 555; Clayton 2000, 633ff.): emergent properties have novel causal powers, influencing the parts of the system whose properties they are. Insofar as emergence *is* somehow defined, it is taken as obvious that it is real; according to Peacocke (1994, 643-644), "emergence" is "the entirely *neutral* name for that general feature of natural processes wherein complex structures, especially in living organisms, develop distinctively new capabilities and functions at levels of greater complexity". The term describes "the observed phenomenon of the appearance of new capabilities, functions, etc., at greater levels of complexity" (658). In the same vein, Barbour (1999, 385) says that "in evolutionary history and in the development of the individual organism there occur forms of order and levels of activity that are genuinely new and qualitatively different", adding that a stronger version of emergence claims that "events at higher levels are not determined by events at lower levels and are themselves causally effective". These authors typically employ a *diachronic* (evolutionary) version of emergentism (cf. Peacocke 1999, 706-707).[3]

From the perspective of the emergence discussion we find in philosophical literature (e.g., Stephan 1999), these formulations are unsatisfactory. Peacocke's characterization, for instance, fails to distinguish between truly emergent (irreducible) properties and other complex system properties. What is essential in his (and many others') views is just the level structure of reality and of the corresponding sciences, supposedly leaving room for the level(s) of soul, meaning, value, etc. The problem of downward causation, in particular – which several authors, including Kim (1998), take to be *the* problem with emergentism and nonreductive physicalism in general – has received no detailed discussion by thinkers interested in a reconciliation of science and religion *via* emergentism.

[1] I cannot offer any general discussion of the concept of emergence or its problems here. For more detailed treatments, see Stephan (1999), El-Hani and Pihlström (2002), and Pihlström (forthcoming). (This paper is abstracted from an on-going research project on this notion, to be carried on partly in cooperation with Professor C.N. El-Hani.)

[2] Proposing the latter alternative, Stump (1995, 510ff.) reads Thomas Aquinas in an emergentist fashion: "soul" is the Aquinian (and Aristotelian) name for the substantial form of a living material object; while a human soul can temporarily exist after the material body has perished, this state is "unnatural" for it. (Resurrection means re-embodiment.) Mental properties – properties of the person, a totality of body and soul – are "dependent on the configuration and composition of the whole; they are not identical to the properties of the material parts of the whole, but they emerge from the properties and dynamic interactions of those parts" (519). Stump notes (525) that Samuel Alexander, in his classical theory, associated emergent properties (understood as configurational patterns) with the distinction between matter and form.

[3] On the distinction between diachronic and synchronic emergence, see Stephan (1999).

Do the "emergents", e.g. soul, do the causal work they are supposed to do *qua* emergents, and if so, is this view compatible with the physicalist conviction of a causal closure of the physical? Or are they epiphenomenal, after all, leaving genuine causal powers to their physical supervenience base? It is not necessary to solve this dilemma in order to speak about emergence, for many human capacities we take to "emerge" from lower levels of reality can be accounted for in noncausal terms (Pihlström forthcoming), but the problem should be recognized.

As Peterson (1999, 291-292) admits, emergentism may not, then, take seriously enough the questions of how, specifically, the levels interact; it provides only a general framework for the study of the mind as a natural phenomenon. It is only seldom that Kim-type worries about downward causation are raised in these discussions (see, however, Bielfeldt 1999, 622-623; Murphy 1999b, 637; Clayton 2000, 633). When these worries arise, they are set aside too easily (as Clayton does), relying on something like "emergentist supervenience" which allegedly saves mental causation and leaves room for a religious reality.[4]

One of the few recent contributions in which the combination of (emergentist or supervenientist) physicalism and theism is seriously challenged[5] is William Vallicella's (1998). He rejects eliminativism, type-type identity theory, supervenientism, emergentism, and "the constitution view" (i.e., the view that persons are materially constituted beings) as five "theologically useless physicalisms" (163ff.). The argument is largely based on Kim's criticism of nonreductive physicalism. Regarding emergentism (167-170), Vallicella points out that even if the human soul were seen as an emergent substance or as having emergent properties, problems would remain, as neither divine nor angelic consciousness can be understood as emerging from matter, upon any Christian construal: "It is analytic that emergence is emergence from a physical base, and in the case of God and angels classically conceived there is no physical base. Moreover, it is analytic that to emerge is to come into being, and God's consciousness does not come into being" (169). Vallicella (170) also argues against Stump's (1995) Aquinian suggestion of combining materialism and dualism (and the possibility of survival), insisting that an emergent property cannot continue to exist after the physical system whose property it is falls apart.

If a reconciliation of science and theism were possible through emergentism, this would constitute an intellectual breakthrough of enormous magnitude. No doubts about the cultural or generally human significance of the notion of emergence would remain. Unfortunately, the research program run by theistically inclined naturalists seems to me hopeless; as Vallicella (1998, 176) puts it, physicalism and theism are "competing *Weltanschauungen*". One problem with views seeking to reconcile them, and with the on-going discussion of emergence and theism in *Zygon* (and elsewhere), is – as in the systematically philosophical emergence literature we find elsewhere – an unargued commitment to strong *metaphysical realism*. It is presupposed that both scientific and religious language purport to refer to a fundamentally concept- and language-independent world and that, therefore, religion and science *must* be coherently fitted into one grand theory of the world, if we want to retain both. Against this assumption, a more Wittgensteinian-oriented thinker may argue that religion and science are different human practices (or groups of practices) with their characteristic normative structures. Quite different "moves" are allowed in these different (families of) language-games; for example, the "soul" allegedly rendered "scientifically acceptable" in emergentism would hardly have a place in religious language-use.

Insofar as one abandons metaphysical realism in general philosophy, including the metaphysics and epistemology of emergence, one should abandon it in the philosophy of religion as well.[6] No ordinary theism will be defensible, if we choose this strategy (because theistic metaphysics in its common forms can hardly be maintained if we give up metaphysical realism), but nor do we have any desperate need for an epistemological reconciliation of religion and science (*via* emergence or other conceptual innovations). A pragmatic *pluralism* emerges.

3. The neglect of Wittgensteinian alternatives in the emergence debate parallels the eclipse of these possibilities in the metaphysical-realism-based mainstream analytic philosophy of religion.[7] From a Wittgensteinian point of view, the interesting way to promote the science–religion dialogue and to seek (inconclusively) possibilities for a reconciliation is through a pragmatic pluralism drawing attention to the fact that people act differently within different practices, having different goals and different methods for achieving their goals. Such variability is constitutive of human life as we know it. This general "pragmatist" idea is not too far from Wittgenstein's emphasis on the plurality of language-games which has had some influence in the philosophy of religion.[8] Science and religion serve different human purposes and may (if this un-Wittgensteinian formulation is allowed) be understood as establishing different ontologies that need not be unified into a single all-inclusive theory. Whether mutually irreconcilable ontological commitments can be endorsed by one and the same thinker is a difficult question inviting the problem of relativism; yet, epistemologists of religious belief should examine this question, instead of taking the reconciliatory task for granted and developing emergentist pseudo-solutions to it. Emergentist theists misleadingly hold that scientific and religious conceptualizations of human experience must refer to the same "world", reality in itself, construed in a metaphysical-realist fashion.

It is, then, metaphysical realism that leads both emergentism and the philosophy of religion astray (and impedes synthesizing the two). Both, and their potential dialogue, could be enriched by questioning the realistic premises that most parties to contemporary debates presuppose. Such criticism can be based upon Wittgensteinian considerations, though related anti-metaphysically-realist options, including pragmatism, are also available. Just as Wittgensteinian philosophers of religion have denied that religious belief could be evaluated on the epistemic principles of scientific theorizing, the metaphysical conceptions of the mind underlying emergence

[4] Clayton's (2000) view is confused: he calls his position "emergentist monism" (arguing that the world should be conceived of as a single physical system) but nevertheless subscribes to both ontological and explanatory pluralism in his theory of levels (644).

[5] I am not implying that this combination is generally accepted; on the contrary, most philosophers hardly take it seriously. To "challenge" the idea is to deal with it explicitly and argue against it.

[6] This is not to give up *pragmatic* realism about religious issues (cf. Pihlström 1998). I should note that although I have relied on Vallicella's critique of theistically reinterpreted physicalism, he does not question the realistic assumptions of the discourse he criticizes.

[7] For an informative discussion of the ways in which Anglo-American philosophers of religion tend to endorse realistic theism, see Koistinen (2000). Also authors who (like some contributors to *Zygon*) wish to replace traditional theism by pan(en)theism are firmly committed to metaphysical realism.

[8] Barbour (1999, 385) describes his view as "ontological pluralism" but does not ground it in Wittgensteinian arguments. I see Wittgensteinian philosophy of religion as, broadly speaking, belonging to the pragmatist tradition, but this is not a topic I can pursue here.

theories (viz., nonreductive physicalism) may be subordinated to a Wittgensteinian critique. Today, typical philosophical treatments of consciousness and psychological concepts are scientistic, failing to take the Wittgensteinian perspective seriously (Schroeder 2001).

I cannot, of course, present any full-blown account of religion – or mind – in these scarce pages. I have only sketched why some recent nonreductive physicalists' attempts to epistemically "save" theism by referring to emergence are misguided. Nothing has been said against religious faith as such (nor in favor of such faith, for that matter). We may, by drawing attention to the complexities, variations and indeterminacies of our actual linguistic practices themselves, try to trace the true similarities and differences of (say) scientific and religious activities.[9] In this process, the possibility of offering a Wittgensteinian reconceptualization of emergentism should be explored. Accordingly, my message is not purely negative; I am not denying that there are interconnections between emergence theories and Wittgenstein's (1953) and his followers' picture of human beings as naturally language-using creatures. A form of *antireductionism*, in particular, is common to both: language is a rule-governed activity, something "more" than mere actual verbal behavior; yet, it undeniably emerges from factualities of that behavior. This emergence deserves philosophical scrutiny, whether we are interested in the peculiarities of our religious or mental vocabularies. But the philosopher's task is to examine the (pragmatic) preconditions of meaningfulness in these areas, not to engage in quasi-scientific speculations.

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[9] Arguing for any specific position in this regard cannot be my task here.

Probability Theories and the Justification of Theism

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In the present paper I intend to analyse, criticise and suggest an alternative to Richard Swinburne's use of Bayes's theorem to justify the belief that there is a God. Swinburne's contribution here lies in the scope of his project and the interpretation he adopts for Bayes's formula, a very important theorem of the probability calculus, which reads as follows:

$$P(h / e.k) = \frac{P(e / h.k)}{P(e / k)} \times P(h / k)$$

Posterior probability of *h* **Explanatory power of *h*** **Prior probability of h**

h is the hypothesis under assessment, *e* is the set of evidence in view of which the hypothesis is assessed and *k* is background knowledge.

Swinburne uses the framework provided by the theorem to reconstruct the main arguments of natural theology in an inductive case in favour of theism aimed to academic and scientific circles, which are the most sceptical as regards religious belief.

1. Logical Bayesianism applied to Theism

For Swinburne, the Bayesian formula is the formal expression of scientific inductive reasoning in the assessment of how much probable a hypothesis is in view of relevant evidence. In his application of Bayes's theorem to justify theistic belief, Swinburne aims to show that theism is confirmed by some relevant pieces of evidence. In other words, he wants to show that the existence of God is more probable than not (i.e. has a probability higher than 0.5) in view of evidence such as the existence of the universe, order in this universe, the providential character of this order, and the occurrence of conscious beings in this providential universe. In view of all these pieces of evidence, Swinburne holds that: 1) their expectedness or probability of happening anyway ($P(e_n/k)$) is very low, and 2) that they are all well explained in view of the hypothesis of theism, that is, $P(e_n/k)<P(e_n/h.k)$. In fact, the decisive piece of evidence in Swinburne's cumulative case is religious experience, which becomes the argument that tips the balance in favour of theism (see Swinburne 1991, 291).

However, the adaptation of the natural theology arguments to Bayes's formula is not the only part of Swinburne's probabilistic approach to the justification of theism. In addition to the likelihood calculation, that is, the proportion between how much evidence *e* gets explained by hypothesis *h* and the expectedness of *e* ($P(e/h.k)/P(e/k)$), the Bayesian interpretation of inductive reasoning postulates a consideration of the prior probability of *h*.

The assignment of prior probabilities is the most controversial part of Bayesianism as an interpretation of scientific reasoning. In this respect, there are two main positions in the Bayesian field. There are those who postulate that the estimate of priors is a matter of universal and neutral criteria that stem from logical considerations only. In addition, there are those who hold that prior probabilities are a matter of subjective opinion, i.e. just a personal initial degree of belief in a certain hypothesis. For the subjectivists, the only constraints on the assignment of prior probability values would be coherence, that is, the conformity to the axioms of probability calculus (see De Finetti 1989).

For Swinburne the subjective theory of Bayesian probability is not able to provide an adequate account of confirmation of theories by evidence in scientific contexts (see Swinburne 1973 24). For him, we should select a theory prior to the consideration of evidence, which amounts to estimating its prior as higher than its rivals', using three objective parameters: fitness with background knowledge, scope and simplicity, which is the most significant of them.

For Swinburne, the principle that, all being equal, simplicity indicates that a hypothesis is true is a synthetic *a priori* truth, that is, it is a condition for theoretical scientific activity being a rational enterprise (Swinburne 1997, 56). In other words, our normal conception of science is that this is an activity guided by rational criteria for selecting hypotheses, not by random procedures without any ordering principles. Thus, where the rival theories we are discussing refer to a field of research with no neighbouring area and where they cannot be distinguished in terms of scope, we need to resort to the principle of simplicity, otherwise our theory selection will be irrational.

Unfortunately there are strong reasons for believing that Swinburne's attempt to use simplicity as a directly applicable, objective and impersonal criterion for ascribing a prior probability to theism fails. For the sake of brevity, I will only outline them here:

- The concept of simplicity has too many different meanings (see Prevost 1990, 50);
- The application of this concept in theory choice is not direct, but requires judgement based on the shared knowledge of the research community (see Sober 1988, 69 and Salmon 1998, 563);
- There is no clear interpretation of the principle of simplicity in Bayes's theorem if we follow Swinburne's account;
- The reduction of simplicity to quantitative and mathematical terms resorts to a concept of infinite that conflicts with the theological meaning of it (see Le Blanc 1993, 62);
- It is at least highly controversial that theism is a simple hypothesis (see Fawkes & Smithe 1996);

The idea that we need simplicity to adjudicate among an infinite number of hypothesis is either contrary to the probability calculus or too artificial to account for scientific confirmation.

In addition, it is highly polemical to say that a hypothesis is always *a priori* more probable than another because of its simplicity. Indeed, a too simple a theory is frequently considered implausible even before we take into account the phenomena it aims to explain. Instead of a linear gradation for evaluating a hypothesis in view of simplicity so that the simplest it is the most probable in principle, it

seems more correct to take simplicity as medium optimum above which we have complex theories and below which we have simplistic ones. In this case, neither the complex nor the simplistic should be *a priori* more probable than the simple one. If so, however, the application of the criterion for estimating prior probabilities is far from straightforward. Instead, it requires familiarity with the prevailing conception about what is the optimum of simplicity in the research area we are referring to in order to sustain a trained judgement. So, we can even agree with Swinburne that simplicity is not a sheer methodological or pragmatic criterion, but that it has something to do with theory truth-value. However, the definition of what simplicity amounts to and the application of this parameter for assessing the plausibility of a hypothesis depend on the background knowledge shared by a given community of researchers.

2. Intersubjective Probability and the Justification of Theism

The theory of probability that is behind Swinburne's approach takes probability as a logical relationship between propositions, which is regulated by *a priori* correct inductive criteria valid in all contexts. The problem with this view is that it cannot live up to its intention, that is, the application and definition of these criteria end up being dependent on judgement. However, Swinburne and the proponents of the logical theory are right in not accepting the subjective theory of probability as an account of scientific inference, since theory choice in this context is not a matter of pure personal taste.

The view I intend to defend is based on an intermediate between the logical and the subjective theories of probability. An account of this view is the intersubjective theory of probability proposed by Donald Gillies. According to him, intersubjective probability is an extension of the notion of subjective probability, that is, it is defined by the degree of belief shared by a group of individuals in a proposition *p*. This degree of belief is defined by how much money the group is prepared to bet in *p* in a psychological experiment. The basic requirement is that the group be coherent in the probability assignments it proposes, i.e. that it complies with the axioms of probability calculus, otherwise, following from the Dutch book argument, it will lose money for sure. In addition, each individual of the group has to follow the group view in the initial degree of belief attributed to the proposition in question (see Gillies 1991, 517).

Gillies claims there are two requirements for this theory to work. The first one is the existence of a common purpose that unifies the group so that it needs to have a coherent, shared view of the probability of the hypothesis in question. The second one is that the individuals can be informed about the degrees of belief shared by the group and correct their prior probabilities accordingly. As a result, the intersubjective theory of probability can account for the fact that the probabilities ascribed to hypotheses in scientific contexts are neither a matter of individual taste nor stem from a single rational degree of belief on which all rational human beings should agree. Instead, the high degree of consensus in the scientific community should be interpreted as intersubjective probabilities, that is, common beliefs shared by a group with the common purpose of putting forward true theories about matters of fact and relations of concepts. It is on the basis of their shared background knowledge that scientists agree as to whether a given hypothesis is confirmed by a certain piece of evidence.

The application of this theory of probability to the epistemology of theism can be outlined as follows. First, we need to define the research community we are referring to, i.e. an account of who is involved in the discussion about the rational justification of the belief in God. It seems reasonable to circumscribe it to people interested in reconciling religious belief and the tenants of philosophic and scientific argumentative reason. In other words, Swinburne is right in addressing the academic and scientific circles with his religious epistemology, because it is in this type of group that the question about the justification of religious belief arises. Particularly, the question is posed to those who have belonged to a religious community since their early years but who also became part of a scientific, academic or any intellectually sophisticated group later on. For those religious believers who do not participate in the environment defined by argumentative reason the problem of the rationality of theism is much less pressing if it exists at all.

If the question of justification of theism is a problem particularly posed to those who both have a religious upbringing and participate in the environment dominated by argumentative reason, then their common purpose can be to evaluate the extent to which the belief that there is a God meets the requirements of intellectual respectability given both their religious faith based on a certain experience of God and the constraints posed by reason. In Bayesian terms, this will mean that the prior probability they will ascribe to the hypothesis of theism will be higher than the one attributed by someone who does not have a religious background. Yet they also have to consider in this prior probability judgement some elements that count against this initial plausibility such as the fact that religious experience is fundamentally ambiguous and can be described in different ways, and that there is disagreement about the matter, for example (see McKim 2001 252).

This way of considering the particular religious background of the theist who engages in the discussion of God's existence has the advantage of being more realistic than the one supposed by Swinburne. There is no neutral starting point in this matter, as there is no neutral starting point in scientific reasoning. From a Bayesian perspective there is no problem in starting to participate in a debate from a determinate point of view as long as we are coherent in our degrees of belief, and are set to update our initial probabilities in light of evidence. An interesting phenomenon Bayes's theorem enables us to see is that to the extent that evidence is considered, the importance of our determinations of prior probability gradually decreases. In the limit, given certain conditions, the consideration of evidence will lead to a convergence of opinion where one of the alternatives will reach probability one, as the others tend to zero.

The crucial element in this discussion will be the extent to which the opponent parts in this debate share a common background knowledge that is sufficient to make a difference to opinion convergence. The fact that both contending groups share the same heuristic values and reasoning standards prescribed by intellectually sophisticated circles is a reason to believe that this is possible in principle.

In sum, my suggestion for using Bayesianism in the discussion of the justification of theistic belief focuses on the idea that Bayes's theorem expresses two very distinct moments in inductive reasoning. First, the prior probability of theism is better thought of in terms of a particular degree of belief shared by a group and based on their specific background knowledge. Second, the likelihood calculations, where the particularity of the priors tends to vanish given that here we will consider public evidence and evaluate their confirmatory force for the hypothesis according to criteria prescribed by background knowledge common to the contending groups.

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Justification in Context

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Determining knowledge happens by indexically attuned justification. One may also say that knowledge comes without justification if standards for knowledge are measured by fancy requirements. A lower setting of scores brings justification back. Epistemic responsibility requires attuning to context. Structures of epistemic justification are extended from these resting on exceptionless general rules to the ones involving generalities with exceptions and further to those proceeding from particular contextual cases. How can justification in the context really work? Discussion involves the last two manners of how to systematize the structure of justification. The first of these involves general patterns and thus normative authority of the general and the second builds on particular contexts. The structure of justification proposed by this last one complies with accommodation requirements for a realistic account of knowledge.

1. Justification in context – how does it happen?

I did not know about the departure time of the bus in direction of town. So I phoned the bus company. They told me about the schedule and I immediately knew, so I was able to plan my trip. I took the relevant pieces of background knowledge and brought them together. It was important for me that bus at *this* particular time departs to *this* particular town. I only have guessed about the information before, but as I asked and as I received response I knew. So I skipped further verification. It would have taken me too much time anyway to check everything that could perhaps go wrong if I wished not to be too late for my bus. Counterfactual possibilities exercise a big pressure. Indexical elements have a stronger overall pull towards conditions that secure knowledge than do the non-indexical elements coming in a generalized form.

The usual story involving conditions guaranteeing knowledge has it the other way round in respect to the already explained experience and intuitions. General possibilities dealing with defeaters and counterexamples are considered as providing conditions for knowledge, for their function is to insure against fallibility. The resulting pressure for determining all possible conditions of justification screens off the importance of indexical presuppositions.

Indexical elements come with the context. Indexicality also creates context. Justification for beliefs does not come in one single form. The relevance of a feature contributing to justificatory conditions of knowledge varies from one context to another.

Maybe there are several forms of justification. If this is the case, then whatever is called "knowledge without justification" may still be justified, but just in another, perhaps in a weaker sense. Justification may come in several forms of compactness pertaining to the landscape inhabiting forces that secure knowledge. Justification may have its background consistency stressed or relieved; it may come with high, with middle or with low requirements put on the structure of the shape supporting it.

Fancy forms of knowledge won the day at the time Socrates was walking around the town, demonstrating to each person how despite this person's beliefs about possessing knowledge the person in question did not actually know. Another fancy form of knowledge figures court decisions. One would feel rather uneasy about accepting something based merely on probable opinion as an outcome of a fair trial.

As scores for most situations of knowledge are set too high, it is then natural that most of the usual cases figuring knowledge will fail to pass the test. We may say that there will be no justification for these cases, and so they will be cases of *knowledge without justification*. Myself learning and then knowing when the bus will depart is perhaps a case of knowledge. High-grade excessive justification requirements come with abstraction from context. Abstraction from a particular context is linked to stretching justificatory structure over a multitude of contexts reaching out of the range of the unique indexed context in which the agent finds himself.

There is another understanding of what knowledge without justification may be about. According to this, there are basic beliefs, so one presupposes something in the situation, without the need to account for it. Candidates for such unjustified beliefs would then be supported by presuppositions in the situation. One builds one's authority on what is given in the context.

Instead of fancy excessive requirements for justification some other structure is needed, and this is provided by *epistemic responsibility*. Being epistemically responsible does not mean that one has to check for all the ways in which the goal of knowledge can fail. Many times this would be a rather irresponsible manner of acting. It is responsible to act in a way that is appropriate to the situation at hand, and to check all the *relevant* defeaters in *this* situation.

> "Broadly speaking, being epistemically responsible has to do with such activities as: (1) gathering evidence, (2) considering and dealing with counterpossibilities, and (3) dealing with internal conflicts of belief." (Timmons 1999, 195)

Here are three possible readings of the first two items proposed by the quote.

(1) (a) gathering *all* possible evidence

(b) gathering *some* evidence

(c) gathering *just this contextually attuned* evidence

(2) (a) Considering and dealing with *all possible* counterpossibilities

(b) Considering and dealing with *some* counterpossibilities

(c) Considering *just these contextually attuned* counterpossibilities

Three emerging structures of justification bases may be more systematically characterized in the following way, corresponding to possible readings of epistemic responsibility requirements:

(a) Deductive-like pattern of justification ranges over *all* single cases, and it considers *all* possible counterexamples or defeaters (for a belief to be justified knowledge).

(b) Inductive-like pattern ranges over *most* of the single cases, and it considers *most* of the possible counterexamples or defeaters (for a belief to be justified knowledge).

(c) Particularist pattern does not involve any projection from one single case to another one; the considered relevant counterexamples or defeaters all reside *in the unique context*, and are indistinguishable from this context. Once you see the context, you see them all. If you do not see some, they make part of another context.

The mistake of (a) and (b) is to suppose that *relevance* of the justificatory structure may be obtained in such a manner that it includes counterexamples or defeaters extending over general pattern which ranges through a multitude of contexts, somehow *besides* to the actual context. The basic distinction is between the particular contexts with their unique patterns, including defeaters as dynamical forces shaping them, and between generalist strategies, either without or with exceptions. The difference is thus between c) on the one hand, and between (a) and (b) coming together on the other hand. There is thus no such basic distinction between this general pattern ranging over *all* or over *most* of the cases involving defeaters, although this kind of distinction, introduced by (b) may *seem* basic at first sight, and it is indeed a qualitative jump from the position presupposed by (a). Justification includes *relevance in the context*, so it embraces the possibility (c). This last position is qualitatively different from the former two positions in that it considers the pattern in *one particular context* providing the justificatory structure, as against the former two which propose *patterns extending over several possible contexts* as providing the justificatory structure.

The three mentioned possibilities of justificatory structure (a), (b), c) may be presented according to the parameters that shape justificatory landscape:

	(a)	(b)	(c)
i. Rules	General rules without exceptions (deduction-like)	General rules with exceptions (ceteris paribus, induction-like)	Particular contexts: no rules, just indexical relevance
ii. Defeaters	Rules determine knowledge as the result of beating all possible defeaters	Rules determine knowledge as considering most of possible defeaters	Knowledge is the result of justification coming from particular patterns, defeaters are *in* a particular context
iii. Projectibility	Projectibility extends over all contexts	Projectibility extends over most contexts	There is no projectibility: the structure of justification, including defeaters, resides in the shape of each particular context

The involved rules (i), the considered defeaters (ii) and projectibility or its absence (iii) shape the structural basis of justification.

Under (a) and (b), projectibility is *generalist* – it extends over *other contexts*, i.e. these contexts that are different from the particular context in question where justification is to be assured. So the indexical element of providing structure in this particular context is avoided. Stress is thus put on other contexts, but these contexts are just not relevant for the justification in question. The *structure of justification* may only be provided in one specific *particular context*. It is wrong to see defeaters as (additional) contexts, as the alternative possibilities (besides to the actual one) that need to be checked in order to assure knowledge. These possibilities figure as abstract contexts, i.e. the contexts abstracted from their actual basis. The *indexical* element needed for justification is missing. So the real and actual defeaters have to reside *inside a particular context* – they have to be *in* the context if the aim is that of obtaining justification. So the right *structure of justification* has to be *within* this context. This is achieved by the possibility (c). In (a) and (b) structure of justification follows the *normative authority of the general* – it reaches over to contexts that operate outside one particular context in question, and it looks at defeaters as being provided by alternative contexts. This cannot be the right way to go though because defeaters construed as alternative possible contexts lack *indexical* elements through which they became relevant in the process of securing knowledge.

2. Justification in context – how does it become effective?

I will fragmentarily use Timmons (1999) as providing a position building on general rules with exceptions, thus the position under (b) according to the discussion above. Because he is appropriating context, his work is of even a bigger interest. But there are also differences with what I think is a more appropriate position as is the one that he is defending. First, his contexts provide a different justificatory landscape if measured by the particularistic shape brought into discussion by c). Then, his is a work in moral justification and it is not dedicated just to epistemic justification *per se*. The question is what kind of *structure of justification* his proposal establishes. He talks about middle level generalizations. But more importantly, he appropriates a Rossian generalist and pluralist approach, substituting contextually basic parameters to propositions instead of Rosses' assignment of self-evidence status to them.

> "There are a number of irreducible moral generalizations that are defeasible… In the ordinary context… these are often epistemically basic…
> They are contextually basic…
> The contextually basic beliefs provide… the justificatory basis for justified belief in other, non-basic moral propositions…
> Going from basic moral beliefs… to more specific moral beliefs about particular cases is not always a matter of simply taking the moral generalization together with relevant empirical information and deducing a moral conclusion. In many cases, two or more morally relevant considerations expressed by the basic moral generalizations will be present in a single case, and for these cases we need have no algorithm or ordering system to which we can appeal to adjucate the conflict. In these cases, moral *judgment* takes over." (Timmons 1999, 214-215)

One may use the same strategy that is given here for moral epistemology for a story about the structure supporting justification. This will then be a typically pluralist story.

There is certainly a lot around to recommend the *structure of justification* according to (b) over the structure of justification according to (a). The claim of the alternative (b) supporting such flexibility is that the projectibility of the general rule prescribing complete or ideal justification has to allow for *exceptions*. *Ceteris paribus* strategy with exceptions is similar to the pluralist strategies in ethics, where a domain cannot be arranged just by application of one single rule, but by application of *several*.

A similar picture would apply to epistemology. You do not have just one general rule without exceptions as you look for defeaters. You can introduce *epistemic responsibility*, and you can shape the structure of justification so that it fits the desired context. You have to use *judgment* to be a responsible epistemic agent.

One should not make a mistake here though. The proposed strategy is still *generalist*, for it comes under (b), just that it allows for *exceptions*, and these exceptions allow for a possible plurality of principles to be considered in order to obtain epistemic justification and knowledge as a result.

The demands of common sense – what may common sensically count as knowledge – are much easier satisfied by generalities with exception strategy (b) then with the exceptionless generalities strategy (a). But it is actually not really possible to satisfy accommodation requirements determining structure of justification according to the strategy (b) if we compare it to the strategy c). The acceptance of (b) has paved the way for introducing *context* into the epistemic justification story. But the question is whether *the normative authority* determining knowledge really is *generalist* as proposed by (b) or whether it is particularist, as proposed by c). Normative authority has to be *particularist*, i.e. attuned to one *indexically* determined context, if knowledge should be the desired result. c) is superior to (b). What gives you knowledge, if you accept pluralistically minded principle of epistemic responsibility, is not the normative authority of the general, which requires you to accept the pattern of general rule that has the job of checking for all or most of logically possible defeaters. What gives you knowledge is rather being attuned to *this* context that *authorizes* you in possessing knowledge.

Relevance can only come from a *particular context*, for precisely this context provides the *normative authority* and thus the appropriate background landscape determining the range of defeaters to be checked in order that knowledge is attained. But as the defeaters are *in* the situation, shaping it, the *context* has to be considered in order that one would attain knowledge. The view will be judgmental, coming at a glance, not tractable. If defeaters are relevant in strategies (a) and (b) they can be indexicalized. The strategy c) can then take over the ensuing job of justification.

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Wittgensteins Kritik an Gödel und das versteckte tertium non datur

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Hört man das erste Mal von einer Kritik Wittgensteins an Gödels Resultaten, so fragt man sich vielleicht, was eine „Kritik“ an Gödels Ergebnissen überhaupt sein soll. Die Ergebnisse sind so einhellig anerkannt, dass es kaum möglich zu sein scheint, sie sinnvoll zu attackieren. Sind es einfach die philosophischen Implikationen, die Wittgenstein kritisiert? Wittgenstein nimmt keinerlei Bezug auf philosophische Folgerungen, die Gödel oder andere aus Gödels Theoremen gezogen haben. Wittgensteins Angriff richtet sich, wie es von ihm zu erwarten ist, gegen die Grundlagen dessen, worauf die Gödelschen Resultate gestützt sind.

1. Wittgensteins Kritik an Gödel

Es gibt zwei Passagen in den BGM, in denen Wittgenstein sich zu Gödel äußert, nämlich Anhang III von Teil I und Teil VII §19 ff. Meine Ausführungen beziehen sich auf die erste der beiden Passagen. Die Kritik Wittgensteins an den Grundlagen der Gödelschen Resultate verläuft m.E. entlang vier Linien. Sie setzt beim mittlerweile einheitlich sogenannten Gödel-Satz (Γ) an, den man in informeller Sprechweise so beschreiben kann: Er sagt von sich selbst aus, dass er unbeweisbar ist. (Diese Sprechweise ist allerdings insofern höchst bedenklich, als Gödels Verdienst gerade darin bestand, diese Selbstbezüglichkeit auf eine technische Weise aufzubrechen.) Die vier Linien der Kritik möchte ich folgendermaßen markieren:

> Du musst die Deutung aufgeben.
>
> Sätze wie Γ sind böse.
>
> Was stört ein Widerspruch?
>
> Sätze (der Mathematik und Logik) müssen sich in der Anwendung bewähren.

Kritik (1) hat ihr Zentrum in folgender Passage (BGM Teil 1, Anhang III, §8):

> Ich stelle mir vor, es fragte mich Einer um Rat; Er sagt: „Ich habe einen Satz (ich will ihn mit ‚P’ bezeichnen) in Russells Symbolen konstruiert, und den kann man durch gewisse Definitionen und Transformationen so deuten, dass er sagt: ‚P ist nicht in Russells System beweisbar’. Muß ich nun von diesem Satz nicht sagen: einerseits er sei wahr, andererseits er sei unbeweisbar? Denn angenommen, er wäre falsch, so ist es also wahr, daß er beweisbar ist! Und das kann doch nicht sein. Und ist er bewiesen, so ist bewiesen, daß er nicht beweisbar ist. So kann er also nur wahr, aber unbeweisbar sein.“ [...] Was heißt nun dein: „angenommen, [der Gödelsatz, Verf.] sei falsch“? In Russells Sinne heißt es: „angenommen das Gegenteil sei in Russells System bewiesen“; ist das deine Annahme, so wirst du jetzt die Deutung, er sei unbeweisbar, wohl aufgeben. Und unter dieser Deutung verstehe ich die Übersetzung in diesen deutschen Satz.

Wenn die Behauptung, der Satz Γ besage seine Unbeweisbarkeit, zu Schwierigkeiten führt, dann, so Wittgenstein, möge man diese Behauptung aufgeben. Dieser Versuch Wittgensteins, die Probleme, die von den Gödel-Ergebnissen aufgeworfen werden, zu beseitigen, lässt uns aber mit einer Schwierigkeit zurück: *Wie* sollen wir die Deutung aufgeben? Jeder der durchgeführten Schritte in Gödels Beweis, insbesondere die Konstruktion des Beweisbarkeitsprädikats und die Diagonalisierung, bewegen sich im Rahmen anerkannter Mathematik. Wenn man die Konstruktion gerade so *gemacht* hat, dass sie genau das leistet, was man eben von ihr erwartet, wie kann man dann im Nachhinein sagen: „Nein, sie tut es doch nicht“? Anders gesagt, es müsste sich eine Stelle im Konstruktionsprozess ausfindig machen lassen, an der die Konstruktion versagt; eine solche aber ist nicht zu erkennen und Wittgenstein nennt auch keine.

Die zweite Stoßrichtung von Wittgensteins Kritik (2) kulminiert in der Aussage (§11):

> Das kommt davon, wenn man solche Sätze [wie Γ, Verf.] bildet.

Wittgenstein tritt also für eine ad hoc-Elimination von sich als unbrauchbar erweisenden Sätzen ein. Seine Argumentation dazu verbindet er mit Einwand (3), welcher lautet (§18):

> Man kann ja den Satz des Widerspruchs sehr wohl falsch nennen.

Wittgenstein radikalisiert also die Infragestellung der logischen Grundprinzipien, die Brouwer mit seiner Zurückweisung des tertium non datur begonnen hatte, indem er auch den Satz vom ausgeschlossenen Widerspruch nicht unbedingt gelten lassen will.

Eine Verbindung der Einwände (2) und (3) zeigt sich in folgendem Absatz (§12):

> 12. Schadet der Widerspruch, der entsteht wenn Einer sagt: „Ich lüge. – Also lüge ich nicht. – Also lüge ich. – etc.“? Ich meine: ist unsere Sprache dadurch weniger brauchbar, daß man in diesem Fall aus einem Satz nach den gewöhnlichen Regeln sein Gegenteil und daraus wider ihn folgern kann? – der Satz *selbst* ist unbrauchbar, und ebenso dieses Schlüsseziehen.

Sätze wie Γ und „Ich lüge“ erzeugen (nach Wittgensteins Auffassung[1]) einen Widerspruch. Aus dieser Situation sieht Wittgenstein zwei Auswege: Mit dem Widerspruch zu leben[2] oder solche Sätze zu verbannen. Jedenfalls nicht als sinnvolle Lösung sieht Wittgenstein es an, den Kontext damit als in seinen Grundfesten erschüttert zu begreifen, d.h. im Fall des Gödel-Resultats: die Idee der prinzipiellen Beweisbarkeit oder Widerlegbarkeit mathematischer Sätze aufzugeben.

Kritik (4) ist eine sehr allgemeine (§20):

> *20.* Man muß sich hier daran erinnern, daß die Sätze der Logik so konstruiert sind, daß sie als *Information keine*

[1] Sie erzeugen einen Widerspruch nur dann, wenn das tertium non datur für Beweisbarkeit von Sätzen vorausgesetzt wird, oder das Gödel-Resultat als „der Vernunft widersprechend“ angesehen wird.

[2] Die Parakonsistente Logik gibt Wittgenstein recht. Sieht man sich nämlich genauer an, warum man eine (logische) Sprache, die einen Widerspruch enthält, für unbrauchbar hält, so bemerkt man, dass der Grund für die Unbrauchbarkeit eigentlich nicht im Auftreten des Widerspruchs liegt, sondern im sich daraus in der klassischen Logik ergebenden „ex falso quodlibet“, also darin, dass der Wahrheitsbegriff dann überhaupt obsolet wird. Die parakonsistente Logik wählt eine Grundlage, die zwar nicht den Widerspruch, aber das „ex falso quodlibet“ ausschließt.

> Anwendung in der Praxis haben. Man könnte also sehr wohl sagen, sie seien garnicht *Sätze;* und daß man sie überhaupt hinschreibt, bedarf einer Rechtfertigung. Fügt man diesen „Sätzen" nun ein weiteres satzartiges Gebilde andrer Art hinzu, so sind wir hier schon erst recht im Dunkeln darüber, was dieses System von Zeichenkombinationen nun für eine Anwendung, für einen Sinn haben soll, denn der bloße *Satzklang* dieser Zeichenverbindungen gibt ihnen ja eine Bedeutung noch nicht.

Sätze müssen sich nach Wittgenstein in der Wirklichkeit bewähren. Das können schon die Tautologien nicht in der herkömmlichen Weise, um wie viel weniger können es Sätze wie Γ – so Wittgenstein.

2. Die Rolle des tertium non datur im Allgemeinen und im Besonderen

Wittgenstein ist, wie ich im Folgenden argumentieren werde, inkonsequent in seiner Haltung zum tertium non datur bei seiner Kritik an Gödel. Wohlverstandene Inkonsequenz aber ist sein (politisches) Programm in Bezug auf die Mathematik und gleichzeitig eine von insgesamt drei Haltungen, die Wittgenstein gegenüber dem tertium non datur einnimmt. Die erste ist die Kritik am tertium non datur, mit der er sich Brouwer zumindest teilweise anschließt. Die zweite ist die unbewusst überzeugte, die sich etwa in seiner Kritik an Gödel bahnbricht. In der dritten findet Wittgenstein seinen üblichen Ausweg: „Es kommt darauf an."

2.1 Nein zum tertium non datur

Brouwers Kritik an der klassischen Logik und Mathematik blieb nicht ohne Wirkung auf Wittgenstein (Richter 1965). Auch Wittgenstein formuliert grundsätzliche Bedenken gegenüber dem tertium non datur. Konkret geht er diesen Bedenken anhand der Frage nach, ob in der Entwicklung von π eine gewisse Anordnung φ von Ziffern vorkommt (BGM Teil V, §9):

> „Was aber sagt der, der sagt, eines sei klar: man werde oder werde nicht, in der endlosen Entwicklung auf φ kommen?
> Mir scheint, wer dies sagt, stellt selbst schon eine Regel, oder ein Postulat auf.
> Wie, wenn man auf eine Frage hin erwiderte: ‚Auf diese Frage gibt es bis jetzt noch keine Antwort'?
> So könnte etwa der Dichter antworten, der gefragt wird, ob der Held einer Dichtung eine Schwester hat oder nicht – wenn er nämlich noch nicht darüber entschieden hat."

Das tertium non datur, wie es üblicherweise gebraucht wird, klassifiziert Wittgenstein also als ein Postulat. Das Postulat lautet angewendet auf das konkrete Beispiel: „Es gilt: π enthält φ oder π enthält φ nicht". Diesen üblichen Gebrauch kontrastiert er mit dem Umgang eines Dichters mit einer solchen Frage, der nämlich in seiner Antwort nicht festgelegt ist. Inwiefern nun ist der Dichter nicht festgelegt?

> „Wenn einer den Satz vom ausgeschlossenen Dritten aufstellt, so legt er uns gleichsam zwei Bilder zur Auswahl vor und sagt, eins müsse der Tatsache entsprechen. Wie aber wenn es fraglich ist, ob sich die Bilder hier anwenden lassen?
> Und wer da von der endlosen Entwicklung sagt, sie müsse die Figur φ enthalten oder sie nicht enthalten, zeigt uns sozusagen das Bild einer in die Ferne verlaufenden unübersehbaren Reihe.
> Wie aber, wenn das Bild in weiter Ferne zu flimmern anfinge?" (BGM Teil V, §10)

Damit zeichnet Wittgenstein das Programm seiner Kritik vor. Zum einen ist nicht klar, dass sich die Bilder – einzeln – anwenden lassen. Zum anderen kann, anwendbare Bilder vorausgesetzt, immer noch unklar sein, ob die Aussage „Es gilt: π enthält φ oder π enthält φ nicht" richtig ist oder auch nur einen klaren Sinn hat. Wittgenstein hintergeht also das Aufstellen des Postulates in drei Weisen. Er hinterfragt der Reihe nach (1) „Es gilt p oder non p", (2) den Satz „π enthält φ" und (3) den Satz „π enthält φ nicht".

Das Postulat „Es gilt p oder non p" in Zweifel zu ziehen (1), war genau das Anliegen Brouwers. Wittgenstein (BGM Teil V, §10) ist in diesem Punkt sehr kurz:

> „Wie aber, wenn das Bild in weiter Ferne zu flimmern anfinge?"

Selbst wenn die Sätze p und non p eine klare Bedeutung haben, ist nicht klar, ob wir sicher sein können, dass entweder der eine oder der andere gilt. Das ist Brouwers Hauptanliegen.

Auch non p, im vorliegenden Fall „π enthält die Figur *nicht*", erklärt Wittgenstein zuständig für eine mögliche Unklarheit (3) (BGM Teil V, §11):

> „Von einer unendlichen Reihe zu sagen, sie enthielte eine bestimmte Figur nicht, hat nur unter ganz speziellen Bedingungen Sinn."

Die Infragestellung (2) der Aussage „π enthält die Figur" ist die für Wittgenstein typischste von den drei Vorbringungen zum tertium non datur (§12), insofern als sie hinterfragt, was gar so selbstverständlich daherkommt. Wittgenstein fragt: Was meint man mit „Die Figur ... kommt in dieser Entwicklung vor"? Für Brouwer ist völlig klar, was dieser Satz heißt, nämlich einfach, dass man die Entwicklung bis zu irgendeinem Punkt aufgeschrieben hat und bis dorthin φ mindestens einmal vorgekommen ist. Der Satz „π enthält φ" erscheint wirklich völlig unverdächtig. Die Fragwürdigkeit wird erst klar, wenn man sieht, wie Wittgenstein nach einem langen Hin- und Her die Überlegungen schließlich wieder einmünden lässt in seine allgemeinen Überlegungen zum Lernen von Sprache (BGM Teil V, §12):

> „Wie weiß ich denn, was es heißt: die Figur ... komme in der Entwicklung vor? Doch durch Beispiele – die mir zeigen, wie das ist, wenn... Diese Beispiele zeigen mir aber nicht, wie es ist, wenn die Figur in der Entwicklung vorkommt!"

Wittgenstein vertritt in den PU die Auffassung, dass jedes Lernen von Sprache in letzter Instanz ein Lernen anhand von Beispielen ist, anhand derer dem Lernenden vorgemacht wird, wie ein Element der Sprache zu gebrauchen ist. Diese Möglichkeit hält Wittgenstein in Bezug auf den Satz „π enthält φ" für grundsätzlich verwehrt, weil es laut Annahme ja gerade noch kein Beispiel für ein Vorkommen von φ in π gibt und es auch überhaupt kein Beispiel geben kann, das beschreibt, wie eine Ziffernfolge in der Entwicklung einer Zahl vorkommt, wenn man das Vorkommen noch nicht festgestellt hat.

2.2 Ja zum tertium non datur

Während ich im vorigen Abschnitt Wittgensteins Bedenken gegen das tertium non datur nachgezeichnet habe, wird es nun darum gehen, Wittgensteins Verhältnis zum Prinzip des tertium non datur gleichzeitig als bejahend auszuweisen. Wenn ich Wittgenstein also eine Inkonsequenz nachsage, so auf einer performativen Ebene. Um das nachzuweisen, muss ich eine Stelle angeben, an der Wittgenstein tatsächlich das tertium non datur zur Grundlage seiner Argumentation macht. Die für meine Absicht entscheidende Passage beginnt folgendermaßen (BGM Teil 1, Anhang III, §8):

> „[...] ‚in Russells System wahr' heißt, wie gesagt: in Russells System bewiesen; und ‚in Russells System falsch' heißt: das Gegenteil sei in Russells System bewiesen."

Ganz selbstverständlich bedient sich Wittgenstein in der Folge des Prinzips des ausgeschlossenen Dritten, indem er davon ausgeht, dass eine dritte Alternative nicht in Frage kommt. Da er Wahrheit und Beweisbarkeit identifiziert, geht er somit stillschweigend von der *Annahme* aus, dass jeder Satz entweder beweisbar oder widerlegbar ist (im Widerspruch zu Gödels Resultat). Damit setzt er aber das Prinzip des tertium non datur an einer Stelle voraus, an der es selbst Nicht-Intuitionisten für bedenklich erscheinen muss.

2.3 Naja zum tertium non datur

Begeht Wittgenstein damit schlicht einen notwendigen performativen Selbstwiderspruch, dh *muss* Wittgenstein das tertium non datur, dessen prinzipielle Berechtigung er anzweifelt, in seinen Aussagen benutzen? So einfach liegen die Dinge bei Wittgenstein nicht. Wittgenstein bezweifelt nämlich nicht die Gültigkeit des tertium non datur prinzipiell. Er lässt schon gelten, dass entweder etwas „so ist" oder es „so nicht ist", falls klar ist, was es heißt, etwas „ist so". Was er bezweifelt, ist, dass wir das „ist" oder „ist nicht" jeweils einzeln in den in Bezug auf das Tertium non datur fragwürdigen Fällen so eindeutig bestimmen können bzw. dass wir beide so deutlich trennen können, dass eines davon eintreten muss. Wenn also überhaupt das „Oder" in Frage steht, dann nur weil die beiden Disjunkte nicht deutlich voneinander abgrenzbar sind.

3. Wittgensteins Wissen und Gewissheit in Bezug auf die Mathematik

Wittgenstein behandelt das tertium non datur als eine in gewisser Hinsicht nicht-hinterfragbare Gewissheit. Wittgensteins Auffassung von Wissen und Gewissheit, die er in ÜG zum Ausdruck bringt, geht davon aus, dass es Sätze gibt, die wir nicht ernsthaft bestreiten können, weil wir uns sonst außerhalb des Kommunikationsrahmens stellen. Diese Vorstellung nimmt er mit in seine Überlegungen zur Mathematik. Mathematik ist in unserem Verständnis wesentlich Beweisen und Widerlegen. Wir können nicht von einer Mathematik sprechen, in der nicht prinzipiell bewiesen oder widerlegt werden kann[3], daher kann man alle Prinzipien eher opfern, als jenes, das besagt, dass Sätze der Mathematik stets entweder beweisbar oder widerlegbar sind.

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[3] Die Feststellung von Wittgensteins „desire to identify mathematical truth with provability" in (Wright 1980), p.28 ist also korrekt, übersieht aber m.E. den entscheidenden Punkt.

Bayes' and Fisher's Conceptions of Statistic in the Context of Empirical Paradigm

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The conceptions of Bayes and Neyman-Pearson are considered in methodological literature as irreconcilable opponents as for their goals, tasks, and methods of solving statistical problems [1-3]. This article demonstrates that in some respects important for the statistical practice the methodological principles of the conceptions of Bayes (BC) and Fisher (FC), the last is ideologically close to Neyman-Pearson, reveal the similarity in positions. As an alternative to these directions of investigations an empirical conception is proposed. Let us start with some critical arguments against Bayes and Fisher's conceptions.

Arguments against Bayes' conception are as follows.

1. The proponents of Bayes' conception are accused of subjectivism which becomes apparent in the assigning of a priori probabilities. What is especially criticized is the idea of using the uniform distribution in the case of the lack of knowledge about the described state of affairs.

2. The followers of the Bayesian paradigm maintain that the calculation of probabilities based on Bayes theorem amounts to the inductive logic. Their opponents argue that methods of induction along with Bayes theorem do not constitute logic.

3. The most important task of the inductive logic is to determine the degree of hypotheses confirmation. The solution of this problem proves to be sensitive to the choice of probabilistic measure. In certain situations every measure leads to paradoxical solutions. In addition, very often there are no conclusive proofs in favor of a measure for formal description of a concrete situation.

4. Hypotheses verification does not originate from this paradigm. It is an adaptation of the classical statistics.

5. The notion of confidence probability for the estimation of the distribution parameter, which is constant, is not correct because the constant falls on the interval with the probability either one or zero. All intermediate probabilities between zero and one which are used in Bayesian methodology do not make any sense.

6. The adequacy of the Bayesian paradigm for scientific applications is also criticized. Scientists are not Bayesians.

In its turn the arguments against Fisher's conception are as follows.

1. The inability of using a priori information came under criticism.

2. The verification of hypotheses is the most important task of Fisher's conception. The methodology of the hypotheses verification came under criticism.

3. The followers of the Bayesian paradigm point out that in the framework of Fisher's conception there is no unique confidence interval. Confidence probability is determined for the multitude of intervals. In particular, when solving the problem of parameters estimation, it is not known on which interval falls the required parameter.

4. The objective character of Fisher's paradigm is denied. In objectivist conceptions probabilities are assigned to the events that have not yet happened. For this reason the probability of event depends on the place and time this event happens.

5. The adequacy of the Fisherian conception for scientific applications is also criticized.

In spite of differences between the approaches (BC) and (FC) they are methodologically similar.

1. Both lines of inquiry are model oriented. In both approaches the problem of model building, which is crucial for special sciences, is ignored. (BC) as well as (FC) assume that a model is given and what is necessary is to specify its unknown parameters.

For example, the problem of the estimation of distributions parameters belongs to this class of tasks. From the very beginning, much more information is assumed known (model) than to be additionally obtained (model parameters).

In science, like in any other domain of rational thinking, behaving, and acting, it was always conventional to move from solving simple tasks to investigating complex problems. With this in mind, it seems unreasonable to build a statistical distribution with the mean and dispersion as parameters in the beginning, in order to determine the mean, dispersion, and other statistical characteristics.

2. In both approaches, basic features of models, like independence, are either considered given a priori or presupposed on the basis of intuitive considerations. It is assumed that if the investigations are conducted in controllable conditions and the experiments are independent, the results of the experiments will also be independent.

3. Solutions of many problems, like estimating the distribution parameters or building regressive models, lead to the same or similar quantitative results. Of course, the interpretation of the solutions in both cases will be different.

4. The parameters estimation criteria (consistency, unbiasedness and efficiency) are used in both approaches.

5. The used methods of parameters estimation are not robust because the estimations obtained much unbiased even in the case of a small deviation of statistical characteristics of data from model ones.

6. Each approach criticizes the methodological principles of the concurrent one. For instance, the groundlessness of the conception of hypotheses confirmation in Bayes' approach caused by the problem of measures multiplicity is criticized. At the same time, a satisfactory solution of this problem cannot be found in the framework of Fisher's approach as well. In its turn, the methodology of hypotheses verification in Fisher's analysis is criticized from the Bayesian point of view. The latter, however, does not propose any ways of improving the verification of hypotheses.

The empirical conception of statistics developed by Alimov is an alternative to BC and FC methodology. The

main task of the empirical metrological conception (EMC) consists in constructing a semi-empirical model of data. The semi-empirical model of data is effective for prognosis, if the semi-empirical parameters of the model are robust. Theoretical characteristics are the representation of the stable semi-empirical characteristics. General basic characteristics of the data model, like uniformity and independence, are neither considered given a priori nor presupposed on the basis of intuitive considerations (for example, experiments are conducted in controllable conditions and independently from one another; therefore the model of independent observation is accepted). Instead, they are obtained on the basis of the formal examination of independence, uniformity, and other characteristics. If the formal independence is obtained, there are reasons for cautious claim that the experiments were truly conducted in independent conditions.

EMC criticizes Fisher's methodology of hypotheses verification. The point is that Fisher's methodology presupposes that the distribution of the criterion statistic is known up to small probabilities. The main principle of the hypotheses verification consists in the refutation of the hypothesis, even if it is true, once in the only conducted experiment a low-probable event happens.

This method is convincing neither for acceptance nor for refutation of the hypothesis. A convincing way of the hypothesis refutation consists in the discovering of an essential difference between the frequency of real event and its probability, provided that the hypothesis is true. This method is based on frequency and requires many experiments to be conducted.

In order to demonstrate that the appeal to small probabilities is not realistic, let us show that for the convincing estimation of the probability about 10**(-n) we need about 10**(n+1) experiments.

Suppose that we examine the frequency of an event $\varpi_m(A)$, where m is the quantity of the conducted experiments. Denote by s_k the number of test in which the event A happened k-th time. When passing from $m=s_k-1$ to $m=s_k$ the frequency changes from

$\varpi_{(sk-1)} = (k-1)/(s_k-1)$ to $\varpi_{sk} = k/s_k$.

The relative frequency leap in this transition is equal to

$\delta(k)= (\varpi_{sk}(A)- \varpi_{sk-1}(A))/ \varpi_{sk}(A)=(s_k-k)/(s_k-1)k$

For rare events $s_k>>k$ and therefore $\delta(k)$ is approximately equal 1/k.

Therefore, only when k>10 the relative increase in frequency will be less than 10%.

A weakness of the contemporary estimation methods consists in that they do not provide stable estimations. The most powerful estimation method is the method of maximum likelihood (MMP). It starts from the assumption that the results obtained are independent and the maximum value is assigned to their combined density. Method MMP is exact, if data completely fit with its various requirements. In case of a small deviation of the data actual characteristics from the necessary model characteristics, the obtained estimations very often have large bias. As a rule, in the practice of using the method MMP the change in combined density value for different data is not examined in order to determine on which data the combined density will be actually maximal. How the results will change when the combined density of the obtained results is not maximal is not examined as well.

The applied criteria of the quality of estimation have no pragmatic value. The popular criterion of the quality, which is consistency, does not allow one to estimate how the estimation obtained from the end sample differs from the optimal estimation derived from the presupposition that there is an infinite sample of data.

The methodology of building confidence intervals in BC and FC is also criticized in the empirical conception. In BC one speaks of the probability of a constant's fall on an interval. In FC one finds a multiplicity of intervals, and it is not clear how to use them. The empirical conception suggests a constructive procedure for building a unique "confidence interval". The probability of the falling on the interval is not determined. To illustrate this approach let us consider the estimation of the average value. Data are divided on groups with the equal level. For each group the average value is calculated. Minimal and maximal average values are the edges of the actual " confidence interval". Then we make the obtained interval more accurate on the basis of new data with more level and more number of groups. If we find an interval with the length not exceeding the permissible error, we can speak of the stable estimation of the semi-empirical average value and of the building of the confidence interval for it.

To determine the values estimations that are essentially connected to the values whose estimations prove to be stable the methodological principles representing the development of the methodology of using mathematics in natural sciences (first suggested probably by Comte) are used. Comte argued: let a variable X take values $x_1, x_2,\ldots x_n$, and these values can be measured. Another variable Y is not measurable. The role of mathematics consists in describing the dependency F between the variables X and Y. If the variable X is measured with permissible error, the solution of the equations set F(Y)=X allows one to determine the required values of the variable Y.

It is assumed in the statistical literature that the theorem of the law of large numbers has a special empirical significance. In conclusion the special epistemological and heuristic significance of the theorem of the law of large numbers which is often considered as a corner stone of statistics is criticized.

In the simplest case the theorem of the law of large numbers is stated as follows.

Theorem. Let μ be the number of occurrences of the event A in n independent tests, and p be the probability of the occurrence of A in each test. Then, whatever $\varepsilon > 0$,

$$\lim_{n\to\infty} P\{|\mu/n-p(A)|<\varepsilon\}=1 \quad (1)$$

The problem of the status of the theorem of the law of large numbers appears. Is it probability-theoretical? That is to say, does it allow one to calculate the probabilities of events on the basis of elementary probabilities or does this theorem allow one to reveal and verify primary probabilistic characteristics, for example, to determine the stability of frequencies, and thus belong to mathematical statistics?

In the theorem of the law of large numbers the theoretical value "the probability of success" is given a priori, and thus the theorem cannot be used in order to determine this already known probability. The conclusion of the theorem speaks of the event's probability, which consists in the difference between the probability and frequency of the event A. The event in the applied probabilistic theory is a result of any experiment. The probability of event is a

theoretical value. That is why the probability of event cannot be a result of a real test.

In the empirical interpretation the probability of event is determined if and only if the corresponding frequency is stable. In the empirical approach the external probability in the expression (1) should be replaced by frequency. The conclusion then takes the following form:

$\omega_n\{|\mu/n\text{-}p(A)| < \varepsilon\}=1$ (2).

In the expression (2) the symbol ω denotes frequency and the symbol n designates a large number.

Furthermore, the conclusion of the theorem rewritten with the help of the expression (2) speaks of the frequency of the deviation of the absolute difference between the probability of the event A and the frequency of the same event, provided this difference is less than ε. The heuristic significance of the theorem conclusion for determining the stability of the frequency in its empirical interpretation is in doubt. Indeed, if the probability of the event A is close to zero, the conclusion of the theorem speaks of the frequency of the frequency of the event A. Supposing that the theorem has a heuristic significance, it should consist in assuming to be possible to determine the stability of the frequency of the event A from the frequency of the event A.

It is obvious that the methodological significance of this interpretation of the theorem is overestimated.

First, to determine the frequency of the deviation of the frequency of the event A from the probability is not possible without determining before the frequency of the event A. Second, in order to use the frequency of the frequency of event for determining the stability of the event, it is necessary before to make certain of the stability of the frequency from the frequency of event. To push the analogy further, in order to make certain of the stability of the frequency from the frequency of the event A it is necessary to use more complex construction. Namely, one needs the frequency of the frequency of the event B, which is in its turn the frequency of the event A. There is a logical circle here.

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The General Will, Group Decision Theory, and Indeterminacy

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1. Rousseau and Contemporary Group Decision Theory

1.1 Rousseau's *Social Contract* asks how individuals can live together without losing their freedom: Is there "a form of association which defends and protects with all common forces the person and goods of each associate," Rousseau wonders, "and by means of which each one, while uniting with all, nevertheless obeys only himself and remains as free as before" (I.6)? Rousseau wrote at the dawn of a golden age of reflection on group rationality. The last 50 years also witnessed a dramatic increase in understanding of formal aspects of group rationality. Yet curiously, we understand the mathematics of social choice better than its philosophy. But first let me continue with Rousseau for a bit.

Rousseau's solution to his puzzle is "an act of association" that "produces a moral and collective body composed of as many members as there are voices in the assembly, which receives from this same act its unity, its common self, its life and its will" (I.6). As I understand Rousseau, this *common self* belongs to each individual, but is also associated with the political community in the same way in which selves are associated with persons. So Rousseau's problem admits of a solution if that self is each individual's *true* self. For then each true self is identical to the self that belongs to the body politic. The *general will* of the community, then, is the will associated with this common self in the same way in which wills are associated with individual selves. Therefore, whatever the community does in accordance with the general will expresses the will of each true self, and so is binding on each individual while leaving him free. To complete the answer, we must show that the general will is constructed from individual beliefs and values by a process rendering it the will associated with each individual's true self. To this end, I interpret the general will as the decisions made by the community with its deliberation subject to suitable constraints.

However, even *constrained* deliberation is not guaranteed to reach unanimity. Decisions must often be made under circumstances of radical and persistent disagreement; conflicts of values that cannot be realized in single lives, single decisions of deliberating bodies, or single constitutions require decisions in spite of irresolvable disagreement. So we need an account of what to do when deliberation ends inconclusively. We might then still reach a general will, *provided* that for any set of circumstances under which a group might find itself in disagreement there is a uniquely reasonable rule which delivers that will. So we need to investigate the following thesis:

> *Uniqueness*: for any given set of circumstances, there is a uniquely reasonable decision rule the group should adopt if deliberation fails to deliver a decision.

If Uniqueness fails, there will be multiple inconsistent but reasonable methods under the same conditions: some will "lose" because one method was adopted, though they may have "won" had another, equally reasonable, rule been used. I argue that Uniqueness is false. Frequently, we cannot know the general will if deliberation ends inconclusively, and may also not have any reason to think that there actually *is* a general will in such situations.

1.2 We are now in the midst of contemporary group decision theory. Group decision theory constitutes no unified field. Instead, there are separate literatures on areas like fair division, game-theoretic scenarios, and types of aggregation: aggregation of preference rankings, expected utilities with shared probability functions, and, recently, Bayesian aggregation of utilities and subjective probabilities. My concern is with aggregation.

Thinking about aggregation leads to puzzles. Suppose a department must make a hiring decision. All members rank the candidates. How should they determine a group ranking? One way of doing so is by aggregating ordinal rankings, using proposals to be discussed in section 2. But suppose somebody suggests a 100-point system: each voter assigns from 0 to 100 points to each applicant, and then they average. This proposal uses more than ordinal information. Should we adopt this rule instead? Can we distinguish conditions under which ordinal rankings are appropriate from conditions under which other rankings are? Such questions are hard to answer and call for a theory that assesses, first, the conditions under which particular kinds of rankings are appropriate (e.g., ordinal or point systems); second, what specific rule(s) is (are) appropriate for the specific kinds of rankings; and third, what the criteria for "appropriateness" are, respectively. While we do not possess any such theory, I use this framework to refute Uniqueness. Section 2 argues that Uniqueness is false if we aggregate ordinal rankings, and section 3 argues this for Bayesian aggregation. Or, to put the claim in terms from the 18th century, we have no particular reason to think there is a general will unless deliberation ends with unanimity.[1]

2. Preference Aggregation: Borda vs. Condorcet

2.1 Suppose we must rank m candidates. The *Condorcet proposal* does so by looking at all m(m-1)/2 pairs among m candidates, selecting one or more of the m! rankings in light of these pariwise votes. We consider all pairwise votes as "data" and ask which ranking of the candidates these data support best. The Condorcet proposal selects a ranking *supported by a maximal number of votes in all pairwise elections*. For each of the m! rankings, we look at the m(m-1)/2 pairs of candidates and count the number of voters that rank the respective candidates in the same way as that pair and thus *support* the ranking. To illustrate, suppose a group of 48 must rank A, B, and C. 10 rank them (A, B, C), 12 (A, C, B), 5 (B, A, C), 7 (B, C, A), 3 (C, B, A) and 11 (C, A, B). So here we have 3! = 6 rankings and 3(3-1)/2 = 3 pairwise votes. The ranking with the highest support in pairwise elections is (A, C, B): In A vs. B, 33 people support it (33 people rank A over B), in B vs. C 26 people, and in A vs. C 27. Thus 86 votes support (A,

[1] Due to the length constraints, the argument in this paper is sketchy. Some of the arguments can be found at other places as well, although I have never brought them together in a unified argument opposing Uniqueness. Section 2 draws on my "Arrow's Theorem, Indeterminacy, and Multiplicity Reconsidered," in *Ethics* 111 (2001), pp 706-734; similarly, section 3 draws on my article "Bayesian Group Agents and Two Modes of Aggregation," forthcoming in *Synthese* (2003). That article, in turn, draws on joint work with Richard C. Jeffrey and Matthias Hild: "Preference Aggregation after Harsanyi," forthcoming in *Social Choice and Welfare* (2003).

C, B) in pairwise votes, compared to 82 for (A, B, C), 64 for (B, A, C), 58 for (B, C, A), 62 for (C, B, A), and 80 for (C, A, B). So (A, C, B) is a *ranking with maximal support*.

Consider now the *Borda count*. Again a group must rank m candidates. First each person ranks them, assigning 0 to her last-ranked, 1 to her second to the last ranked, etc., until she assigns m-1 to her first ranked. Then a sum over these numbers is formed for each candidate, which is that candidate's *Borda count*. The group ranks the candidates by decreasing Borda counts. Suppose we have three people (1, 2, 3) and four candidates (A, B, C, D). Person 1 ranks them (A, B, C, D), 2 (B, C, D, A), 3 (A, B, D, C). The social ranking is (B, A, C, D) because A obtains six points, B seven, C three and D two. Another characterization of the Borda count is that it ranks candidates by their *average position* across rankings. Like the Condorcet proposal, the Borda count uses as "input" all m(m-1)/2 pairwise votes. But Borda asks about the *support for each of the m candidates in all rankings*, whereas Condorcet asks about the *support for each of the m! rankings in all pairwise elections*.

2.2 How to decide between Condorcet and Borda? On earlier occasions I argued for three claims: first, arguments for majority rule tend to be limited to the case of two candidates; second, generalizations of these arguments support the Condorcet proposal, and thus that proposal is what we should mean in general by majoritarian decision making; and third, none of these arguments is decisive against the Borda count. I illustrate this for one claim. One argument for majority rule is

Condorcet's Jury Theorem: Supposes it makes sense to speak of being right or wrong about political decisions. Suppose n agents choose between two options; that each has a probability of p>½ of being right; and that their probabilities are independent of each other (i.e., they make up their minds for themselves). Then, as n grows, the probability of a majority's being right approaches 1.

Formulated like this, the theorem only applies to the case of two candidates. However, there is a generalization, and this generalization picks out the rankings with maximal support. The procedure is to go through all m! rankings and calculate the conditional probability of the pairwise voting results given that the respective ranking is the correct one. The ranking that bestows maximum likelihood to the voting result is chosen.[2]

According to the theorem, rankings selected by Condorcet bestow the highest likelihood on the election result. Yet the option ranked highest by Borda is the *single option* that, if the best, bestows highest probability upon the voting results, provided the voters' competence p is close to ½. Borda is concerned with ranking *options* in terms of their rightness, and Condorcet with finding the right *ranking*. For values of p close to ½, this difference carries over to the epistemic scenario, with Condorcet searching for the ranking with maximal likelihood, and Borda ranking the options in terms of their maximal likelihood. The Borda count has its counterpart to this theorem reflecting this difference and regards arguments drawing on it as non-starters. Other arguments in support of the Condorcet proposal fare similarly, and *mutatis mutandis* for Borda. As far as rules for aggregating rankings are concerned, Condorcet and Borda are on a par: neither has conclusive arguments against the other, whereas both are reasonable rules. Thus we have sketched an argument against Uniqueness if we are aggregating ordinal rankings.

3. Bayesian Aggregation: *Ex Post* vs. *Ex Ante*

3.1 Our second task is to show that Uniqueness fails for Bayesian aggregation. A Bayesian agent is an agent described by theories of expected utility theory that take probabilities to be subjective. Suppose we have a group of such agents, and suppose they would like for their group as such also to be a Bayesian agent. Moreover, they also would like for group decisions, and thus for group preferences, probabilities, and utilities, to be aggregated from the respective individual entities in such a way that at least unanimous agreements are preserved.

Mongin (1995), using the Savage framework, shows that Bayesian aggregation satisfying some reasonable condition is available only to fairly homogenous groups.[3] Mongin's result holds in *ex ante* frameworks, where restrictions on group expected utilities are formulated in terms of individual expected utilities. A typical *ex ante* rule may include a restriction of the kind "If each individual's expected utility is higher for a than for b, the group should rank a higher than b." Mongin's result fails in the *ex post* framework, which aggregates probabilities and utilities separately. Typical *ex post* aggregation rules may satisfy the restriction "If each individual's utility for *a* is higher than the utility for *b*, then the group utility for *a* should be higher than the group utility for *b*." A parallel condition for probabilities may hold.

Yet *ex post* models come with trouble of their own: They display a peculiar dependence on the level of detail used in describing the decision problem. Suppose a group of Bayesians aggregate probabilities and utilities according to some *ex post* rule. Suppose they analyze their situation in more detail without anybody changing her mind about the ranking of the actions. Then the group as a whole should not change "its" mind about that ranking when the more fine-grained utilities and probabilities are aggregated. However, such a reversal may happen under *ex post* rules. So we must choose between two modes of aggregation each of which has its problems.

3.2 On what grounds can we choose? Suppose Ante and Post defend those approaches. Both need, first, a positive argument for their positions; second, a negative argument attacking the opponent's view; and third, an argument why the aforementioned worries about their account are not troublesome. Let us sketch these positions.

Ante's positive argument is that for agents to be taken seriously as participants in the decision process means being accepted as *decision makers*, rather than probability and utility providers. Agents' decisions, however, are based on preferences, or expectations. Thus restrictions on the decision process should be formulated in terms of expectations, that is, in the *ex ante* fashion. Ante's complaint against Post is that the instability result shows that the *ex post* approach is futile. Since we never know for sure whether a more fine-grained look at the same situation would reverse group preferences, decisions based on the *ex post* approach are ill-founded. As far as Mongin's theorem is concerned, Ante may bite the bullet by saying that Mongin's theorems teach us a lesson about

[2] This paragraph draws on Peyton Young, "Condorcet's Theory of Voting", *American Political Science Review* 82 (1988): 1231-1244,

[3] Philippe Mongin, "Consistent Bayesian Aggregation." *Journal of Economic Theory* (1995); 66, 313-351

group decision making. Aristotle was right when, in the *Politics*, he thought of a political community as a community of like-minded persons. Rational decision making is unavailable to groups with little in common.

Post proceeds as follows: It is in accordance with the Bayesian credo to distinguish facts from values. If the group is the decision maker, its method must be to aggregate probabilities and utilities separately. Agents are taken seriously if their epistemic views and their values are taken seriously. This view takes account of the reality of the decision structure while assigning individuals the appropriate place as *members* of the group within that structure. Post's complaint against Ante is based on Mongin's theorem. Post thinks of this result as a *reductio* of the *ex ante* approach. For rational social choice cannot be restricted to homogeneous groups, leaving inhomogeneous groups without any advice. Post has two replies to the instability result: On the one hand, he may deny its relevance and argue that in all decision situations that we encounter in our lives, even in strongly idealized ones, there will be a point when we have reached the most fine-grained relevant refinement (or at least, the most fine-grained refinement we are capable of considering). Though it is hard to discuss this any further at the general level, Post might continue, it will be clear enough in each given scenario. On the other hand, it is also open to Post to bite the bullet and argue that groups are fragile decision makers, but that this insight, far from refuting the *ex post* approach, teaches us something about the nature of groups as decision makers. While, once again, this argument is sketchy, I claim that neither position has resources to refute the other. This establishes the falsity of Uniqueness of Bayesian aggregation.

4. Conclusion

Rousseau's general will, I suggested, should be understood as the decisions of the respective group if its deliberation is subject to suitable constraints. Since even such deliberation cannot ensure unanimity, we must ask how a group should reach a decision if deliberation ends inconclusively. In many cases, aggregation of individual views is needed. For us to have access to the general will, there would have to be a unique aggregation rule under all conditions under which aggregation is required. I have argued for two kinds of settings that there is no such uniqueness: there is no uniquely reasonable decision rule if ordinal rankings are aggregated, and there is no uniquely reasonable rule if both utilities and subjective probability are aggregated. Thus in many cases some individuals will be "losers" in the decision process although they would not have been if had another, equally reasonable rule been adopted. This, I claim, is an inescapable feature of group decision making. [4]

[4] Prepared for a special session on the work of Richard Jeffrey during the 26th International Wittgenstein Symposium in Kirchberg (Austria), August 3-9, 2003. My assignment is to address Jeffrey's group decision theory. He did not work much on those areas. Around 1970, Jeffrey worked on a book tentatively called "The New Utilitarianism," but later abandoned the project. The result were two papers on interpersonal comparisons of utility, reprinted in *The Art of Judgment*, a collection of his papers. He returned to group decision theory towards the end of his life, mostly in joint work with Matthias Hild and myself about the epistemic foundations of game theory and Bayesian aggregation. My concern in this paper is to put our work on Bayesian aggregation into the context of a larger question about group rationality.

Analogical Predictions

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1. Introduction

This paper deals with exchangeable analogical predictions, and proposes a Bayesian model for such predictions. The paper first discerns two kinds of analogical predictions, based on similarity of individuals and of types respectively. It then introduces a Bayesian framework that employs hypotheses for making predictions. This framework is used to describe predictions based on the similarity of individuals, and further relates exchangeable predictions with a specific partition of hypotheses on types. Exchangeable predictions based on type similarity are determined by prior probabilities over the partition, but the partition obstructs the control over the similarity relations. Finally the paper develops a model for exchangeable predictions based on type similarity, which employs hypotheses on similarity between individuals, thereby offering a better control over the similarity relations.

2. Similarity of individuals and types

This section introduces the two kinds of similarity that play a role in analogical predictions. It further describes the relation between the predicates associated with these similarities.

Following (Niiniluoto 1981), analogical predictions based on similarity between individuals have this form:

$M_1a_1 \cap M_2a_1$

$M_1a_2 \cap M_2a_2$

...

$M_1a_t \cap M_2a_t$

M_1a_{t+1}

———————

probably M_2a_{t+1}.

That is, the similarity between individuals a_1 to a_t and the further individual a_{t+1} is derived from the fact that all of them satisfy the predicate M_1. This similarity is subsequently used to derive from M_2a_1 to M_2a_t that probably also M_2a_{t+1}. The similarity involved in this inference is between individuals a_1 to a_t on the one hand, and the further individual a_{t+1} on the other.

Imagine that we have a limited number L of M-predicates, indexed k, which can be either true or false of an individual. Denote the above predications of a_i as $M^m_k\, a_i$, where $m = 0$ or $m = 1$ for M_ka_i being true or false respectively. We can define the type predicate of an individual a_i as cells Q in the partition generated by the M-predicates. These cells are determined with an L-tuple q of the binaries m, which encode the satisfaction of M-predicates by individual a_i:

$q = \langle m_1, m_2, \dots , m_L \rangle$.

So every individual a_i can be assigned a unique type predicate Q^q, which refers to one particular cell in the partition generated by the M-predicates. I sometimes refer to the type predicates as Q-predicates, and where convenient I denote the L-tuples q with natural numbers.

Imagine that we only have access to the types, or Q-predicates, and not to the M-predicates underlying these types. In that case we can still make analogical predictions. For example, it may be that we consider type Q^1 more similar to type Q^2 than type Q^0, where these type numbers refer to specific L-tuples q, and further that we observe the t-th individual to be of type Q^1. Then, apart from deeming Q^1 more probable for the next individual, we may also take the effect of observing Q^1 to be more favourable to Q^2 than to Q^0. The observation of Q^1 is thus assumed to have some predictive relevance for Q^2 as well. Below I give a formal definition of this kind of analogical prediction. For now, note that the example is an analogical prediction based on similarity between types of individuals.

3. Bayesian framework

The following contains a brief introduction into a Bayesian framework that employs hypotheses for making predictions. It deals with observations, belief states, hypotheses, updating by conditioning, and predictions.

In expressing the observations of Q- or M-predicates, it will be convenient to omit reference to the individuals a_i. Instead we can refer to the observations directly by adding a time index to the predicates. Thus, the expressions $Q^q{}_t$ and $M^m{}_{kt}$ refer to the observations of individual a_t having predicates Q^q and $M^m{}_k$ respectively. The expressions $E^Q{}_t$ and $E^{Mk}{}_T$ refer to sequences of such observations, having length t, or a vector of such lengths T. We can write

$Q^q{}_t \cap E^Q{}_{t-1} = E^Q{}_t$,

$M^m{}_{kt} \cap E^M{}_{Tb} = E^M{}_{Ta}$,

in which T_b and T_a are vectors of lengths having t-1 and t in the k-th element respectively. The remainder of this section deals with Q-predicates. The formal treatment of M-predicates is analogous.

Belief is represented with a probability function p, which takes observations and hypotheses as arguments. Observations $Q^q{}_t$ are defined above. Hypotheses H are general observational statements that prescribe specific probabilities for the observations $Q^q{}_t$. The prescribed probabilities $p(Q^q{}_t \mid H \cap E^Q{}_{t-1})$ are called the likelihoods of observations $Q^q{}_t$ on hypothesis H. A partition of hypotheses $P = \{ H_\alpha \mid \alpha \in [0,1] \}$ is a collection of such general statements that are together assumed to exhaust logical space.

When we observe $Q^q{}_t$, our new belief can be represented with the same probability function conditioned on the new observation:

$$p(\cdot \mid E^Q{}_{t-1}) \quad \rightarrow \quad p(\cdot \mid Q^q{}_t \cap E^Q{}_{t-1}) .$$

This transition between belief states is called updating by conditioning. We can update the probability assigned to hypotheses by means of the likelihoods on these hypotheses:

$$p(H_\alpha \mid Q^q{}_t \cap E^Q{}_{t-1}) = p(H_\alpha \mid E^Q{}_{t-1}) \times p(Q^q{}_t \mid H_\alpha \cap E^Q{}_{t-1}) \,/\, p(Q^q{}_t \mid E^Q{}_{t-1}) .$$

Moreover, using the partition we can write the denominator $p(\ Q^q_t \mid E^Q_{t-1})$ in terms of likelihoods and probabilities over hypotheses:

$$p(\ Q^q_t \mid E^Q_{t-1}) = \int p(\ H_\alpha \mid E^Q_{t-1}) \times p(\ Q^q_t \mid H_\alpha \cap E^Q_{t-1})\ d\alpha\ .$$

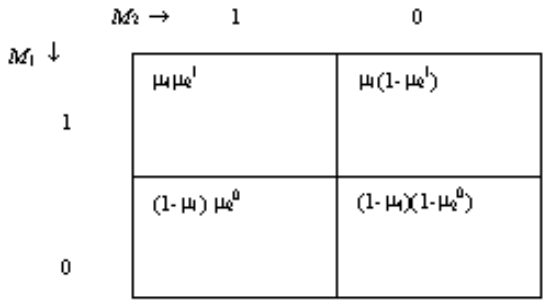
The predictions $p(\ Q^q_{t+1} \mid E^Q_t\ )$ can be expressed in the same way. In sum, they can be derived from a partition P, a prior probability $p(H_\alpha)$, the likelihoods $p(\ Q^q_i \mid H_\alpha \cap E^Q_{i-1})$ for i ranging from 1 to t+1, and the observations E^Q_t.

The above may seem an unnecessarily complicated framework for making predictions: we can also define predictions directly, as a function of previous observations E^Q_t and some further parameters. However, as I will show, hypotheses are very useful in laying down the assumptions underlying analogical predictions.

4. Similarity between individuals

Consider again the analogical predictions based on similarity between individuals, as introduced in section 1. We can model these predictions using the framework of section 2. This section defines the model by means of a specific partition of hypotheses.

To model similarity between individuals we can use a partition of hypotheses H_μ, which is summarised with the following diagram:



Every hypothesis H_μ is characterised by a vector μ containing parameters μ_1, $\mu_2{}^1$, and $\mu_2{}^0$. The diagram shows the likelihoods of the M-predicates conditional on these hypotheses. The parameter μ_1 is the likelihood of M^1_{1t} for any t:

$$p(\ M^1_{1t} \mid H_\mu \cap E^M_{\langle t-1,t'\rangle}) = \mu_1\ .$$

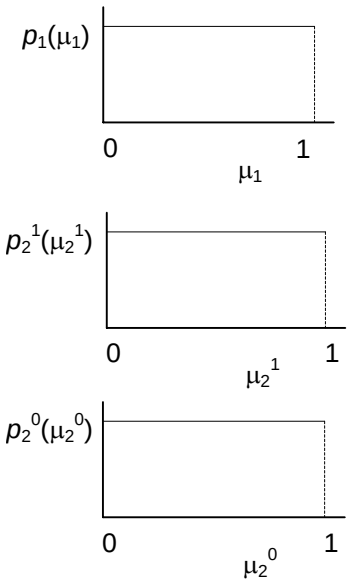
The parameters $\mu_2{}^1$ and $\mu_2{}^0$ are the likelihoods of M^1_{2t} on H_μ, conditioned on the further occurrence of M^1_{1t} and M^0_{1t} respectively:

$$p(\ M^1_{2t} \mid H_\mu \cap E^M_{\langle t-1,t'\rangle} \cap M^1_{1t}) = \mu_2{}^1\ ,$$

$$p(\ M^1_{2t} \mid H_\mu \cap E^M_{\langle t-1,t'\rangle} \cap M^0_{1t}) = \mu_2{}^0\ .$$

The probability distribution over the partition of hypotheses H_μ is a function of the three independent parameters in μ.

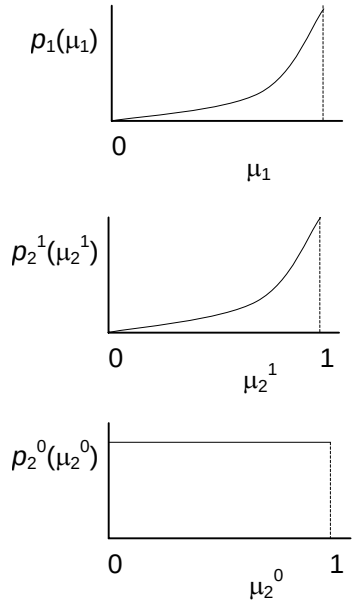
With this partition of hypotheses in place, I can make explicit how the predictions resulting from it employ similarity between individuals. Assume that the prior probability distribution over hypotheses H_μ is uniform, so that the marginal distributions over the parameters in μ are uniform too:



Furthermore, assume that the observations until t are those given in the example of section 1:

$$E^M_T = M^1_{11} \cap M^1_{21} \cap M^1_{12} \cap M^1_{22} \cdots M^1_{1t} \cap M^1_{2t}\ .$$

We can then compute a probability over the hypotheses conditional on these observations. The marginal distributions of this updated distribution will look approximately as follows:



Since there has been no relevant observation on the value of $\mu_2{}^0$, the distribution over $\mu_2{}^0$ has not changed. But the distributions over μ_1 and $\mu_2{}^1$ are both tilted towards higher values. This is because updating with the observations of M^1_{1i} and M^1_{2i} favours hypotheses that have higher likelihoods μ_1 and $\mu_2{}^1$ for these observations.

Now we can compare the prediction of M^1_{2t+1} based on the observations E^M_T and $E^M_T \cap M^1_{1t+1}$ respectively. This difference measures the effect of taking individual a_{t+1} to be similar to the observed individuals a_1 to a_t, for which M_1 was true. Using the above likelihoods, the predictions are

$$p(\, M^1_{2t+1} \mid E^M_T) = \int p(\, H_\mu \mid E^M_T) \times [\mu_1\mu_2{}^1 + (1\text{-}\mu_1)\, \mu_2{}^0]\, d\mu \,,$$

$$p(\, M^1_{2t+1} \mid E^M_T \cap M^1_{1t+1}) = \int p(\, H_\mu \mid E^M_T) \times \mu_2{}^1\, d\mu \,.$$

It can easily be verified that the prediction based on E^M_T and the further observation that M^1_{1t+1} is higher than the one based on E^M_T alone. The Bayesian framework thus models analogical predictions based on similarity between individuals.

5. Exchangeability and type similarity priors

The above concerns predictions based on direct observations of *M*-predicates. Similarity of individuals is exhibited in the *M*-predicates that the individuals have in common. However, in many cases we do not have access to *M*-predicates, but only to *Q*-predicates. Similarity between individuals must then be replaced by similarity between types. The remainder of this paper is devoted to analogical predictions based on type similarity.

The following only discusses exchangeable analogical predictions. Let the operation $\Phi_i[\,\cdot\,]$ permute the first and the *i*-th observation of a sequence E^Q_t. The exchangeability of a prediction can then be defined as

$$p(\, Q^q_{t+1} \mid \Phi_i[E^Q_t]\,) = p(\, Q^q_{t+1} \mid E^Q_t\,) \,.$$

This means that the prediction does not depend on the order of the observations Q^q in E^Q_t. In a Bayesian framework, exchangeable predictions can be represented with a specific partition of hypotheses. Assuming that the types *q* are numbered 0 to *K* and indexed *j*, these hypotheses have the following likelihoods:

$$p(\, Q^j_t \mid H_\alpha \cap E^Q_t) = \alpha_j \,.$$

A hypothesis H_α is thus defined by a vector α containing parameters α_0 to α_{K-1}. The parameter α_K must be such that $\Sigma_j\alpha_j = 1$.

Let me now give a formal definition of type similarity. Following Carnap's original suggestions in (1980), the similarity effect may be rephrased as

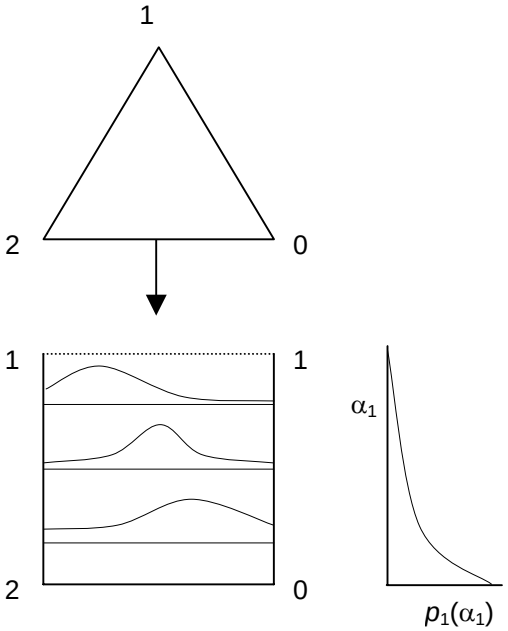
$$s_{12} > s_{10} \Rightarrow p(\, Q^1_{t+1} \mid Q^2_t \cap E^Q_{t-1}\,) > p(\, Q^1_{t+1} \mid Q^0_t \cap E^Q_{t-1}\,) \,,$$

where s_{ij} denotes the similarity between types *i* and *j*. For the purpose of this paper, I take similarity to be reflexive, so that from $s_{12} > s_{10}$ we also have

$$p(\, Q^2_{t+1} \mid Q^1_t \cap E^Q_{t-1}\,) \,/\, p(\, Q^2_{t+1} \mid E^Q_{t-1}\,) \;>\; p(\, Q^0_{t+1} \mid Q^1_t \cap E^Q_{t-1}\,) \,/\, p(\, Q^0_{t+1} \mid E^Q_{t-1}\,).$$

This is a formal expression of the type similarity in the example of section 1. I will not discuss the improved and refined definitions of type similarity suggested in (Kuipers 1984a) or (Festa 1997).

Exchangeable analogical predictions can now be characterised using the partition of H_α, and an appropriate prior over this partition. Intuitively, it must look somewhat like the following:



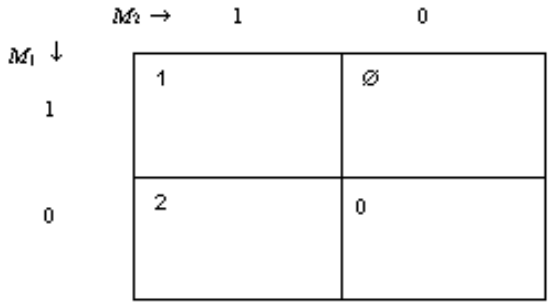
The simplex on the left is first transformed into a square by stretching the top corner. The prior over the simplex for H_α can then be decomposed in a marginal distribution over α_1 and a continuum of distributions over the transformed simplex, each of them associated with a specific value of α_1. The idea behind the continuum is that higher values of α_1 are associated with distributions that favour Q^2 over Q^0. If we observe Q^1, the marginal distribution over α_1 will tilt towards the higher values, and this will cause the distributions favouring Q^2 to gain more weight. The marginal distribution for α_0 will then shift slightly towards lower values.

However, this representation makes it difficult to translate the update with Q^1 into an operation on the marginal distribution for α_0 or α_2. A related difficulty is in encoding type similarity relations into the priors. Skyrms (1993), Maher (2001) and others have presented interesting ways to do this more or less indirectly. The last section develops a new method, based on the model of section 3.

6. Type similarity model

The idea behind the model is that similarity relations between types can be expressed in terms of shared underlying *M*-predicates. This section employs the hypotheses of section 3 to make this idea precise.

Following the example, types Q^1 and Q^2 are highly similar, and both are dissimilar to Q^0. We can now employ the hypotheses H_μ to facilitate an expression of the similarity relations. The diagram represents the new hypotheses $H_{\alpha\mu}$:



This diagram gives the following relations between *M*- and *Q*-predicates:

$M^0_{1t} \cap M^0_{2t} = Q^0_t$,

$M^1_{1t} \cap M^1_{2t} = Q^1_t$,

$M^0_{1t} \cap M^1_{2t} = Q^2_t$,

$M^1_{1t} \cap M^0_{2t} = \varnothing$.

From this last relation we know that $\mu_2{}^1 = 0$. So the hypotheses $H_{\alpha\mu}$ are defined by only two parameters. These are related to the original likelihoods of the *Q*-predicates on the hypotheses H_α:

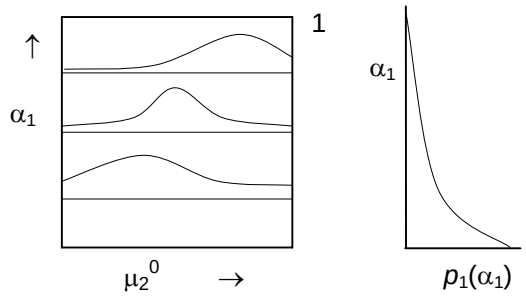
$p(Q^1_t \mid H_{\alpha\mu} \cap E^Q_t) = \mu_1 = \alpha_1$,

$p(Q^2_t \mid H_{\alpha\mu} \cap E^Q_t) = (1 - \mu_1)\, \mu_2{}^0 = (1 - \alpha_1)\, \mu_2{}^0$,

$p(Q^0_t \mid H_{\alpha\mu} \cap E^Q_t) = (1 - \mu_1)\, (1 - \mu_2{}^0) = (1 - \alpha_1)\, (1 - \mu_2{}^0)$.

In the following, I take the hypotheses to be parameterised with α_1 and $\mu_2{}^0$.

The similarity relations between types can now be expressed with a prior over these new parameters. We can use a marginal distribution $p_1(\alpha_1 | E^Q_{t-1})$, and a continuum of distributions over $\mu_2{}^0$ associated with the values of α_1:



In this representation the prior is related to the similarity relations much more directly. Because the framework involves no transformation, the marginal distributions for α_j can be computed quite easily. The shift in the probability of Q^2_{t+1} due to the occurrence of Q^1_t can therefore be readily expressed:

$p(Q^2_{t+1} \mid E^Q_{t-1}) = \int p_1(\alpha_1 \mid E^Q_{t-1}) \times \alpha_1 A_\mu(\alpha_1)\, d\alpha_1$,

$p(Q^2_{t+1} \mid Q^1_t \cap E^Q_{t-1}) = \int \alpha_1 p_1(\alpha_1 \mid E^Q_{t-1}) \times \alpha_1 A_\mu(\alpha_1)\, d\alpha_1$,

where $A_\mu(\alpha_1)$ is the average of $\mu_2{}^0$ as a function of α_1. With these expressions for the shifts we have full control over the similarity relations encoded by the prior.

The above presents one example of encoding similarity between types in a prior over hypotheses that employ underlying predicates. Many more underlying predicate structures may be investigated, all of them facilitating different similarity relations. Positing such structures turns out to be a convenient tool for controlling the similarity assumptions used in analogical predictions.

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Über Raum und Zeit, deren Wesen, Entstehen und Vergehen

Harald Rüdisser, Innsbruck

1.Raum und Zeit, die letzten Strukturen der Wirklichkeit, die notwendigen Bedingungen jeder Existenz?

Was ist das, ‚Raum und Zeit'? Oder einfacher: Was ist nicht räumlich und zeitlich? Die Antwort scheint einfach: Nichts. Wohin wir auch schauen, wir werden kein Ding finden, das außerhalb von Raum und Zeit ist.

Daraus könnte man schließen, dass Raum und Zeit dasjenige ist, das vor jeder Möglichkeit existiert. Dieses Paar, oder vielleicht sogar diese Einheit, durch die Schaffung des allumfassenden Rahmens der Welt erst die Möglichkeit eröffnete, zur Wirklichkeit zu werden.

Oder doch nicht?

Ist diese Sprech- und Denkweise, Raum und Zeit als etwas gegebenes, beinahe Dinghaftes, zu betrachten, nicht einfach nur die Folge des üblichen Fehlers der Philosophen und anderer Denker: Die durch Abstraktionen, durch Sprachen und Symbolsysteme entstandenen Größen, als etwas a priori gegebenes zu betrachten?

2. Was ist Raum und Zeit wirklich?

Wenn Raum und Zeit also nicht die notwendige Bedingungen von Veränderung, die die Möglichkeit eines vorher und nachher schaffenden Größen sind, was sind sie dann?

Richtig scheint mir zu sein, dass Zeit mit Veränderung zusammenhängt, aber nicht in der angeführten Art und Weise, sondern eher in dieser Form:

> Wenn es ein vorher und nachher, also eine Veränderung, gibt, so ist es das, was wir Zeit nennen.

Mag diese nominalistische Unterscheidung, diese Gewichtung der Reihenfolge, auch trivial erscheinen, so leugnet sie indirekt doch die unabhängige Bestehensweise der Referenzgegenstände der Wörter ‚Raum' und ‚Zeit'. Was unter einem gewissen Verständnis zu der sicher nicht trivialen und Gemütlichkeit zerschmetternden Aussage führt: „Raum und Zeit existieren nicht!". Nach belieben mit dem, den Herzschlag wieder verlangsamenden, Zusatz ergänzbar: „lediglich bestimmte Weisen der Veränderung eines konkreten Dinges und unter mancher Rücksicht auch eines Geistes".

3. Tieferes Graben

Analysiert man genauer, ergibt sich doch noch die Möglichkeit, das Ganze etwas unverständlicher und damit philosophischer auszudrücken, denn es ist vor allem die Veränderung des chimärenhaften Geistes, die für dieses Anliegen wichtig ist.

Raum und Zeit sind also nichts ‚an sich' Bestehendes, aus dem zusammen mit irgendeinem transzendentalen Ding ein konkretes Ding, die uns bekannte und zugängliche Welt entsteht.

Die Veränderung gebiert auch keine Zeit, sie bringt diese nicht hervor, so schön und erhebend dies alles auch klingen mag, aber sie ist es, die uns den Begriff dessen ermöglicht, das wir Zeit nennen.

Um genauer zu verstehen, was Zeit und in ähnlicher Weise auch Raum, sind, müssen wir uns deshalb mit der Frage befassen, was Veränderung eigentlich ist. Hierfür scheinen mir aber kleine ontologische Präliminarien sinnvoll zu sein.

Einen roten Ball ‚an sich', wie er ist, wenn er von niemanden wahrgenommen wird, stellt man sich oft als einen roten Ball vor, der irgendwo rum liegt oder schwebt, ohne dass man sich eine Person vorstellt, die ihn anschaut.

Ähnlich denken sich wahrscheinlich viele eine Außenwelt ohne Wahrnehmenden, eine Außenwelt an sich ist, als ein Universum das seinen gewohnten Lauf nimmt, nur dass es in ihm keine Lebewesen gibt. Es scheint einem daher ganz klar, dass Raum und Zeit auch in so einer Welt noch vorhanden sind, da sich die Himmelkörper ja in der gleichen Weise verändern und bewegen.

In beiden Fällen vergisst man aber, dass sowohl der Ball als auch das Universum von jemandem vorgestellt wurde. Wir selbst haben einfach unsere eigene Anschauung der Dinge hergenommen und in unserer Vorstellung lediglich die Bilder von anderen Personen weggelassen, was natürlich überhaupt nichts mit einem ‚an sich' zu tun hat.

Konzentriert man sich länger auf diese Fragestellung, ist es nicht nur der rote Ball, von dem wir nicht mehr sagen können, wie er an sich ausschaut, sondern auch das scheinbar so unabhängig bestehende Koordinatenkreuz von Raum und Zeit bricht ziemlich in sich zusammen. Sein, oder besser das was ist, hängt vielleicht viel enger mit dem Geist zusammen als es auf den ersten Blick scheint.

4. Über die Entstehung von Raum und Zeit

Selbst wenn Obigem nicht zugestimmt wird, scheint mir das Folgende nicht uninteressant zu sein, wenn dem Vorausgegangenen aber zugestimmt wird, kommen wir jetzt in einen Bereich, der etwas von einer Weltentstehung hat:

Am Anfang war (oder vielleicht ist) unbewegtes, und dies ist wahrscheinlich eher mit Geist als mit Materie zu bezeichnen. Wie es nun zur Bewegung, zum Entstehen von Raum und Zeit kam, ist mir unerklärlich und vielleicht das ganz große Rätsel, das gleich nach dem Staunen kommt, dass überhaupt etwas ist. Es soll hier gar nicht versucht werden zu erklären, warum dies geschah, sondern nur wie es abgelaufen sein könnte.

Ähnlich wie die Göttin zu Parmenides sprach: *„Damit beende ich dir verlässliche Aussage und Begriff hinsichtlich der Wahrheit. Von hier ab aber lerne die menschliche Meinung verstehen, ...*

[Denn] *Sie haben sie* [die Wirklichkeit] *der Gestalt nach als Gegensätze geschieden*" (Parmenides 1999, 323) könnte man auch an dieser Stelle sagen, dass nun der Pfad der Gewissheit verlassen wird, um in der Welt der Meinungen aus unseren Konzepten und Auffassungen eine Neue zu bilden, für die vieles sprechen mag, die aber doch letztlich auf allzu Menschlichem aufbaut.

5. Wie wurde was ist

Betrachten wir einen Geist für sich, vor einer jeden Veränderung, bevor er je in Bewegung war:

Nehmen wir an, er befinde sich in einem Zustand der vollkommenen Zufriedenheit. Meiner Behauptung nach wird sich dieser Geist nun nicht verändern, es gibt hier kein vorher und nachher und natürlich erst Recht kein vorne und hinten.

Empfindet dieser Geist aber nun einen Mangel, so wird Veränderung die Folge sein und der Unterschied den wir Zeit nennen existiert.

Mag es für manche merkwürdig und spekulativ erscheinen, sich einen Geist ohne jeden Körper vorzustellen, so haben wir die Möglichkeit ein ähnliches, vielleicht leichter nachzuvollziehendes, Gedankenexperiment mit einem Individuum der Spezies Mensch zu machen.

Betrachten wir nun ein eben geborenes Baby und treffen wir die falsche Zusatzannahme, dass es über keine pränatalen Erfahrungen verfügt.

Nehmen wir weiters an, dieses Baby würde keinerlei Zustände verspüren, die ihm mehr oder weniger gefallen. Für dieses Wesen gäbe es keine Veränderung, es hätte keinerlei Vorstellung von einem Selbst, einer Außenwelt, von Raum und Zeit!

Erst aus dem Gefühl der Unlust, die einen bestimmten Zustand nicht will, oder vielleicht des Verlangens, entsteht eine Bewegung des Geistes, aus der heraus sich dann nach und nach alles andere ergeben wird:

Sehr bald würde das Wesen bestimmte Zusammenhänge zu erkennen beginnen, Vorstellungen, wenn auch auf einer sehr grundlegenden Ebene, von bestimmten Situationen entwickeln. Beispielsweise würde es einen gewissen Mangel spüren, wenn es alleine herumliegt und nicht dieses Gefühl da ist, das es empfindet, wenn es gehalten wird, oder die Unlust, wenn es nass ist. Aus dem ganz unwillkürlichen Verhalten, dass zum Erfolg, also gewolltem, Führendes wiederholt wird, würde langsam ein bewusstes Erkennen von Zusammenhängen(z.B. das Erfassen einer Verbindung zwischen weinen und sich zum angenehmen wandelnden Situationen). Diese Sprechweise ist natürlich leicht falsch zu verstehen, da sich von Seite des Kindes erst jetzt die ganzen Vorstellungen von einem ich, einer Außenwelt, einem ganz speziellen Übergangsbereich von Außen- und Innenwelt, nämlich dem eigenen Körper, und so weiter zu entwickeln beginnen. Hier entsteht nun sowohl die Grundlage für einen Zeitbegriff, wie in weiterer Folge, durch die selbe Ursache initialisiert, aus der Vorstellung einer Außenwelt heraus, auch das Konzept von Raum.

Ob dies genau so geschehen ist, es diesen 0-Punkt aus dem alles entstand, oder dies etwas ist, das seit Anfangloser Zeit in jedem Moment aufs neue geschieht, ist für diese Problemstellung nicht entscheiden, da es uns hier im wesentlichen um ein Verständnis von Raum und Zeit geht.

6. Über den Raum an sich

Es mag den Anschein haben, als ob bisher Gesagtes vor allem für die Zeit galt, der Raum lediglich als ein Anhängsel betrachtet wurde, manche Argumentationen zwar auf die Zeit, nicht aber auf den Raum zutreffen:

Stellen wir uns eine Welt vor, die ‚still steht', in der es keine Veränderung und damit auch keine Zeit gibt, scheint in ihr der Raum doch noch bestehen zu bleiben.

Wenn wir in ein Zimmer blicken, in dem sich nichts verändert, scheint es uns Unsinn zu behaupten, dass es hier keinen Raum gibt. Aber einerseits vergessen wir, dass in diesem Fall unser wahrnehmender Geist das Tätige, sich Verändernde ist. Andererseits sollte vorher erklärt worden sein, wie wir zu einem Konzept von ich, Außenwelt und damit auch Raum und Zeit kommen: Hätten wir nicht die für uns typischen Erfahrungen gemacht, würden wir diese ‚optische Empfindung' nicht so auffassen, wie wir es nun tun.

Genau so wie es unsinnig ist zu behaupten, dass ein Ball, den wir rot wahrnehmen, an sich rot ist, ist es Unsinn zu glauben, dass die Wirklichkeit an sich räumlich ist.

7. Über die Besonderheit des Räumlichen

Man mag sich einen Geist losgelöst von allem Körperlichen denken können und sich weiters vorstellen, wie dieser irgendwie tätig ist, es also einen Unterschied in seinen Zuständen gibt, wir also von einem vorher und nachher, einer Zeit sprechen können. Wir sind aber in diesem Fall nicht gezwungen, das Tätigsein des Geistes ebenso untrennbar mit dem Raum, einem vorne und hinten, zu verbinden, mit einer Vorstellung von vorne und hinten, einer räumlichen Veränderung. Es scheint also Zeit ohne Raum geben zu können, wie aus den vorangegangenen Kapiteln deutlich werden hätte sollen, aber keinen Raum ohne Zeit.

Diese hypostasierende Sprechweise legt Schlüsse nahe wie: die Zeit ist Grundlage, Ursache für den Raum, der Raum ist nur eine abgeleitete Größe.

Weniger schön aber korrekter scheint es mir zu sein, zu behaupten, dass ein sich bewegender Geist im Augenblick der Bewegung schon das Erzeugt, was wir Zeit nennen, er also ganz wesentlich mit der Zeitlichkeit verbunden ist. Bei einem einfachen Verständnis von Geist könnte man sogar sagen, dass dieser notwendigerweise tätig, also zeitlich sein muss, um zu existieren.

Der Raum ist nun aber nicht so unmittelbar mit der Veränderung eines Geistes - oder anders formuliert: einfach mit dem Geist - verbunden, er ist nur die Luxusvariante von Veränderung. Er ermöglicht eine Ausdifferenzierung und Konstanz der Veränderung. Korrekter gesprochen verhält sich der Sachverhalt natürlich wieder umgekehrt: Es ist nicht die Entität Raum, die zu einem Bewusstsein hinzutritt und dadurch etwas ermöglicht, sondern in dem das Bewusstsein bestimmte Erfahrungen macht, entsteht das Konzept von Raum.

Obwohl er also nur einen Spezialfall von Veränderung bildet, ist dieser Fall so merkwürdig, dass er vielleicht wider erwarten noch interessanter ist als die Zeit.

Die ganzen typischen Eigenschaften unserer räumlichen Welt sind denen eines Geistes scheinbar geradezu zuwiderlaufend: die Konstanz, Regelmäßigkeit, die unendliche Ausdifferenzierung und vor allem diese eigenartig ‚harte' Realität, die sie zu besitzen scheint, sind doch höchst merkwürdig, stellt man sie in Relation zu der Sprunghaftigkeit, Vergesslichkeit und Wandlungsfähigkeit unseres Geistes.

Ist es nicht geradezu ein Wesensmerkmal des Geistes, dass er nicht körperlich, nicht ausgedehnt und damit auch nicht räumlich ist?

Daher hat diese Verbindung von Körperwelt- im besonderem Masse die von unserem Leib- und Geist auch ein große Zahl von philosophischen Lösungsversuchen hervorgebracht, ohne dass diese aber wirklich auf eine anerkannte Lösung hin konvergieren würden.

Aus diesen Überlegungen könnte man einen Ansatz für eine weitere Eule im Athen der Erklärungsversuche dieses Bereiches zu entwickeln versuchen:

Es sollte hier deutlich geworden sein, dass Geist und Körper keine gleichrangigen Ebenen sind, der Geist das bestimmende ist. Dies muss aber nicht zwangsläufig zu einem reinen Idealismus führen, der nur schwer diese merkwürdige Leistungsfähigkeit des Geistes hinsichtlich der Projektion der Außenwelt, vor allem im Vergleich mit seinen übrigen uns zugänglicheren Fähigkeiten erklären kann, noch den Umstand der Existenz anderer Personen mit denen wir in Kommunikation stehen können und die ihre Außenwelt so ähnlich wahrzunehmen scheinen wie wir.

Nur von der so einfach vorliegenden Außenwelt, die etwas so ganz verschiedenes von unserem Geist zu sein scheint, müssen wir uns verabschieden.

Hilfreich mag sein, wenn man sich des Weges bewusst bleibt, der zu bestimmten Konzepten und Auffassungen geführt hat, statt einfach bestimmte Begriffe des Alltags und der Einzelwissenschaften als etwas gegebenes zu betrachten und von diesen aus dann philosophische Probleme, Gedankengebäude und Erklärungsmodelle zu konstruieren.

8. Das Ende, von Raum, Zeit und dieser Arbeit

Aus Gesagtem hätte klar werden sollen, dass es zwar schwer ist anzugeben, ob und was es ohne einen Geist, so oder so ähnlich wie wir ihn kennen, gibt, aber doch behauptet werden kann, dass es Unsinn ist, in diesem Fall noch von Raum und Zeit zu sprechen.

Es könnte aber auch möglich sein, dass es etwas Geistiges gibt, ohne dass Raum und Zeit existieren.

Alleine schon die Unbeweglichkeit eines Geistes lassen Raum und Zeit verschwinden.

Dieses Untätigsein muss nicht unbedingt eine Art von Bewusstlosigkeit oder vollkommenes Phlegma bedeuten.

Es scheint mir durchaus möglich, sich etwas wie einen Geist zu denken, der so geartet ist, dass es für ihn kein entstehen und vergehen gibt, zumindest nicht in dem Sinne, dass für ihn etwas Neues entsteht, es wirkliche Bewegung in ihm gibt. Bildlich gesprochen würde es für diesen Geist nicht deshalb keinen Raum und keine Zeit geben, weil er sich zu einem Punkt zusammengezogen hat, sondern weil er diese Größen irgendwie umfasst, nicht nur hervorbringt, sondern sie von außen umschließt. Dadurch verlieren diese Größen Raum und Zeit aber einen Teil ihrer wesentlichen Eigenschaften, als etwas in dem der Geist auf bestimmte Art geradezu gefangen zu sein scheint.

Wie dies mit bestimmten vorhandenen Auffassungen konform geht, müsste genauer untersucht werden, vielleicht sind scheinbar nicht vereinbare Erklärungsmodelle letztlich doch verträglicher als man glaubt, da auf dieser Ebene unsere Begrifflichkeit und Denkmodelle einfach zu sehr versagen, wir zu sehr an Wortbedeutungen festhalten, die sich auf ganz andere Ebenen beziehen: Vor allem, was ‚letztlich ist' und hier wieder besonders was Geist, Bewusstsein, Seele eigentlich sind und ob sie wirklich so voneinander getrennte Entitäten darstellen wie es uns scheint, müsste ziemlich genau durchdacht werden.

Ein allumfassendes Wesen, ein Schöpfergott, ein Pantheismus, ein aufgehen in Gott, eingehen ins Paranirvana, finden des ewigen Friedens, der durch Einsicht erlangte unerschütterliche Zustand der Erleuchtung, ... widersprechen sich vielleicht weniger als es zuerst scheinen mag.

Was mit diesen Worten wirklich gemeint ist, wissen zwar nur die, die die einen ganz speziellen direkten Zugang zu diesen Wirklichkeiten haben, aber der hier angerissene Ansatz könnte trotzdem einen Weg zu einem gewissen Verstehen dieser Verständnissen eröffnen, angenehmer Weise einen eher verbindenden als trennenden.[1]

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[1] Die wesentlichen Gedanken dieser Arbeit verdanke ich dem in Innsbruck tätigen Herrn Prof. Hans Kraml, sowie dem in Salzburg lehrenden Prof. Reinhard Kleinknecht, sowie der sich auf Che Zongkhapa zurückführenden Linie des tibetischen Buddhismus, die auf dem Mt. Pelerin in der Schweiz eine kleine Klosteruniversität unterhält, und derern Wissen mir besonders durch die Meister Gonsar Rinpotsche, Gesche Thupten Trinley und Gesche Pemba vermittelt wurde.

Has Cosmology Advanced in Recent Years?

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Introduction

Cosmologists are astronomers who study the universe as a whole. The idea of *the universe as a whole* presents some difficulty both to science and philosophy. In science, because we can only study parts of a system unknown in its totality. Moreover there are features of scientific cosmology which set it apart from other sciences: we cannot in cosmology speak of experiments or verifiable predictions (Cosmologists are prophets of the past!). We can only check astronomical observations with theories and models. Philosophically, the connection between models of the universe and reality, the intelligibility of an universe as an independently existing entity and the perennial questions about the origin of the universe remain unsolved. (Munitz 1986)

We will in this essay consider the features of the universe as provided by modern astronomy and theoretical cosmology and see how far our understanding of the general scheme of things have advanced over the years. We will conclude that though advances in astronomy and cosmological model building have advanced remarkably, progress in our understanding of eternal philosophical questions have been minimal. (leaving aside religious and teleological answers completely). Did the world have a beginning in time? Is the universe finite or infinite in extension? Are some of the cosmological theories closer to the truth than others? What are meaningful (philosophically) questions and what are not? What about limitations of our capacity to understand?

The Story So Far

Man's view of the universe has changed steadily with time. As the scientific approach to heavenly objects progressed, the mystical element began to give way. Nicolaus Copernicus (1473-1543) started a revolution (the earth moves round the sun) which continued to the days of Isaac Newton (1643- 1727) and beyond speeding up the growth of observational astronomy. Today astronomers estimate the universe to contain over 100 billion galaxies each with many billions of stars. Our sun belongs to a galaxy, the Milky Way, a huge disc of a diameter of 100,000 light years containing 100,000 million stars. The most remote galaxies observed so far lie about 12 billion light years away. (Natl.Geog. Mag. 2003).

At this moment there are in sight no viable alternatives to the General Theory of Relativity as the basic conceptual framework for the modelling of the universe as a whole, and there are no working alternatives to the standard Big Bang cosmological model (Mosterin 2000) According to the Big Bang Theory, the universe originated in a big explosion some 15 billion years ago. According to cosmologists shortly after the big bang the Universe went through a brief period of extremely rapid expansion called inflation followed by steady expansion which is still going on. What happened before the Big Bang is not discussed in scientific cosmology. But Stephen Hawking, a pioneer cosmolgist, advanced what he called the *no-boundary proposal* according to which the entire history of the universe , all of space and all of time, forms a kind of four-dimensional sphere: space-time. Talking about the beginning or end of the universe is thus as meaningless as talking about the beginning or end of a sphere. (Horgan 1996)

Around 1930 it was noticed that the glow of galaxies was invariably shifted toward the red end of the visible spectrum. (Doppler Shift) Apparently the galaxies were hurtling away from the earth and from each other. The universe was expanding. (Expanding into what?). Recent work by astronomers have indicated that the visible part of the universe contains only a fraction of total mass of matter in the universe; there must exist some invisible, dark matter to bind the galaxies together. Various alternative solutions to the baffling question about what the dark matter might be, are under discussion. (Rees 1997) The mass of the dark matter has been estimated to be about nine times the mass of all visible matter. (Natl.Geog. Mag. 2003)

There are many strange facts reported by astronomers: black holes, neutron stars, quasars, supernova explosions, gamma ray bursts etc. Suffice it to say that the picture of the universe presented today is simply mind boggling, completely incompatible with our daily experience.(Sci. Am. 2002)

Added to the sheer vastness of numbers, we are in modern cosmology presented with new concepts of space, time and gravitation which are at variance with our accustomed ways of thinking in terms Euclidean geometry and Newtonian physics. Einstein's General Theory of Relativity GRT (1915), his Field Equations and their solutions have ushered in a completely new way of thinking (philosophically) about space and time. Even the language used in GRT about space and time sounds strange: *The spce-time is a 4 dimensional differentiable manifold described by a semi-Riemannian metric which satisfies Einstein's Field Equations . The phenomenon of gravitation is to be understood as intrinsic curvature of the space-time. Gravitation is a matter of geometry and nothing else.*(Callender and Hoefer 2002) A theory of the the universe would thus appear to represent a language game with its own grammar. (Munitz 1986 p.83)

Nature of Cosmology

Because of its pecularity, cosmology can be likened to a historical science though reconstruction of the initial state has proved to be difficult. Today cosmology as a science has become a science of mathematical theories for the construction of cosmological models. As such it can be defined as the study of the global properties of cosmological solutions of certain field equations, notably Einstein's.

The big bang theory, mentioned earlier, has prevailed largely because of the prediction, observation and interpretation of a phenomenon known as the Cosmic Background Radiation discovered in 1964. The rival Steady State Model of the Universe predicted no such radiation. According to the Steady State model matter is created continuously at a rate just sufficient to compensate for the matterthat is disappearing from the visible universe. The Steady State theory says that the universe always looks the same. This has been contradicted by observation of very remote stars (Sci. Am. 2002).

Despite its successes the standard big bang theory cannot answer several profound questions, e.g. why is the

universe so uniform? Somehow the uniformity of the universe must have predated the expansion but the theory does not explain how. To meet this and other difficulties in early1980s the theory of inflation waw introduced: the baby universe went through a period of very rapid expansion. After the inflation, lasting perhaps only 10^{-35} second, the slower bg bang expansion started.

By quantum cosmology one means the application of quantum mechanics to the universe at large. It deals with what happened before the big bang or how to account for the creation of the universe out of nothing. To answer how everything began, quantum cosmologists refer to the concept of small fluctuations in the vacuum. (According to quantum mechanics empty space is not entirely empty). The no boundary proposal of Hartle and Hawking, mentioned earlier, also addresses this question. Whether such answers will satisfy a philosopher or a critical layman is a moot question.

In studying cosmology one should take particular care to distinguish between what is well established and what isn't. Speculations about whether there are other universes governed by different laws, whether the physical laws were different in the very early universe , whether there was really an exponential inflation in the beginning, whether the string theory is acceptable, these questions are still being debated. For a sceptic, the cosmological models need not have any relation to the external world. All one could say is that the current theories of cosmology are tentative and just applied mathematics or mathematical physics, scenarios, unable to explain anything of the external world or part of it. (Goenner 1994 p.163) According to Goenner, scientists doing pioneering work in the field of cosmology should be aware of the "fictitiousness" of the reality they are producing. Reading through some of the popular books on cosmology, he says, one gets the impression that the authors are often carried away by their speculations. Goenner(1994) concludes by saying: *the science of cosmology especially in dealing with the early and earlist epochs of the universe, is producing cosmological myths adequate for our time.*

So Where Do We Stand?

Fired by indomitable curiosity man has tried to seek knowledge about the structure, origin and evolution of the universe he inhabits. Man has used ever powerful telescopes and other instruments to map the sky. Working hand in hand with astronomers, mathematical physicists have produced cosmolgical theories covering different phases of cosmic evolution. The picture of the universe presented, though not free from difficulties or controversies, can be followed even by the layman thanks to the many popular books and articles by competent scientists. To appreciate the overall significance of cosmology, however, we may need a modicum of philosophical doubt.

Nature of Philosophy

Answers to the outstanding philosophical questions of how the world began, whether it has an end, can the human brain at all grasp everything etc. still remain speculations which no scientist will deny. Cosmologists like all other scientists should exercise special care not to give the impression that they have found an answer to perennial questions.We can live happily with this state of incomplete knowledge with a philosophical attitude close to Wittgenstein's. His views on the nature of philosophy can be summarised with the following quotations (Sanatani 2001):

Philosophy is wholly distinct from science, and its methods and products are not those of the sciences. (NL)

The object of philosophy is the logical clarification of thought.

Philosophy is not a theory but an activity.

A philosophical work consists essentially of elucidations. (T 4.112)

Philosophy is not a cognitive pursuit; there are no new facts to be discovered by philosophy; only new insights. ((PR; PG 256)

Philosophy seeks to establish an order in our knowledge of the use of language (PI § 132)

The philosopher's treatment of a question is like the treatment of an illness. (PI 255)

Conclusion

Modern cosmology is characterized by two features:

i) Unlike physics it cannot make verifiable prdedictions but can only interpret current observations with the help of theories and models. The theories must, of course, tally with the observations.

ii) The large scales of space, time and mass (energy) discussed in astronomy and cosmology are way beyond our day-to-day experience or even beyond human capacity of visualisation.

This makes it very difficult to apply familiar concepts to questions of cosmology.

At this moment there are in sight no viable alternatives to the General Theory of Relativity as the basic conceptual framework for the modelling of the universe as a whole, and there are no working alternatives to the standard Big Bang cosmological model. According to this model the universe originated in a big explosion some 15 billion years ago. What happened before the Big Bang is outside the scope of scientific cosmology. This discipline comprising both theory and observation of the sky, has advanced remarkably in recent years. Yet it cannot finally answer our deepest questions about the origin, structure, purpose and future of cosmos. The fundamental philosophical questions remain unanswered. Are space and time finite or infinite? Has the universe a beginning and an end? Is there a purpose, design or meaning in the scheme of things (teleology)?

Though unable to give definitive answers philosophy has an important role to play. Philosophy does not progress in the sense that science does but it clarifies the questions in our mind and cures our intellectual unrest as pointed out by Wittgenstein. Cosmologists, like all other scientists, should exercise special care not to give the impression that they have found an answer to perennial questions.

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Wittgenstein and the Possibility of Religious Belief

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1. Wittgenstein and Religious Belief

Contemporary philosophers of religion delimiting their field often distinguish between *belief in* and *belief that*, and then focus on the latter as more pertinent to a philosophical investigation of religious belief. The believer's relationship to a proposition, and the relationship between that proposition and reality is of primary concern. The epistemology of religious belief has thus tended to be approached as a species of justification theory; its task is to provide a satisfactory account of our acceptance or rejection of various religiously relevant propositions. It is against this background that some of the more well-known discussions of Wittgenstein's philosophy of religion have taken place. Hence one much belabored question has been whether standards for the justification of religious belief can only be determined within the context of the language-game played by the community of religious believers; another has been whether religious beliefs are even the kind of thing open to justification, for it may be that the language in which they are framed is expressive rather than propositional.

While these are interesting issues, and one can see how various strategies and techniques employed by Wittgenstein in his later work gave rise to them, they seem curiously bloodless when held up against his terse, intensely passionate, writings on matters of religious belief. The reason for this, it seems to me, is that when Wittgenstein thinks about religious belief, he does so against a very different set of background concerns than most philosophers of religion bring to the table. That is, while mainline philosophy of religion is almost exclusively focused on *belief that*, Wittgenstein is more concerned with *belief in*. Hence the questions that disturb Wittgenstein have less to do with the epistemic status of religious belief than they do with the spiritual status of the religious believer, where what is crucial is *believing in* one's own redemption, passionately embracing a "system of coordinates" so as to radically reorient your life. (Wittgenstein 1998, 73e)

Wittgenstein often seems to write from the perspective of one who longs to believe in his redemption, but finds he cannot honestly lay claim to the status of a religious believer. The problem is not that his intellect rejects the *belief that* redemption of human persons is possible, for this, he writes, is "something that actually takes place in human life." (ibid., 32e) The problem is a matter of will, of finding within himself the capacity to passionately embrace his own redemption. "I cannot kneel to pray," he writes, "because it's as though my knees were stiff. I am afraid of dissolution (of my own dissolution) should I become soft." (ibid., 63e) Problems of this sort tend to be dismissed by philosophers of religion as beyond the reach of philosophy. Important as they may be, they are pastoral, spiritual, or psychological difficulties, not epistemological ones.

Wittgenstein would surely agree with this latter claim. Indeed, it could be argued that one of his most significant contributions to the epistemology of religious belief is to change the subject. He writes: "Religion says: *Do this!*--*Think like that!* but it cannot justify this and it only need try to do so to become repugnant; since for every reason it gives, there is a cogent counter-reason." (ibid., 34e). But even if Wittgenstein rejects the standard justificatory epistemological approach to religious belief, it does not follow that his concerns regarding religious belief lie outside the pale of philosophical concern, especially if we adopt his conception of philosophy as a collection of techniques designed to help us work our way through confusions that prevent us from getting on with our lives. The problem of overcoming an inability to believe in one's own redemption in the face of a great longing to do so, would certainly seem to qualify as a problem in knowing how to 'get on.' The following is a modest philosophical effort to dispel a few of the confusions surrounding *belief in*.

2. Wittgenstein and 'Apocalyptic Atheism'

Let us begin with the provocative comments with which Brian Clack concludes his helpful overview in *An Introduction to Wittgenstein's Philosophy of Religion.* Elaborating on points similar to those made above, Clack writes that while "the mistake made by philosophers of religion embarked on a justificatory project is that of envisaging religion as something which possesses explanatory power and which rests on intellectual foundations...religion is presented by Wittgenstein as something like a particular perspective on the world; a means of assessing life and of judging one's actions, a way of living." (Clack 1999, 109) In fleshing out his account of this way of living, Clack looks to Wittgenstein's 'Remarks on Frazer's *Golden Bough*.' There we learn that a religious form of life has "its roots in instinctive human behavior....[and] this primitive behavior is definitive of humanity, filling as large a role in the natural history of human beings as does eating, drinking, procreation, playing games, singing, making art, and so on." (ibid., 123-124)

But how, if religion is rooted in instinct, can one experience an incapacity to passionately embrace a religious point of view? If we possess primitive instincts of this sort, shouldn't it come naturally to us to adopt a religious stance? As Clack is quick to point out, primitive instinct is only part of the story. Human instincts typically play out within the context of human communities, and cultural practices can be powerful inhibitors of instinct. If we are to understand how *belief in* could become a genuine problem for a person, we need to take into account culture as well as primitive instinct. Thus, when reflecting on the "two determining features of Wittgenstein's approach to religious belief: first, the extent to which he was drawn with awe toward the religious view of the world; and second, his own inability fully to share in that perspective," Clack suggests that it might be "something about the character of 'this age' which constrained his religious impulses." (ibid., 126-127)

To unpack this, Clack turns to Spengler, whose work, *The Decline of the West*, was clearly much on Wittgenstein's mind during the years when he was developing the ideas characteristic of his later thought. Spengler urges us to think of cultures as analogous to organisms. They spring forth from the soil of human instinct, are nourished by the life conditions of a particular time and place, flower into maturity in vibrant artistic, intellectual, and spiritual achievements, and then, their possibilities exhausted, wilt away. As Clack sees it, the relevant lesson Wittgenstein took from Spengler is that "the possibility of religious belief

is determined by what is allowed and what is disallowed by a culture's stage of development." Given our current state of cultural decline, Clack concludes, Wittgenstein leaves us with "no option but to accept atheism." (ibid., 128) The atheism Clack has in mind, however, has very specific flavor. It is "not an atheism based on denying the existence of super-empirical realities...nor is it the rebellious atheism of an Ivan Karamazov, nor yet is it the positivistic atheism of denying sense to religious propositions. It is, rather, a despairing, apocalyptic atheism that arises from Wittgenstein's philosophy of religion, the frustrated and bitter recognition that the passionate beauty of the religious life is no longer open to us...the possibility of living one's life in relationship with God must be surrendered." (ibid., 129)

As Clack notes, "The conclusions thus reached can only be unsettling for believers." (ibid.) This is especially so for those of us who have found Wittgenstein's comments on religious belief, puzzling and oracular as they might sometimes be, more encouraging than discouraging overall. But surprised as we may be to discover that taking those comments seriously means that an apocalyptic atheism is our only option, the notion that the serious pursuit of religious belief should end in some form of surrender should not surprise us, for the association between a religious attitude and an attitude of acquiescence is there from early on in Wittgenstein's thought. And so, "as stoic resignation has been seen to be definitive of faith, this final renunciation may itself be regarded as an act of the deepest piety." (ibid.)

3. An Alternative to Apocalyptic Atheism

As a way of putting together various strands of Wittgenstein's reflections on religion, factoring in other thinkers known to be influential in shaping those reflections, Clack's interpretation is a compelling one. And yet, while Wittgenstein is certainly critical of contemporary culture, contrasting its scientific cast unfavorably with the more religious cast of pre-modern cultures, his more personal comments on religious belief seem less concerned with obstacles posed by his culture than with obstacles arising from within himself. I suspect that Wittgenstein would reject Clack's the appeal to the cultural impossibility of *belief in* as letting him, and us, off too easily. In developing this point I turn to another philosopher who was surely as influential on Wittgenstein's thinking as Spengler, but whom Clack more or less relegates to the footnotes.

Kierkegaard offers an interesting counterpoint to Spengler, for he too thought of human history in terms of the rise and fall of cultures, each with its own peculiar character. And, again like Spengler, he took a dim view of the present age, finding its spirit antithetical to the spirit of religion. Religion calls each of us, as flesh and blood individuals, to make a passionate commitment. The spirit of our overly intellectualized, reflective age, on the other hand, operates in a realm of abstractions, leveling the ground of all particularity and difference in its preference for bloodless generalities. The resonance here with Wittgenstein's later philosophy is unmistakable, as is the shared pessimism about the likelihood that much can be done to relieve the darkness of these times. As Kierkegaard sees it, there is nothing any individual or collective can do to arrest the abstract process of leveling so characteristic of our age. It is "bound to continue, like a trade wind, and consume everything." (Kierkegaard 1962, 55-56)

All this may seem simply to strengthen the case for there being something about our age prohibiting religious belief, but Kierkegaard draws a different conclusion. The character of our age, far from ruling out religious belief, simply throws into starker contrast what such belief requires, namely, that each one of us, for ourselves and without expecting our culture to do the work for us, leap passionately into the arms of God. Here we have a leveling which places the same religious requirement before us all, and while the abstract leveling of our age can obscure the leveling involved in a religious point of view, there is no in principle impossibility in the passionately interested individual discovering the difference. For Kierkegaard, then, although the spirit of our age may bear a different relation to the spirit of religious belief than that of other ages, the task that faces the individual believer is a task of the same infinite difficulty whatever the historical era.

This, I think, is closer to a view Wittgenstein would endorse than the apocalyptic atheism proposed by Clack. Wittgenstein, sounding very much like Kierkegaard, writes that "The Christian religion is only for the one who needs infinite help, that is only for the one who suffers infinite distress. Someone to whom it is given in such distress to open his heart instead of contracting it, absorbs the remedy into his heart." (Wittgenstein 1998, 52e) There is nothing in this passage to suggest the impossibility of belief in the face of a recalcitrant culture. It does however, point us once again toward the problem of his own recalcitrance. The remedy for infinite distress is an open heart, and yet, Wittgenstein reflects, "The folds of my heart all the time tend to stick together & to open it I should need to keep tearing them apart." (ibid., 65e) The implication seems to be that this tearing apart is something he either cannot or will not undertake. For such a one is there then no remedy?

It is precisely in the face of this difficulty that Clack's apocalyptic atheism contains the seeds of an important insight. To get at this insight, let us turn once again to Kierkegaard, who usefully reminds us that our incapacity to will our salvation is precisely why a Socratic teacher whose skill lies in reminding us of our latent capacities cannot help. We need someone who can alter our capacities: a redeemer. We call him that, Kierkegaard writes, "for he redeems the learner from the captivity into which he has plunged himself, and no captivity is so terrible and so impossible to break, as that in which the individual keeps himself." (Kierkegaard 1967, 21) Wittgenstein mirrors this distinction between teacher and redeemer in his reflections on what inclines even him to believe in Christ's resurrection: "If he did not rise from the dead, then he decomposed in the grave like every human being...In that case he is a teacher, like any other & can no longer *help*..." The help that is required is the work of radical redemption, a remaking such that "*everything* is different and it is 'no wonder' if you can then do what now you cannot do." (Wittgenstein 1998, 39e)

This help, unfortunately, remains out of reach as long as one is determined to evade the need for redemption by holding tight instead to the notion that there is something within one's heart capable of bringing it about. Wittgenstein seems aware of something similar to this in his reflections, one Good Friday, on whether he should undertake a religious fast. He writes: "'I want to do it if it comes from my heart and not because I was *commanded* to.' But this then is no obedience!...You don't *die* in this, after all...But I myself!--I confess that I do not want to die off, even though I understand that it is higher." (Nordmann 2001, 168) Only if one is willing to die to who one is and what one wants, including one's desire to bring about one's own redemption, will one succeed in finally taking hold of that redemption. This is difficult for us not because our culture inhibits our instincts, but rather, because our most primitive instinct

is to avoid death in all its forms and it is precisely this instinct that needs to be radically overcome. In a very profound sense, then, Clack is correct that the act of final piety can only be a renunciation of the desire to take hold of one's redemption. But that is only because that desire can do nothing to bring it about, not because it cannot be brought about.

Wittgenstein once wrapped up a series of disparaging comments on Paul's Epistles by writing, "I want to ask--& may this be no blasphemy--: 'What would Christ perhaps have said to Paul?'" He went on, however, to add, "But a fair rejoinder to that would be: What business is that of yours? Look after making *yourself* more decent." (Wittgenstein 1998, 35e) This is a salutary warning regarding our reflections here, for, really, it is none of our business to speculate about Wittgenstein's spiritual condition. We have plenty to do in looking after ourselves. Even so, it is hard not to respond in some fashion to the things others say to us, and whatever else one makes of Wittgenstein's deathbed injunction to "Tell them I had a wonderful life," it is hard to hear it as the expression of a frustrated, bitter, renunciation. It sounds, rather, like an amazing note of grace.

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Judgement and Certainty

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1. Judgement, Assertion and Knowledge[1]

Judgement is the interiorisation of assertion: the inner notion of judgement is to be explained in terms of the outer notion of assertion. When someone asserts 'Snow is white', an interlocutor is entitled to ask 'How do you know?' If the asserter is not able to give grounds for his assertion, it has to be withdrawn. In an assertion an illocutionary claim that one has grounds is present; an assertion is thus a claim to knowledge. Not all occurrences of declarative sentences are asserted. In such cases the context should make it clear that the declarative is, for example, used to express mere opinion or conjecture. Whereas an assertion made is correct or incorrect, other uses of the declarative do not allow for this distinction. Just as for assertion, implicit in every judgement is a claim to knowledge; judgement is an epistemic notion.

The explanation of knowledge as justified true belief is standard. Some philosophers, though, explain knowledge as grounded or evident judgement. They rightly consider the notion of truth to be superfluous in their explanation of knowledge: groundedness ensures truth.

2. Subjective, Objective and Absolute Certainty

The explanation of knowledge as evident judgement may be elucidated in terms of subjective, objective and absolute certainty. A judgement's *objective certainty* may be explained either as its being grounded, or as the universal validity of the judgement. The former explanation is found in the article 'Gewissheit' in the *Historisches Wörterbuch der Philosophie* (1974): certainty in the objective sense is the epistemic justification of what is known (*certitudo rei cognitae*). The latter explanation one finds in the corresponding article in Eisler's *Handwörterbuch der Philosophie* (1913): what stands fast for every possible judger is called 'objektive Gewissheit'. In the article 'certainty' in Baldwin's *Dictionary of Philosophy and Psychology* (1901) the two explanations are combined: "an assertion is certain when its content is taken to be such that it must be asserted by all intelligences, i.e., when its truth is taken to be assured by universally valid grounds."

A judgement is *subjectively certain* (sure, *sicher*) when the judger is convinced of its correctness. A judgement's being subjectively certain may be the result of its being objectively certain. Knowledge entails belief in the sense of conviction. Subjective certainty may also obtain without objective certainty, in which case we have *mere belief*. Here (mere) belief is explained as a *deprived* judgement – a judgement for which we have no (epistemic) ground. Accordingly, belief is not apt for elucidating the concept of knowledge. Mere belief excludes knowledge.

A judgement is *absolutely certain* if it is excluded from error. The explanation of absolute certainty as indubitibility is less apt, because it seems to express a psychological impossibility. The concept of absolute certainty can be used only in a negative way: none of our judgements is absolutely certain, because the human judger is fallible.

Within the Cartesian tradition where knowledge is identified with absolutely certain knowledge, objective certainty is often identified with absolute certainty (infallibility) and undubitibility. This ideal of knowledge has brought the explanation of knowledge as evident judgement into discredit, because it leads to the problem of evidence: How can evidence be both epitemically accessible to the judger, and at the same time be a guarantee of infallible truth. The answer to the problem is that evidence is epistemically accessible to the judger, and there is no guarantee of infallible truth. Those who do not distinguish between objective and absolute certainty consider the explanation of knowledge as evident judgement to be merely subjective, for, pertaining to the evident judgement, there seems to be nothing left but subjective certainty. Given the distinction, the evident judgement, *i.e*. knowledge, can be both subjectively and objectively certain, without having to be absolutely certain.

3. Non-Epistemic Certainty

Declarative sentences, when used as assertions, can be considered as answers to a question. Implicit in a question is a presupposition, that itself can be considered as answer to a question. Not every presupposition is an answer to a question, though. When we have reached one of our *absolute presuppositions* (a term I borrow from Collingwood), such as *God exists*, there is no question to which this could be an answer. Absolute presuppositions are not answers to questions. Their expression as declarative is artificial, for they are neither true nor false. Instead of saying that a certain person believes *that* god exists, we should say that he believes *in* God (*fides*, *Glaube*). *God exists* is not a judgement; such an absolute presupposition is a *non-epistemic certainty*. It is a certainty, because we trust it; it stands fast for us. It is non-epistemic, because the judger cannot give a ground for it, and is not expected to be able to give such a ground. When someone utters a declarative with the intention to express a non-epistemic certainty, we cannot meaningfully ask 'How do you know?' The certainty of absolute presuppositions is prejudgemental; they make certain questions and answers (judgements) possible. Another example of such a certainty is belief in the evolution-theory. Such a certainty makes certain judgements possible, and it determines what counts as ground for a certain assertion. We learn these certainties from parents and teachers without questioning them.

Both subjective certainty and non-epistemic certainty are convictions, but they are of a different type. Non-epistemic certainties are not judgements, because they are themselves not answers to questions. We cannot meaningfully doubt whether God exists, because such a doubt presupposes that 'God exists', or 'God does not exist' expresses a judgement. Subjective certainties *are* judgemental. Because declaratives standardly express epistemic certainties, one is allowed to ask 'How do you know?' If it turns out that the person that has subjective certainty cannot give an (epistemic) ground, and thus expresses a mere belief, we may still ask 'Is it true?', or 'How *can* it be known?' We need an antecedent notion of non-epistemic

[1] I thank Göran Sundholm for comments on this paper; more on the first section in Sundholm 1999.

certainty against the background of which such questions, and thus, judgement and knowledge, are possible.

4. Wittgenstein on Judgement, Knowledge and Certainty

Wittgenstein's use of *Gewissheit* and *Sicherheit* is not systematic. Section 308 in *On Certainty* is crucial for understanding his ideas on judgement and certainty:

'Knowledge' and 'certainty' ('*Sicherheit*') belong to different *categories*. They are not two 'mental states' like, say 'surmising' and 'being sure' ('*Sichersein*'). […] What interests us now is not being sure but knowledge. That is, we are interested in the fact that about certain empirical propositions no doubt can exist if making judgements is to be possible at all. Or again: I am inclined to believe that not everything that has the form of an empirical proposition *is* one.

What does it mean that knowledge and certainty belong to different categories? In *On Certainty* we do not find anything like the standard definition of knowledge as justified true belief. We do find elucidations of uses of 'I know …'. Assertions that start with 'He knows …' are more complex, because they entail 'I know …'. Wittgenstein's primary interest is a first person concept of knowledge rather than the customary third person concept of knowledge. 'I know' often means that I have the proper grounds for my assertion (18; isolated numbers refer to sections in Wittgenstein 1969), and what is a proper ground is determined by the language game in question. A first person concept of knowledge presupposes a language game that belongs to a community. Giving and asking for grounds happens within a system that is a complex of language games (105). Wittgenstein's elucidations of the first person concept of knowledge are a variant of the explanation of knowledge as grounded judgement. Wittgenstein rejects the idea that knowledge is a mental state (308). By saying 'I know' I do not say that I am in a special state (588). Its use is the same as the use of 'That is' (588). We may express this point by saying that 'I know' makes explicit the knowledge claim contained in an assertion.

Certainties that are Wittgenstein's focus do not belong to the same category as knowledge because they are not judgemental certainties. Asking and giving grounds do not apply to them. In certain contexts empirical sentences may be used to express such certainties; the most famous one being Moore's 'Here is a hand'. Although we can imagine a context in which one's utterance of the declarative 'Here is a hand' is used as an assertion, and is thus true or false, for Wittgenstein the sentence is of interest in so far as it expresses a *norm* (167): this is what we call 'a hand' (cf. Stroll 1994 and Kober 1996). This way we learn how to categorise. Certainties, unlike axioms, we do not learn in isolation; they are part of a world-view that, as a whole, is an unquestioned foundation, a background against which we can distinguish between true and false (94). A certainty like *here is a hand* thus plays the same role in relation to judgement as the certainty *God exists* mentioned in the former section. Another example of a certainty is that what has always happened, will happen again (135) – we did not learn it as a principle, rather we act intuitively in accordance with it; without it assertions about the future would be impossible.

Wittgenstein says that we may be convinced of the rightness ('Richtigkeit') of a world-view by its simplicity and symmetry (92). If our world-view thus changes it may be called a *conversion*. Wittgenstein prefers the religious term 'belief' to any psychological term for these certainties (459). Rightness as it is used here is essentially different from judgemental truth. Criteria for rightness can be applied only to a *complete system*, like the criterion of coherence and pragmatic criteria.

How does Wittgenstein's notion of certainty relate to the epistemic notions of certainty explained in the second section? *On Certainty* contains two passages where the term 'objective certainty' is used. Wittgenstein gives (270) a general quotation "I have compelling grounds for my certitude (*Sicherheit*)". After the quote he adds that these grounds make the certainty objective. In the same passage he expresses the idea (273) that we may dispute whether something *is* certain: "when something is *objectively* certain". At first sight this seems to be in accordance with the epistemic meaning of the term 'objective certainty'. But the examples Wittgenstein gives of objective certainties do not confirm such an accordance: that if someone's arm is cut off it will not grow again, and that if someone is beheaded is dead and will never live again. Such certainties are *presupposed* when we make judgements. Wittgenstein considers these certainties to be objective in the sense that one has learned them from others (275). It is the certainty we share with all who take part in our language games in which our experience is embedded.

In the other passage, Wittgenstein contrasts objective and subjective certainty (194):

With the word "certain" ("*gewiss*") we express complete conviction, the total absence of doubt, and thereby we seek to convince other people. That is *subjective* certainty.

But when is something objectively certain? When a mistake is not possible. But what kind of possibility is that? Mustn't mistake be *logically* excluded?

What does Wittgenstein mean when he says that error is excluded? He adds that the error has to be *logically* excluded, where 'logic' has a special meaning in *On Certainty*. Logic concerns the general rules of language. 'This is a hand' in the proper context is an explanation of the word 'hand'. It is a rule for the use of this word prior to any of its applications. Error is excluded because questions of truth and falsity do not arise. This kind of certainty does not belong to a category where error applies, because it is *prejudgemental*. In this sense Wittgenstein's notion of certainty is far apart from the notion of absolute certainty in the traditional, epistemic sense: absolute certainty in the traditional sense is *judgemental*.

The first half of section 194 shows that Wittgenstein explains what he calls 'subjective certainty' as conviction; it is the absence of doubt, he adds. The context does not determine whether 'subjective certainty' means epistemic subjective certainty as explained in section 2. Wittgenstein's term 'subjective certainty' should be read as personal prejudgemental certainty, a notion that stands in opposition to public prejudgemental certainty ('objective certainty' in Wittgenstein's sense). Because prejudgemental certainty is determined by a language-game, and thus learnt from others, the notion of public certainty is prior to that of personal certainty. What Wittgenstein calls 'subjective certainty' is not to be identified with epistemic subjective certainty. Wittgenstein contrasts prejudgemental certainty with a state of being sure (308), and he explicitly says that a feeling of being sure is irrelevant to the certainties that interest him (524). Epistemic subjective certainty *is* a psychological state; the feelings that accompany this state in certain circumstances are not accidental. The criterion by which we can determine

whether something is a certainty, according to Wittgenstein, is not whether we have a special feeling, but whether there is a distinction in acting with language. Wittgenstein's distinction between subjective and objective certainty concerns exclusively a contrast on the level of prejudgemental certainty. He elucidates his notion of certainty by using terms that come close to subjective certainty in the epistemic sense, such as 'conviction' and 'to stand fast for us'. But, for Wittgenstein, if something stands fast for us, we are not expected to be able to give any epistemic ground. Wittgenstein's notion of certainty is prejudgemental, whereas the epistemic notion of subjective certainty concerns judgement. His notion of certainty is thus essentially different from the epistemic one. Prejudgemental certainties cannot be expressed by declarative sentences; they can only be shown by a practice, a way of acting and living.

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Zur Eigenart religiöser Überzeugungen

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Gewöhnlich ordnet die intensionale Semantik epistemologischer Termini den Ausdruck »Überzeugung« in den Bereich des rationalen Glaubens ein oder verwendet den Überzeugungsbegriff synonym mit dem Begriff des rationalen Glaubens (vgl. hierzu beispielsweise Kutschera 1981, 2). Allerdings erweist sich eine epistemische Logik als reichhaltiger und mit anderen 'Logiken' (wie etwa der deontischen Logik) verzahnbarer, wenn sie neben den Termen »glauben« und »wissen« auch einen eigenen Überzeugungsbegriff zuläßt, der *weder* mit Glauben *noch* mit Wissen zusammenfällt. Die eigene Kontur des Überzeugungsbegriffes erhellt aus den alltagssprachlichen Verwendungsweisen: Wenn eine Person a von einem Sachverhalt p *überzeugt* ist, dann steht sie in einer besonderen epistemischen Relation zu p, die weder erschöpfend mit einem Führwahrhalten noch bereits plausibel mit einem Wissen beschrieben ist (vgl. Searle 1987, 49-58).

Die Eigenart von Überzeugungen im Gefügen von Glauben und Wissen ist von zwei Seiten her eingehender zu beleuchten – logischerweise erstens von der Seite der Person, die Überzeugungen hat, und zweitens von der Eigenart der Sachverhalte, auf die sich Überzeugungen bevorzugt beziehen. Nehmen wir ein einfaches Beispiel der Gebrauchssprache: »Edmund ist davon überzeugt, daß das Parteiprogramm der Partei XYZ alle relevanten Antworten auf die drängenden Zukunftsfragen der Gesellschaft und des Staates enthält.« Für die Person unseres Beispielsatzes spielt die in Rede stehende Überzeugung nicht nur eine theoretische Rolle, sondern hat Konsequenzen gerade auch im Blick auf ihr Handeln. Dieser Umstand weist zurück auf die Tatsache, daß mit dem alltagssprachlich verwendeten Überzeugungsbegriff auch implizite Bewertungen verbunden sind. Überzeugungen sind nicht nur aufs engste mit Wertungen und Präferenzen verbunden, sondern bilden selbst den Grund auf dem die Person steht, um Wertungen formulieren oder Präferenzen diskursiv erläutern zu können. Gerade dieser Horizont der Wertungen zeigt schon an, daß die Sachverhalte, die im Fokus des Überzeugungsbegriffes stehen, eine besondere Eigenart aufweisen: Sie mögen zwar in den Rahmen der theoretischen Vernunft gehören, erhalten aber durch den Überzeugungsbegriff eine Relevanz auch für die praktische Vernunft im Sinne einer Bestimmungs*basis* für das sittliche Urteilen und für die Orientierung des Handelns. Deshalb ragen Überzeugungen über die reine epistemische Logik hinaus. Sie gehören in den Bereich dessen, was man mit Kant die *Urteilskraft* nennen muß, weil sie eine Verbindung zwischen theoretischer und praktischer Vernunft herstellten. Ferner fügen sich die im Fokus von Überzeugungen stehenden Sachverhalte vor dem Hintergrund der notwendig zu denkenden Einheit des Handelns und der Kohärenz der Handlungsorientierung zu einem Ganzen, das man sinnvoller Weise in den Begriff des Weltbildes fassen sollte. Blickt man von der Kohärenz und Ganzheit eines Weltbildes, das sich aus Überzeugungen 'formt', zurück auf die Person, so wird man in der näheren Bestimmung von Überzeugungen auf den Vorschlag von McClendon und Smith zurückgreifen können: „*A conviction* (...) means *a persistent belief such that if X (a person or community) has a conviction, it will not easily be relinquished and it cannot be relinquished without making X a significantly different person (or community) than before*."(McClendon/Smith 1994, 5.) Anders gesagt: Weil Überzeugungen die Grundlage für Wertungen bilden und handlungsleitend wirken, formen sie auch die Identität einer Person, die eben jene Überzeugungen hat. Zur Eigenart von Überzeugungen gehört nicht nur, daß sie eine Zukunftsdimension besitzen, die es schwierig macht, die im Fokus des Überzeugungsoperators stehenden Sachverhalte zu verifizieren, sondern prinzipiell, daß sich Überzeugungen den herkömmlichen Wegen von Verifikation entziehen, weil sie die Grundlage unserer Urteile sind. Wittgenstein hatte eine ähnliche Dimension im Weltbildbegriff entdeckt (vgl. Wittgenstein 1990, § 94), aber diesen Grundlagencharakter nicht in den Begriff der Überzeugung gegossen, weil er letzteren im Sinne des rationalen Glaubensbegriffes verstand. Gesteht man dem Überzeugungsbegriff jedoch eine andere Bedeutung zu als dem Begriff des Glaubens (wenngleich Interdependenzen hier nicht ausgeschlossen werden sollen), so läßt sich Wittgensteins Einsicht auch hier zur Geltung bringen: Bestimmte Einstellungen sind so grundlegend, daß sie sich dem Spiel des Verifizierens durch Erfahrung entziehen; vielmehr geben sie – vergleichbar den Idealen der theoretischen Vernunft bei Kant, die aus *synthetisierenden Abschlußakten der Vernunft* resultieren – selbst Regeln dafür an, wie bestimmte Sätze so mit Erfahrungen korreliert werden können (vgl. Wittgenstein 1990, § 167), so daß man ein Spiel des Verifizierens sinnvoll ausführen kann, das auf die Anwendbarkeit des Ausdrucks »Wissen« führt.

Robert B. Brandom hat in seiner epochalen Studie gezeigt, wie das mentalistische Vokabuler der herkömmlichen Epistemologie in ein handlungstheoretisches Vokabular i.w.S. übersetzt werden kann (vgl. dazu grundlegend Brandom 2000, 122-218, bes. 208-218). Überzeugungen lassen sich in dem von Brandom so genannten (epistemologischen) Spiel des Gründe-Verlangens und Gründe-Gebens unter dem Aspekt der *doxastischen* Festlegung einordnen (vgl. Brandom 2000, 299). Allerdings fängt diese sprach-handlungstheoretische Verortung die Eigenart von Überzeugungen gegenüber Glauben und Wissen noch nicht ein. Wenn Wissen bei Brandom durch die sozial-kommunikative Praxis der Zuerkennung einer Festlegung und der Billigung bzw. Anerkennung dieser Festlegung bestimmt ist (vgl. Brandom 2000, 300f.), dann muß der Überzeugungsbegriff – soll er sich vom Wissensbegriff signifikant unterscheiden – gewissermaßen 'eine Stufe unterhalb' des Wissens angesiedelt werden. Doch da tut sich ein Problem auf. Denn die bloße Zuerkennung der Festlegung in einer kommunikativ-diskursiven Praxis ist das Kennzeichen des (rationalen) Glaubens im Sinne eines Fürwahrhaltens. Wie können die Aspekte, die Überzeugungen vom (bloßen) Glauben unterscheiden, handlungstheoretisch so reformuliert werden, daß dadurch die besondere Note des Überzeugungsbegriffes zum Ausdruck gebracht werden kann? Auf der Linie der grundlegenden Ergebnisse Brandoms sei der folgende Vorschlag formuliert: (i) Mit dem rationalen Glauben kommen die Überzeugungen einer Person a darin überein, daß eine Person b der Person a die durch den Gehalt und den Status der Überzeugung erfolgende Festlegung im diskursiven Spiel des Gründe-Verlanges und Gründe-Gebens *zuerkennt*. (ii) Hinzu kommt ein reflexives Moment, das auch für den rationalen Glauben noch nicht untypisch ist: Die sich festlegende Person a *erkennt sich selbst* diese Festlegung *zu*. (iii) Über den rationalen Glauben hinaus

geht jedoch der Umstand, daß die Person a diese Art der Festlegung gleichzeitig als Maßstab in der für das Spiel des Gründe-Verlangens und Gründe-Gebens notwendigen Kontoführung – die Kontoführung *ordnet* nach Brandom gewissermaßen die diskursiv-rationalen Spielzüge und *gibt* gleichzeitig *Auskunft* über die Phasen des Spiels (vgl. Brandom 2000, 272-295) – nutzen wird und daß die Person a von der allgemeinen Billigung ihrer Festlegung ausgeht (ohne diese *faktisch* erworben zu haben). (iv) Das hat für die Person b folgende Konsequenzen: Im rationalen Diskurs mit a legt sich b auf diesen Maßstab fest; wird er (aus welchen Gründen auch immer) zum Problem, kann dieses Problem nicht mehr auf der Ebene eben dieses Diskurses geklärt werden, sondern nur durch das Hinaufsteigen auf die Ebene eines Metadiskurses. (v) Aber gerade da wartet ein Regreßproblem, das sich als solches nur umschiffen läßt, wenn es gelingt einen Maßstab und eine Diskursebene zu finden, der für a und b gleichermaßen normativ ist und auf den a und b sich gleicher Maßen als festgelegt *anerkennen*. Was dabei passiert, ist aber nun nichts anderes als ein Appell an (noch grundlegendere) Überzeugungen. Der Weg der Überzeugungen auf dem Forum diskursiver Vernunft führt also auf eine letzte Unhintergehbarkeit, die wiederum nur im Modus von Überzeugungen ansichtig ist. Erst die Einsicht in eine letzte Anerkennungsdimension, in der unser diskursives Vernünftigsein sich bewegt, vermag hier dem Regreßproblem die Spitze abzubrechen: „Das Wissen gründet sich am Schluß auf der Anerkennung." (Wittgenstein 1990, § 378.)

Aus den oben genannten Überlegungen läßt sich in inhaltlicher Hinsicht erschließen, daß es ganz bestimmte Propositionen gibt, die bevorzugter Weise im Bezugsbereich von Überzeugungen liegen. Das läßt sich alltagssprachlich daran festmachen, daß wir es für überzogen oder zumindest übertrieben hielten, wollte jemand jene Sätze, die normaler Weise – sofern sie eben nicht im Fokus des Wissens stehen – im Bezugsbereich des Fürwahrhaltens liegen, grundsätzlich als Überzeugungen formulieren. Es lassen sich Sprachspiele denken, in denen dieser Übergang sinnvoller Weise geschieht. Bezeichnend dürfte sein, daß die (jene Überzeugung äußernde) Person für das Eintreten des in Rede stehenden Sachverhalts gleichsam 'den Kopf hinhält' (vgl. Wittgenstein 1990, § 620). Dieses Pathos ist nicht überall notwendig, aber bisweilen unausweichlich, wenn wir an die Verbindungslinien denken, die zwischen Überzeugungen einerseits und der Identität der betreffenden Person bzw. der Konsistenz ihres Weltbildes andererseits bestehen. Kann es da – philosophisch gesprochen – eine vernünftige Annahme sein, daß Überzeugungen der exzellente 'Modus' sind, in dem sich das Verhältnis einer Person zu sich selbst und zu seinem Weltbild artikuliert? Das würde aber bedeuten, daß eine Person – sofern sie sich auf ihre Identität nur im Modus der Überzeugungen beziehen und sofern sie ihr Weltbild nur im Modus der Überzeugung vor sich hinstellen kann – von ihrer Identität und ihrem Weltbild *im strengen Sinne nicht wissen* kann. Diese Behauptung folgt einer Spur Wittgensteins (vgl. Wittgenstein 1990, §§ 137, 138, 154-158), der in *Über Gewißheit* jene Sätze, in denen sich unser Weltbild (als der Boden, auf dem unser Urteilen steht) ausdrückt, als dem Spiel der Verifikation und somit den Zielbedingungen von Wissen für entzogen hält (vgl. Wittgenstein 1990, §§ 115 und 116). In zweiter Linie deutet diese Behauptung aber auch schon an, daß Überzeugungen nicht nur zwischen Glauben und Wissen, sondern bei genauerer Hinsicht *jenseits* von Glauben und Wissen situiert sind, wenn sie sich für das regulierte 'Spiel' des Verifizierens nicht wirklich eignen. Und diese Behauptung folgt ebenfalls einer Spur Dieter Henrichs, der die Bezugnahme auf notwendige Abschlußgedanken, die sich als Selbst- und Weltbeschreibung ausdrücken, als 'Fiktionen' kennzeichnet – als Denknotwendigkeiten, die sich nicht als Wissen im herkömmlichen Sinne einstufen lassen, aber für die Konsistenz unserer Selbst- und Weltbeschreibung unerläßlich sind. Henrich selbst rekurriert in Hinsicht auf die eigentümliche Form der Abschlußgedanken auf Kant: „Was zu begründen uns unmöglich ist, was aber aus dem Ganzen unseres Vernunftwesens als unverzichtbare These hervorgeht, auf das dürfen wir ebenso unser Leben orientieren, wie wenn es eine begründete Erkenntnis wäre." (Henrich 1999, 146.) Als Verständigungshilfe in Hinsicht auf diese Reflexion seien zwei zentrale Motive Kants herangezogen: In den Idealen der reinen Vernunft treffen wir auf Denkformen, deren Referentialität ebenso problematisch wie *postulatorisch* notwendig ist. Aufgrund ihres Status entziehen sie sich im strengen Sinne einem landläufigen Erkenntnis- oder Wissensbegriff. Aber ohne sie würde unser Denken buchstäblich in eine Partikularität zerbröseln. Mit der Rede von den transzendentalen Idealen sind Instanzen genannt, die sich als solche einer mit epistemischen Absichten erfolgenden Bezugnahme entziehen und doch immer fixe Bezugspunkte unsere bewußten Lebens bilden, auch wenn sie sich nicht in bekannte Modi von Anschaulichkeit überführen lassen. Im Gefüge dieser wissensentzogenen, weil auf Singularität und Totalität ausgreifenden Ideale und der notwendigen, aber nicht als solche eigens in der Sachverhaltsstruktur von Welt abbildbaren Bezugspunkte hat auch das Religiöse seinen Ort. Es entspringt einem maximal synthetisierenden Akt der Vernunft, der sich als der Versuch darstellt, Subjekt- und Weltbeschreibung miteinander zu vermitteln. Der Dynamismus der Vernunft kann ausgehend von Kants Analysen differenziert werden in die Versuche, die Einheit des Subjekts, die Einheit der Welt und eine Subjekt und Welt vermittelnde Einheit zu denken (vgl. Kant, KrV B 391); aus letzterem entspringt der Gottesgedanke. Doch muß man mit dem so auf rein formalem Anweg gewonnen Gottesgedanken noch nicht all das assoziieren, was die monotheistischen Religionen unter »Gott« verstehen. Für diesen formalen Gottesgedanken ist das Denken des Unbedingten konstitutiv, dem gegenüber das Subjekt sich in ein bestimmtes Verhältnis gesetzt sieht, das Grundlage des religiösen Verhältnisses ist. Denn im Denken des Unbedingten entdeckt das Subjekt das für es typische Oszillieren zwischen freiheitlichem Selbststand einerseits und radikaler Kontingenz andererseits. Die Vermittlung von beiden scheinbar konträren Momenten kann nur eben von einem Unbedingten erwartet werden, das die Kontingenz des Subjekts unterfängt und als den Selbststand des Subjekts entlassend gedacht werden kann. Die Phänomene des Religiösen entspringen – transzendentalphilosophisch gesprochen – aus den verschiedenen Weisen, wie das Subjekt sich zum Unbedingten in ein konkretes Verhältnis setzt und wie in dieses Verhältnis die Welt als eine Gesamtheit ermöglichter Gegenstände eintritt. In die Dynamik bewußten Lebens hinein – und zu dieser Dynamik gehört wesentlich die Reflexion – ragt diese Verhältnissetzung zum Unbedingten gerade in der Form religiöser Überzeugungen, die (aus einer transzendentalphilosophisch rekonstruierenden Warte heraus) wie eine Kuppel unsere anderen, die Weltlichkeit der Welt, die Eigenart der Gegenstandsbevölkerung der Welt, das Bild von uns selbst und die Leitsterne unseres Handelns artikulierenden Überzeugungen überwölben, zusammenhalten und im Einheitspunkt spiegeln. Das Haben von Überzeugungen entspringt einer Notwendigkeit, die in der Dynamik der Vernunft gründet; der Gehalt der Überzeugungen folgt der Spur unseres Subjektseins, d.h. einer Spur aus Vorgegebenheit einerseits und Freiheit andererseits: Resultat ist ein *notwendiges* Fingieren (im Sinne Henrichs), das Wirk-

lichkeitsbezüge trägt, aber nicht selbst in den Mechanismen der Wirklichkeitsbezüge beschrieben werden kann

Wie sind Überzeugungen – zumal sie unserem Wissen vorausliegen – der diskursiven Vernunft also zugänglich zu halten? Betrachten wir die Aufgaben der diskursiven Vernunft wie Brandom als regelgeleitets Spiel, das sich aus Sprechakten zusammensetzt, so ergeben sich unmittelbar drei Gesichtspunkte, die Anhalt für einen vernünftigen Umgang mit Überzeugungen bieten könnten: Überzeugungen müssen rekursfähig sein in der Weise, daß sie sich in das Spiel diskursiver Verständigung einbringen lassen. Die Signatur des Anerkennens und des Anerkanntwerdens ist Überzeugungen wesentlich. Daraus erhellt, daß zum Haben von Überzeugungen wesentlich Freiheit gehört, die auf der Ebene diskursiver Verständigung reziprok ist: Nicht nur der formale Status, sondern auch der Inhalt meiner Überzeugungen wird durch die Notwendigkeit von Anerkennung, die ich ja selbst schon immer da reklamiere, wo ich eigene Überzeugungen habe, geprägt. Die *Güte* meiner Überzeugungen läßt sich also durchaus daran bemessen, inwiefern sie Raum geben für die Maßgabe der Anerkennung von Andersheit, ohne die ich mit meinen Überzeugungen nicht auf das Forum diskursiver Vernunft treten könnte. Der Beurteilung in Hinsicht auf die Güte unterliegen Überzeugungen auch dank eines zweiten, in ihrer transzendentalpragmatisch zu erhellenden Verfassung begründeten Aspekts: Weil es – auch und gerade bei religiösen Überzeugungen – um *meine* Selbstbeschreibung geht, bemißt sich die Güte meiner Überzeugungen auch an deren *Authentizität*, d.h. an der Weise, wie sie in meine bewußte Lebensführung eingreifen bzw. wie mein bewußtes Leben auf ihnen aufruhen kann. Drittens entspringt aus dem Gefüge meiner Überzeugungen eine Weltbeschreibung, die trotz ihres partikulären Ausgangspunktes einen universalen Anspruch erhebt – nämlich als Darstellung eines Ausgriffes auf ein Ganzes, das auch für Andere als ein solches Ganzes ansichtig sein soll. Darin drückt sich eine prinzipielle Universalisierbarkeitsantizipation meiner Überzeugungen aus und die Bereitschaft, sie mit den tragenden Überzeugungen alternativer Weltbeschreibungen zumindest abzugleichen. Man könnte hier gewissermaßen von einem Kategorischen Imperativ von Überzeugungen sprechen: *Forme deine Überzeugungen so, daß sie auch die Überzeugungen anderer Subjekte sein könnten, ohne daß dabei die Modi der Freiheit oder Authentizität gefährdet werden.*

Nun gibt es – und das deutet Wittgenstein an – durchaus einen Weg, auf dem geklärt werden kann, wie wir als Personen zu Überzeugungen gelangen: Wir entnehmen sie nicht – das wäre zu simpel gedacht – der Erfahrung, sondern wir *erlernen* Überzeugungen (vgl. analog Wittgenstein 1990, §§ 128, 129, 144), um dadurch Erfahrungen diskursiv verhandelbar oder handhabbar zu machen. Das Weltbild, das sich aus Überzeugungen zusammensetzt, ist nicht nur ein von uns entworfenes Bild, sondern im gleichen Maß ein Bild, in dem *wir uns schon bewegen*, bevor wir uns darin situiert *wissen* oder als darin situiert *reflektieren*. Daß dieses Weltbild auf mich kommt, bevor ich an einen Punkt gelange, an dem ich es architektonisch von einem festen Fundament aus errichten kann, ist freilich kein Grund, um mich von der Notwendigkeit, diesem Weltbild einen reflektierten Ort in meinem bewußten Leben zu geben, zu dispensieren. Denn in diesem Weltbild ist auch meine Selbstbeschreibung notwendig mitgegeben; und mit beidem zusammen ist der Dynamismus gesetzt, der mein Selbst und meine Welt auf einen gründenden Einheitspunkt hin orientiert – ein Dynamismus, der sich vornehmlich in der Gestalt religiöser Überzeugungen zum Ausdruck bringt: Gerade indem *ich* meine Überzeugungen, die die Grundlagen meiner Selbst- und Weltbeschreibung in die Dimension des Epistemischen heben und auch darüber hinaustragen, artikuliere, stelle ich sie auf ein Forum, auf welchem die Frage nach Gründen aufkommen muß, auch wenn ich weiß, daß das herkömmliche Spiel des Verifizierens versagen muß. Der Erwerb von Überzeugungen bringt hier einen weiteren Aspekt ins Spiel, um Überzeugungen vernunftzugänglich zu halten. Wittgensteins Hinweis auf das Erlernen von Überzeugungen klingt in einem sehr starken Maß nach einem Verweis auf bloß monolineare Abrichtungs-vorgänge. Dabei gibt es durchaus andere denkbare Modelle, diesen Lernvorgang zu beschreiben. Eine wichtige Rolle spielt in diesem Zusammenhang das *Beispiel* – in einem intersubjektiven Sinn verstanden. Es ist denkbar und kommt faktisch auch vor, daß wir unsere Überzeugungen erwerben, indem wir vom *Beispiel* eines Anderen *lernen*. Dieses Lernen erfolgt jedoch nicht unkritisch; auch hier ist es die Frage nach der *Güte des Beispiels*, die unsere Kritik anleitet. Das Beispiel eines Anderen ist zustimmungsfähig, wenn wir uns seiner Güte versichert haben. Dazu gehört zum einen der Blick auf die transzendentale Ausrichtung von Überzeugungen auf die Modi der Freiheit und der Authentizität. Dazu gehört auch die Versicherung, daß die diesem Beispiel inhärierende Universalisierungsantizipation die genannten Modi nicht unterminiert. Und dazu gehört schließlich, daß die Quellen, aus denen unser Beispiel schöpft, und die Zeugnisse bzw. Zeugen, denen es selbst seine Überzeugungen verdankt, auch für uns beispielgebend sind. Freilich fordert gerade diese kritische Frage nach der *Güte von Überzeugungen* eine Form von Vernunft ein, die sich weniger als wissenschaftliche Rationalität, sondern vielmehr als sapientiale ‘Unterscheidung der Geister’ vollziehen muß.

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Is Gettier's First Example Flawed?

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1. Introduction: what does Smith believe?

1.1. The 'Gettier counterexamples' (Gettier 1963[1]) to the tripartite account of propositional knowledge are generally taken to show that not every instance of justified true belief constitutes knowledge. I argue that Gettier's famous first example fails to establish this conclusion. I claim to show that the example violates the *belief* condition of the tripartite account. Of course, if Smith does not believe that

(1) the man who will get the job has ten coins in his pocket

it should not be surprising that he does not know it either, as Gettier correctly claims. But as the three conditions are not satisfied, the tripartite account is not refuted.

1.2. My analysis exploits the distinction between 'attributive' and 'referential' uses of a definite description introduced by Donnellan (Donnellan 1966). According to Donnellan, 'the F' in a statement of the form 'the F is G' (here: (1) 'the man who will get the job has ten coins in his pocket') can be used *attributively* in order to attribute the property of G-hood to *whatever* object satisfies the description (is the F); or *referentially,* serving as one contextually adequate way of establishing reference to an independently identified object with the intention of making an assertion about that object, namely, that it is G. I consequently take beliefs involving descriptions to have the following truth conditions: if the description is intended referentially, the belief is singular, and the object referred to figures in it as 'constituent'. It is true iff this object is G. Understood attributively, as in Russell's original account, it has to be analysed as an existential statement (i.e. as: $\exists x (Fx \& \forall y (Fy \rightarrow y=x) \& Gx)$), and that is true iff there *exists* some object that is both the unique F and also G. This *object*, however, does not enter the truth conditions of the thought that would also be true if in its stead some other object had been both the unique F, and G.

Now, to *know* (or believe) that the F is G, as a referential proposition, is to know (believe) of the *object* that actually is the F that it is G. To know (believe) an attributive proposition instead is to know (believe) that there *exists* some object – the identity of which one need not (but may have) an opinion about – such that this object is both the unique F and G. Both of these cases can properly be reported as 'knowing that the F is G'.

1.3. The Gettier example to which I would now like to apply this distinction is the following: Smith is justified in believing that Jones will get the job they have both applied for, and he also has a justified and true belief that Jones has ten coins in his pocket. So apparently Smith's belief in the following would be justified:

(1) The man who will get the job has ten coins in his pocket.

But should, unexpectedly, Smith himself get the job, and should he himself coincidentally and unbeknownst to him have ten coins in his pocket too, (1) is true, even though one proposition from which it had initially been deduced is false.

[1] All unannotated quotations are from the first example of this paper.

Now apparently i) (1) is true, ii) Smith believes it, and iii) Smith is justified in believing it.[2] The three conditions for knowledge as justified true belief seem satisfied. Yet, Gettier continues, certainly this is not an instance of *knowledge* since Smith's belief "is true in virtue of the coins in Smith's pocket, while Smith does not know how many coins are in Smith's pocket, and bases his belief in [(1)] on a count of the coins in Jones's pocket, whom he falsely believes to be the man who will get the job."

My methodological *Leitmotiv* is the question *what exactly* it is that Smith *believes* but does not know. Given Donnellan's distinction, (1) could represent several distinct referential or even an attributive belief. Which one of these does Smith believe? I shall argue that he believes none of them.

2. The referential reading: he can't believe it

Let us first look at the referential reading. Following Donnellan, 'the man who will get the job' could, in this context, be used either to refer to Smith, to whom it applies, or to Jones, to whom it does not apply; only the former reading is interesting here. Yet we are told that Smith has been informed that *Jones* is the person to whom the description applies, and that Smith neither believes that he himself will get the job, nor that he has ten coins in his pocket.

So, maybe quite obviously, Smith can't believe (1) if understood referentially to him.

3. The attributive reading: if only he had believed!

3.1. This section is based on the intuition that Smith does not have to believe/know that *he* will get the job for him to be able to *believe/know* that *the man who will get the job* has ten coins in his pocket, even if that should turn out to be him; for instance in case he had the 'attributive' belief (Russell 1905) that *whoever* will get the job has ten coins in his pocket:

(2) $\exists x$ (x will get the job & $\forall y$ (y will get the job $\rightarrow$ x = y) & x has ten coins in his pocket) [3]

If so, Smith's ignorance of the fact that *he* will get the job clearly does not provide sufficient explanation for his ignorance of (1): if Smith *could* believe or know (2) without believing that *he* will get the job, then, logically, the fact that he *does not* believe that he will get the job is not conclusive evidence for his *not* knowing (2). (2), however, is just one way of reading (1) and thus Smith *could* know (1) despite this ignorance. But we said that Smith *does not* know (1).

[2] The 'Principle of Deducibility of Justification' (PDJ) asserts that "for any proposition P, if S is justified in believing P, and P entails Q, and S deduces Q from P and accepts Q as a result of this deduction, then S is justified in believing Q." My argument does not need to question this principle. Deductive closure of beliefs is not required by the tripartite account.

[3] Another example would be the candidate with the most votes (the actual person), who does not have to believe/know that she herself is the candidate with the most votes in order to know that the candidate with the most votes wins the election.

3.2. That Smith has an additional and mistaken belief about who will get the job is irrelevant for this attributive belief; and accordingly the answer to: 'of whom was Smith thinking *in believing (2)*?' would have *had* to be: 'of no-one in particular' – existential statements, in the logical sense, never refer to any object. Most people however would add, hesitantly, that Smith does have *Jones* 'in the back of his mind' in some sense. This tends to push us back to the referential reading in which the description refers to *Jones*. But Smith's ignorance about who gets the job would only have mattered had (1) been intended, first, referentially rather than attributively, and secondly, referentially *to Smith* – but Smith certainly doesn'tt have either of these referential beliefs (cf. §2).

So it seems Smith does not have the referential belief, and assuming he has the attributive belief his ignorance of who gets the job would not have mattered for knowledge of (1). What is more, Gettier's story seems to suggest he has both a referential belief and an attributive belief, in some sense or other. What, finally, is the role of the coins?

4. But he couldn't have believed it!

4.1. In fact, a conclusive reason why Smith does *not* seem to hold an existential belief like (2) is that he *does not know about the coins in his pocket.* It seems that in order for him to believe that *whoever* will get the job has ten coins in his pocket, knowledge of the coins is required since, logically, either of Smith or Jones *could* get the job.

The central – and so far unjustified – claim here is that unless Smith believes of *himself* that he has ten coins in his pocket he cannot plausibly be understood to believe that *whoever* will get the job has ten coins in his pocket, given that he is well aware of the fact that he *could* get the job.

A justification of this claim will have to wait for the next section, but the underlying intuition is this. If you *claim* to believe something of some unspecified element of a set of things (but of no element in particular, i.e. 'attributively'), then, unless you think that what you know serves to *determine* this element (the coins serving to determine who will get the job), you will have to believe of all the elements whatever what you claim to believe of this unspecified element for your claimed belief to hold up *as belief* (rather than just as a *claimed* belief, that is, a belief that you claim to have but do not actually have[4]). My argument here may be taken to mirror Gettier's (implicit) reasoning for his claim that Smith does not *know* (1) – just replace *know* for *believe* in what follows to get Gettier's version: in order to believe (2), that is, that *whoever will* get the job has ten coins in his pocket, Smith has to believe that whoever *could* get the job has ten coins in his pocket. Both Jones and Smith *could* get the job, but Smith only knows of *Jones* that he has ten coins in his pocket, thus, Smith does not believe of whoever *could* get the job that he has ten coins in his pocket. It follows that he does not believe that whoever *will* get the job has ten coins in his pocket – he *could not*, since for that he would have to believe it of himself as well. Hence he does not believe that the man who will get the job has ten coins in his pocket, whoever that may be.

4.1. So, that Smith does not know about the coins in his pocket is not the reason why he does not *know* (2) even though he does justifiably and truly believe it – as Gettier claims – no, it is the reason why he cannot even *believe* (2). The right explanation, then, of why Smith *does not* know (1) is *not* to be found in the insufficiency of the tripartite account of knowledge, it is simply that he does not even believe it – but belief is required for knowledge. In other words, what is wrong with (1) is that it cannot be read as a *(justified) true belief* of Smith, not that it cannot be read as knowledge – but that follows immediately.

5. The claim justified

5.1. I will now argue that if Smith were *not* thus required to know about the coins to believe (1), then he *could* also have known it – but we concurred with Gettier that Smith does *not* know. Hence he must be required to know about the coins, in this sense, even by Gettier.

For the purpose of this 'reductio' argument let us assume that it were not required that Smith had to know of the coins in his pocket to have the belief (2). And it seems indeed that this is possible: without believing of himself that he has ten coins in his pocket it generally is still possible for Smith to believe that the man *who will get the job* has ten coins in his pocket (in the attributive sense) even if that should turn out to be him. For instance, he learns that the numerologists-board members want to pick the person with ten coins in his pocket.

In such a case Smith *could* believe (1) attributively despite ignorance of the coins in his pocket (as long as he is ignorant about who actually gets the job). But here is the rub: under *these* circumstances, one is not barred from saying quite literally: 'Smith *knew* that *the man who will get the job* has ten coins in his pocket', maybe but not even necessarily continuing with 'he just did not know that that man would be him', and/or with 'he just did not know that *he* had ten coins in his pocket' and thus to attribute *knowledge* of (1) to Smith. That is to say, by *not* requiring that Smith has to be aware of the coins in his pocket it is actually possible to attribute belief *and knowledge* of (1) to Smith. (Of course *additional* knowledge of the coins in his pocket would not turn *that* piece of knowledge into ignorance either.)

5.2. So, in addition to the irrelevance of the ignorance about who gets the job, whether Smith knows about the coins in his pocket or not really does not matter for the attributive belief either – provided Smith actually believes (2) as here we *assume* he does. But the problem for Gettier's story is that clearly Gettier does *not* want to attribute knowledge to Smith! If we assume the above claim (cf. §4) to be false, there is no ignorance, but Gettier obviously requires this ignorance. Hence it must be true.

5.3. Note, importantly, that if you accept that ignorance of the coins does not show that Smith necessarily does not know (2), nor that knowledge of them implies knowledge of (2), as surely you have to, then it can no longer simply be *stipulated* that Smith does believe (2) and would know (1) in case he knew about the coins. Independent argument is now required to establish that Smith does believe (2) in the first place since we know that ignorance of the coins in his pocket does not suffice to show that he does *not know* (2) if he *did* believe (2), as Gettier wants us to believe. (Ignorance about who will get the job does not matter anyway since the belief is attributive). We need a good reason to think that *in this case*, ignorance about the coins in his pocket suffices to establish that Smith does not know – as we all want to say – since it does not do so generally (given belief in (2)). My analysis provides this reason, whereas Gettier's story provides none.

[4] This is not as unusual as it might appear. For instance, think of the number of people who, on one occasion or other, claim that they believe in God.

6. How the Example Works

6.1. Supposing that Russell's theory of descriptions has not entered the subconscious of most readers of this example the description in Smith's alleged belief (1) will initially be understood as applying 'referentially' to either Jones or Smith. The reader is thus faced with two possible readings of (1) representable as:

(1) Jones is the man who will get the job, and Jones has ten coins in his pocket, or

(2) Smith is the man who will get the job, and Smith has ten coins in his pockets.

Note that (1) can be taken to *paraphrase* (3) from Smith's perspective (who "...sees the entailment [of (1) from (3)] ... and accepts [(1)]..."), and to paraphrase (4) from the reader's perspective, *but not vice versa*. Unlike Smith, the reader has the correct information about who will get the job, and also knows that Smith has ten coins in his pocket. Smith himself clearly does not believe (4) while he seems to believe (3).

So Smith neither has *justified true belief* in (3) (which is false) nor in (4) (which he does not believe). But then, the reader rightly wonders, how *could* he have justified true belief in (1)? Thus in the second step the attributive belief (2) enters the scene as the third and last possible reading of (1) and is then adopted by elimination.

6.2. The common understanding is that Smith believes (2) but does not know (1), the reason for this ignorance being that he neither knows about his ten coins nor about the job he is about to get. But if Smith actually *did* believe (2), I argued above, none of this need matter for knowledge. But clearly here it does. My conclusion was that Smith, for the same reason for which he does not believe (4), does not believe (2) either – the coins in his pocket. This explains *why* his ignorance matters, but the counter-example is dissolved.

The rationale behind the common reading is somewhat twisted, deriving from the overriding desire to attribute *some* belief to Smith, and preferably a justified and true one at that. From the possible *true* beliefs (2) and (4) on offer (2) has major advantages over (4). As argued, Smith does not have to know that he gets the job to believe (2), but he does to believe (4). That by itself would eliminate (4). Furthermore (2), unlike (4), is *justified by assumption* (PDJ and existential generalisation[5]), and the reader thinks that clearly it cannot be *contradictory* to attribute a belief to Smith which he is *justified* to hold. Clearly, if already he is *justified* in believing (2) at the very least he *might* believe it. Nonetheless a contradiction arises from the supposition that Smith *does* believe (2). Thus it is concluded that Smith cannot know (1) despite (the possibility of) justified true belief in (2). What is more, the ignorance about the coins also affects (4) so there is really no reason to believe that Smith knows either of these. This conclusion is not doubted since anyway expected.

7. Justified True Beliefs, anyone?

Smith takes (1) to express (3) and that the reader takes (1) to express (2) or (4). Given these beliefs of Smith, for him, belief in the truth of (1) and hence its acceptance is perfectly legitimate (hence the J: he is 'justified'). So Smith *accepts the sentence* (1) because he *believes the proposition* (3) and believes (1) to express that proposition (he mistakenly thinks that the man who will get the job is Jones) – he believes (1) *to be true*. And indeed (1) is true (hence the T: his 'belief is true'). Given the beliefs of the reader, *her* acceptance of (1) is equally legitimate. When the reader accepts (1) she believes both (2) and (4) which she *knows* to be expressed (ambiguously) by (1) – she has better information than Smith about who gets the job (required for (4)), and she also knows about the coins in Smith's pocket (required for both (4) and (2)). Yet Smith's belief (3) is a sufficient reason for *his* acceptance of (1). It is due to rashly identifying this belief in the truth of (1) with belief in what (1) expresses that Smith was therefore thought to *believe* (1) too (hence the B: 'belief'), and thus (2) (since (3) and (4) are clearly out for him). But acceptance clearly is not an infallible guide to belief. It is Smith's *acceptance* of (1) that is mistaken and based on the 'wrong reasons' (his *false* belief (3)) – these still help to rationalise the problem. But Smith does not have the 'wrong reasons' for his *belief in* (1) since he does not believe (1) at all, even though he believes (1), the sentence, *to be true.*

Smith does not have a justified true belief in (1). A fortiori he does not have a justified true belief that is not knowledge. Hence Gettier's first example is flawed.

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[5] Gettier never says that Smith performs an existential generalisation. The fact that he could, and would be justified in so doing, does not suffice to establish that he does.

Der Begriff der religiösen Erfahrung bei William James und seine Weiterentwicklung nach Wittgenstein

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1. Problemdefinition und Methode bei James

Das Buch von James ist aus den *Gifford Lectures* hervorgegangen, die unter dem Titel ‚Natürliche Religion' stehen. Um seine Vorgehensweise zu charakterisieren, kann man sie mit der von Hume vergleichen (Hume 1981). Dieser versteht das Projekt so, dass es um die Chancen einer Vernunftreligion geht, d. h. einer Lehre, die religiöse Erkenntnisquellen wie heilige Schriften ausklammert. Dies bedeutet für Hume nun aber (anders als für James) eine Orientierung an den gerade entstehenden *Naturwissenschaften*.

Hume wählt als Ausgangspunkt gewisse Glaubenssätze (dass ein gütiger Gott die Welt geschaffen habe), und untersucht, ob sie sich unter Rekurs auf die wissenschaftliche Erfahrung bewahrheiten. Das Ergebnis ist kläglich: „Die Ursache oder Ursachen der Ordnung im Universum besitzen wahrscheinlich irgendeine entfernte Ähnlichkeit mit menschlicher Intelligenz." (Hume 1981, 141)

James dagegen stellt nicht eine religiöse Behauptung an den Anfang, um dann nach empirischen Gründen für sie zu fragen. Er geht umgekehrt von Erfahrungen aus, die eine große Anzahl von Gewährsleuten gemacht haben, um von dort aus einen Begriff des Religiösen zu gewinnen. Seine Frage lautet also: In welchen auch heute noch zugänglichen persönlichen Erfahrungen liegt der im ‚natürlichen Leben' vorfindbare Anlass, um den herum sich der Bereich des Religiösen entwickelt hat?

James hatte selbst eine religiöse Erfahrung: Beim Anblick eines geisteskranken, verwahrlosten Jungen wurde er plötzlich der Tatsache gewahr, dass seine bisherige Selbstzufriedenheit keinen Grund hat, dass es nicht sein Verdienst ist, wenn er sich von diesem Jungen unterscheidet, und dass er nichts dazu tun kann, diese Differenz aufrecht zu erhalten. Es ergriff ihn eine panische Angst und er hatte später den Eindruck, nur seine Stoßgebete hätten ihn davor bewahrt, verrückt zu werden (James 1979, 179 f.). Diese Erfahrung war für seinen Lebensweg höchst bedeutsam, James weiß also, wovon er spricht.

Seine Methode ist die folgende: Aus einer Fülle von Schilderungen eines weit aufgefassten Bereichs umwälzender, das Leben der Betroffenen prägender Erfahrungen arbeitet er allgemeine Charakteristika heraus, die für einen Unterbereich seines Materials die Kennzeichnung ‚*religiöse* Erfahrung' angemessen erscheinen lassen, und zwar in einem Sinn, der an keine bestimmte Religion gebunden ist. Er benutzt den Üblichkeiten seiner Zeit und seiner Herkunft entsprechend in seinen Beschreibungen zwar christliche und dem Christentum nahe Wörter wie ‚Gott', ‚die Gottheit', ‚gottähnliches Objekt', ‚der Kosmos', ‚das Universum', ‚die unsichtbare Ordnung'. Dabei bemüht er sich aber, keine dogmatischen Aussagen und keine auf das Christentum beschränkte Terminologie zu verwenden.

Es geht James darum, die Erfahrungen seiner Zeugen so weit es möglich ist ‚natürlich' zu verstehen, d. h. aus der Perspektive des *common sense* und bezogen auf seine eigene Lebenserfahrung und sein psychologisches Wissen. Er macht glaubhaft, dass es solche Erfahrungen gibt, dass sie im Prinzip jedermann zugänglich sind und dass sie für das Leben der betroffenen Personen einen entscheidend positiven Wert besitzen. James bemüht sich dann zweitens, einen Kern der speziell religiösen Erfahrungen herauszuarbeiten, d.h. diese von verwandten Fällen und variierenden Begleiterscheinungen abzugrenzen. Dies ist seine Tatsachenbasis, deren lebendige Fülle und überzeugende Systematisierung den Hauptwert seines Buches ausmachen. Und in einem dritten Schritt nimmt er Abstand zu seiner Phänomenologie um sich einen philosophischen Reim darauf zu machen.

Ursprünglich sollte dieser letzte Teil ebenso umfangreich werden wie seine Fallsammlung. Im verwirklichten Projekt beansprucht er aber erheblich weniger Raum. Was James dort zum Ausdruck bringt, nennt er seinen persönlichen (in seinem Fall philosophisch ausfallenden) ‚Überglauben', d. h. den Teil seiner Überlegungen, von dem er seine Leser nicht unbedingt überzeugen will (James 1979, 460, 469 ff.). Dies legt die Frage nahe, ob es systematische Gründe für die Kürze dieses Teils gibt, speziell die Frage, ob der ‚Überglaube' entbehrlich ist.

2. Merkmale des Begriffs ‚religiöse Erfahrung'

Die wichtigsten Merkmale des Begriffs der religiösen Erfahrung bei James sind: Erstens: Sie betrifft die Haltung des betroffenen Menschen zum ‚Ganzen' seines Lebens und der ihn umgebenden Welt. Gemeint ist dabei ein erlebnismäßiges Ganzes, nicht ein räumliches oder zeitliches Ganzes im Sinne einer wissenschaftlichen Kosmologie.

Zweitens: Dies Ganze schließt die leidhafte Seite und die Übel des Lebens ein (wie Verlust, Schmerz, Krankheit, Tod). Die nüchterne Wahrnehmung und Integration dieser leidhaften Seite in die Haltung zum Ganzen ist der Kern der eigentlichen religiösen Erfahrung. Diese hat es immer mit einer positiven Wendung in der Art und Weise zu tun, in der die leidhafte Seite des Lebens aufgefasst wird.

Drittens: Betrachtet man diese Wendung genauer, zeigt sich eine Abfolge von drei Schritten: Ihr *Ausgangspunkt* ist die Erfahrung der eigenen Machtlosigkeit dem Leid und dem Übel gegenüber, oft verbunden mit einer völligen Sinn-Entleerung der Welt. Das Eingestehen dieser Machtlosigkeit führt in einem *zweiten* Schritt dazu, dass die Person den Impuls, ihr Leben doch noch ‚in den Griff' zu bekommen, aufgibt. Der *dritte* Schritt ist die subjektiv überraschende Erfahrung, durch diese Selbstaufgabe nicht unterzugehen. Die Person erlebt sich vielmehr als aufgehoben in einer „unsichtbaren Ordnung", in der ihren Platz einzunehmen sie nicht als (moralisches) Joch empfindet, sondern als „höchstes Gut". (James 1979, 63),

Für das Religiöse daran ist wichtig, dass die Erfahrung, dass gerade die Aufgabe des eigenen Handlungsimpulses das bringt, was die Person als ihre Rettung empfindet, typischerweise erlebt wird als das Gefühl, es seien Kräfte außerhalb des eigenen Ich am Werke. Es handelt es sich hier um ein ‚Widerfahrnis', um etwas, das einem geschieht,

das sich nicht der eigenen praktischen Tätigkeit oder dem eigenen Nachdenken verdankt. (Kamlah 1973, 34ff.)

Dieses Widerfahrnis ist sinnvoll. Es wird wie eine „zweite Geburt“ (James 1979, 156) erfahren, nämlich als Schritt vom unwirklichen (naiven, von Täuschungen durchzogenen) zum realen Leben. In seiner höchsten Form ist das Resultat eine „höhere Art von Glückseligkeit und eine Standfestigkeit der Seele, mit der sich nichts anderes vergleichen kann“ (James 1979, 349). Charakteristisch für diesen Zustand ist u.a.: Verlust aller Sorge, Überzeugung, dass es gut um einen steht, unabhängig davon, was einem geschieht. (James 1979, 238). (Hier sind wir an Wittgensteins Bezugnahme auf die Formulierung ‚es kann mir nichts geschehen‘ erinnert (Malcolm 1984, 58; Schulte 1989, 100).) Die Welt erscheint nun in einem positiven Licht, ohne dass sich etwas in ihr ‚objektiv‘ geändert hätte. Weder wird die Realität der leidhaften Seite geleugnet, noch wird angenommen, dass höhere Kräfte unangenehme Episoden durch ihre Intervention vom Betroffenen fernhalten.

Und als viertes Merkmal nennt James den Umstand, dass dieser Wandel bei religiösen Erfahrungen in der Mehrzahl der Fälle nachhaltig ist; er vermittelt dem Betroffenen eine bleibende seelische Standfestigkeit.

3. Der ‚Überglaube’ von James

Ich sehe die Stärke von James‘ Vorgehen darin, dass es nahe legt, die traditionellen Artikulationen der Religionen primär als Ausdruck für die besondere Qualität solcher Erfahrungen anzusehen. Sekundär wären dann theoretische Überformungen entstanden, sowie eine Verbindung mit Spekulationen, die sich anderen Quellen verdanken, wie etwa dem Bedürfnis nach Naturerklärung. Demnach enthalten die Erfahrungen den Schlüssel zum Verständnis religiöser Redeweisen.

Bezüglich der philosophischen Verarbeitung des Erfahrungsmaterials gibt es aus heutiger Sicht zwei Möglichkeiten. Der erste ‚referenzsemantische’ Weg unterstellt den religiösen Ausdrücken unabhängige Bedeutungen, die gleichartig sind mit den Bedeutungen anderer referierender Ausdrücke. Der zugehörige Sinn gilt als den Mitgliedern der Sprachgemeinschaft aus Erzählung, Lektüre etc. bekannt. Salopp gesprochen: Im Prinzip wissen wir, was Götter sind, wir wissen heute nur nicht mehr sicher, ob es sie gibt. Daher lauten die Anschlussfragen hier (wie bei Hume von vornherein), ob die fraglichen Ausdrücke eine Referenz haben und wie sich die Sätze bewahrheiten lassen.

James bleibt bei dieser referenzsemantischen Auffassung. Zwar lässt er keinen Zweifel daran, dass er der Erfahrung gegenüber ihrer philosophischen Interpretation den Vorrang einräumt. Er beobachtet die materialistischen Tendenzen in der Wissenschaft mit Misstrauen, weil er befürchtet, dass sie die Erfahrungen für nicht existent erklären könnten, für Träume von Fieberkranken. Er scheint nun zu meinen, einer solchen Entwertung nur durch die Annahme begegnen zu können, es müssten transzendente Gegenstände existieren, die das sind oder verursachen, was das Objekt der jeweiligen Erfahrung ist.

So gelangt James zu einer konventionellen Lehre von drei Welten, nach der wir eine materielle, eine psychische und eine geistige Welt zu unterscheiden haben. Was unabhängig von uns, für sich, real existiert, was nicht nur der psychischen Welt der Einbildungen angehört, muss zu einer Welt außerhalb unserer Empfindungen gehören, also entweder zur materiellen oder zu einer transzendenten geistigen Welt. Von diesen beiden haben wir zwar nur über die Empfindungen Kenntnis. Was aber *nur* dieser Empfindungswelt angehört und nicht auf etwas ‚Äußeres’ verweist, gilt als ‚bloß psychisch’.

4. Wittgensteins Alternative

Die Sprachphilosophie des späten Wittgenstein ermöglicht eine alternative Auffassung, die hier die ‚kriteriale’ heißen soll. Negativ wendet sich Wittgenstein (ganz im Geiste von James) gegen die These, Religionen würden Hypothesen über die Existenz und Natur besonderer transzendenter Gegenstände aufstellen, z. B. der Götter, die zwar anders, aber doch gleichartig sind mit anderen Objekten. Diese Auffassung werde der Rolle religiöser (und magischer) Vorstellungen im Leben der Menschen nicht gerecht. (Wittgenstein, 1989) Der Gläubige habe im relevanten Fall „das, was man einen unerschütterlichen Glauben nennt. Und der wird sich nicht beim Argumentieren oder beim Appell an die gewöhnliche Art von Gründen für den Glauben an die Richtigkeit von Annahmen zeigen, sondern vielmehr dadurch, dass er sein ganzes Leben regelt.“ (Wittgenstein 1968, 88)

Die positive Seite der kriterialen Auffassung ist eine Anwendung seiner Sprachspielkonzeption auf Probleme der Referenz. So taucht bei ihm die Frage auf, ob Ausdrücke für Zahlen nur dann Bedeutung haben, wenn Gegenstände existieren, die von ihnen benannt werden. Frege hatte gemeint, entweder die materiellen Ziffern (z. B. Tintenspuren auf dem Papier) als die Zahlen ansehen oder ein eigenes Reich geistiger Wesenheiten postulieren zu müssen, in dem sie als immaterielle Gegenstände ihren Platz hätten. Da das erste Horn des Dilemmas im mathematischen Fall offensichtlich absurd ist (Tinte hat keine mathematischen Eigenschaften), entschied sich Frege für die zweite Möglichkeit. Dazu sagt Wittgenstein: “Dass diese Alternative nicht richtig ist, zeigt gerade das Schachspiel: Hier haben wir es nicht mit den Holzfiguren zu tun, und dennoch vertreten die Figuren nichts, sie haben in Freges Sinn keine Bedeutung. Es gibt eben noch etwas drittes, die Zeichen können verwendet werden wie im Spiel.“ (Waismann 1984, 105)

Auf die Religion übertragen entspricht dem ersten Horn des Dilemmas die These, das, wovon ihre Aussagen sprechen, sei allein etwas Psychisches. Es gebe nur die Erfahrungszustände selbst, nicht etwas, von dem sie Erfahrungen sind. Der Inhalt der Religion bestehe aus ‚mentalen Episoden’ und sei daher den ‚bloßen Phantasien’ gleichzustellen. Es ist klar, dass sich William James nach allem, was er uns phänomenologisch zu sagen hatte, zu einer solchen Position nicht entschließen konnte. Sie ist aus seiner Sicht ebenso absurd wie die These, unser mathematisches Wissen handle von Tinten- oder Bleistiftspuren. Daher optierte er (wie Frege auf mathematischem Gebiet) für die Existenz einer transzendenten Welt.

Für Wittgenstein sind *beide* Alternativen unakzeptabel, und zwar sowohl für die Mathematik als auch für die Religion. Mit der Analogie zum Schach will er für die Mathematik einen dritten Weg aufzuzeigen: Zahlzeichen sind bedeutungsvoll, aber dies verdanken sie nicht transzendenten Referenzgegenständen, sondern allein der Rolle, die sie in unseren Aktivitäten spielen. Die Art des Auftretens eines solchen Zeichens in unserer Praxis ist das *Kriterium* dafür, ob es im jeweils vorliegenden Fall eine Bedeutung hat oder z. B. ein Nachplappern ist.

Ich meine, dass sich diese Lösung auf das Gebiet der Religion übertragen lässt. Die Präsenz und Lebensbe-

deutsamkeit der von James geschilderten Erfahrungen reichen aus, um die religiösen Redeweisen mit Bedeutung zu versehen, Hypothesen über die Existenz transzendenter Gegenstände sind entbehrlich.

Dabei ist u. a. zu beachten, dass Wittgensteins Vergleich von Wörtern mit Werkzeugen nicht heißt, dass es in Sprachspielen stets um *technische Hilfsmittel* geht. Im Fall der religiösen Erfahrung fungiert die Sprache im Kontext von Widerfahrnissen, ähnlich wie im Fall des Ausdrucks ‚Schmerz'. Wörter bekommen ihren Sinn zwar durch die praktischen Kontexte, diese brauchen aber keine technischen Handlungen zu sein.

Zweitens erinnert uns das Beispiel des Schmerzes daran, dass die Analogie zum Spiel nicht als die These verstanden werden darf, es gehe bei Sprachspielen um Spielerisches. Wenn wir den Sprachspielbegriff auf die Religion anwenden, in der es nach James ‚ums Ganze geht', brauchen wir also nicht zu befürchten, sie dadurch zu leicht zu nehmen, wenn wir nicht zusätzlich besondere Referenzgegenstände postulieren. Die Theologie kann wohl bestätigen, dass Gott kein Gegenstand ist wie andere Gegenstände, dass er nicht das Referenzobjekt eines Eigennamens ist, dass die Möglichkeit eines ‚Redens von Gott' schon immer einer eigenen Reflexion bedurfte.

Die Situation ist derjenigen vergleichbar, die Wittgenstein mit Bezug auf den Ausdruck ‚den Zustand meiner Seele beschreiben' durch die Worte „man kann nun sagen ... und kann es auch wieder *nicht* sagen" charakterisiert (Wittgenstein 1953 § 662; vgl. Schneider 1997). Ohne Zweifel hat u.a. die christliche Tradition erwiesen, dass man den Gehalt religiöser Erfahrungen in einer theistischen Sprache artikulieren *kann*. (Einen nicht theistischen Weg zeigt der Buddhismus, vgl. Schneider 1998.) Wenn man aber meint, Gott sei eine Person wie andere auch (oder die Seele sei ein Ding mit Zuständen, wie die Lunge), dann gilt: Man kann es *nicht* sagen. Ähnlich behandelt Wittgenstein die Schmerzen: Mein Zahnschmerz ist kein Gegenstand wie mein Zahn. Wenn aber der Eindruck entsteht, er wolle zwischen schmerzvollem und schmerzlosem Zustand keinen Unterschied zulassen, dann kann er ausrufen: „Welcher Unterschied könnte größer sein!" (Wittgenstein 1953 § 304) Und ebenso könnte man unter den Prämissen von James sagen: Wir brauchen keinen transzendenten Gegenstand als Referenzobjekt, um mit Bezug auf das Verhältnis zwischen einem depressiven und einem erleuchteten Leben zu sagen: Welcher Unterschied könnte größer sein!

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Bayesian Arguments for Weak Foundationalism

Gerhard Schurz, Düsseldorf

In this talk I give some simple arguments why there is an intrinsic need in Bayesian epistemology for a weak kind of foundationalism and for objective probabilities. My arguments are as follows:

1. Arguments based on (Jeffrey) condition-alization:

In Bayesian conditionalization of the simplest kind, we have two logically independent propositions A, B, and a prior probability distribution P_o over {±A∧±B} ("±" for "negated or unnegated") at a time t_o. The probabilities are completely determined by the values of the nodes of the corresponding Bayes net $P_o(B|A)$, $P_o(B|\neg A)$, and $P_o(A)$. Already the orientation of the Bayes net indicates that we take "A" as epistemically prior to "B". But nothing in Bayesian epistemology makes this assumption explicit. At time t_1, a new experience is made, with the result that the initial probability of A at t_1, call it $P_{1\text{-in}}(A)$, is significantly greater than $P_o(A)$. Now, the probability $P_{1\text{-in}}(A)$ is incoherent with $P_o(B|A)$, $P_o(B|\neg A)$, and $P_o(B)$. So the question is: *how should one rationally change his or her probability values in order to make them coherent again.* We denote the new coherent probability distribution by P_1. Prima facie there are three possibilities: (i) change $P_o(B)$! ; (ii) change $P_o(B|A)$ and/or $P(B|\neg A)$, and (iii) change $P_{1\text{-in}}(A)$.

1.1 Bayesian conditionalization requires epistemic priority of evidence: What one never does in Bayesian conditionalization is to reset $P_{1\text{-in}}(A)$ to $P_1(A) := P_o(A)$. This would, for example, be the right kind of reaction if one is convinced of $P_o(B)$ to an extremely high degree, so that one concludes that the new experience leading to $P_{1\text{-in}}(A)$ was a wrongly interpreted or errorness experience. In Bayesian conditionalization, however, one takes the new initial probability value $P_{1\text{-in}}(A)$ for granted, i.e., one assumes $P_{1\text{-in}}(A) = P_1(A)$. This shows that Bayesian conditionalization presupposes a distinction between what counts as evidence – A – and what counts as predictive (singular) hypothesis – B. The probability values of evidence statements are immediately given as *inputs*; the probability values of hypotheses are calculated from the probabilities of evidence statements. This is a weak kinds of foundationalism: it implies an epistemic priority, though not an infallibility, of evidence statements.

1.2 Bayesian conditionalization requires objective and causally supported conditional probabilities: Even if we take it for granted that A counts as evidence, and hence set $P_1(A) := P_{1\text{-in}}(A)$, then there are still two possibilities left: we may change the unconditional probability of B, or we may change the conditional probability of B given A (and/or B given ¬A). In Bayesian conditionalization one assumes that $P_0(B|A) = P_o(B|A)$, and likewise for ¬A. In other words, the conditional probability of the prediction B given the evidence A is *stable* under new incoming evidence. But *why* should that hold? Note that p(B|A) is nothing but a quotient P(A∧B) / P(A) of two unconditional probabilities. Moreover, I will give some examples where the change of the conditional probability will indeed be the more appropriate reaction. I claim that the natural reason why P(B|A) is considered as stable as against new incoming evidence is the fact that P(B|A) is considered as an objective, statistically interpreted probability value of the corresponding event-*types* p(Bx|Ax). But even this is not enough. It can be shown that in the usually Bayesian update rule, where one sets

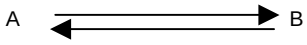
$$P_1(B) = P_0(B|A) \,.\, P_1(A) + P_0(B|\neg A).P_1(\neg A) \quad \text{where}$$
$$P_1(B|\pm A) := P_o(B|\pm A)$$

it follows that the inverse conditional probability values *change* their value (at least in most cases) – that is, it will indeed hold that $P_1(A|B) \neq P_o(A|B)$ (and likewise for ¬B). So why is P(B|A) considered as invariant, but not P(A|B)? I claim that it is implicitly assumed that the direction from A to B reflects a directed (direct or indirect) *causal* influence from A to B. Only conditional probabilities reflecting causal influence are treated as stable in Bayesian conditionaliza-tion.

2. Bayesian arguments for non-circularity

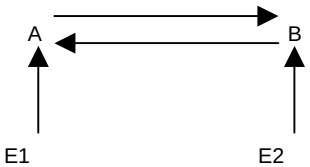
Within the same framework of Bayesian conditionalization I will show that there cannot exist (completely) circular justification Circular justification means that, given some moderate probability value p(A), it is possible to justify B with help of A, leading to an increase of p(B), and then to justify A with help of the so justified B, leading to a further increase of p(A).

Consider the following graph



where the arrows mean high conditional probabilities. If p(A) increases, this will produce an increase of p(B) (given the conditional probability p(B|±A) is held fixed.) However, this increase of p(B) *will not produce a further increase of p(A)*. This is a crucial difference to, for example, winner-take-all networks.

I will also show that Bayesian networks *do allow for partially circular justification*, which are displayed by the following graph:



It can be shown that given an increase of P(E1) and of P(E2), the increase of P(E1) will have an effect on P(B), and the increase of P(E2) will have an effect on P(A), which is only possible because of the circular probabilistic support between A and B.

3. Bayesian arguments against extreme coherentism

Under extreme coherentism I understand the viewpoint that (i) the internal justification of belief set $B \subseteq L$ (L the formal language) is a function of our probability distribution over B (and over L), and that (ii) this probability distribution is chosen by the requirement of maximal internal coherence, where the internal coherence is a function of this probability distribution. Thus we choose our probability distribution for each $B \subseteq L$ in a way that the internal coherence of B becomes maximal. Then we choose that $B^* \subseteq L$ as our belief set which has highest coherence among all L-subsets .

If we map each atomic formula At into its negation and call this function f, we can construct for each probability function P an f-isomorphic probability distribution $P_\neg$ such that for each atomic formula At, $P_\neg(At) = P(\neg At)$. Moreover we get, for each belief set B, a corresponding belief set $B_\neg$. The unconditional and conditional P-probabilities over elements of B will have exactly the same values as the corresponding unconditional and conditional $P_\neg$-probabilities over the corresponding (subformula-negated) elements of $B_\neg$. Therefore the $P_\neg$-coherence of $B_\neg$ will be the same as the P-coherence of B. This means that by the method of extreme coherentism, we can construct for each maximally coherent belief set B many other belief sets B' differing from B in that for some atomic statements they assert the exact denial, which are equally internally coherent with respect to correspondingly modified probability functions.

Wittgenstein in Berlin

Monika Seekircher, Innsbruck

In diesem Aufsatz werden die möglichen Gründe für Wittgensteins Maschinenbaustudium an der Technischen Hochschule in Berlin näher betrachtet, wobei vielfältige Bezüge der Familie Wittgenstein zur Technik und zu Berlin aufgezeigt werden. Auch auf Wittgensteins – allerdings eher spärlich dokumentierte – Beziehungen in Berlin wird hier kurz eingegangen. Abschließend wird ein Zusammenhang zwischen Wittgensteins ingenieurwissenschaftlichen Studien und seiner Abbildtheorie der Sprache dargestellt und somit gezeigt, dass sich seine Beschäftigung mit der Technik auch in seiner Philosophie widerspiegelt.

Wittgenstein wollte ursprünglich bei Ludwig Boltzmann (1844-1906) Physik studieren, was durch dessen Selbstmord nicht mehr möglich war. Daraufhin entschied sich Wittgenstein für ein Maschinenbaustudium an der Technischen Hochschule in Berlin, wo er laut Matrikelbuch des TU-Hochschularchivs vom 23.10.1906 bis 5.5.1908 inskribiert war. Zunächst erweckt diese zweite Wahl den Eindruck einer Notlösung. Bei genauerer Betrachtung kann man jedoch erkennen, dass Wittgensteins Maschinenbaustudium durchaus nicht zufällig gewählt ist, sondern dass es sehr interessante Bezüge der Familie Wittgenstein sowohl zur Technik als auch zu Berlin gibt.

Bereits Wittgensteins Vater Karl (1847-1913) besuchte die Technische Hochschule in Wien und arbeitete sich dann zu einem Großindustriellen und "Schöpfer" der österreichischen Stahlindustrie empor. Er arbeitete 1872 zunächst als technischer Zeichner in Ternitz in Niederösterreich, wo er Pläne für die Teplitzer Walzwerke in Böhmen zeichnete, zu deren Bau er 1873 als Ingenieur berufen wurde. 1876 wurde er in den Direktionsrat der Teplitzer Werke gewählt. (Vgl. Sjögren 1989, 101f.) Leiter der Eisen- und Stahlwerke in Ternitz und Teplitz, sowie der Rothschildwerke in Witkowitz in Böhmen war Paul Kupelwieser (1843-1919), dessen Bruder Karl Kupelwieser (1841-1925) mit Karl Wittgensteins Schwester Bertha verheiratet war. Somit fand Karl Wittgenstein über die Familie Kupelwieser Eingang in die Stahlindustrie. Ein weiterer Techniker in der Familie Wittgenstein war Johann Nepomuk Oser, der Mann von Karl Wittgensteins Schwester Josefine. Er war Professor an der Technischen Hochschule in Wien war und für einige Zeit sogar Rektor.

Aber nicht nur zu den Ingenieurwissenschaften, sondern auch zu Berlin, insbesondere zu Otto von Bismarck (1815-1898) hatte die Familie Wittgenstein interessante Verbindungen. Louis Wittgenstein, ein Bruder von Karl Wittgenstein war ein großer Verehrer von Bismarck und lernte diesen auch persönlich kennen, wie Hermine Wittgenstein in ihren *Familienerinnerungen* schildert. (Vgl. H. Wittgenstein, 207f.) Karl Wittgenstein gelang es sogar, dass der Arzt von Bismarck bei einem schweren Krankheitsfall unter seinen Angestellten aus Berlin anreiste. (Vgl. H. Wittgenstein, 69) Außerdem bezieht sich Karl Wittgenstein auch in einigen seiner Artikel mehrfach auf Bismarck, wobei er mit großer Anerkennung von Bismarck spricht. (Vgl. K. Wittgenstein 1984, 80 u. 171)

Diese Bismarckverehrung scheint auch auf Ludwig Wittgenstein gewirkt zu haben. Er zeigt sich in einem Brief an Norman Malcolm vom 5.2.1948 von Bismarcks Autobiographie sehr beeindruckt: "I read in Grimm's fairy tales & in Bismarck's 'Gedanken & Erinnerungen' which I admire greatly. I don't mean, of course, that my views are Bismarck's views. It's written in very excellent, though rather difficult German, as the sentences are very long. Otherwise I'd recommend you to look at it."

Der Bezug der Familie Wittgenstein zu Bismarck und zu Berlin ist zwar in Zusammenhang mit Wittgensteins Maschinenbaustudium in Berlin erwähnenswert. Aber von sicherlich wesentlich größerer Bedeutung ist in diesem Zusammenhang der indirekte bzw. im zweiten Fall sogar direkte Bezug zu den beiden Berliner Maschinenbauprofessoren Franz Reuleaux (1829-1905) und Alois Riedler (1850-1936). Reuleauxs zweibändige *Kinematik*, welche an der Technischen Hochschule in Berlin prägenden Einfluss hatte, fand Wittgenstein in der Bibliothek seines Vaters vor. Wittgensteins Vertrautheit mit diesem Werk zeigt sich daran, dass sich in seinem Nachlass Darstellungen von Maschinen finden, die Reuleauxs *Kinematik* entnommen sind.[1]

Aber auch wenn die Technische Hochschule in Berlin durch die Verbindung mit Franz Reuleaux anziehend auf Wittgenstein gewirkt haben mag, so war doch eine Begegnung mit diesem nicht mehr möglich, denn er war bereits 1905 gestorben. 1897 hatte er zum letzten Mal gelesen. Inzwischen hatte schon Reuleauxs wissenschaftlicher und hochschulpolitischer Antipode Alois Riedler, der seit 1888 Professor für Maschinenbau und um 1909 zudem Rektor der Hochschule war, grundlegende Änderungen der Ingenieurausbildung an der Technischen Hochschule in Berlin durchgeführt, wodurch das Studium wesentlich praxisbezogener wurde.

Auch Riedler hatte einen Bezug zur Familie Wittgenstein, und zwar einen sehr konkreten. Er publizierte 1892 in der *Zeitschrift des Vereines dt. Ingenieure* den Aufsatz "Die Abteufung des Max-Schachtes der Prager Eisenindustrie-Gesellschaft in Kladno". Die Wittgensteins besaßen in Kladno, der bedeutendsten Industriestadt in der mittelböhmischen Region, Stahlwerke. 1885 brachte Karl Wittgenstein die Organisation der böhmischen Eisenindustrie zum Abschluss. In Kladno errichtete er seiner Frau ein Denkmal, indem er dort ein neues Werk – die Poldihütte – bauen ließ. (Vgl. McGuinness 1988, 38) In der Einleitung zu diesem Artikel von Riedler heißt es:

> In den Jahren 1889 und 1890 wurde im gleichen Kohlenfelde der 520 m tiefe Max-Schacht nach den Angaben des Hrn. Bergrates Bacher abgeteuft. Hierbei wurde das Abteufsystem unverändert beibehalten, jedoch mit vollkommenen maschinentechnischen Mitteln und unter Benutzung aller bisherigen Erfahrungen durchgeführt. Indem ich über diese Schachtabteufung berichte, kann ich gleich vorausschicken, dass sie nach dem gewählten System genau programmgemäß und in musterhafter Weise von Oberingenieur Hrn. Sedlak durchgeführt wurde.
> Das System der Abteufung bewährte sich in jeder Beziehung vollständig, und es wurden ganz hervorragende Leistungen erzielt. (Riedler 1892, 446)

Der hier erwähnte Bergrat Bacher arbeitete für Karl Wittgenstein und war der Schwiegervater von Carl Sjögren,

[1] Darauf wies Michael Nedo in seinem Vortrag beim Symposium "Ludwig Wittgenstein: Ingenieur – Philosoph – Künstler" vom 26. bis 28. September 2001 in Berlin hin. (Vgl. dazu auch das Programmheft zu diesem Symposium)

der ebenfalls – allerdings nur für kurze Zeit, da er bereits früh starb – bei Karl Wittgenstein angestellt war. Die junge Witwe Mima Sjögren und ihre drei Söhne Nils, Arvid und Carl, die später ebenfalls technische Berufe ergriffen, hatten enge Verbindungen zur Familie Wittgenstein, auch zu Ludwig Wittgenstein, der insbesondere mit Arvid Sjögren eng befreundet war, wie dies in über 60 Briefen von Arvid Sjögren dokumentiert wird.

Der Bezug Riedlers zu Kladno und Bacher ist ohne Beziehung Riedlers zu Karl Wittgenstein kaum denkbar. Ein eindeutiger Beweis für eine solche Beziehung findet sich in Karl Wittgensteins Artikel "Freihandel und Schutzzoll", der erstmals 1903 in der *Zeitschrift des Österreichischen Ingenieur- und Architekten-Vereines* (Nr. 12) erschienen ist und in dem er schreibt: "[...] aus meiner früheren Tätigkeit kann ich mich erinnern, daß wir in allen schwierigen Fragen Professor Dörfler in Prag und Geheimrat Riedler in Berlin zu Rate gezogen haben und unsere Maschinen von ihnen konstruiert wurden." (K. Wittgenstein 1984, 104) Riedler fungierte somit als Ratgeber von Karl Wittgenstein.

Damit seien die Beziehungen der Familie Wittgenstein zu Berlin und zur Technik hinreichend dargestellt, um einen Zusammenhang zwischen Wittgensteins Maschinenbaustudium an der Technischen Hochschule in Berlin und dem Beziehungsgeflecht der Familie Wittgenstein zu vermuten. Bei Wittgensteins Maschinenbaustudium in Berlin handelt es sich zwar um eine zweite Wahl, aber dennoch um keine zufällige Wahl. Vielmehr scheinen die Beziehungen der Familie Wittgenstein ein wichtiges Motiv, wenn nicht das entscheidende Motiv für seine Wahl gewesen zu sein. Jedenfalls war die Sache nicht das entscheidende Kriterium, denn sonst hätte Wittgenstein bei der Physik bleiben müssen.

Von Beziehungen, die Wittgenstein während seiner Zeit in Berlin selbst geknüpft hatte, ist hingegen wenig bekannt, was darauf zurückzuführen ist, dass keine Dokumente Wittgensteins aus dieser Zeit erhalten sind. Bislang konnten nur drei Personen eruiert werden, die Wittgenstein in Berlin näher kennen gelernt hat: Stanislaus Jolles (1857-1939), Professor für Darstellende Geometrie an der Technischen Hochschule, dessen Frau Adele Jolles und Hermann Thun, ein Studienkollege von Wittgenstein. Stanislaus und Adele Jolles, bei denen Wittgenstein wohnte, blieben auch nach seiner Zeit in Berlin mit Wittgenstein in Briefkontakt. Es sind insgesamt 58 Korrespondenzstücke aus diesem Briefwechsel erhalten, allerdings nur ein Brief von Wittgenstein. Dabei handelt es sich vor allem um Feldpostkarten, in denen es vielfach um Sendungen von Essenspaketen geht, und daher von Anton Unterkircher unter dem Titel "Schokoladenbriefe" herausgegeben wurden. (Vgl. Unterkircher 2001)

Von Hermann Thun (geb. 1886), der 1905 zunächst an der TH Aachen und dann 1906-1910 an der TH in Berlin studierte, wo er auch seinen Dipl.-Ing. für Maschinenbau erlangte, ist nur ein Brief an Wittgenstein erhalten, obwohl – wie aus diesem Brief hervorgeht – zumindest ein "bescheidener Briefwechsel" zwischen den beiden ehemaligen Studienkollegen stattgefunden hat. In diesem Brief vom 10. Oktober 1920 aus Essen heißt es, nachdem Thun zunächst seine Frau und sein dreijähriges Töchterchen vorgestellt hat:

> Eigentlich wollte ich nichts wieder von mir hören lassen, bis ich Sie eines Tages mit der Rückgabe jener Summe überraschen konnte. Bei den jetzigen Verhältnissen ist das doch recht schwierig. Im vorigen Jahre bekam ich von Krupp für Erfindungen eine größere Summe, die ich aber für meinen jungen Haushalt bald wieder verbrauchen mußte. Sodann habe ich mit Krupp zwei Licenzverträge über weitere Erfindungen, welche aber außer von den üblichen noch von besonderen Umständen abhängig sind. Vielleicht schieße ich aber doch einmal den Vogel ab, und dann werde ich zuerst an Sie denken.
>
> Mit meinen Arbeiten habe ich gute Erfolge gehabt, meine erste, eine Sache für die Marine, mußte leider infolge des unglücklichen Kriegsausganges beiseite gelegt werden, als sie gerade fertig war. Ich mache genau das, was ich Ihnen seinerzeit vorschlug, auf eigenes Risiko zu unternehmen. Finanzielles wäre bei einer solchen Tätigkeit genau so wenig vorgekommen wie bei der eines Arztes oder dergl. Dies zur nachträglichen Entschuldigung.

Von November 1916 bis Mai 1925 arbeitete Thun als Konstrukteur bei der Firma Krupp in Essen. Zu den von Thun angesprochen Erfindungen äußert sich Ralf Stremmel vom Historischen Archiv Krupp in Essen folgendermaßen:

> Thun scheint zeitweise unter nervösen Spannungen gelitten zu haben. Auch aus diesem Grund ist unklar, was von seinen "Erfindungen" zu halten ist. Klar zu rekonstruieren sind sie mit den uns zur Verfügung stehenden Quellen leider nicht. Nach eigenen Angaben erfand er 1910-1912 eine Frankiermaschine und gründete zu deren Produktion eine eigene Firma (Harco-Frankierapparate GmbH in Schwelm), aus der er jedoch im Februar 1913 wieder ausschied. Als Erfindung aus seiner Zeit bei der Firma Krupp nennt Thun eine Meßmaschine (Planimeter). Diese Maschine ist augenscheinlich nie in Produktion gegangen, und Zahlungen der Firma an Thun für die Erfindung finden sich in den Akten nicht. Nach seinem Ausscheiden bei Krupp will Thun unter anderem noch einen "elektrischen Spannungsregler" erfunden haben. In den – allerdings nur lückenhaft überlieferten – Unterlagen des Kruppschen Patentbüros gibt es im Übrigen keine Hinweise auf Erfindungen von Thun. (Brief vom 16.10.2002 an die Verfasserin)

Auch zur Firma Krupp hatte die Familie Wittgenstein Verbindungen, insbesondere über Paul Kupelwieser, der von Alfred Krupp sogar ein sehr lukratives Stellenangebot erhielt, das dieser jedoch nach längerer Überlegung ablehnte. (Vgl. Kupelwieser 1918, 165f.) Damit sind die Beziehungskreise der Familie Wittgenstein wieder geschlossen und die spärlichen Spuren aus Wittgensteins Zeit in Berlin, zumindest was persönliche Beziehungen anbelangt, erwähnt.

Im folgenden soll am Beispiel der Abbildtheorie der Sprache gezeigt werden, dass Wittgensteins Maschinenbaustudium auch in Zusammenhang mit seiner Philosophie gesehen werden kann, dass sozusagen ein direkter Einfluss seiner technischen Studien auf seine Philosophie festgestellt werden kann. Die Tatsache, dass Wittgenstein in Berlin bei Stanislaus Jolles wohnte, ließ bereits McGuinness in seiner Wittgenstein-Biographie vermuten, dass es einen Zusammenhang zwischen der Abbildtheorie des *Tractatus* und den Lehrfächern von Jolles gibt:

> Dabei geht einer der Hauptgedanken des Buches, nämlich die Vorstellung des Satzes als Bild, in vielem auf Überlegungen zurück, die mit den Lehrfächern von Prof. Jolles zu tun haben; denn Jolles lehrte Darstellende Geometrie (also Verfahren zur Darstellung dreidimensionaler räumlicher Figuren durch zeichnerische Wiedergabe in einer Ebene) und Graphische Statik (eine

> Methode zur graphischen Reduktion von Kräftesystemen und zur Darstellung der resultierenden Kraft, des Kräftepaars oder des Gleichgewichts). (McGuinness 1992, 110)

Wenn man sich Wittgensteins Abbildtheorie der Sprache vor Augen führt, die von der Projektion von Tatsachen auf Sätze ausgeht, so erinnert das tatsächlich sehr stark an geometrische Modelle. Ähnlich wie geometrische Zeichnungen sind gemäß Wittgenstein auch Sätze Bilder der Wirklichkeit, wobei die Projektion in beiden Fällen auf einer Isomorphiebeziehung beruht, d.h. Urbild und Abbild haben dieselbe Struktur. Genau diese abbildende Beziehung, die Strukturgemeinsamkeit, die Wittgenstein die Form der Abbildung nennt, zeigt sich und ist daher nicht sagbar. Damit ist auch das Grundprinzip geometrischer Darstellung beschrieben.

Kelly Hamilton hat diesen Gedanken in ihrem Aufsatz "Wittgenstein and the Mind's Eye" herausgearbeitet, wobei sie zeigt, dass Wittgensteins visuelles Denken, welches durch seine Ingenieurausbildung geschult wurde, entscheidend für die Konzeption des *Tractatus* war. Zunächst geht sie auf die Ingenieurausbildung in Berlin zur Zeit Wittgensteins ein und zeigt dann die grundlegende Bedeutung von visuellem Denken für Ingenieure auf. Genau auf dieser Form visuellen Denkens – so zeigt Hamilton als nächsten Schritt – basiert Wittgensteins *Tractatus*:

> The engineer can "see" the structure of a projected machine; he can actually think through in his mind's eye how the principles will work in a nonverbal fashion. I am arguing that this is one way the engineering mindset, with its implicit reliance on visual thinking, shaped Wittgenstein's understanding of the nature of language and thought in the *Tractatus*. What is important to keep in mind here is that the ability to see basic, simple elements in their various possible configurations would have been second nature to Wittgenstein given his engineering training. (Hamilton 2001, 73)

Susan Sterrett sieht ebenfalls einen Zusammenhang zwischen Wittgensteins Abbildtheorie der Sprache und seiner Ausbildung als Maschinenbauingenieur. In ihrem Aufsatz "Physical Pictures: Engineering Models circa 1914 and in Wittgenstein's Tractatus" befasst sie sich mit der Verallgemeinerung der Methode von maßstabgetreuen Modellen. Wittgensteins Idee, Sätze als Bilder aufzufassen, kommt gemäß Sterrett erstmals in seiner Tagebucheintragung vom 29.9.1914 zum Ausdruck: "Im Satz wird eine Welt probeweise zusammengestellt. (Wie wenn im Pariser Gerichtssaal ein Automobilunglück mit Puppen etc. dargestellt wird.)" (MS 101) Diese Einsicht steht in Zusammenhang mit der allgemeinen Form des Satzes, worauf Wittgenstein unmittelbar davor zu sprechen kommt: "Der allgemeine Begriff der Satzes führt auch einen ganz allgemeinen Begriff der Zuordnung von Satz und Sachverhalt mit sich: Die Lösung aller meiner Fragen muß höchst einfach sein!" (MS 101) Wittgensteins Idee einer Abbildtheorie der Sprache entwickelte sich also schon bald nach seinem Maschinenbaustudium in Berlin und Manchester. Es ist daher nicht verwunderlich, wenn seine ingenieurwissenschaftlichen Techniken in den *Tractatus* einfließen. Damit ist hier nur ein Aspekt erwähnt, an dem der Einfluss von Wittgensteins ingenieurwissenschaftlichen Studien auf seine Philosophie erkennbar wird. Es lassen sich noch weitere Aspekte finden, die einen Zusammenhang zwischen Wittgensteins Beschäftigung mit der Technik und seiner Philosophie deutlich machen. (Vgl. Seekircher 2003)

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What our Rylean Ancestors Knew: More on Knowing How and Knowing That

Joseph Shieber, Easton / PA

In their recent article "Knowing How,"[1] Jason Stanley and Timothy Williamson deny that there is a fundamental distinction between knowing-how and knowing-that, claiming instead that knowledge-how is rather a form of knowledge-that. I contend that Stanley and Williamson are incorrect in rejecting the distinction between knowledge-how and knowledge-that. Our Rylean ancestors, and Ryle himself, had a genuine insight in recognizing knowing-how and knowing-that as distinct phenomena. This discussion will be divided into two sections. In section 1, I discuss some implications of what I take to be our naïve notion of knowing-that. In section 2, I turn to a defense of Ryle's argument in favor of the distinction between knowledge-how and knowledge-that against the criticisms leveled against it by Stanley and Williamson.

I

Consider the following three cases:

> (1) Steve, the ski-instructor, knows how some professional skier skis the course in record time, though Steve is unable to do so that fast himself.
>
> (2) Pete, the paraplegic pianist, knows how to play the piano part in Beethoven's "'Triple Concerto' for Violin, Cello and Piano in C," Op. 56, although Pete is unfortunately no longer able to do so.
>
> (3) Chip, the chicken-sexer, knows how to tell the sex of baby chicks, though he does not know how he knows.

All three of these cases demonstrate senses in which we say that one knows how to ϕ. All three are similar in at least the following senses. They all involve a reliable disposition (where this may be a disposition to believe) or ability of the agents in question. Furthermore, they all involve personal dispositions (where these may include dispositions to believe) or abilities of the knowers in question. Thus, none of the three support the extension of the notion of knowing-how to non-intentional actions or sub-personal dispositions, such as digesting food or breathing. That is, no human knows how to digest food or to breathe, precisely because such actions are non-intentional actions for humans.

Despite these similarities between the three cases, there are some striking differences between them. Crucial among these for our discussion here is a pair of ways in which (1) and (3) markedly differ from each other. Whereas (3) involves a reliable ability on the part of the knower-how to perform an action (in the particular case considered, to sort chicks), (1) involves no such ability. As the case was presented, it was explicitly stipulated that Steve the ski-instructor not be able to ski in the way he was nevertheless reliably able to recognize as being the way to ski the course in record time. Thus, (3) employs a sense of knowledge-how involving the possession of a reliable ability, whereas (1) does not. We will refer to this sense of knowing-how as the *performative* sense.

There is a further way in which (1) differs from (3), the second of the crucial ways alluded to above. As we noted, (1) involves a case in which Steve the ski-instructor has a reliable recognitional capacity: when presented with various ways of skiing the course, he is reliably able to say which will be the way to ski it in record time. Furthermore, it seems reasonable to suppose that part of this recognitional capacity rests in Steve's being able to recognize, when he himself is skiing, which ways of skiing are appropriate for which sorts of powder, etc. Call this sort of recognition, which would seem to rest in part on phenomena such as muscle-memory and other practical modes of presentation collectively known as the way a certain activity or performance "feels," *proprioceptive* acquaintance. Contrast the role that such acquaintance plays in (1) with the lack of such a phenomenon in (3). Although there might be some series of sub-personal mechanisms whose workings would characterize the way in which Chip the chicken-sexer sorts baby chicks, it would be a mistake to suppose that Chip's ability requires that he have any sort of awareness of the way in which he performs that action. Thus, this second distinction between (1) and (3) highlights the second sense of knowledge-how, that of acquaintance with a way of bringing about a state of affairs. Call this the *acquaintance sense*.

Note of course that, in asserting that some cases of knowledge-that do not fall under the acquaintance sense of knowledge how to ϕ, one need not claim that agents can know how to ϕ without being acquainted with *anything* – including, e.g., their external environment – rather, one need merely claim that one need not be aware of, or acquainted with, any particular way of ϕ'ing in order to possess knowledge how to ϕ. Indeed, it is imperative that one recognize the prevalence of cases of knowledge-that that do *not* comport with the acquaintance sense. Indeed, there are many sorts of abilities that one can acquire and exercise without having any particular sort of proprioceptive awareness or acquaintance. Indeed, a good deal of the skills honed by high performance athletes, surgeons, musicians, and others are ones the exercise of which is actually hampered by an attempt on the part of the agent to shape her performance on the basis of an explicit awareness of the way in which she performs. That is, acquaintance with a way of ϕ'ing is actually inimical to at least some forms of knowing-how to ϕ.

The case exemplified by (2) is a particularly interesting one, as it poses a challenge to a naïve understanding of both the acquaintance and performative senses of knowledge-how. The difficulty posed by (2) for the performative notion of knowledge-how is easier to recognize. Pete is no longer able to perform the piano part of Beethoven's "Triple Concerto;" nevertheless, we still feel comfortable attributing knowledge how to Pete. Nor, however, can we explain this fact straightforwardly in terms of the acquaintance sense of knowing-how. Certainly, there are certain proprioceptive sensations – those involving balance or the performance of certain specific muscle-tasks – that are no longer available to one who has lost the use of some or all of his limbs. Let us stipulate that Pete, due to his injury, is in such a situation. That is, were Pete to have the use of his limbs, he would be able reliably

[1] Jason Stanley and Timothy Williamson, "Knowing How," *The Journal of Philosophy* (2001): 411-44.

to pick out, through proprioceptive acquaintance, the way to play the piano part of Beethoven's "Triple Concerto." However, since he does not, Pete is no longer even dispositionally acquainted with the way to play the piano part of Beethoven's "Triple Concerto." That is, the acquaintance sense seems to be in the same situation with respect to cases like (2) as the performative sense: it seems on the face of it that we attribute knowledge how to Pete due to the fact that, if he had the use of his limbs, he would be acquainted with the way of performing the piano part of Beethoven's "Triple Concerto." This, however, is true of Pete's ability as well: were he to have the use of his limbs, he would be able to perform the piano part.

Let us recap. So far we have attempted to sketch an intuitive motivation for the idea that there are two independent senses associated with knowledge how, an acquaintance sense and a performative sense, and provided examples of cases of knowledge how in which one or the other sense would not apply. It is interesting to note that the two senses of knowledge how do have striking parallels to distinct aspects of knowledge that: the performative sense of knowledge how mirrors the significance of reliability for knowledge that, whereas the acquaintance sense of knowledge how mirrors the fact that knowledge that is a representational state of subjects. Thus, although we will be arguing that knowledge how is not a form of knowledge that, it would be futile to ignore the significant parallels between the two phenomena.

II

In the last section we amassed an amount of independent evidence in favor of the idea that at least one sense of knowledge how, the performative sense, is not a form of knowledge that. There is still the matter, however, of Stanley's and Williamson's critique of Ryle.

Stanley and Williamson[2] suggest that Ryle argues as follows. He assumes (in order to employ a *reductio ad absurdum*) that [I] all knowledge how to ϕ is knowledge that ___ ϕ. He then argues that (a) when one intentionally ϕ's, one employs knowledge how to ϕ, and (b) if one employs knowledge that *p*, one must contemplate the proposition that *p*. This means that, for any S, if S ϕ's, then – according to (a) – S employs knowledge how to ϕ. By [I], if S employs knowledge how to ϕ, then S employs knowledge that ___ ϕ. According to (b), however, if S employs knowledge that ___ ϕ, then S must contemplate the proposition that ___ ϕ. But contemplating the proposition that ___ ϕ is itself an action. Thus begins the regress.

In objecting to Ryle's argument, Stanley and Williamson build on a reply to Ryle given by Ginet in his *Knowledge, Perception, and Memory*.[3] There, Ginet argues that Ryle is mistaken, in the application of (b) to S's employment of knowledge that ___ ϕ, to suggest that, when one employs one's knowledge that *p* one performs the distinct action of contemplating the proposition that *p*. Thus, I employ my knowledge that opening a door is the best way to leave a room, and that turning a doorknob is the best way to open a door, by turning the knob and opening the door – and without contemplating the propositions in question. The only way that Ryle can dispute Ginet's argument, Stanley and Williamson suggest, is by interpreting the contemplation of propositions as a non-intentional – or otherwise deflated sense – of action. However, as they rightly suggest, their reformulation of premise (a) of Ryle's argument requires that the action in question be an intentional action. Thus, they argue, Ryle's argument relies on an equivocation for its force; it is, in fact, unsound.

In taking Ryle's argument to deal simply with intentional actions, however, Stanley and Williamson have done him a disservice. In fact, Ryle considers not intentional actions, simpliciter, but those that we would characterize as "intelligent." In the context of discussion, "intelligent" actions, for Ryle, are those actions that display knowledge how. In *The Concept of Mind*, for example, Ryle summarizes his argument against the idea that all knowledge how is a species of knowledge that as follows:

> To put it quite generally, the absurd assumption made by the intellectualist legend [i.e., the idea that all knowledge how is a form of knowledge that] is this, that a performance of any sort inherits all its title to intelligence from some anterior internal operation of planning what we do. … By the original argument, therefore, our intellectual planning process must inherit its title to shrewdness from yet another interior process of planning to plan, and this process could in turn be [analyzed with respect to its shrewdness]. The regress is infinite.[4]

Thus, Stanley and Williamson are correct insofar as they see Ryle's argument as a species of infinite regress argument, but incorrect in seeing the argument simply as referring to all intentional actions. How, exactly, are we to understand it?

The argument rests on the following considerations. Ryle seems to characterize the "intellectualist legend," the idea that knowledge how is a species of knowledge that, as comprised by the following thesis:

> [INTELLECTUALISM] ϕ'ing on the basis of one's knowledge how to ϕ requires that one guide one's actions on the basis of one's knowledge of the proposition that ___ ϕ.

The argument then seems to run as follows:

> (1) If one's action is a knowledgeable performance of ϕ, then one ϕ's on the basis of one's knowledge how to ϕ.
>
> (2) [INTELLECTUALISM]
>
> (3) If one's guidance of one's actions on the basis of one's knowledge of the proposition that ___ ϕ is itself to be knowledgeable, then one guides one's actions on the basis of one's knowledge of the proposition that ___ ϕ on the basis of one's knowledge how to guide one's actions on the basis of one's knowledge of the proposition that ___ ϕ.
>
> (4) [INTELLECTUALISM]
>
> -
> -
> -

Thus, according to this analysis, Ryle's argument does not rest on any independently implausible theses concerning what is involved in employing knowledge that *p*, but rather employs simply those theses that the intellectualist himself must accept. Is this in fact the case?

[2] Cf. pp. 413-4.

[3] Carl Ginet, *Knowledge, Perception, and Memory* (Boston: Reidel, 1975), p. 7.

[4] Gilbert Ryle, *The Concept of Mind* (New York: Barnes & Noble Books, 1949), p. 31.

It does not seem that the intellectualist will want to object to premise 1, as this premise simply captures the difference between action on the basis of knowledge how – i.e., knowledgeable action – and action that accidentally achieves the desired result. Thus, we wouldn't call the clumsy person's accidentally flawless performance of a flamenco a knowledgeable performance, precisely because that performance was not executed on the basis of a knowledge how to dance the flamenco.

Nor does it seem that the intellectualist can deny [INTELLECTUALISM]. For precisely such a thesis will be needed if the intellectualist is to rule out the sorts of cases, like Chip the chicken-sexer, which motivated the performative sense of knowledge how in sections 1 and 2. That is, in order to be able to restrict the range of cases of knowledge how to the acquaintance sense, one would have to argue that it is a necessary condition of S's acting on the basis of knowledge how that S guide her actions on the basis of knowledge that ___ ϕ – specifically, in the case of Stanley and Williamson, on the basis of knowledge that *w* is a way of reliably performing ϕ. Indeed, this is what it means to say that knowledge how is a species of knowledge that.

Furthermore, it does not seem that the intellectualist will be able to stop the move to step 3 of the argument by denying that one's guidance of one's actions on the basis of one's knowledge that need be knowledgeable. Recall that "knowledgeable action," in the sense used in the above argument, is simply that action that is based upon the ability of an agent reliably to perform the given action – as opposed to that of an agent who, by sheer luck, manages to perform the same action. If the intellectualist were to stop the argument here, then it seems that he would be forced to relinquish the idea that an agent's guidance of her own actions – in those cases in which the agent exercises her knowledge how – is itself no different than that of an agent who guides her actions through sheer luck.

Aspekte philosophischer und religiöser Gewißheit bei Ludwig Wittgenstein

Ilse Somavilla, Innsbruck

Obwohl Wittgenstein die uns bekannten Notizen über die Problematik von Gewißheit erst in den letzten anderthalb Jahren seines Lebens niedergeschrieben hat, geben zahlreiche Aufzeichnungen aus früherer Zeit Zeugnis, daß dieses Thema ihn von Beginn seines Philosophierens an beschäftigt hat. Dabei läßt sich eine unterschiedliche Herangehensweise beobachten, den Schwerpunkten seiner Fragestellungen gemäß. D.h., die Grenze zwischen den Möglichkeiten wissenschaftlicher und religiöser Aussagen wird früh gezogen.

Entsprechend diesen zwei Ebenen, möchte ich im folgenden zum einen Wittgensteins Überlegungen über Gewißheit im philosophischen Sinn, zum andern über Gewißheit im Glauben erörtern.

In seinem *Vortrag über Ethik* nennt Wittgenstein das Gefühl der absoluten Sicherheit als eines der drei Beispiele zum Verständnis von Ethik und spricht dabei über ein selbst erfahrenes Erlebnis, das in ihm dieses Gefühl der Sicherheit bewirkte. Es handelt sich um eine Art mystische Erfahrung des Protagonisten eines Theaterstückes, das Wittgenstein angeblich tief beeindruckte und ihn die Möglichkeit von Religion erkennen ließ (Malcolm, 58).

Es ist nicht auszuschließen, daß dieses Erlebnis Wittgensteins Philosophieren insofern beeinflußt hat, als sich – wie aus dem *Tractatus* ersichtlich – neben seiner analytisch orientierten Sicht- und Denkweise auch ein mystischer Zugang abzeichnete. Auch Russell bemerkte einen Wandel Wittgensteins und fürchtete, daß dieser "ganz zum Mystiker geworden sei"(McGuinness, 432).

Als Wittgenstein sich nach 1929 der Untersuchung des Gebrauchs von Sprache im alltäglichen Leben widmete und sich seine Philosophie in gewisser Weise in Richtung einer pragmatischen und anthropologischen Angelegenheit entwickelte, wies er immer wieder auf die Bedeutung intuitiver und künstlerischer Fähigkeiten hin, und die im *Tractatus* angedeutete Kritik an den Wissenschaften verstärkte sich.

Trotzdem spielt sein Streben nach Klarheit hinsichtlich philosophischer Erkenntnisse weiterhin eine entscheidende Rolle und er gibt zahlreiche Beispiele für seine Untersuchungen über die Sicherheit unseres Wissens und unserer Aussagen darüber, wobei er Begriffe wie "Wissen", "Glauben", "Zweifel" und "Sicherheit" einer eingehenden Analyse unterwirft.

Dies geschieht auf zwei Ebenen - in der Untersuchung der Bedeutung dieser Begriffe im allgemeinen bzw. alltäglichen Sprachgebrauch und in der Untersuchung ihrer Bedeutung in der Philosophie. Es war Wittgenstein klar, daß zwischen der Feststellung "Ich weiß, daß ...", wie sie beiläufig im gewöhnlichen Leben gebraucht wird, und dieser Äußerung, wenn ein Philosoph sie macht, ein Unterschied besteht, so wie es zwischen den Sätzen der Logik und den Sätzen von der Form der Erfahrungssätze einen Unterschied zu subjektiven Äußerungen eines einzelnen Menschen gibt.

Deshalb auch seine lange und ausführliche kritische Auseinandersetzung mit George Edward Moore, der - als Befürworter des sogenannten "common sense" - von der Sicherheit einer Äußerung wie zum Beispiel "Ich weiß, daß das ein Baum ist" überzeugt war.

Wittgenstein jedoch konstatiert diesbezüglich einen entscheidenden Unterschied, ob diese Äußerung von jemandem ohne philosophische Absichten gemacht wird oder innerhalb einer philosophischen Diskussion. Im ersten - alltäglichen - Fall würde Wittgenstein die Äußerung als richtig und "vernünftig" akzeptieren, im zweiten Fall würde er sie - und damit Moore's Behauptung - jedoch anfechten.

In seiner Untersuchung, wann eine Äußerung wie "Ich weiß" sinnvoll bzw. vernünftig ist, kommt er zu dem Schluß, daß die im alltäglichen Sprachgebrauch als vernünftig zu wertende Behauptung "Ich weiß, daß ich L. Wittgenstein heiße" im Rahmen eines philosophischen Disputes – ohne Angabe von Gründen – nicht genüge.

Moore jedoch, der ohne tiefere Hinterfragung mit Überzeugung behauptete, dies und das einfach zu wissen, argumentiere nicht als Philosoph im Sinne des philosophischen Fragens und Zweifelns. Er beziehe sich nur auf Aussagen, wie sie im alltäglichen Sprachgebrauch verwendet und verstanden werden, aber nicht im Sinne einer erkenntnistheoretischen und damit philosophischen Fragestellung. Seine These über die Sicherheit unseres Wissens hinsichtlich sogenannter Binsenweisheiten kann laut Wittgenstein nicht als "Wissen" bezeichnet werden, sondern vielmehr als Ausdruck von Überzeugungen subjektiver Art, die jedoch jeglichen objektiven Wahrheitsanspruch entbehren. Viele Fälle dieser Überzeugungen stützen sich auf eigene Erfahrung und auf die Erfahrung von Mitmenschen, sowie auf Annahmen wie zum Beispiel die Annahme, daß die Erde schon viele Jahre vor unserer Geburt existiert habe; diese "erfahrungsmäßigen Begründungen" sind die Folge davon, daß wir zu einer Gemeinschaft gehören, deren Angehörige durch Wissenschaft und Erziehung verbunden sind (ÜG, § 298).

Angesichts der Problematik, sinnvolle Aussagen über Wissen, Sicherheit und dergleichen zu machen, die philosophisch relevant sind und trotzdem den normalen Sprachgebrauch berühren, weist Wittgenstein auf die Bedeutung von Gestik und Mimik hin. Mit ihrer Hilfe müsse man "zeigen", daß wir nicht nur Wahrheiten über Sinnesdaten, sondern auch solche über Dinge wissen. Selbst wenn jemand nie die Worte "Ich weiß, ..." gebraucht, kann sein Gebaren das zeigen, worauf es uns ankommt" (ÜG, § 427).

Innerhalb eines bestimmten Kontextes können wir mittels Beschreibung den Grund für unser Wissen anzugeben versuchen. Wichtig ist, ob "ein Unterschied in der *Praxis* der Sprache damit zusammengeht" (ÜG, § 524), da der Begriff des Wissens mit dem des Sprachspiels zusammenhängt. Das Sprachspiel ist etwas Unvorhersehbares, d.h. es ist nicht begründet. "Es steht da - wie unser Leben" (ÜG, § 559).

In seinen späten Bemerkungen über Gewißheit wird Wittgensteins Abkehr von logischen Überlegungen im Sinne von sprachanalytischen Zerlegungen, wie er sie im *Tractatus* verfolgte, spürbar. Die Tendenz zur logisch-

stringenten Betrachtung der Dinge wird beibehalten, doch die Grenze zwischen Sätzen der Logik und Erfahrungssätzen erscheint ihm nun nicht mehr so scharf, selbst der Begriff "Satz" wird unscharf.

Theoretische Überlegungen weichen in zunehmendem Maße der Betonung auf "Praxis". In ähnlicher Weise wie Sprache durch Praxis bzw. Handlung bestimmt ist, kennzeichnet Religiosität eine Haltung, die sich in einer bestimmten Lebensweise "zeigt". Voraussetzung dafür ist eine Sicherheit jenseits allen Zweifels. Dies gilt auch für die Sicherheit vom Wissen bzw. der Gewißheit alltäglicher Erfahrungen, wo Wittgenstein nach schier endlos scheinenden Untersuchungen zu dem Schluß kommt, daß es so etwas wie fundamentale Dinge geben müsse, über die man derart sicher ist, daß kein Zweifel mehr besteht. Denn sonst könnte nichts mehr "wahr" oder "falsch" sein. Das Sprachspiel sei eigentlich nur möglich, wenn man sich auf etwas verläßt, was aber nicht heißen soll, daß man sich auf etwas verlassen kann. Daß Gewisses *in der Tat* nicht angezweifelt wird, gehöre zur Logik unserer wissenschaftlichen Untersuchungen (ÜG, § 342).

In seinen Reflexionen über "Ursache und Wirkung. Intuitives Erfassen" betont Wittgenstein, daß die primitive Form des Sprachspiels die Sicherheit sei, nicht die Unsicherheit. Denn die Unsicherheit könnte nicht zur Tat führen. Zuerst sei immer das Einfachere, dann erst folge das Kompliziertere und insofern sei auch unsere Sprache eine "Verfeinerung", die sich aus einfachen Formen zu komplizierteren entwickelt hat - "auf dem Grund fester Lebensformen, regelmäßigen Tuns" (URWI, 115).

Die Funktion der Sprache ist vor allem durch Handlung bestimmt, d.h. das Wesentliche des Sprachspiels ist eine praktische Methode - "keine Spekulation, kein Geschwätz" (URWI, 116).

Da die Grundform des Sprachspiels eine sei, in der gehandelt wird, könne man auch nicht mit dem Zweifel beginnen. Irgendwo müsse der Zweifel aufhören und wir müssen - ohne zu zweifeln - sagen können, daß dies oder jenes aus dieser oder jener Ursache geschehe. Denn die einfache Form bzw. Urform des Ursache-Wirkung Spiels sei die der Bestimmung der Ursache, nicht des Zweifels (URWI, 115).

Wittgenstein unterscheidet zwischen der "beruhigten" Sicherheit und der "noch kämpfenden" Sicherheit.

Die erste ist die des "vernünftigen", nicht-philosophischen Menschen, der sozusagen über gesunden Hausverstand verfügt und nicht von philosophischen Fragen gepeitscht wird. Die beruhigte Sicherheit, die sich in der Feststellung "Ich weiß..." ausdrückt, stellt für Wittgenstein eine Lebensform dar, die aber nicht als der "Oberflächlichkeit" verwandt anzusehen sei, sondern als etwas "Animalisches" (ÜG; § 359). Sie ist der Unerschütterlichkeit eines Gläubigen zu vergleichen, dessen Lebensform von einem Nichtgläubigen nicht verstanden werden kann, doch aus Wittgensteins Sicht keineswegs als etwas Lächerliches abzutun ist.

Während die beruhigte Sicherheit ihrem Charakter nach irrational ist, sucht die noch kämpfende Sicherheit nach rationaler Begründung und beunruhigt sozusagen den Geist.

Obwohl Wittgenstein unsere "Sicherheit" anhand von zahlreichen Beispielen bzw. unterschiedlichen Situationen, in denen wir die Ausdrücke "ich weiß.." oder "ich glaube..." verwenden, untersucht, kommt er letztlich doch zu keiner befriedigenden Antwort, wenn es um eine alles erschöpfende Begründung geht. Denn es sei immer von Gnaden der Natur, etwas zu wissen (ÜG, § 505).

Auch das Gefühl der Sicherheit im religiösen Glauben ist von einer Art "Gnade" abhängig und beginnt dort, wo rationales Denken aufhört oder zu einem Ende kommen muß, da es keine weitere Begründung gibt.

Es ist das im Vortrag über Ethik beschriebene Gefühl der absoluten Sicherheit im Gegensatz zur relativen Sicherheit, die sich auf den Tatsachenraum beschränkt, wo sinnvolle Aussagen gemacht werden können.

Die "beruhigte" Sicherheit, die etwas "Animalisches", Irrationales an sich hat, entspricht dem, was man einen blinden, instinktiven Glauben an etwas nennen könnte – in einem Bereich, wo alle Sprach-, Erklärungs- und Begründungsversuche scheitern.

Der Zusammenhang zwischen instinktivem und - religiösem - Glauben hinsichtlich des Begriffs der Sicherheit ist wiederholt feststellbar, wenn auch meist nur verborgen, in Form von Anspielungen:

"ich WEISS, daß dies mein Fuß ist. Ich könnte keine Erfahrung als Beweis des Gegenteils anerkennen. - Das kann ein Ausruf sein; aber was *folgt* daraus? Jedenfalls, daß ich mit einer Sicherheit, die den Zweifel nicht kennt, meinem Glauben gemäß handeln werde" (ÜG, § 360).

Und Wittgenstein fährt fort: "Ich könnte aber auch sagen: Es ist mir von Gott geoffenbart, daß das so ist. Gott hat mich gelehrt, daß das mein Fuß ist. Und geschähe also etwas, was dieser Erkenntnis zu widerstreiten scheint, so müßte ich *das* als Trug ansehen" (ÜG, § 361).

Die Annahme eines solchen Wissens geht jedoch mit einer "Entscheidung" einher, der Entscheidung, mit Vertrauen zu glauben oder weiterhin zu zweifeln – so wie auch der religiöse Glaube eine Frage der Entscheidung ist. Einer Entscheidung zu einer Änderung der Lebensweise.

Zwischen den Worten "Wissen" und "Glauben" trifft Wittgenstein allerdings eine wesentliche begriffliche Unterscheidung. Während wir keine Gründe anzugeben brauchen, warum wir etwas glauben, erfordert die Äußerung "Ich weiß..." eine exakte Begründung durch den objektiv feststellbaren Beweis von der Unmöglichkeit eines Irrtums. Moore's Fehler sieht Wittgenstein deshalb darin, seinen Überzeugungen mit den Worten "Ich weiß, ..." anstatt mit "Ich glaube, ..." Ausdruck verliehen zu haben.

Der Schwierigkeit, Begriffe wie Sicherheit, Wissen und dergl. zu definieren, ist sich Wittgenstein bereits im alltäglichen Leben bewußt. Umso schwerer findet er es, den Glauben zu begründen, da am Grunde des begründeten Glaubens der unbegründete Glaube liegt (ÜG, § 253).

Das Problem liegt vor allem darin, daß der Wissenschaftler stets nach Begründung fragt, es aber in den wesentlichen Fragen keine Begründung, keine Erklärung gibt, somit die Schwierigkeit darin besteht, die Grundlosigkeit unseres Glaubens einzusehen. Da es nicht einmal möglich ist, sicher zu sein, warum sollte es dann möglich sein, einen Grund zum *Glauben* zu haben? (ÜG, § 373).

Der Unterschied zwischen "Glauben" und "wissenschaftlichen Beweisen" kommt insbesondere in Wittgensteins Einstellung zum religiösen Glauben zum Ausdruck, wo er von vornherein jegliche wissenschaftliche Begründung ablehnt und - ähnlich Pascals Diskurs von der "logique du coeur" - vom Wissen und Erkennen des Herzens spricht:

Wenn ich aber WIRKLICH erlöst werden soll, - so brauche ich *Gewißheit* - nicht Weisheit, Träume, Spekulation - und diese Gewißheit ist der Glaube. Und der Glaube ist Glaube an das, was mein *Herz*, meine *Seele* braucht, nicht mein spekulierender Verstand. Denn meine Seele, mit ihren Leidenschaften, gleichsam mit ihrem Fleisch & Blut muß erlöst werden, nicht mein abstrakter Geist. Man kann vielleicht sagen: Nur die *Liebe* kann die Auferstehung glauben. Oder: Es ist die *Liebe*, was die Auferstehung glaubt. (VB, 74f.)

Wittgensteins Erkenntnis der Grenzen rationaler Erklärung, sein "Wissen um das Nichtwissen", - die "docta ignorantia" – worin Parallelen zu Augustinus, Bonaventura, Nikolaus von Kues und anderen zu beobachten sind, erfährt eine Antwort durch die Liebe. Sicherheit und Gewißheit im Glauben können demnach nur mit dem Herzen, nicht durch den Verstand erfahren werden.

Selbst das Wort "Denken" scheint Wittgenstein in Zusammenhang mit Glauben nicht das richtige Wort; im religiösen Glauben wird Denken völlig ausgeschaltet, in der allgemeinen Bedeutung des Wortes "Glauben" erfährt Denken eine Art "Abschwächung". Während Wittgenstein zwischen Glauben, Erwarten und Hoffen eine gewisse Affinität sieht, wird Denken als "artfremd" dazu betrachtet, der Glaube allenfalls als ein "Farbton der Gedanken" beschrieben (PU I, § 578).

Wittgensteins Hinweis, daß seine Bemerkung "Glauben ist nicht Denken" eine grammatische Bemerkung sei, stellt den Bezug zur Religion her. Wie auch Luther geschrieben hätte, daß die Theologie die "Grammatik des Wortes Gottes, der heiligen Schrift" wäre (DB, 203), so bedeutet bei Wittgenstein die Grammatik mehr als bloße Grammatik der Sprache: wie der Ethik und der Logik, so obliegt es der Grammatik, das "Wesen der Dinge" zu erforschen.

Für Luther war der Glaube eine Sache des Herzens; Wittgenstein verwies darauf:

"Ich habe mich in meinem Herzen dazu entschlossen." Und man ist dabei auch geneigt, auf die Brust zu zeigen. Diese Redeweise ist psychologisch ernst zu nehmen. Warum sollte sie weniger ernst zu nehmen sein als die Aussage, der Glaube sei ein Zustand der Seele? (Luther: "Der Glaube ist unter der linken Brustzitze.") (PU, § 589).

Bezeichnend für Wittgenstein ist der häufige Hinweis auf Farben - auf Sinnliches, auf Leidenschaft, auf Irrationales – dies vor allem hinsichtlich des religiösen Glaubens, wo er immer wieder von der Leidenschaft des Herzens spricht. Während Wissenschaft und Weisheit für ihn kalt und tot sind, beschreibt er das Leben und die Religion als "farbenreich" und sieht diese, wie Kierkegaard, als "eine *Leidenschaft*" (VB, 106).

Im Sinne Kierkegaards erfordert der religiöse Glaube nach Wittgenstein ein leidenschaftliches Sich-Entscheiden zu einem Bezugssystem, ein leidenschaftliches "Ergreifen *dieser* Auffassung"(VB, 125), das immer auch ein "Sprung ins Ungewisse" ist.

Die Existenz der Welt, der Wittgenstein in einer Haltung des philosophischen Staunens begegnet, ist für ihn eine Art "Brücke" zur "Welt außerhalb des Tatsachenraumes" und damit Ausgangspunkt zu einem Weltbild, das ohne religiösen Glauben keinen Sinn hat.

Somit berührt der Blick auf die sichtbaren Erscheinungen der Welt den Blick auf das Nicht-Sichtbare: Die Auseinandersetzung mit der phänomenalen Welt wird zum Sprungbrett für ein Ahnen ethischer und religiöser Fragen – für das Gefühl einer religiösen Sicherheit, das sich verbaler Erfassung und philosophischer Gewißheit entzieht.

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Religiöser Glaube und Zweifel

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Religiöser Glaube und Zweifel scheinen sich auf den ersten Blick gegenseitig auszuschließen. Wer wirklich glaubt und vertraut, zweifelt nicht. Und wer ernsthaft zweifelt, kommt nicht zum Glauben. Dieser Ausschluss des Zweifels aus dem Feld des Religiösen und seine damit verbundene Stigmatisierung vereint sonst so unterschiedliche Ansätze wie die Wittgensteinianische Religionsphilosophie und den katholischen Weltkatechismus. Zweifel als existentiell begründete Infragestellung gilt vielen Wittgensteinianern als dem Glauben entgegengesetzte Verzweiflung bzw. als weltbildinterne Unmöglichkeit (vgl. Herck 1999, 223) und dem Weltkatechismus als Sünde (vgl. Weltkatechismus Nr. 2088). Nur wer ihn überwindet, kann als religiöser Mensch und guter Christ bezeichnet werden. In universaler Weise betriebener methodischer Zweifel gilt Wittgensteinianern angesichts der besonderen Eigenart religiöser Sprachspiele als nutzloses Unterfangen, während die Hüter der katholischen Glaubenslehre in ihm bereits eine Gefährdung des im ersten Gebot geforderten Gehorsams gegen Gott zu sehen scheinen.

Besonders diese Frontstellung gegen den methodischen Zweifel scheint den emanzipatorischen Potentialen neuzeitlicher Philosophie zu widersprechen, die sich in ihrem Grundansatz auf ein konstruktives Verhältnis zum Zweifel festgelegt hat. Stellvertretend für viele sei nur an René Descartes erinnert, der im methodischen Zweifel des Subjekts die Grundlage alles Philosophierens und aller Wissenschaft einschließlich der rationalen Rekonstruktion des Gottesbegriffs sieht. In den Fußspuren subjektphilosophischer Ansätze haben sich in der neueren deutschsprachigen Theologie und Religionsphilosophie eine Reihe von Glaubensbegründungsversuchen etabliert, die den methodischen Zweifel in einer ähnlich konstruktiven Weise zu nutzen suchen. Das Zweifeln wird dabei methodisch eingesetzt, um ein nicht mehr bezweifelbares *fundamentum inconcussum* freizulegen, das durch die Analyse der Elementarstruktur menschlicher Vernunft (H. Verweyen), menschlicher Freiheit (T. Pröpper) oder menschlichen Selbstbewusstseins (K. Müller) eruiert wird (vgl. Müller 1998, 97-100). Der Zweifel wird dabei immer dazu verwendet, eine Grundlage des Glaubens oder seiner rationalen Bewertung zu finden, die selbst nicht mehr bezweifelt werden kann. Trotz der positiven Verhältnisbestimmung zum methodischen Zweifel geht es also auch diesen transzendentalphilosophisch orientierten Versuchen der Verantwortung religiösen Glauben letztlich um die Überwindung des Zweifels, zumindest um die Überwindung des existentiellen Zweifels.

Religiöser Glaube erscheint in dieser Perspektive dann vor der Vernunft verantwortet, wenn eine unhinterfragbar gültige Glaubensgrundlage ausgewiesen wurde (vgl. Verweyen 1997, 96), und so der Zweifel mit guten Gründen zum Schweigen gebracht wurde. Damit ist zwar ein nicht zu unterschätzender Fortschritt gegenüber Programmen erreicht, die den Zweifel ignorieren oder verbieten wollen. Das Ziel der Eliminierung des Zweifels bleibt aber erhalten, ja wird noch einmal verstärkt, weil sie letztbegründet werden soll.

Interessant ist, dass auch die derzeit prominenteste Gegenbewegung zu dieser Form des Begründungsbemühens, die sich im Umfeld der *reformed epistemology* etabliert hat, eine ähnliche Verhältnisbestimmung religiösen Glaubens zum Zweifel vornimmt. Die Vertreter der *reformed epistemology* kritisieren zwar den Versuch des *foundationalism*, eine unhintergehbare, unbezweifelbare Grundlage allen Philosophierens zu rekonstruieren (vgl. Plantinga 2000, 81-107). Aber in Bezug auf den religiösen Glauben versuchen sie dennoch nachzuweisen, dass interne Zweifel an ihm unberechtigt sind.

Grundlage dieser Bemühungen ist dabei beispielsweise bei Alvin Plantinga die Behauptung der epistemischen Basalität religiöser Glaubenssätze. Mit dieser Einschätzung möchte Plantinga religiöse Sätze zwar nicht gegenüber Zweifelsmöglichkeiten immunisieren. Er betont mehrfach ausdrücklich, dass der Zweifel auch an epistemisch basalen Überzeugungen berechtigt sein kann oder durch veränderte Umstände Berechtigung erlangen kann, so dass die eigentlich basalen Überzeugungen begründungsbedürftig werden (vgl. etwa Plantinga 2000, 344; Plantinga 1998, 322-324). Auch die Rechtfertigung basaler Überzeugungen kann durch sog. „defeaters“ außer Kraft gesetzt werden. Aufgabe der Theologin ist es in diesem Fall aber, die „defeaters“ durch „defeaters defeaters“ zu widerlegen und damit den Zweifel aus der Welt zu schaffen (vgl. Runggaldier 2001, 297). Rational gerechtfertigt ist der Glaube in dieser Perspektive nicht erst, wenn eine Letztbegründung für die Ausräumung des Zweifels gegeben ist, sondern bereits dann, wenn alle vorgebrachten Einwände widerlegt und der faktisch aufgekommene Zweifel zur Ruhe gekommen ist. „Our beliefs are rational unless we have reason for refraining; they are not nonrational unless we have reason *for* believing. They are innocent until proved guilty, not guilty until proved innocent“ (Wolterstorff 1983, 162f.).

Mit dieser Inversion der Begründungsanforderungen ist eine gravierende Kehrtwende religiöser Epistemologie angestoßen, deren Berechtigung in meinen Augen zu Recht sehr umstritten ist (vgl. Müller 1998, 83-88). Aber bei allem Streit über Ausrichtung und Tragweite des Begründungsprogramms in der Auseinandersetzung zwischen *foundationalism* und *anti-foundationalism* ist doch diese Übereinstimmung beider Denkrichtungen frappierend: Ob mit oder ohne Letztbegründung, ob in Abwehr konkreter Einwände oder in der Konstruktion einer unhintergehbaren Argumentationsbasis, in beiden Fällen besteht das Ziel darin, den Zweifel vom religiösen Glauben fernzuhalten. Religiöser Glaube gilt als gerechtfertigt, wenn der Zweifel keinen Angriffspunkt mehr an ihm findet.

Die gemeinsame Basis von transzendental-philosophischer Glaubensverantwortung und *reformed epistemology*, zwischen *foundationalism* und *anti-foundationalism* sowie zwischen römisch-katholischem Lehramt und Wittgensteinianern besteht also darin, dass das letzte Ziel jeder Glaubensbegründung die Eliminierung des Zweifels sein muss. Im folgenden will ich durch einige von Wittgenstein inspirierte Überlegungen zeigen, dass dieses Ziel nicht nur unerreichbar, sondern auch vollkommen verfehlt und unreligiös ist.

Grundlegend für diese Positionierung ist dabei die von Wittgenstein her rekonstruierbare Einsicht in die doppelte Kontingenz des regulativen Status‘ religiöser Glaubenssätze (vgl. Stosch 2002, 331-340). Wenn Wittgenstein religiösen Glaubenssätzen grundsätzlich einen regulativen

Status zubilligt, vertritt er eine Position, die sehr an Plantingas Behauptung der epistemischen Basalität religiöser Überzeugungen erinnert. Und tatsächlich könnte Wittgenstein sich mit Plantingas Grundanliegen einverstanden erklären, dass der religiöse Glaube nicht inferentiell herzuleiten ist, sondern auf sprachspielpraxeologisch verwurzelte epistemisch basale Gegebenheiten zurückgreifen kann, bzw. dass er – in Plantingas an dieser Stelle calvinistisch geprägter Terminologie – auf durch den *sensus divinitatis* spontan gebildeten Grundüberzeugungen aufruht (vgl. Plantinga 2000, 175-177). Auch Plantingas Betonung der durch Änderung des Kontextes gegebenenen Möglichkeit der Bezweiflung von Elementen des Weltbild-Glaubens ließe sich noch mit Wittgenstein vereinbaren.

Trotz dieser Parallelen scheint mir aber ein entscheidender Unterschied zwischen beiden Denkern zu bestehen, bzw. ein von der *reformed epistemology* zu wenig beachteter Aspekt auszumachen zu sein, der aus einer von Wittgensteins deskriptivem Anliegen geschärften Perspektive ins Auge fällt. Wittgensteins Betrachtungsweise führt nämlich in meinen Augen gerade nicht dazu, dass religiöse Glaubenssätze und andere Glaubenssätze unseres Weltbildes in ihrem epistemischen Status gleichzusetzen sind. Genau dies tut aber Plantinga, wenn er die Existenz der Außenwelt epistemologisch auf der gleichen Stufe wie den Glauben an Gott sieht (vgl. Plantinga 1967) oder wenn er religiöse Sätze wie „Gott spricht zu mir“ oder „Gott vergibt mir“ als ebenso berechtigterweise basal ansieht wie Propositionen wie „Ich sehe einen Baum“ oder „Ich habe vor mehr als einer Stunde gefrühstückt“ (vgl. Plantinga 1998, 325).

Mit Wittgensteins Instrumentarium kann man Plantinga zwar getrost zugeben, dass religiöse Glaubenssätze ebenso wie die zuletzt genannnten Propositionen (und die bei Wittgenstein ausführlich diskutierten Mooreschen Sätze) auf regulativer Ebene anzusiedeln sind. Jedenfalls gibt es bei Wittgenstein eine Reihe von Bemerkungen, die deutlich machen, dass er dem religiösen Glauben weltbildkonstitutive Bedeutung zumisst und dass er ihn als Teil der Grammatik religiöser Menschen versteht. Aber es gibt keinen Grund anzunehmen, dass Wittgensteins Instrumentarium deswegen nicht dazu hinreichen würde, zwischen unterschiedlichen Formen regulativer Sätze zu unterscheiden.

Bei einer mit der Methodik Wittgensteins betriebenen Analyse religiöser Glaubenssätze scheint es mir jedenfalls belegbar zu sein, dass religiöse Glaubenssätze sich in einem grundlegenden Punkt von anderen weltbildkonstitutiven Sätzen unterscheiden. Während uns andere weltbildkonstitutive Überzeugungen als unbezweifelbar gewiss erscheinen können, bzw. nur dann bezweifelbar sind, wenn sie ihren regulativen Status verlieren, ist der Zweifel an religiösen Überzeugungen nicht nur niemals ausgeschlossen, sondern auch dann möglich, wenn die religiösen Überzeugungen auf regulativer Ebene weiterhin in Kraft sind. Eben darin liegt es begründet, dass es als verfehlt anzusehen ist, die Zweifelsmöglichkeit an religiösen Glaubenssätzen eliminieren zu wollen. Denn der Zweifel wird bei religiösen Elementen von Weltbildern nicht erst in externer Perspektive möglich, sondern kann bereits glaubens- und weltbildintern artikuliert werden.

Ein Paradebeispiel für die Möglichkeit eines solchen internen Zweifels an religiösen Glaubenssätzen scheint mir das Gebet zu sein. Denn im Gebet ist es möglich, in der Anrede an Gott alle Glaubensgewissheit hinter sich zu lassen und in der Klage oder der Rückfrage an Gott existentiellem Zweifel Ausdruck zu verleihen, ohne deshalb die grundlegende Bindung des eigenen Weltbildes an den Gottesglauben aufzugeben.

So kann ich beispielsweise nicht ernsthaft daran zweifeln, ob ich unter den von Plantinga immer wieder beschworenen normalen Bedingungen tatsächlich einen Baum vor mir sehe. Der Zweifel an einer solchen unmittelbaren Sinneswahrnehmung käme einem Zweifel an meiner geistigen Gesundheit gleich. Dagegen ist es auch einem religiösen Menschen möglich, daran zu zweifeln, dass Gott mit ihm geredet oder ihm vergeben hat. Dieser Zweifel ist bereits aufgrund der Pluralität religiöser und nichtreligiöser Weltbilder immer faktisch möglich, ohne dass man an der eigenen geistigen Gesundheit zweifeln müsste. Die eigentliche Pointe scheint mir nun allerdings darin zu bestehen, dass der Zweifel an allen religiösen Glaubenssätzen auch dann möglich ist, wenn die Existenz Gottes faktisch aufgrund der Anrede Gottes bejaht wird. Denkt man an das Ringen Ijobs mit Gott, an Jesu Schrei am Kreuz und an sein Gebet in der Ölbergnacht, so wird deutlich, dass in biblischer Tradition der existentielle Zweifel an epistemisch basalen Elementen des religiösen Weltbildes innerhalb des religiösen Weltbildes artikuliert werden kann. In seiner letzten Verzweiflung kann Ijob Gott gegen Gott anrufen (vgl. Ijob 19,25), und Jesus kann das Gefühl totaler Verlassenheit von Gott als letzten Anruf an Gott artikulieren (vgl. Mk 15,34). Insofern gilt gerade von den normativen Grundlagen christlichen Glaubens her: „Auch das Gebet ist vom Zweifel in Mitleidenschaft gezogen. Es kann und darf ihm sein Wohnrecht nicht versagen; der Gebetsglaube hebt den Gotteszweifel nicht auf. Das Gebet ist der Ort der Wahrheit, die Stunde der Wahrheit – und gerade deshalb nicht der Ort der fraglosen und fragenlosen Gewissheit.“ (Werbick 2001, 32)

Ein philosophisches sowie ein theologisches Argument scheinen mir diese Position zusätzlich zum bisher Gesagten nahe zu legen. Zunächst das philosophische: Es lässt sich zeigen, dass die sprachspielpraxeologische Begründungsstruktur für epistemisch basale Sätze bei Sätzen über das Unbedingte nicht so greifen kann, dass der interne Zweifel an ihr ausgeschlossen wird. Denn die bei anderen grammatischen Sätzen gegebene selbstverständliche Gründung der regulativen Kraft der Sätze in bestimmten Handlungsweisen verliert dann notwendig ihre Selbstverständlichkeit, wenn per definitionem bedingte Handlungsweisen epistemische Gewähr für eine unbedingte Wirklichkeit übernehmen müssen. Denn das Unbedingte kann im Bedingten nur auf symbolische und damit bezweifelbare Weise Gestalt annehmen. Wenn nach Wittgenstein die epistemische Basalität von Sprachspielen in ihrer praxeologisch ausweisbaren weltbildinternen Unhintergehbarkeit beruht, gilt für alle Elemente von Sprachspielen über etwas Unbedingtes, dass diese nicht von bedingten Wesen auf der Handlungsebene als epistemisch basal ausgewiesen werden können. Dies ist auch der philosophische Grund dafür, warum religiöse Glaubenssätze in ihrem weltbildkonstitutiven Charakter nicht nur aus faktischen, sondern auch aus grammatischen Gründen kontingent sind.

Doch es gibt in meinen Augen auch einen guten theologischen Grund für die Notwendigkeit der internen Bezweifelbarkeit und wirklichen Bezweiflung aller Glaubenssätze. Dieser hängt mit der Theodizee-problematik zusammen. Denn nur wenn es möglich ist, die Zweifel an Gottes heilvoller Wirklichkeit in der Gottesanrede zum Ausdruck zu bringen, bleibt die Möglichkeit erhalten, die sittlich gebotene Anerkennung des kategorischen Nichtseinsollens absurden Leidens ohne Aufgabe des Gottesglaubens zu artikulieren. „Wo die Schwierigkeit, Ja und Amen zu sagen, im Gebet nicht vorkommen darf, wo

sie überholt werden soll durch eine Identifikation, die kontingenzbewältigend hinnimmt, was da komme, weil es von einem guten Willen zugefügt sei, da wird der, mit dem man sich – betend? – identifiziert, zum Inbegriff der Entwichtigung des Leidens, der Desensibilisierung für das Unglück, das Gottes ‚guter' Wille für die Menschen bereithält." (Werbick 2001, 73) Will man diese Desensibilisierung in Bezug auf die Theodizeeproblematik vermeiden, darf der Zweifel auf glaubens- bzw. weltbildinterner Ebene nicht eliminiert werden.

Wittgensteins Methodik kann nach allem bisher Gesagten den Blick für die konstruktive Rolle des Zweifels für den religiösen Glauben schärfen. Dabei geht es Wittgenstein nicht um eine Indienstnahme des Zweifels zur Begründung religiösen Glaubens. Es ist oft genug völlig zu Recht betont worden, dass Wittgenstein das cartesianische Verständnis an dieser Stelle umkehrt, indem er deutlich macht, dass der Zweifel den Glauben voraussetzt und nicht etwa begründen kann. „Der Zweifel kommt *nach* dem Glauben" (Wittgenstein 1997, Nr. 160; vgl. ebd., 170, 449). Denn Zweifeln ist nach Wittgenstein immer nur *innerhalb* von Sprachspielen und dem entsprechenden jeweiligen Bezugssystem sinnvoll (vgl. ebd., 221f., 323, 370, 467). Zweifel kann sich nicht universal auf meinen ganzen Bezugsrahmen beziehen. „Wer an allem zweifeln wollte, der würde auch nicht bis zum Zweifel kommen. Das Spiel des Zweifelns selbst setzt schon die Gewißheit voraus" (ebd., 115). Ohne feststehendes Bezugssystem hätte der Zweifel gar keinen Angriffspunkt (vgl. ebd., 356), d.h. ich muß irgendwo „anfangen zu trauen ... (und; Vf.) mit dem Nichtzweifeln anfangen", weil sonst das Urteilen unmöglich wird (ebd., 150).

Doch gerade die Einsicht in die Unmöglichkeit der Feststellung eines (lebensweltlich relevanten) *fundamentum inconcussum* durch die Verwendung des methodischen Zweifels erlaubt es Wittgenstein, dem Zweifel eine Rolle zuzuweisen, die seine sonst zu beobachtende Eliminierung aus dem Feld des religiösen Glaubens zu vermeiden hilft. Dabei geht es Wittgenstein nicht um den stets möglichen, aber eben fruchtlosen *paper doubt* des Skeptikers oder an ihm orientierten Transzendentalphilosophen, der nur zu der trivialen Einsicht führen kann, dass es auf diesem Feld zu jedem Grund einen stichhaltigen Gegengrund gibt (vgl. Wittgenstein 1992, 490f.). Wittgenstein will, im Gegensatz zu einigen Wittgensteinianern, auch nicht darauf hinaus, jeden weltbildinternen Zweifel aufgrund der epistemischen Basalität religiöser Überzeugungen ad absurdum zu führen, oder wie Plantinga durch defeaters aus der Welt zu schaffen. Angesichts der oben gemachten Ausführungen wird vielmehr deutlich: Es gibt nicht nur den internen methodischen Zweifel oder den existentiellen Zweifel, der schließlich zur Verzweiflung führt. Es gibt auch Formen eines intellektuellen Zweifels, der nicht methodisch universalisiert, sondern der in der Hinwendung zum Einzelfall durch Hinzuziehung von Vergleichsobjekten ausgetragen wird. Und vor allem gibt es auch Formen existentiellen Zweifelns, die weltbildintern ausgetragen werden und die immer wieder zu Flexibilisierungen und Dynamisierungen religiöser Weltbilder führen. Diese beiden Formen des Zweifels gründen in der unaustilgbaren Kontingenz religiöser Weltbilder. Ihre Respektierung scheint mir aus philosophischen und theologischen Gründen für jede Glaubensverantwortung unverzichtbar zu sein.

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Semantics and Ontology: On the Modal Structure of an Epistemic Theory of Meaning

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In this paper I shall confront three basic questions.

First, the relevance of epistemic structures, as formalized and dealt with by current epistemic logics, for a general Theory of meaning. Here I acknowledge M. Dummett's idea that a systematic account of what is meaning of an arbitrary language subsystem must especially take into account the inferential components of meaning itself. That is, an analysis of meaning comprehension processes, given in terms of epistemic logics and semantics for epistemic notions.

The second and third questions relate to the ontological and epistemological framework for this approach. Concerning the epistemological aspects of an epistemic theory of meaning, the question is: how epistemic logics can eventually account for the informative character of meaning comprehension processes. "Information" seems to be built in the very formal structure of epistemic processes, and should be exhibited in modal and possible-world semantics for propositional knowledge and belief. However, it is not yet clear what is e.g. a possible world. That is: how it can be defined semantically, other than by accessibility rules which merely define it by considering its set-theoretic relations with other sets-possible worlds. Therefore, it is not clear which is the epistemological *status* of propositional information contained in the structural aspects of possible world semantics. The problem here seems to be what kind of meaning one attributes to the modal notion of possibility, thus allowing semantical and synctactical selectors for possibilities. This is a typically Dummett-style problem.

The third question is linked with this epistemological problem, since it is its ontological counterpart. It concerns the *limits* of the logical space and of logical semantics for a of meaning. That is, it is concerned with the kind of structure described by inferential processes, thought, in a fregean perspective, as pre-conditions of estentional treatment of meaning itself. The second and third questions relate to some observations in Wittgenstein's *Tractatus*. I shall also try to show how their behaviour limits the explicative power of some semantics for epistemic logics (Konolige's and Levesque's for knowledge and belief).

1. Relevance of epistemic modal notions and inferences for a Theory of meaning

Dummett's basic idea is that a systematic and non-modest theory of meaning must account for what it means to understand a statement. In Dummett's view, this account must possibly support a constructive metaphysical option. But as stated in *The logical basis of Metaphysics*, metaphysical questions and statements themselves depend on semantic assumptions and pre-semantics ways of considering formal structures relevant for meaning (thus, also on synctactic ways of accounting for combinatorial aspects linked to compositionality).

Dummett assumes that molecolarism, as opposed to holism, allows for a heuristically interesting treatment of modalities of meaning, taken to be similar to fregean *Sinne*. He approaches this by asking a question concerning the very limits and status of what we may define the "epistemic space" of meaning. This is in turn taken as the set of propositional contexts relevant (primarily or indirectly) for comprehension of a language subsystem. These contexts actually exhibit the structure of information conveyed by the subsystems considered. They are therefore to be thought of as propositional contexts in the proper sense, that is: as an account of how the world would be if the understood propositions actually held (which is different form saying: if assertions expressing those propositions were true, in that it can be adapted to a non-classically truth functional definition of meaning such as Dummett's).

In the case of meaning analysis for logical constants the informational content exibithed by the propositional modality (set theoretic range of possibilities allowed) is a formal structure. That is, a formal partition on the considered fragment of reality establishing a meta-semantical (stipulated) pre-condition for semantical interpretation inside our formal universe. In a way, then, the formal structure of reality considered as the object of logical analysis is stipulated, as it depends directly on the consequences of stipulation for the meaning of logical constants. This meaning is in turn given in epistemic terms: it represents the epistemic pre-condition of access to semantical structures and regularities. An other way of putting it is by saying, as Dummett himself does, that the meaning of logical laws (axiomatizations of given semantics and consequent theorems and validities) depends directly on the meaning of logical constants.

One can obviously assign to logical constants different types of meaning. The main selector for these types is the specification of what kind of formal reality, *if any*, is described by constants. Here I shall assume, coherent with an anti-realist assumption (yet to be investigated), that this reality is an epistemic reality. It is, in other worlds, the structure described by our way of describing semantical structures. The structure of epistemic access to semantics is tipically *modal*. This is independent from our assuming that its semantical counterpart should be possible world semantics. Modality represents the basic meta-semantical notion also in those logical treatments of meaning and logical consequence relations where modal concepts such as possibility are taken to be merely synctatical tools, for example (indirectly) in intuitionistic logics.

We are therefore in the necessity to cope with the question of what a modal structure is, whether it is treated semantically or sinctactically. In other words, what is a possible world or an intuitionistic state of information, which turn into a (meta-)semantical structure as soon as they are operationalized by meaning stipulation for logical constants? Semantics for epistemic logic proper seems to be parasytic on such questions. They turn our attention to the epistemological question of what a possibility is. So: concerning what kind of propositional structure is taken into account in possible world semantics for epistemic logics when I conditionalize the meaning of a belief relation statement to the range of possibilities considered (and linked to each other by accessibility relations or synctactic sieves). The question also exhibits its obvious ontological

side: what happens when I take possibility to be a meta-semantical structure, therefore defining the limits of logical space. As we shall se, both these questions directly determine the heuristic and expressive capacity of epistemic systems. But let us first give a brief account of how the epistemological-ontological pair can be treated.

2. Wittgenstein and Carnap on possible worlds: ontology and semantics

Traditionally, there are two basic ways of confronting the question. The first is suggested by the essentialist approach found in the *Tractatus*; the second is typically Carnap's view on deductive logics and its abstract ontology.

Wittgenstein's *Tractatus* offers an important account of how modalility as a pre-semantical tool should be viewed. The account is based on a quasi-realist reduction of epistemology (how we should understand contextual meaningful structures) to metaphysics.

It then reduces the question concerning the structure of our epistemic access to meaningful configurations to the question of the latters' real structure – thus defining the notion of possibility as a realistic notion based on real (physical?) combinatory modalities.

Wittgenstein's modal atomism, as Bradley among others has defined it, plays on the notion of logical form, and on the general framework used to explain this notion, that is: a picture theory of language. In this account, logical form exhibits modality as the fundamental property of language, a property that (opposite to Frege's analysis of meaning as sense in indirect contexts, where modality turn up to be the new denoted) cannot be denoted because it defines the limits of denotation. As it is said in the *Notebooks,* giving the "nature of the proposition" can be equally thought as "giving the nature of all being" (January 22th 1915). In the Tractatus, propositions (information expressed by statements) are concatenations of names. Combinatory conditions of an object (thus of its denoting term) are assumed as a basic structure. Because of the shift of combinatory calculus from synctactic to semantical level, such conditions are the possibility conditions of factual structures in which an object can enter as a constituent. Logical form is thus a possibility of structure beared by objects. Objects are then defined by modal relations constituting "states of affairs". Possibility attains to states of affairs themselves (Tlp 2.061-062). A proposition (a propositional context) shows a formal partition on the set of all possible states of affairs relevant for object-name's meaning. It exhibits which states of affairs are made actual (as a meaning context for the atom-expression considered) and which ones are not. Consequently, "a proposition shows how things are, and says that they are so and so" (Tlp 4.022). Here the formal structure shown is the limiting pre-condition for what is said; therefore no analysis is possible on which criteria we have for selecting sub-structures relevant at each stage for the meaning of the language sub-systems considered. These criteria are not a matter of stipulation.

Thus if understanding a proposition means knowing what happens if it is true (if the assertion expressing it is true), the meta-semantical conditions on "what happens" cannot be represented and analysed in logical terms. This is because the analysis would then have as its object the set of possibility conditions one of whose sub-sets is the possibility condition of analysis itself.

Logical statements take as their object this formal structure, which is also their form. Thus, it is a non-sense, in Wittgenstein's terms, to proceed from the level of mere showing (e.g a tautology shows that it is a tautology) to that of representing (the conditions because of which the tautology is a tautology). The information context epressed by a proposition is then given in structural and non-epistemic terms. Its comprehension is at the same time the very limit of inferential process constituing meaning comprehension. Modality is here a tool for selection of possible sub-systems inside a universe-set, and it says nothing about itself (about the criteria for this selection). One may say that this depends partly from a fregean heritage (consisting in taking generality as the object of logical analysis), partly from a biased metaphysic view (assigning to generality a non-constructivist status). However, how strange as this might seem, similar problems are at issue also in a conventionalist approach like Carnap's, suggesting that something very important concerning the operational structure of modality (thus its epistemic properties) remains problematic. Better said, suggesting that a non-traditional ontological treatment of modality is strongly needed - one able to overcome classical disctinctions between realism and anti-realism for what concerns the informative charachter of possibility-selection structures as basic modal structures for meaning comprehension processes. Thus, for the truly epitemic component of meaning.

Carnap's treatment of modality can be viewd as a subset of semantic and synctatic analysis for mathematical and logical propositions. Since traditional empiricist criteria for significance cannot applied to denoted abstract entities of mathematics, the question arises of what constitutes a significance truth-functional criteria for abstract semantics. One needs to ask what kind of reality is described by synctactical constructions, e.g. to explicit the ontology underneath treatment of derivations and proofs and formulate hypothesis on what kind of status attains to epistemic structures and inferences (to the semantic selectors of posibilities relevant for comprehension of a language sub-system, since they also exhibit meta-semantical properties). Carnap's idea is that meaning is given by inferential connections from statements to verification or truth conditions, and that truth and falsity of mathematical statements is built into the very structure constitutive of these connections. So mathematics and logics study the articulation of inferential consequences admissible from systematic premises. Such premises are defined as merely conventional.

Consequently, modality is a property attaining to this epistemic (synctactical) structure. It therefore does not describe anything, since it contributes to define the way we refer to anything, which is exactly what is described by logics. In a way, all logic is epistemic, and its meta-semantical pre-conditions are not a matter of ontology or epistemology, but rather a pragmatic one. So structural necessity in meta-semantical terms, and concerning questions of foundation, is not ontological. It is an arbitrary criteria for conditionalization of possibilities inside the chosen logical net. Possibilities are then merely inferential tools, and completely de-substantialized.

Carnap's state descriptions are based on this approach. Think for example of the definition of L-equivalence as equivalence of an informational content which is defined by mapping inferential structures onto the formal synctactical criteria adopted for defining state descriptions. So, they are actually mapped onto themselves. The heuristic capacity of Carnap's modal logic seems to be none. It cannot give any account of the criteria for defining what

(state of affairs) is possible and what is not. It is true that intensions are defined in propositional terms: but then, in turn, a proposition refers to combinatory clusters of synctatical structures.

What we need here is a semantical tool to specify how the synctactic aspect of combinatory rules relates to the semantical notion of possibility, and how this relation tells us something about possibility meta-semantics. The notion of information conveyed by selection of relevant possibilities is here fundamental. It is clear that a condition for expliciting this notion is to adopt a propositional treatment of modality, on which epistemic structures are mapped. So that "possible states of the worlds" are in some way distinguished and related to epistemic inferential ways of having access to them. Classical examples of this approach are given by Hintikka's game theoretic semantics, by Fine's analysis of e.g. propositional disjunction, and finally by cluster-models for possible world semantics – where the latter directly takes into account the epistemological space in which semantics is viewed.

Generally, propositional semantics seem to be much more interesting than merely synctactical approaches. We shall better see this in viewing Konolige's logics and Levesque's system for implicit and explicit belief.

Before turning to these, just a brief observation. Ontological problems concerning possible worlds semantics have traditionally been treated in two different ways. One is typically Kripke's: ontology is given in terms of definition of identity and rigidity of designators. This is, however, an approach trying to fix the semantical space of modality from an estentional point of view. The second approach consists in saying what a possible world is directly in metaphysical terms: this is typically David Lewis'approach.

It seems that definitions in terms of semantics, which only as a second step tie semantics to ontology, are rather problematic. Even if we say that a possible world is a counterfactual, this does not tell us anything about the semantic and ontological structure of "counterfactuality". Nor, of course, we can give credit to the idea that a purely infra-systemic notion of a possible world as a maximal consistent set of well formed propositions is sufficient.

One might reply that this cluster of problems simply does not make sense. The idea would then be to leave out any meta-semantic option, and go for an interpretation of possible worlds as merely useful tools for logical analysis of correct and valid inferences in an axiomatized logical system. However, this will not do if the aim is to use possible world semantics for an epistemic theory of meaning. Here it seems essential to investigate the structure onto which epistemic inferences are built, taking seriously Frege's idea about links between *Sinn* and *Bedeutung*, both in terms of model-theoretic properties and of formally ontological assumptions. The question then becomes: since propositional modality carries the (formal) information about meaning, as well as its epistemic conditionalization to the structure exhibited by modality itself, then how is this conditionalization to be investigated? (Different ways of having access to what is denoted actually determine the structure of the process of information building implied by comprehension).

3. Two epistemic logics and relevant ontological questions

The concept of semantic information has been at the core of knowledge basis representation in AI. Two paths have traditionally been followed. The first one is given by attempts to represent conceptual links through semantic web and frames. This one we shall leave out, mostly because it is concerned with a specific way of tracing the link from semantics to ontology, linked to Carnap's meaning postulates and Putnam's basic properties of what is denoted, only secondarly concerned with the inferential structures of epistemic meaning comprehension processes. Instead, we shall briefly follow the path of formal ontology for epistemic structures, although in a way the two paths are obviously linked.

From the viewpoint of epistemic logic, modality is to be treated as the meta-semantical conditionalization of epistemic structures (knowledge and belief), functions and operations defined on semantics –the latter describing reasoning processes inside the logical modal space. A possible world can then be defined in terms of a state of information in propositional terms, and epistemic relations are mapped onto this structure to account e.g. for belief or knowledge semantical conditions from the viewpoint of set-theoretic semantics. Here a central notion seems to be that of propositional indeterminacy, for the treatment of which a non-normal modal approach to possible worlds is obviuosly required. The definition of propositional indeterminacy in epistemic logic has been a fundamental tool against logical omniscience.The notion of indeterminacy is parasytic on that of possibility, so again we are confronted with our basic problem. There are mainly two basic ways of treating indeterminacy and thus possibility, in formalizing information acquisition processes.

The first way is to use a synctactical approach, and Konolige's system, proposed in 1986, gives us an interesting example of it. The example is obviously linked with an internalist position such as Moore's and Hendrix's hypothesis – thus owing much to the psychologist account of epistemic modality, and very little to the idea that modality should be taken as something contibuting to explain how language fits some formal structure of reality. Konolige takes beliefs held by epistemic subjects to be sets of formulas, e.g. statements and not propositions, deductively closed under logically incomplete rules of inferences. Properties of beliefs are operationalized inside deduction structures associated with subjects. A deduction structure is a structure d(i) made up by a pair <b(i), ρ(i)> (a sub-set of believed formulas and a set of rules of inferences). Belief relation is then represented as a structure:

$$Bel(<b(i), \rho(i)>) = \{a \mid b(i) \vdash_{\rho(i)} a\}$$

The system is thought as a way to give account of provinciality of belief structures, that is: it is established that the number of premises for every rule application must be fixed and finite. So, every inference from a defined belief sub-set is independent from the whole belief set. Semantically, here you have a classical set-theoretic notion of interpretation for the non-modal sub-sets, plus the synctactic sieves for the modal formulas.

So, for example, $M \models p$ (for an atomic p) iff $\varphi(p)=t$; $M \models a\&b$ iff $M \models a$ and $M \models b$, and so on. For the modal belief relation: $M \models B_i a$ (that is: it is true under interpretation M that "a" is believed) iff $a \in Bel(d(i))$, where d(i) belongs to the set of deduction structures or points of view considered. For the axiomatization: the semantics is correct under PC axioms, *modus ponens*, a specification of a set of deduction rules for every deduction structure and, most important, a linking rule LR for which:

From $B_i a_1 \ldots B_i a_k$ and from $a_1 \ldots a_k \vdash_{\rho(i)} b$, it follows that $B_i b$.

The linking rule allows inferences through the link with synctactic structure in the model. Obviuosly the system does not use the notion of "possible world". It therefore tries to avoid problems concerning propositional possibility. Inferential structures produce a formal partition on the universe-set, dividing statements believed from statements not believed through the sieve given by synctactic consequence relations. These are in turned based on the meaning of logical constants, given in merely combinatory terms by the underliyng meta-linguistic theory. However, here the informative content of meaning is completely left out, precisely because there is no propositional structure onto which inference models are mapped onto. As a matter of fact, in synctactic models the latter are mapped onto themselves. This has in turn a consequence on the formal deduction relations: the only condition posed on a deduction is synctactic consistency, whereas the propositional approach suggests that epistemic modality must in some way be related to some stronger semantical condition specifying the formal structure of our way of believing (and knowing) things. In other words: something concerning the formal partition on reality considered must account for the way we relate to reality (here reality is intended in a weak sense: as a set of objects and links among objects, eventually computable as functions and operations on them). From our point of view, even if synctactical accounts such as Konolige's allow for acquisition of information through application of established deduction rules, this information is not at all an information properly (that is: something saying what kind of formal structure of reality should hold if the belief were taken to be true). Also: indeterminacy is taken to be only an inferential limit.

Propositional accounts of modal epistemic notions try to do for this; however, they are limited by lack of ontological investigation and semantical specification. Think for example of Levesque's logics for implicit and explicit belief (1985). Here the informative property of modality is accounted for through semantical indeterminacy –that is, by assuming non classical worlds and treating them as situations (where the terminology is an heritage from Barwise and Perry). Situations shape the sub-set of reality taken to be relevant for a subect's believes, and leave everything else as indeterminate. Of course the notion of "being indeterminate" is conditionalized to a determinate background of implicit beliefs. These describe "not what an agent takes to be true, but what reality would be if what he believes were true". Normal possible worlds are used to account for implicit belief; the semantics for explicit belief is given in terms of situations, propositional sub-sets whose intensions may well lack of a proper informative content (for example when situations are inconsistent, that is: there is at least a proposition of the sub-set to which both "t" and "f" are assigned, or incomplete, that is: the truth value assigned is Ø). Here the main interpretation schemes are given by:

i) M, s $\models_t E$a iff M, s' $\models_t$ a for all situations s' belonging to B (set of beliefs)

ii) M, s $\models_f E$a iff M, s $\nvDash_t E$a

iii) M, s $\models_t B$a iff M, s' $\models_t$ a for all s' belonging to W(B) (set of possible worlds consistent with beliefs)

iv) M, s $\models_f B$a iff M, s $\nvDash_t B$a.

While *B* is closed under implication, *E* (explicit belief) is not (we shall leave out examples of this, since they are quite obviuos to imagine if we consider inconsistent situations). Also, of course, $E\text{a} \rightarrow B\text{a}$. The latter is again the obvious precondition for iii), since it states the condition at which possible world can complete incomplete situations for explicit belief. However, our problem turns up again. That is: which is the structure of the process of information acquisition allowing to know criteria for relevancy, so that what is indeterminate can at some point of inferential processes be determined?

Another very simple example of the problem can be found in a very common semantical property assigned to propositional belief relations. That is, the closure property with respect to set-intersection. So:

For every w belonging to the set W and for every proposition X and Y (thinkable as sets of worlds) :

If $X \cap Y \varepsilon N(w)$ (the latter being the sub-set of possible worlds, or the common sub-set of sets of propositions on which a modal function is considered), then $X \varepsilon N(w)$ and $Y \varepsilon N(w)$. (Also the inverse holds).

In propositional terms, and recalling wittgensteinian terminology, this means: if you know the possible state of affair in which a propositions' conjunction is true, then you know the possible states of affairs in which each one of the propositions considered is true. But what kind of information is given by this "then"? Shouldn't such an information be semantically specified by accounting for semantical properties of the notion of possibility itself? How does the introduction of new ways of defining concepts implies new information? And how is this information to be thought (for example: as an introduction of new state of affairs or as a specification of known ones)? Modal notions convey an information which is in some way ubiquous.

Some concluding remarks. A way to confront the semantical-ontological question of defining modal notions could be given by a strategic reduction of possibility to probability. Consequently, the notion of necessity would be treated as the conditionalizing reference term; in Kolmogorov's classical symbolism, necessity attains to the universe-set Ω, where Probability (Ω)=1. The axioms and formalizations of probability calculus could then be applied to epistemic calculus of belief and knowledge relations; something which would intuitively take up De Finetti's and Carnap's subjective interpretations of probability (De Finetti said that probabilities could be thought of as degrees of belief). This would seem at a first instance a nice way of relating language information-processing to some basic structure of reality, thus taking seriously both Maxwell's general idea that "the true logic of reality is the logic of probability" and Adams' version of probability as the study of propagation of probability in uncertain inferences (where both premises and conclusion are uncertain). The most interesting aspects of such an approach is probably given by what we are told by Kolmogorov's continuity and countable additivity axioms, establishing inversely proportional links between complexity of inferential processes and probabilities of conclusions.

On the other side, however, logical (as opposed to physical) interpretations of probability are confronted by general and specific problems similar to those attaining to the status of possibility and modal notions. So the question would be again: what shall we do with Wittgenstein's remarks, for which modality is to be taken as the very limit of the logical space?

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What does Haack's double-aspect experientialism give us?

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1. Introduction

Twentieth century analytical epistemology concerned itself mainly with various attempts to work out two basic issues. The issue most often engaged was the relationship between beliefs, propositions, theories and such other elements of a world view that had been thought of as deserving of being called 'knowledge'. The other issue that was often considered was the relationship between the abovementioned elements and experiences. This issue was of manifest significance given the empiricist roots of most of the analytic tradition and became even more vital once Quine's critique seemed to rule out a priori knowledge and gave rise to the naturalist tradition (Quine 1953).

The middle of the century didn't just witness Quine's undermining of the a priori. At much the same time, Sellars attacked the idea of The Given and seemed to remove the possibility of experience being involved in the justification of our beliefs (Sellars 1963). The two arguments taken together have given rise to a number of epistemologically nihilist positions – most clearly to Rorty's anti-realist neo-pragmatism (Rorty 1979).

Writing in the Peircean pragmatist tradition, Susan Haack, in *Evidence and Inquiry*, has attempted to defend what she terms 'experientialism'. This is the view:

1. that knowing subjects have (sensory, memorial, etc.) experiences,
2. that unless they had such experiences none of their empirical beliefs would be justified to any degree and,
3. that the justification of all of a subject's justified empirical beliefs depends ultimately at least in part on those experiences. (Haack 1993, 50-51)

Haack's approach is to argue for a double aspect theory of justification in which the logical or evaluative aspect of justification is supplemented by a causal aspect. By turning to the causal relationship between experiences and belief states she hopes to avoid Sellars' objection while showing how experiences can play a role in the justification of beliefs.

Double aspect theories, however, are notoriously susceptible to 'deviant causal chains' objections. This, certainly, is the case with Haack's theory. The possibility of deviant causal chains shows up what is the essential mismatch between the normative nature of justification and the purely descriptive nature of causation.

Interestingly, however, the failure of Haack's double aspect experientialism does not drive us back towards the kind of purely doxastic theories like that put forward by Davidson (Davidson 1972-73, 5-20) and criticised by Haack. Instead, what becomes glaringly obvious is the significance of the problematic assumption which lies at the core of Sellars' argument – the assumption that justification is purely logical in character. Haack's error is that she fails to go far enough in her criticism of Sellars. Not only should we reject his assumption that justification is purely logical but we must allow for a *normative* aspect of justification which isn't logical in nature.

The challenge, therefore, must be to provide a normative characterisation of justification which isn't only based upon logical relations.

2. Sellars' argument against The Given

In his classic attack upon what he calls 'The Myth of the Given', Sellars argues that C. I. Lewis or anyone else who puts forward what Haack would call an experientialist theory faces a dilemma. Either:

> a) It is *particulars* which are sensed. Sensing is not knowing. The existence of sense data does not *logically* imply the existence of knowledge,
>
> or
>
> b) Sensing *is* a form of knowing. It is *facts* rather than *particulars* which are sensed. (Sellars 1963, 129)

Sellars argues each of these alternatives is unacceptable. In the first alternative, the claim leaves experiences incapable of justifying beliefs. All that they can do is cause beliefs. In the second alternative, Sellars argues that the account is unacceptable since we do sense particulars and not facts. In other words, experiences are events and to have experiences is not to have knowledge. It is only beliefs (in Sellars' formulation 'facts') that somehow constitute knowledge and that can justify other beliefs.

Haack points out, however, that Sellars' argument is based on an assumption. The assumption is that justification is a matter of logical relations. Given that knowledge is generally thought to require justification, and logical relations apparently can not obtain between beliefs and experiences, it follows that experiences can not justify our beliefs.

Without this assumption the argument isn't justified. If we do not assume that all justification is a matter of logical relations we are left without the main reason for thinking that experiences can only cause – and not justify – beliefs.

3. Haack's position

Susan Haack's approach is to deny Sellars' assumption and to argue that justification has two aspects. It has the logical aspect that Sellars recognised but, also, it possesses a causal aspect which gives Haack a way for experiences to justify beliefs. Haack's double aspect theory of justification consists in providing "an account of how [causation] is relevant, of the relations between the causal and the logical aspects of the concept of justification." (Haack 1993, 29)

Without going into Haack's account in detail it is possible to see that it faces two fundamental, and closely related, problems. The first of these is that, having pointed out Sellars false assumption she falls for one, herself. Just because justification is not just a matter of logical relations does not automatically mean that it is a matter of logical relations and causal relations.

The second problem is the problem of deviant causal chains that troubles double aspect theories in general. In Haack's case the problem affects her claim that "how

justified A is in believing that p depends in some fashion on what it is that causes him to have that [belief state]." (Haack 1993, 75) She argues that belief contents are justified in part by their respective belief states being caused by perceptual states. A possibility she does not consider is that the perceptual states might cause the belief states in a non-kosher way. For example, an error in our neural pathways might mean that the belief state of thinking we are in the company of a cat might be caused by the smell of jasmine. Or, to consider an even more inconvenient case, *all* smells, including that of a cat, might cause the 'cat is near' belief state.

It might seem that Haack can bite the bullet and say that such deviant chains are still cases of justification; cases in which we are justified in believing something but, unfortunately, turn out to be wrong. Such a response sits well with Haack's overall strategy of relating justification to the evidence available to us rather than to extrinsic considerations. However, the attractiveness of this response actually relies upon a hidden equivocation. Haack sees herself as presenting an evidentialist account of justification "in the sense that the account of justification proposed is couched in terms of the subject's evidence for a belief." (Haack 1993, 139) However, this suggests that, if perceptual states are not evidence for beliefs then, while deviant chains aren't a problem, causation is not an aspect of justification. On the other hand, if perceptual states are evidence for beliefs then causation is an aspect of justification but the degree to which perceptual states are evidence for beliefs can be evaluated. Since she does want to consider causation to be an aspect of justification Haack has to reject deviant chains and give an account of kosher ones. As we will see, however, a normative account of this sort leads Haack away from a double aspect theory of justification.

At a point in her presentation of double aspect experientialism Haack stops talking about the logical aspect of justification and starts to talk about an evaluative aspect. Her reason for this is that she later comes to examine Popper's and Watkins' deductivist account of the role of evidence and to reject it. In its place Haack argues for what she calls a moderate psychologism, "according to which psychological factors do not exhaust, but have contributory relevance to, questions of justification/rational acceptability." (Haack 1993, 103) While her attack on deductivism is on target, she fails to properly integrate the conclusion into her account. The original need for a double aspect theory was caused by the limited ability of logic to justify our knowledge. Having replaced the logical aspect of justification with a more broadly evaluative one this rationale disappears. Logic can not take into account events but there is no reason why evaluation can't. There aren't even grounds to revivify the logical/causal distinction in terms of normative and descriptive aspects of justification. As we have seen, if causation is to play a role in justification it will have to be 'the right sort' of causation, thus giving it a normative quality, as well. It turns out that rather than two aspects, justification has only one – evaluative.

What role is left for logic in justification? Haack thinks (Haack 1993, 105) that valid deductive derivations do constitute reasons for accepting statements, just not the only ones. However, even this claim ought to be understood in the context of what is essentially a psychological picture of justification. Once we opt for an epistemology *with* a knowing subject the role of logical arguments must be understood within the broader evaluative context. Harman illustrates this point when he shows that there exist no deductive psychological inferences (Harman 1986). Thus, for example, Mary – who believes that there are corn flakes in the cupboard, that she will see them when she opens it and that she has opened it – doesn't automatically believe she is seeing corn flakes even though her other beliefs imply this. In fact, realising that she can't see any corn flakes she reaches the reasonable conclusion that someone else has eaten them. Experiences and beliefs interact in various ways to justify other beliefs. Logic helps us to relate different beliefs but doesn't tell us what to do once we know how they are related. To understand what we should do we would have to look at a broader account of evaluation. This means that, rather than accepting moderate psychologism we ought to go for the full-blooded version in which the logical connections between beliefs play a role by influencing psychological inferences rather than constituting reasons, themselves.

4. Normative naturalism

Not much remains of Sellars' original argument against The Given. The accounts of experience which took it for granted – such as those of Davidson, Popper and Watkins – have turned out to be inadequate. In fact, they could well be deemed to be a *reductio* of Sellars' position.

We have seen that the argument rested upon the false assumption that justification is logical in character. It has turned out that justification is primarily psychological in character. Given this, there appears to be no good reason why experience can not have a role in justifying beliefs – which is as empiricists would expect. What is the character of experience, however?

Haack argues (Haack 1993, 108-117) that experiences are experiences of objects rather than of sense data. She means this in the sense that, when we look, what we are aware of are objects and not sense data. In arguing in this way, however she is still holding on to assumptions which are an artefact of accepting Sellars' argument. In particular, she is showing a preference for conscious inferences over the unconscious processing that is done on the information which reaches our senses. Such a preference was natural if what we were concerned with was logic. However, given the profoundly naturalist view of justification which has resulted from a rejection of Sellars, there is no reason for such a valuation. The Given, far from being a myth, ought to be reconsidered as a possibly viable element of a naturalist account of experience.

From what has been said it might seem that any normative notion of justification might have to be given up. This isn't the conclusion that Haack reaches; nor is it one that I would see as justified. Frege railed against psychological justifications of mathematics and logic (Frege 1980). In a sense, much the same error has been made by his followers when they insist that psychological inferences must be related to logic to be justified. The problems caused by Sellars' account are symptomatic of this error. Giving up on normativity because of taking up a psychologically based view of justification would be another example of it. As it is, the existence of deviant chains forces us to conclude that we must work out an account of the relationship between experiences and beliefs which is normative.

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Group Knowledge

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1. Introduction

There is *knowledge in groups* or communities, e.g. in the scientific community, that such and such is the case, and that in some cases *groups as groups know*; and in all these cases there must be or have been actual knowers. Accordingly, there is knowledge available in social groups, and this knowledge can be "picked up" and had by individual members as knowledge. My main concern in this paper is to give an account of group beliefs and knowledge in the sense that the group members *as a group* believe or know something. A central case here is *normatively binding* group belief and knowledge. In such a case the group is obligated to reason and act on the truth of the content of the belief in question. I will assume that a group cannot know unless its members or at least some of them know the item in question. The general ground for this assumption is that group properties *supervene* on their members' relevant properties (see Tuomela 1995 Chapter 6, for a discussion). A group's normatively binding belief concerning a topic will accordingly depend on its members, beliefs, indeed we-mode "acceptance" beliefs, about the topic and on their relevant "interconnections" concerning it. We-mode acceptance belief centrally involves the idea of functioning fully as a group member (see Tuomela 2002a, 2003a for the we-mode). A member's private or I-mode beliefs may differ from his relevant we-mode beliefs.

In a group that knows qua a group a justifying *group reason*, amounting to a jointly accepted joint reason (thus a we-mode reason), for the acceptance and truth of p in the case of group knowledge is needed. Why? Briefly, knowledge (entailing justified true belief) guides group action and, indeed, does it more reliably than mere shared belief and, at least from the group's point of view, even shared true belief. This also applies to the group case: The group can act as a group more successfully and reliably (from an objective point of view) as well as be more confident and take more risks (from its internal, "groupjective" point of view) in the case of group knowledge based on a jointly accepted reason than in the case of shared true belief or even shared I-mode knowledge by the members (cf. Tuomela, 2003, for detailed arguments for we-mode group reasons). Another point is that the group can also better argue for its view and defend itself in public when it has a good collectively accepted joint reason for its view than when it does not. (The joint reason can in an extreme case be a collectively accepted disjunction of the members' private reasons.)

Speaking of normatively binding group beliefs, there are two kinds of them: 1) group beliefs (viz. beliefs attributed to a group) concerning the external world (e.g. grass is green) and being at least partly dependent "upon the way the external world is"; 2) group beliefs are social and artificial in the sense that they are performatively created and that it is entirely up to the group members to decide about their truth or, rather, correctness. I will call group beliefs of kind 1) *natural.* As to 2), I will concentrate on its central subclass formed by *constitutive institutional belief*s, based on collective acceptance. An example is given by the institutional case of money (e.g. the group accepts and thus believes that squirrel fur is money). I will concentrate on normatively binding group beliefs, where the normativity is based primarily on the fact that there are "operative" members for the group who have been authorized to make normatively binding decisions and agreements and/or to accept views for the group. The set of operative members may in the extreme case consist of all group members, in which case there need not be prior authorization.

In the case of natural knowledge the group might err concerning the truth of the content of an item of knowledge and even concerning the justification it has concerning the acceptance of the content. Group discussion and, indeed, any method of justification may fall short of yielding truth in the case of natural belief. In contrast, in the (constitutive) institutional case the truth of the item p of knowledge *and* the justification of the group´s acceptance of p are both totally up to the group. Thus the criteria of justification are necessarily social. In the constitutive institutional case we can speak of performative truth, as the conceptual model for these institutional beliefs is *collective performative speech acts*. Suppose we, the group members, decide and thereby declare that squirrel fur is to be our money by representing in our actual use that squirrel fur is money. Then squirrel fur is money in our group, and our group *knows* it is money and describes it as money. In other cases less than explicit declaration will suffice as long as functionally right action is involved.

In the case of natural belief there is in general mind-to-world direction of fit (cf. Searle 1983 for the notion). This means in colloquial terms that the mind must be changed to fit the world. In contrast, in the case of constitutive institutional belief (e.g. squirrel fur is money) the direction of fit is world-to-mind. That is, when viewed as constitutive the belief in question has the world-to-mind direction of fit (in contrast to the case when it is viewed merely as expressing what the world is like according to its subject). Thus, in the constitutive case the world is to be changed and kept changed by the participants so that it fits their mind. However, the group is here also taken to have asserted the content in question, and thus the belief also has the mind-to-world direction of fit.

The "operative" members who have formed the item of knowledge for the group *actually* have the knowledge (at least at the time of making the decision or agreement in question). The case with non-operative members, in contrast, may be like that of a stranger or an external observer. They may learn about the item of knowledge e.g. by *testimony* from someone (or from books) and thus have the source in question as their justified source of knowledge. The content in question, say that squirrel fur is money in the group, is "quasi-objective" or, as we may say, "groupjective" knowledge (cf. Searle 1995). For external observers the knowledge that squirrel fur is money initially has the mind-to-world rather than the world-to-mind direction of fit of satisfaction (cf. above).

2. Group knowledge

Group knowledge involves group belief, in analogy with the individual case. I have elsewhere (in Tuomela 1992, 1995) given an account of group belief (in this case amounting basically to the group's acceptance of p as true). Here I propose to elucidate *epistemically justified* normatively group-binding group belief:

(*BG*) Group g is *justified in believing* that p in the normative group-binding sense in the social and normative circumstances C if and only if in C there are (authorized) operative members $A_1,...,A_m$ of g in respective positions $P_1,...,P_m$ such that

(1) the agents $A_1,...,A_m$, when they were performing their social tasks in their positions $P_1,...,P_m$ and due to their exercising the relevant authority system („joint intention formation" system) of g,

(a) (intentionally) collectively accepted p as true or correctly assertable in g and because of this exercise of the authority system they ought to continue to accept and believe it positionally, thus in the we-mode (being collectively committed to p, which they have collectively accepted for g); and

(b) p relates appropriately to the realm of concern of the group and is epistemically justified for g in C;

(2) there is mutual knowledge among the operative members $A_1,...,A_m$ to the effect that (1);

(3) because of (1a), the (full-fledged and adequately informed) non-operative members of g tend to tacitly accept -- or at least ought to accept -- p in the we-mode;

(4) there is mutual knowledge in g to the effect that (3).

My concise group-level analysis of epistemic group justification for the case dealt with by (*BG*) can be summarized in general terms as follows (cf. Tuomela 2002b):

(*EJ*) Proposition p is *epistemically justified* for group g (in a situation C) if and only if (in C) g accepts p in virtue of p fitting and being supported by (a) the data available to g and (b) the „semantical" (viz. world-language, language-language, and language-world) rules accepted by g.

Clause (b) is to be understood in terms of the scientific method and hence conduciveness to informative truth, understanding the semantical rules here more or less in a Sellarsian way (cf. Sellars 1968, Tuomela 1985). (*EJ*) can clearly accommodate not only natural group beliefs (best covered by the phrasing) but also constitutive institutional group beliefs. In the latter case the central element in (b) is a constitutive rule such as "squirrel fur counts as money".

My present analysis of "positional" group knowledge is compatible with the possibility that a group member may be justified in the I-mode without the group being justified.: A joint reason might be missing. For instance, the constitutive goals and standards (etc.) of the group might simply prohibit the kind of I-mode or private justification that the group member has for his belief that p. (Even all group members might be justified without the group rationally having a joint reason – cf. cases requiring compromises.) Conversely, the group might be justified in its acceptance that p even if some members (e.g. non-operative members) are not, and might privately have good reasons against the truth of the content in question, but just go along with what the operative members have accepted. (Cf. Schmitt 1994, for resembling points.)

To arrive at an elucidation of group knowledge that p, I propose, in contrast to Longino 2002, that the truth of p (or, more generally, correct assertability) also needs to be required, for the group might be wrong no matter how good reasons it takes itself to have. In addition, there must be a condition blocking Gettier-type paradoxes. Without further discussion, I adopt Pollock's 1987, p. 181, formulation for this condition. So we get:

(KG) g *knows* that p in the normative group-binding sense in the social and normative circumstances C if and only if in C (i) g believes that p in the normatively group-binding sense and p is not only groupjectively but also epistemically justified (in g), (ii) p is true or correctly assertable (for g), and (iii) there is no true proposition, q, such that were g to believe that q it would not any more be epistemically justified in believing that p.

It follows from (KG)) -- given the entailed clause (1)(b) of (BG) -- that the operative members must know that p and indeed generally mutually we-know that p in the we-mode (but they need not know it *also* in the I-mode). However, the non-operative members might not know that p, despite being obligated to knowing.

Not all group beliefs are normatively group-binding in the above sense. Let us still consider weaker kinds of group knowledge that fall into four categories I – IV (cf. Tuomela 2003b.) I will do it concisely in terms of some examples as follows:

(1) The Catholic Church believes that miracles happen. (Category I: Normatively group-binding, viz. based on group obligation, with supporting I-mode beliefs had by the group members)

(2) The Communist Party of Ruritania believes that capitalist countries will soon perish, but none of its members really believes so. (Category I: Normatively group-binding but not backed by personal, I-mode beliefs)

(3) This group believes that Smith is a traitor. (Category II: Weakly normatively group-binding as the leaders have led the others to believe that they ought to treat Smith as a traitor, which resulted in collective commitment)

(4) The team believes that it will win today's game. (Category III: Non-normative, the case is assumed still to be group-binding, because of based on a joint plan which is personally accepted in a non-normative, thin sense by the participants and which involves collective commitment but no group-obligation)

(5) Finns believe that sauna originated in Finland. (Category IV: Non-normative and non-binding; this kind of shared we-belief is what Gallup investigations study).

The most typical group beliefs seem to be the normatively group-binding group beliefs in the sense of category I and the non-normative beliefs in the sense of category III. We have:

(KGG) g *knows* that p *as a group* in C if and only if in C (a) g believes that p in one of the senses I-III ; (b) p is epistemically justified (for g), and (c) p is true or correctly assertable (for g).

Here the phrase 'as a group' primarily means that the group members are collectively committed to p for the group.*

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Kann etwas Rotes zugleich grün sein?

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Ich analysiere die „syntaktische“ Lösung Wittgensteins der apriorischen Farbensätze aus den späten zwanziger und dreißiger Jahren. Wittgenstein versuchte, den Farbensatz „Etwas kann nicht zugleich Grün und Rot sein“ als einen Scheinsatz darzustellen, der eine bestimmte syntaktische Unmöglichkeit ausdrückt, doch dieser Versuch ist nicht gelungen, denn man muß die apriorische Wahrheit des Farbensatzes dabei schon in irgendeiner Weise voraussetzen. Auch die Kritik Wittgensteins an der Deutung der Farbensätze bei Husserl stimmt nicht, denn Wittgenstein hat darin die logische und die apriorische (Un)möglichkeit der Farbenunterschiede gleichgesetzt. Viele andere Versuche der „analytischen“ Deutung dieses Satzes sind ebenso mißglückt.

Enorm viel wurde über die Sätze der Farbenunterschiede geschrieben und diskutiert, so daß man fragen kann: Läßt sich dazu noch etwas Neues oder mindestens Interessantes finden? – Also: wie steht mit dem Satz „Nichts kann zugleich (und im ganzen) Rot und Grün sein“? Ist dies ein empirischer oder ein nichtempirischer Satz, und wenn er ein nichtempirischer Satz ist, ist er ein notwendiger und sogar ein apriorisch wahrer Satz? Und wenn er ein apriorischer Satz ist, ist er analytisch oder synthetisch? Das sind nur einige der Fragen, die viele Philosophen beunruhigt haben. Man fragt, ob dies ein Fall der synthetischen Sätze *a priori* ist, der der Aufmerksamkeit von Kant entgangen wäre, oder ob er analytisch oder sogar ein kontingenter empirischer Satz ist.

Man kann nicht beweisen, daß z. B. Sätze der Farbenunterschiede, wie z. B. der Satz „Etwas kann nicht zugleich (und im ganzen) Rot und Grün sein“ analytisch sind, z. B., daß die nur bestimmte sprachliche Konventionen ausdrücken. Ebenso scheinen sie nicht kontingent zu sein, denn sie beziehen sich auf die Farbenbegriffe und nicht nur auf den Gebrauch der Farbenwörter.

Man weiß, daß es noch manche andere einfache Sätze gibt, die mindestens *prima facie* gesehen apriorisch und synthetisch sind und die man nicht bei Kant, aber bei vielen anderen Philosophen finden kann, wie z. B. Farbensätze „Alles Rote ist farbig“, „Grün ist dunkler als Gelb“, „Alles Farbige ist räumlich“ oder Relationensätze „Wenn a jünger ist als b, dann ist b älter als a“, „Wenn a jünger ist als b und b jünger ist als c, dann ist a jünger als c“ etc. Ich werde jedoch den Satz „Nichts kann zugleich (und im ganzen) Rot und Grün sein“ als paradigmatischen Fall solcher Sätze betrachten. Ich habe diesen Problem auf dem Beispiel der „syntaktischen“ Darstellung dieses Satzes bei Wittgenstein in der Zeit nach dem *Tractatus* näher betrachtet.

Ich werde hier den Versuch Wittgensteins aus den späten zwanziger Jahren, diesen Satz als reinen „grammatischen“ Satz darzustellen, kritisch betrachten. Seine „sprachlogische“ Deutung dieses Satzes (und ähnlicher Sätze) ist sozusagen das Paradigma der analytischen Kritik an apriorischen Sätzen geworden.

Wittgenstein hat im *Tractatus* den oberen „Farbensatz“ als einen analytischen Satz, genauer als eine verkappte logische Wahrheit verstanden. Genauer gesprochen, Wittgenstein hat den Satz

(a) „Ein Punkt des Gesichtsfeldes hat zu gleicher Zeit zwei verschiedene Farben“

als eine verkappte Kontradiktion angesehen, die er mit der physikalischen „Kontradiktion“

(b) „Ein Teilchen ist zu gleicher Zeit an verschiedenen Orten“

vergleicht (Wittgenstein, 1969, 6.3751).

Es ist nicht klar, wie Wittgenstein diesen Vergleich verstanden hat. Eine Möglichkeit ist, daß er (a) als Satz über bestimmte physikalische Eigenschaften der Lichtwellen verstanden hat, z. B.

(b‘) Ein (farbiger) Punkt des Gesichtsfeldes strahlt zu gleicher Zeit mit Licht, das zwei unterschiedliche Wellenlängen hat.

Dann muß man nur diesen Satz als eine physikalische Kontradiktion darstellen, weil das Licht einer bestimmten Farbe nur eine bestimmte Wellenlänge haben kann. Oder besser gesagt: dies ist im Widerspruch mit der Definition des „Lichtes einer bestimmten Farbe“: „Licht einer bestimmten Farbe: = Licht mit einer bestimmten Wellenlänge“, wobei „eine bestimmte Wellenlänge“ gleichzeitiges Auftreten verschiedener Wellenlängen logisch ausschließt. Diese Deutung ist schwach, weil (a) über phänomenales und nicht über physikalisches Licht spricht. Der angegebene Vergleich von (a) mit (b‘) braucht noch die „apriorische“ bzw. analytische Wahrheit, daß phänomenales Licht notwendig den Eigenschaften des physikalischen Lichtes folgt. Erst dann kann man (a) durch (b) erklären. Aber dies führt uns zurück zur Frage, wie man die angegebene Notwendigkeit analytisch, d. h. ohne irgendwelche synthetischen Sätze *a priori* begründen kann. Das zweite Problem dabei ist, daß auch der Satz „Licht bestimmter Wellenlänge schließt gleichzeitiges Auftreten von Licht mit verschiedener Wellenlänge aus“ ein apriorisch wahrer Satz sein muß, der aber *per se* keine logische Wahrheit ist. Man kann zwar den Satz „die Wellenlänge des Lichtes = λ“ so verstehen, daß er die Negation aller Sätze „die Wellenlänge des Lichtes = λ'“ impliziert, wenn $\lambda \neq \lambda'$.

Das ist aber keine logische Notwendigkeit, sondern eine apriorisch wahre Implikation, die dasselbe Problem darstellt, das man damit lösen will. Damit kommt man in einen unlösbaren logischen Zirkel, wobei man das voraussetzt, was man beweisen will. Auch andere Möglichkeiten des Verstehens des Vergleichs (a) mit (b) führen zu derselben Sackgasse, d. h. in einen logischen Zirkel, oder zur Annahme bestimmter nicht-logisch apriorischer Sätze, die man wieder irgendwie „eliminieren“ muß.

Wittgenstein hat erst Ende der zwanziger Jahre eingesehen, daß es keine Beweise der rein logischen Natur solcher Sätze gibt. Er hat (a) nicht als den synthetischen Satz *a priori*, sondern als reinen „grammatischen“ Satz angesehen, der den fundamentalen, konstitutiven Regeln bestimmter „syntaktischer“ Systeme entsprechen (man kann annehmen, daß für ihn auch (b) ein „grammatischer“ Satz war).

Wittgenstein versuchte erst, statt von Farben von Farbenstufen, also statt vom „Grünen“, „Roten“ usw. von

bestimmten „Graden des Grünen“, „Graden des Roten“ usw. zu sprechen (Wittgenstein, 1989, 24-25, vgl. auch 1994, 19-20). Der Satz „Nichts kann zugleich (und im ganzen) Rot und Grün sein“ wurde damit zu dem Satz „Etwas, was alle Grade des Roten hat, kann nicht zugleich (und im ganzen) am gleichen Ort mit etwas, was alle Grade des Grünen hat, bestehen“. Doch damit bekommt man einen Satz über das Ausschließen bestimmter Quantitäten, nämlich den Satz, daß nichts zugleich verschiedene, vollständig bestimmte Quantitäten haben kann. Dieser Satz stellt uns vor dasselbe Problem wie das Farbenproblem, und zwar, wie man das apriorische Ausschließen von bestimmten Eigenschaften rein logisch begründen kann. Die Beziehung des Gradunterschieds ist eine interne Relation, die sich in einer internen Relation zwischen den Sätzen, die die verschiedenen Gradangaben machen, zeigt. Wittgenstein mußte schließlich die These, daß Elementarssätze logisch unabhängig sind, verwerfen. Sie können zwar einander nicht logisch widersprechen, aber einander *a priori* ausschließen. In den *Bemerkungen über logische Form* wollte Wittgenstein einfach das gemeinsame Auftreten der Sätze „A ist grün in (der Zeit) T“ und „A ist rot in (der Zeit) T“, also die Konjunktion „A ist grün in T und A ist rot in T“ verbieten, aber dies war offensichtlich noch eine unzureichende Lösung.

Ein wenig später gelangte Wittgenstein zu der Idee, daß der Satz über das Ausschließen der Farben sinnlos ist. Danach ist er nur ein scheinbar sinnvoller Satz unserer üblichen Wortsprache, worin bestimmte Regeln der logischen Syntax des Farbensystems mittelbar angegeben sind. Man kann diese Regeln nicht sinnvoll mittels der Sätze dieses Systems beschreiben, sie aber vielleicht mittels der formalen Sätze in bestimmten syntaktischen Systeme klarer angeben, und zwar so, daß die „sinnlosen“ Sätze darin einfach unmöglich sind. Wittgenstein hat diese Idee nie ganz klar ausgedrückt, obwohl seine Versuche mit Farbenoktaedern und anderen Farbendiagrammen sowie mit „Koordinatensystemen“, in denen man die Farbensätze so „übersetzen“ kann, daß ihre richtige logische Mannigfaltigkeit herauskommt, darauf hinweisen (vgl. Wittgenstein, 1994, 18-20, 51).

Die „logische Mannigfaltigkeit“ eines solchen syntaktischen Systems wäre dann der Syntax des ursprünglichen Farbensystems näher, doch sie unterscheidet sich von der logischen Syntax der Wortsprache, worin die vermeintlichen apriorisch wahren oder die apriorisch falschen Farbensätze auftreten. So kann man z. B. den Satz „A hat die Farbe F“ durch den Punkt „A(a, f)“ eines bestimmten formalen Raums darstellen, wobei die Koordinate a der formalen Angabe des Punktes A im visuellen System entspricht, die Koordinate f aber der formalen Angabe der Farbe F aus dem Farbensystem entspricht. Die Farbenkoordinate kann numerisch oder nichtnumerisch sein. Im Falle der nichtnumerischen Angabe der „Farbenwerte“ kann man z. B. jedem a nur einen „Punkt“ eines bestimmten Farbensystems zuordnen (z. B. die Farbenordinate f soll nur einen Punkt des „Farbenoktaeders“ Wittgensteins berühren). Es ist klar, daß man in die logischen Formen A(x, f) bei einem gegebenen x *nicht zugleich* zwei verschiedene Werte für f einsetzen kann. Diese syntaktische Unmöglichkeit zeigt nun die logische Unmöglichkeit des *gleichzeitigen* Auftretens der verschiedenen Farben an demselben Ort des visuellen Raumes.

Die zweite Variante eines solchen syntaktischen Systems Wittgensteins war, daß man numerische Farbenwerte nimmt. Dann wäre im Prinzip A(a, f) und A(a, g) möglich, wobei f und g zwei verschiedene „Farbenzahlen“ sind. Doch in diesem Fall entsprechen f und g verschiedenen Farbeningredienzien, die in der „Gesamtfarbe“ von a gemischt sind. Den visuellen Ort a beschreibt man erst dann adäquat, wenn man die *vollständige* Beschreibung der Gesamtfarbe von a gibt, also wenn man *alle* Farbeningredienzien angibt. Man muß also sagen „A(a, f) und A(a, g) *und keine anderen A(a, y)*“ und das mittels eines bestimmten Symbols ausdrücken. Es ist klar, daß dann a nicht zugleich zwei verschiedene Gesamtfarben haben kann, denn das widerspricht der Syntax unseres Darstellungssystems. Wittgenstein schreibt darüber:

„Könnte es nicht folgendes Schema geben: Die Farbe in einem Punkt ist nicht durch die Zuordnung *einer* Zahl [zu einem Punkt] beschrieben, sondern durch die Zuordnung *mehrerer* Zahlen. Eine Mischung dieser Zahlen macht erst die Farbe und um die vollständige Farbe zu beschreiben, brauche ich den Satz, daß *diese* Mischung nun die komplette Mischung ist, also nichts mehr dazu kommen kann. Das wäre so, wie wenn ich den Geschmack eines Gerichtes beschriebe, indem ich die Ingredienzien aufzähle; dann muß ich am Schluß den Zusatz machen, daß das nun *alle* Ingredienzien sind (Wittgenstein, 1994, 21).

Es ist fraglich, ob Wittgensteins mittels bestimmter syntaktischer Unmöglichkeiten die scheinbar apriorisch-synthetischen Unmöglichkeiten als gänzlich unproblematisch darstellen kann. Im ersten Koordinatensystem Wittgensteins muß man voraussetzen, daß die Formel A(a, f) schon die *vollständige* Darstellung des visuellen Punktes A im ersten Darstellungssystem ist. Das entspricht aber genau dem Satz „A kann nicht mit verschiedenen Farben (vollständig) bestimmt werden“ bzw. dem Satz „A kann nicht zugleich verschiedene Farben haben“. Hier wurde impliziterweise vorausgesetzt, daß diese Formeln *in der gleichen Zeit*, nicht aber in verschiedenen Zeiten gelten. Wenn man dies explizit macht, bekommt man Formeln wie „A(a, t, f)“, wobei „t“ die Zeitkoordinate des Punktes A bezeichnet, also die Zeit der Wahrnehmung des Punktes A bestimmt. Hier sieht man klarer, daß die Konjunktion „A(a, t, f) und A(a, t, g)“, wobei $f \neq g$, nicht so einfach unmöglich ist, außer wenn man voraussetzt, daß der Ausdruck „A(a, t, f)“ die Identität des visuellen Punktes A bestimmt. Die Konjunktion „A(a, t, f) und A‘(a, t‘, g)“ wäre nur dann sinnvoll, wenn $A \neq A‘$ und $t \neq t‘$. Doch dann handelt es sich um verschiedene visuelle Punkte, auch wenn sie dieselbe räumlichen Koordinaten und dieselbe Farbenkoordinate haben. Darauf hat auch Wittgenstein verwiesen, als er bemerkt hat:

> „Würde uns in der Schwierigkeit zu zeigen, daß zwei Farben zugleich an einem Ort sein können, die Einführung der Zeit etwas nützen?
> Angenommen, unser Gesichtsbild bliebe immer dasselbe und andere Sinne als den Gesichtsinn hätten wir nicht, würde dann Zeit verrinnen?
> Man muß scheinbar annehmen: ja; denn der Wechsel schließt auch die *Möglichkeit* der Ruhe in sich.
> Obwohl es schwer ist, sich zu denken, daß Zeit vergeht, wenn alles gleichbleibt.
> Aber schon zu sagen, alles *bleibt* gleich, setzt die Zeit voraus“ (ibid., 20).

Wittgenstein muß also annehmen, daß man nur augenblickliche Farbwahrnehmungen an einem visuellen Punkt als den „identischen“ Ort in seinem syntaktischen System annimmt. Das ist ziemlich künstlich. Erst damit kann man den Satz der Farbenunterschiede als notwendige Bedingung der Identität eines visuellen Punktes verstehen (und ihn damit als analytisch betrachten). Der Satz der Farbenunterschiede folgt daraus als eine syntaktische Notwendigkeit, deren Negation sinnlos und nicht nur

widersprüchlich ist. Die angegebene Bestimmung der Identität des visuellen Punktes ist eine rein konventionelle, die man annehmen kann oder nicht. Sie hilft uns im Beweis der analytischen Natur des Satzes der Farbenunterschiede nicht.

Dasselbe gilt für das zweite Darstellungssystem Wittgensteins. Auch wenn es uns gelingt, eine bestimmte Formel „A(a, F(f, g,…, h))“ aufzustellen, die die vollständige Information über alle Ingredienzien f, g,…, h in der Gesamtfarbe F des Ortes A (mit den räumlichen Koordinaten a) angibt, sieht man daraus noch nicht, warum z. B. „A(a, F(f, g, …, h)) und A(a, G(f‘, g,…, h))“ (wobei f‘ ≠ f) eine sinnlose Zusammensetzung wäre. Nur wenn man voraussetzt, daß A(a, f), A(a, g,),…, A(a, h) und *nur sie* die Gesamtfarbe des Punktes A bestimmen und wenn die Gesamtfarbe zur visuellen Identität des Punktes gehört, kann man sagen, daß der Ausdruck „A(a, F(f, g,…, h)) und A(a, G(f‘, g,…, h))“ sinnlos ist. Dies ist wieder eine konventionelle Bestimmung, nicht aber der Beweis der analytischen Natur des Satzes der Farbenunterschiede. Die nähere Berücksichtigung der zeitlichen Bestimmungen der visuellen Orte hilft uns dabei ebensowenig.

Man muß also den Satz „Ein visueller Punkt kann nicht zugleich verschiedene Farben haben“ oder etwas ähnliches als notwendige Wahrheit annehmen, um damit eine solche syntaktische Bestimmung des Begriffs „visueller Punkt“ zu bekommen, die eine gleichzeitige Angabe verschiedener Farben an demselben Ort des Koordinatensystems ausschließt.

Auch das Argument von Wittgenstein für die Sinnlosigkeit des Satzes (A) „Ein Gegenstand kann nicht (zugleich) rot und grün sein“, das er flüchtig im Gespräch mit Schlick und Waismann über Husserls Phänomenologie 1929 gegeben hat, weist Mängel auf. Wittgenstein argumentierte folgendermaßen: Es scheint, daß der Satz (A) synthetisch ist, die Worte „kann nicht“ aber bedeuten logische Unmöglichkeit. Doch dann müßte auch die Negation von (A), also der Satz (B) „Ein Gegenstand kann (zugleich) rot und grün sein“ sinnvoll sein, d. h. er beschriebe eine *logisch mögliche* Sachlage. Doch das ist nicht wahr, unser Satz versucht also etwas Unmögliches: daß das Unmögliche doch möglich ist (Wittgenstein, 1967, 67-68.). Die Schwachstelle dieses Argumentes sehe ich darin, daß nach Wittgenstein (A) die *logische Unmöglichkeit* des gleichzeitigen Auftretens des Roten und des Grünen am demselben Gegenstand behauptet. Dies ist aber nicht notwendig, denn das *Synthetische a priori* ist keine *logische* Notwendigkeit, sondern die beiden sind Unmöglichkeiten *a priori*. Auch die Negation von (A) behauptet keine *logische*, obwohl eine *apriorische* Unmöglichkeit. Also ist es nicht sinnlos, sich eine „mögliche Unmöglichkeit“ vorzustellen, wobei „die Unmöglichkeit“ *synthetisch a priori* und „die Möglichkeit“ *logisch* ist. Es ist sinnvoll, sich vorzustellen, daß etwas logisch Mögliches *a priori* unmöglich ist, wenn dafür bestimmte außerlogische, doch apriorische Gründe bestehen.

Diese Schwierigkeiten in der Argumentation Wittgensteins zeigen uns, daß man apriorische Sätze von Farbenunterschieden nicht so einfach als Ausdrücke rein sprachlogischer Konventionen wegdenken kann. Synthetisches *a priori* kommt immer wieder als eine erkenntnislogische Tatsache und als ein Problem „wie ist es möglich?“ zurück.

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Time before Time: How to Avoid the Antinomy of the Beginning and Eternity of the World

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1. A universe with or without a beginning

Although modern physical cosmology has been able to emancipate itself considerably from its philosophical predecessors, it is still occupied with some of their fundamental questions (cf. Kanitscheider 2002). One of them is the problem of the finiteness versus infiniteness of time and space. The philosophical implications of current scientific approaches to these problems and the Big Bang, should they turn out to be true, are far-reaching; and they are based on many (partly speculative) premises as well as concepts, which are not always sufficiently clear in scientific practice. Therefore these approaches are also an interesting subject of reflections for philosophers of science (cf. Bartels 1996).

Immanuel Kant (1781/1787), in his *Critique of Pure Reason*, argued that it is possible to prove *both* that the world has a beginning *and* that it is eternal (First Antinomy of Pure Reason, A426f/B454f). As Kant believed he could overcome this "self-contradiction of reason" ("Widerspruch der Vernunft mit ihr selbst", A740) by the help of what he called "transcendental idealism", the question whether the cosmos exists forever or not has almost vanished in philosophical discussions. This is somewhat surprising, because Kant's argument is quite problematic (cf., e.g., Heimsoeth 1960, Wilkerson 1976, Smith 1985, Wike 1982, Schmucker 1990, Falkenburg 2000). In the twentieth century, however, the question became once again vital in the context of natural science, culminating in the controversy between Big Bang and Steady State models in modern physical cosmology (Kragh 1996). In recent years, it has reappeared in the framework of quantum cosmology (Vaas 2001b & 2002a), where, on the one hand, there are Instanton models that assume an *absolute beginning of time* (Vilenkin 1982 & 1984, Hawking & Hartle 1983, Hawking & Turok 1998), while other scenarios suppose that the Big Bang of our universe was only a *transition from an earlier state* (Linde 1983 & 1994, Blome & Priester 1991, Khoury *et al.* 2001, Steinhardt & Turok 2002), and that there are perhaps infinitely many such events.

General Relativity breaks down at very small spatio-temporal scales and high energy densities. This is why quantum cosmology is needed. But in contrast to the framework of General Relativity, which is theoretically well understood and has been empirically confirmed quite marvelously, the current approaches in quantum cosmology, string theory, etc., are still quite speculative, controversial, and almost without any empirical footing yet. Although it is on a much more sophisticated and abstract level, this situation somewhat resembles the pre-Socratic discussions of natural philosophy. This is a further reason why conceptual analysis and philosophical investigations of assumptions and implications in general might be useful here – both within and beyond physics.

This paper has two goals: First, a conceptual clarification of the term "Big Bang" shall be made, drawing a four-fold terminological distinction which helps to classify different cosmologies and avoid confusion. Second, a proposal for a solution of Kant's First Antinomy of Pure Reason within a framework of metaphysical realism is suggested, which is compatible with some modern cosmological scenarios.

2. Different notions of "Big Bang" and "universe"

"Big Bang" is an ambiguous term, which has lead to many misunderstandings and prejudice. One should draw a distinction between at least four logically different meanings: (1) the hot, dense early phase of our universe where the light elements were formed, (2) the initial singularity, (3) an absolute beginning of space, time, and energy, and (4) the beginning of our universe, i.e. its elementary particles, vacuum state, and perhaps its (local) space-time.

That our universe originated from a Big Bang in the sense of (1) is almost uncontroversial. (2) is the relativistic cosmology's limit of backward extrapolation where the known laws of physics break down. Different models of quantum and string cosmology try to overcome this limit, and (3) and (4) classify their different scenarios. Those characterized by (3) might be called *initial cosmologies*; they postulate a very first moment (cf. Grünbaum 1991, Smith 2002). Those characterized by (4) are *eternal cosmologies*; there are different kinds of them – namely *static*, *evolutionary* (with cumulative change), and *revolutionary* (with sharp phase-transitions) ones – both in ancient and in modern cosmology. And they could have either a linear or a cyclic time. The option (4) also allows the possibility that our universe neither exists eternally, nor that it came into being out of nothing or out of a timeless state, but that space and time are not fundamental and irreducible at all, or that there was a time "before" the Big Bang – "Big Bang" in the sense of (1) –, as well as that there are other universes.

There are different meanings of the term „universe“, e.g.: (1) Everything (physically) in existence, ever, anywhere; (2) the observable region we inhabit (the Hubble volume, roughly 27 billion light years in diameter), plus everything that has interacted or will ever interact with this region; (3) this region plus everything that has interacted with it by now, or will at least do so in the next few billion years; (4) any gigantic system of causally interacting things that is wholly (or to a very large extent) isolated from others; (5) any system that *might* well have become gigantic, etc., even if it does in fact recollapse while it is still very small; (6) other branches of the wavefunction (if it never collapses, cf. Vaas 2001c) in unitary quantum physics, i.e. different histories of the universe or classical worlds which are in superposition; (7) completely disconnected systems consisting of universes in one of the former meanings, which do or do not share the same boundary conditions, constants, parameters, vacuum states, effective low-energy laws, or even fundamental laws, e.g. different physically realized mathematical structures (cf. Tegmark 2003). Nowadays, the term „cosmos“ or „multiverse“ or „world“ (as a whole) might be used (and will be used here) to refer to Everything in Existence, while „universe“ permits to talk of several universes within the multiverse. In principle, these universes might or might not be spatially, temporally, dimensionally, and/or mathematically separated from each other.

3. A possible solution for Kant's First Antinomy

Kant's First Antinomy makes the error of the excluded third option, i.e. it is not impossible that the universe could have *both* a beginning *and* an eternal past. If some kind of metaphysical realism is true, including an observer-independent and relational time, then a solution of the Antinomy is conceivable. It is based on the *distinction between a microscopic and a macroscopic time scale*. Only the latter is characterized by an asymmetry of nature under a reversal of time, i.e. the property of having a global (coarse-grained) evolution – an arrow of time (Zeh 2001, Vaas 2002b, Albrecht 2003) – or many arrows, if they are independent from each other. (Note that some might prefer to speak of an arrow *in* time, but that should not matter here.) On the microscopic scale, however, only local, statistically distributed events *without* dynamical trends, i.e. a global time-evolution or an increase of entropy density, exist – if the system is in thermodynamic equilibrium (e.g. there is a huge degeneracy of microscopic states identifiable with the same coarse-grained state) and/or in an extremely simple meta-stable ground state. Some still speculative theories of quantum gravity permit the assumption of such a global, macroscopically time-less ground state (e.g. quantum or string vacuum, spin networks, twistors). Due to accidental fluctuations, which exceed a certain threshold value, universes can emerge out of that state. Due to some also speculative physical mechanism (like cosmic inflation) they get – and, thus, are characterized by – directed non-equilibrium dynamics, specific initial conditions, and, hence, an arrow of time. (It could be defined, for instance, by the cosmic expansion parameter or by the increase of entropy.)

It is a matter of debate (cf., e.g., Price 1996, Vaas 2002b) whether such an arrow of time is 1) irreducible, i.e. an essential property of time (e.g. Maudlin 2002), 2) governed by some unknown fundamental and not only phenomenological law (e.g. Penrose 1989, Prigogine 1979), 3) the effect of specific initial conditions (cf. Albrecht 2003, Schulman 1997, Zeh 2001) or 4) consciousness (if time is in some sense subjective, e.g. Kant 1781/1787) or 5) even an illusion (e.g. Barbour 2000); many physicists favour special initial conditions, though there is no consensus about their nature and form. But in the context at issue it is sufficient to note that such a macroscopic global time-direction is the main ingredient of Kant's First Antinomy, for the question is whether this arrow has a beginning or not. Surprisingly, quantum cosmology offers a possibility that the arrow has a beginning and that it nevertheless emerged out of an eternal state without any macroscopic time-direction. (Note that there are some parallels with a theistic conception of a creation of the world here, e.g. in the Augustinian tradition which claims that time together with the universe emerged out of a timeless God; but such a cosmological argument is quite controversial, especially in a modern form, cf. Craig & Smith 1993, and of course beyond the scope of this paper.) So this overcoming of the First Antinomy is not only a philosophical possibility but is already motivated by modern physics. At least some scenarios of Quantum Geometry (Ashtekar 2002) and String Cosmology (Gasperini & Veneziano 2003, Vaas 2003) can be interpreted as examples for such a local beginning of our macroscopic time out of a state with microscopic time, but with an eternal, global macroscopic timelessness.

Note that this kind of solution bears some resemblance to a possibility of avoiding the spatial part of Kant's First Antinomy, i.e. his claimed proof of both an infinite space without limits and a finite, limited space: The Theory of General Relativity describes what was considered logically inconceivable before, namely that there could be universes with finite, but unlimited space (Einstein 1917), i.e. this part of the Antinomy also makes the error of the excluded third option. This offers a middle course between the Scylla of a mysterious, secularized "creatio ex nihilo", and the Charybdis of an equally inexplicable eternity of the world.

In this context it is also possible to defuse some explanatory problems of the origin of "something" (or "everything") out of "nothing" as well as a – merely assumable, but never provable – eternal cosmos or even an infinitely often recurring universe (cf. Nozick 1981 & 2001, Parfit 1998). But that does not offer a final explanation or a sufficient reason, and it cannot eliminate the ultimate contingency of the world.

4. Outlook

It seems unlikely that philosophical considerations alone can answer the question whether there was a beginning of the universe or not, and in what sense. It is also premature, however, to ignore such questions, e.g. for Kantian reasons. On the other hand, it is not to be expected that some unambiguous empirical results (e.g. from the gravitational wave background, dark matter relics, or some traces in the cosmic background radiation) will ever solve these questions. But empirical research might at least constrain cosmological theories which could and should be based on current and/or future and more advanced fundamental theories of forces, particles, space and time, e.g. M-theory or Quantum Geometry. It is an open question whether the dream of such a "final theory" (Weinberg 1992) or "Theory of Everything" (Barrow 1991) will ultimately explain the origin of our universe (or even the whole multiverse) and address the finiteness or infinity of space and time – or even reduce space-time to something more fundamental. But extrapolating from the scenario of eternal inflation (Guth 2000, Vilenkin 2000), and contemporary approaches to quantum gravity, it seems almost inevitable that the origin of our universe was *not* a unique event, and that other universes also exist (Linde 1994, Smolin 1997, Vaas 1998, Tegmark 2003). This not only has important implications for observational (or anthropic) selection effects (Barrow and Tipler 1986, Kanitscheider 2001, Vaas 2000) and our place in nature (Knobe, Olum & Vilenkin 2003, Vaas 2001a), but also for the question whether the whole cosmos or multiverse is past-eternal or not (Borde, Guth & Vilenkin 2003). If the proposal of this paper is correct, both options could be true in some way.

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On Paradoxicality of Experience in Wittgenstein's "Later" Philosophy

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> Es kann leicht so scheinen, als *zeigte* jeder Zweifel nur eine vorhandene Lücke im Fundament; so dass ein sicheres Verständnis nur dann möglich ist, wenn wir zuerst an allem zweifeln, woran gezweifelt werden *kann*, und dann alle diese Zweifel beheben. (TS227, 73: PU §87b)

1. The Status of Natural Knowledge

The common cognoscitive form of access to reality (consequently *exceptis excipiendis*) constitutes, at first sight, a *definite* (*constant*) and *valid* (*not deficient*) contexture.[1] The standardisation of "ideal" knowledge is determined by its *ineluctable* and *enough* character. The way of being that makes up mankind takes root without our interference, in a word - *naturally*. Since we are aware, we accede to the world through this perspective, in such a way that it does not seem credible to pass to a different situation. The patrimony of *fundamental* or *foundational* structures that shapes "common sense", which presents itself as *legitimate*, manifests itself as the source of all *derived* or *appendicular* knowledge we can hold in our individual existence, also being, extensively, the *positum* of the various scientific disciplines.

Nevertheless we recognise, as much as it is possible for us to recognise, that we do not know a multiplicity of things, but this identification does not leave us perplexed, nor projects us to an immediate and complete acquisition of what we do not know. By the opposite, the recognition of ignorance regarding immense subjects is faced with naturalness because we do not need this. A distinct problem consists in a fall's possibility of *primary* or *basic* determinations. In effect, although habitually we do not tend for a perspicuous understanding of these, we could not be uninjured if it would produce a *deficiency* in its functioning, seeing that this would constitute a *convulsion* in experience.

Wittgenstein's remark that works for motto to the present speculation stresses an aspect that allows to call into question the solidity of natural empirical conformation, namely: "an existing gap in the foundations". Wittgenstein relates further a strategy that passes over all History of Western Philosophy: the conception according to which "secure understanding is only possible if we first doubt everything that *can* be doubted, and then remove all these doubts". At the beginning we do not find "faults" in cognitive configuration, but this does not mean they cannot exist, though inconspicuous. The discovery of these "gaps", dependent of an attention to the grounding of perspective disposal, motivates a continuous philosophical reflection. The efforts that are established to nullify the discovered problems constitute the other side of this investigation. Thus we are forced to admit that natural knowledge, in its foundations, in spite of it offer itself as *strong*, is armed with a genuine *fragility*, conducive to an "amphiboly of representation".

2. The Meaning of Doubt

In circumscribing ourselves only to the well-known material of all Wittgensteinian commentators, we find in the book edited under the title *Über Gewissheit*[2], which consists in remarks written by Wittgenstein in 1949-51, the more concrete consideration of "doubt's" topic with regard to certainty and belief in knowledge's horizon. In MS172 it is initiated, precisely, the commentary to the position of Moore expressed in "A Defence of Common Sense" (1925), "Proof of an External World" (1939) and "Certainty" (1941), which serves as a platform to Wittgenstein's circumspection that finishes in MS177, the last lines he wrote. (Cf. ÜG, "Vorwort" [Anscombe, von Wright]; cf. also Stroll 1994, 8-10; see in addition Malcolm 2001, 70-75)

Considering the examples of Moore, or others, we verify, however absurd, we cannot exclude such possibilities (*e.g.* the earth has started to exist now). In fact the problem lies in the argumentation provided by individuation. In other words if a doubt is installed promoting a perplexity concerning fields of experience, in all its multiple diffusion, even its totality, determined, for instance, in its modal angle, what is evidenced is a radical lability, proportionate by the individual's representative indecisiveness. This makes impracticable a decision, in so far as any deliberation has the problematic form of this point of view. This ambiguity of perspective does not result, therefore, in an empirical *metamorphosis*, *i.e.* in the deposition in a new region of event, but in the acknowledgement of *paradoxical quality* of experience.[3]

In this direction what Wittgenstein carries out is a research of the grammar that *grounds* our access. He says:

> Die Frage des Idealisten wäre etwa so: "Mit welchem *Recht* zweifle ich nicht an der Existenz meiner Hände?" (Und darauf kann die Antwort nicht sein: "Ich *weiss*, dass sie existieren") Wer aber so fragt, der übersieht, dass /dass der Zweifel an einer Existenz (nur) in einem *Sprachspiel* seinen Platz hat./ Dass man also erst fragen müsse: Wie sähe so ein Zweifel aus? und es nicht so ohne weiteres versteht. (MS172, 8: ÜG §24)

Wittgenstein's critique to Moore depends, rightfully, on analysis of verbs like "to know" (*wissen*) or "to believe" (*glauben*). In MS174 we verify that the use of "I know" is incorrect when applied to phenomena like those at stake. When Moore says he "knows" this or that what he is referring to is not a particular and, much less, apodictic knowledge. Indeed what Moore "knows" is something that all we know; however it cannot be proved, demonstrating the double misleading employment of verb "to know". Wittgenstein writes:

[1] It is not necessary to be thus. We could have an *indefinite* (*variable*) form; and being *definite* it could present itself as *invalid* (*deficient*), or being *indefinite* it could present itself either as *valid* or as *invalid*. And beyond this *fixed* formality it is still possible to project a *mutant* formality. This could manifest itself either *inclusively* or *exclusively*. In the first case it could appear either as *definite* or as *indefinite*, being able in each one to patent itself *inclusively* or *exclusively* either as *valid* or as *invalid*. In the second case (just concerning to value's attribution) it could appear either as *definite* or as *indefinite*, coming over *inclusively* either as *valid* or as *invalid*.

[2] A correspondence's synopsis of this text with MSS is presented in Pichler 1993.

[3] That is, the form of access passes to be identified as "amphibolic", remaining *definite* (*constant*), but giving rise in a *mutation of focusing* to an indecision in what concerns to its *validity* (*not deficiency*) or *invalidity* (*deficiency*).

> Die /Wahrheiten,/ von denen Moore sagt, er wisse sie, sind solche, die, beiläufig gesprochen, wir Alle wissen, wenn er sie weiss. (MS174, 22v: ÜG §100)

Effectively Wittgenstein calls our attention for the "system" (*System*) of "convictions" (*Überzeugungen*) (cf. MS174, 22v: ÜG §102), advising that this net of presupposed ideas, this synthesis of general cognition, determines, at the most, the daily practice. It is "action" (*Handlung*) that must decide relatively to something subjected to doubt. This resolution cannot demand "certainty" (*Sicherheit, Gewissheit*) because an asseveration of this nature is impossible for us. Wittgenstein's proposal is based on a *reductio ad absurdum*, which has as a positive limit the norm of the "language-game". Wittgenstein refers:

> Wer an allem zweifeln wollte, der würde auch nicht bis zum Zweifel kommen. Das Spiel des Zweifelns selbst setzt schon die Gewissheit voraus. (MS174, 25v: ÜG §115)

Empirical operations lay in a "practical harmony" (*praktische Harmonie*: Hofmann 2000, 255), to such an extent that a doubting movement can hardly eliminate *in integrum* the basic "presuppositions" (*Voraussetzungen*) or "preconceptions" (*Vorurteile*). Usually it always exists something that stands, a "substratum" (*Substrat*) (cf. MS174, 35r: ÜG §162) in which we still are located and that authorises us to think, *in limine* the "meaning" of the words we use. Wittgenstein states exactly:

> Wenn ich also zweifle, oder unsicher bin darüber, dass das meine Hand ist (in welchem Sinn immer), warum dann nicht auch /über die/ Bedeutung dieser Worte? (MS176, 30r: ÜG §456)

Thus the set of *foundational* knowledge we possess shall pass to be identified not as something that we "know", but as something that we "believe" and that we should want "to believe". Wittgenstein says:

> Das ich weiss, das glaube ich. (MS174, 37v: ÜG §177)

It is the reduction of "objective certainty" (*objektive Gewissheit*) to "subjective certainty" (*subjektive Gewissheit*) (cf. MS175, 1r-1v: ÜG §194) that mould up Wittgenstein's resolubility, mobilising a rotation from an apparent "knowing" to a clarified "belief". This *epistemological* belief should not be immediately confused with Wittgenstein's *religious* belief. Firstly, this "new method of philosophising" (see MS105, 46: WA1, 177, §1) does not impose as an indispensable condition this feature, and secondly, for Wittgenstein, decidedly, religiousness ought not to constitute simply a theoretical salvation, notwithstanding what is in cause is the sustenance of the very *praxis*.

In this way Wittgenstein's depurations have an identical practical result to the ones of Moore, but they involve an efficient, *irrefutable* intellection. The "therapeutic methodology" does not make an apology of "common sense" because this is incongruous in Philosophy. On the contrary, it diagnoses instability that unnoticeably is inherent to natural disposal, which can be raised in all its amplitude on the occasion of a philosophical examination like that we have debated, showing likewise the nonsense of this speculative intention, attempting to safeguard a *nature*. The following remark of Wittgenstein is elucidative:

> Es ist immer von Gnaden der Natur, wenn man etwas weiss. (MS176, 42r: ÜG §505)

Even on the last day, when he wrote down his thoughts, he asks:

> 'Wenn ich /dieser/ Evidenz nicht traue, warum soll ich dann irgend einer Evidenz trauen?' (MS177, 10r: ÜG §672)

3. Grammar and Indeterminability

Wittgenstein's "grammatical investigations", although they give a resolution for actional *epoché*, they are permeable to a placing in a sphere of indetermination that suggests an *unsuitability* to experience. Really we cannot avoid the bewilderment imposed by problems like the ones we have submitted to analytical focus (had they been originated voluntarily [philosophically] or involuntarily). What we experience in these dubious situations is a lack of *power* to decide categorically the aporia; or else, it lacks *truth's criterion*. Wittgenstein's solution, which seems to be the only possible, depends nevertheless on a progressive degradation of pathological intensity that happens *per se*. That is to say, difficult *philosophical* problems exist, they are passable to formulation, and no matter how much, as philosophers, we prevent ourselves from the fall into the "blind alley" (*Sackgassen*) of our language, they can present and melt away themselves by themselves, *innately*. If on the one hand the philosopher can be prepared to face these events, on the other hand he cannot help feeling an *impotence* to determine the *condition* we are in. This is dominated by "truth", in the words of Nietzsche, being preferable for us, according to him, a projection of "error", of "illusion", instead of an unfastening to *our* "will to truth" (*Wille zur Wahrheit*). In Nietzschean thought that is called to expression by "will to power" (*Wille zur Macht*). In this manner Wittgenstein's position would not escape to what is criticised in Nietzsche's philosophy from the beginning, so to speak from the criticism on Schopenhauer, as "resignationism".

Notwithstanding, Wittgenstein is the philosopher in all "resignational tradition" who better hold his ground. As a matter of fact he gives us the elements so that we could theoretically consolidate a community, developing a "truth's process of publicity" (*Wahrheitsprozess der Öffentlichkeit*: Hofmann 2000, 262). But furthermore Wittgenstein's indagation is guided *ab initio* (*i.e.* since the mystical remarks of *Logisch-philosophische Abhandlung* and of correspondent notebooks [MSS101-103]) by an *ethical* purpose: a continuous *suitability* to original request and a making known to the others what he saw.

For that reason an extension to exegetical views of authors like Stroll or Hofmann is feasible. The former, despite the conceptual distinction established between "epistemic" plan of "knowledge" and "non-epistemic" plan of "certainty" or "certitude", defending this last one as the corner stone of Wittgenstein's "foundationalism", restricts, as a consequence, his "analytical" ratiocination to *epistemological* range (cf. Stroll 1994, 145, 161). The later, a "continental" author, situates herself *epistemologically* too, concretely in a Kantian *Metaphysik der Sitten* (cf. Hofmann 2000, 137, 163). But it becomes clear along the *Nachlass* another dimension of Wittgenstein's philosophical task. He writes, for example, in 'Band IV, *Philosophische Bemerkungen'* from 1929-30:

> Die Ergebnisse der Philosophie sind die Entdeckung irgend eines schlichten Unsinns und Beulen die sich der Verstand beim Anrennen an /das Ende/ der Sprache geholt hat. Sie, die Beulen, lassen uns der Wert jener Entdeckung /erkennen/. (MS108, 247: WA2, 302, §4)

This confrontation with "/the end/ of language" shall be *ethically* interpreted (cf. DB, "Vorwort" [Somavilla]). Wittgenstein's inquiry institutes a return to a ground we

must preserve as the directrix of our access to things. In doing this it constitutes a tension between an antisceptical philosophical perspective and an "insight" (*Einsicht*) that extravasates Philosophy (*metaphilosophically*), which is in the antipodes of the Nietzschean proposal and that is defined as a search for sense in a relation of *love*.

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Living in Fiction

Nehama Verbin, Beer-Sheva

Wittgenstein makes two rather brief comments on persuasion in *On Certainty*:

> I can imagine a man who had grown up in quite special circumstances and been taught that the earth came into being 50 years ago, and therefore believed this. We might instruct him: the earth has long… etc. – We should be trying to give him our picture of the world. This would happen through a kind of *persuasion*. (Wittgenstein 1972, §262).

And

> … At the end of reasons comes persuasion. (Think what happens when missionaries convert Indians). (Wittgenstein 1972, §612).

In these comments, Wittgenstein seems to think of persuasion as having to do with a change in one's picture of the world that is *not* brought about by the giving of reasons and arguments. Fiction comes to mind as a possible vehicle of such a change. I would like to explore some of the features of our encounter with fiction, and the manners in which that encounter can persuade and convert us.

The paper has three parts: In the first, I shall make a few general comments about fiction and its defining characteristics, using Kendall Walton's work on representation in the arts. (Walton 1990). In the second part, I shall discuss two types of transformations that can be brought about by means of our encounter with fiction: one involving our emotions, and the other involving our beliefs. In the third part, I shall discuss a third type of transformation, in which fiction becomes subversive and functions as a vehicle of persuasion or conversion. I shall thereby show that conversion does not require a philosophical argument for God's existence or probable existence, nor does it require a belief in the historicity of the biblical narratives. Imagining them may suffice.

1. Fiction

Our experience of fiction as a vehicle that may challenge us in various manners, and may bring about a transformation in the ways in which we perceive the world and ourselves is a familiar one. However, the nature of such a change, and the manners in which it depends on our beliefs, emotions, and on our imagination are far from being clear. In his illuminating book, *Mimesis as Make Believe*, Kendall Walton explores some of the characteristics of representation in the arts in a manner that can help us understand how the fictional can affect and transform what we take to be real.

Walton construes fiction as continuous with children's games of make-believe. He argues that works of fiction serve as props in games of make-believe, i.e., they generate or prescribe imaginings, similarly to the manners in which dolls and teddy bears generate imaginings in children's games of make-believe. The imaginings are generated by means of conditional principles of generation, e.g., "let's say that a rag doll is a baby"; these can be either implicit or explicit. Thus, when we read Anna Karenina, the novel prescribes that we imagine a certain woman with various characteristics, who has an affair, is unhappy and commits suicide. Propositions whose imaginings are prescribed are fictional and the fact that a given proposition is fictional is a fictional truth. Thus, it is fictional in Anna Karenina that Anna has an affair with Vronsky; it is fictional that they have a daughter; it is fictional that she commits suicide.

Walton distinguishes fictionality from truth, but does not construe it as necessarily contrasted with it: "fictionality has nothing essentially to do with what is or is not real or true or factual" (Walton 1990, 102). He points out that works of fiction may be about real things and they may say true things about them. What characterizes works of fiction over and against non-fiction is that they prescribe imaginings and generate fictional truths. Histories and biographies, on the other hand, do not characteristically prescribe imaginings, nor do they generate fictional truths.

What is fictional is fictional in a given fictional world. Fictional worlds are associated with collections of fictional truths. Walton distinguishes the fictional world of a work of art from the fictional *game* world of its appreciator. The work world includes the fictional truths that are generated by the work alone. The game world of the appreciator includes, in addition to the fictional truths generated by the work, fictional truths about the appreciator and his/her relation to the work. Thus, the appreciator's game world of Anna Karenina includes fictional truths about Anna having an affair and being unhappy, as well as fictional truths about the appreciator perceiving her, worrying about her, and feeling sorry for her.

Walton emphasizes that our characteristic relation to fiction is that of participants rather than that of distant onlookers:

> We don't just observe fictional worlds from without. We live in them (…) together with Anna Karenina and Emma Bovary and Robinson Crusoe and the others, sharing their joys and sorrows, rejoicing and commiserating with them, admiring and detesting them ... It is this experience that underlies much of the fascination representations have for us and their power over us. (Walton 1990, 273).

Works of fiction, according to Walton, prescribe imaginings and draw us to participate in worlds of make-believe. It is by means of our participation in worlds of make-believe that we can come to feel, think and perceive differently. In the next section, we shall look at two dimensions of our participation in games of make-believe and at two types of transformations that our encounter with fiction may bring about.

2. Transformations

In imagining Anna Karenina, we are drawn into her world and characteristically imagine ourselves in relation to her: we may imagine hearing her, seeing her, or talking to her. In imagining ourselves in relation to her, we come to participate in her world. Participation in Anna's world has a psychological component: we are moved by her sorrow and despair; we feel for her.

How can we feel for a fictional character? What is the nature of such feelings? We must, first, distinguish between a fictional character and a fictitious one. A fictional character is one that we are to *imagine* by means

of conditional principles of generation, in the context of a game of make-believe. A fictional character may or may not exist. A fictitious character, on the other hand, is one that does not exist. A fictitious character is an illusory being that is mistakenly *believed* to be real. While feeling for a fictitious character is either an epistemic error or a psychological pathology, feeling for a fictional character is one of the characteristic manners in which we engage with art. We can feel for a fictional character, e.g., Anna Karenina because we do not merely entertain the possibility that she existed and had undergone certain experiences. We can feel for her because we share her world by means of our imagination. We are moved by fiction because we participate in it rather than merely observe it from the outside.

Walton, however, denies that we are afraid of fictional characters, or pity fictional characters, since fictional emotions lack the characteristic motivating behavior that he takes to be fundamental to the emotions. Fearing someone fictionally, for example, does not motivate the participant to run away, or to call the police. It merely causes various involuntary responses such as sweating and an increased heartbeat, which Walton takes to be insufficient for the ascription of fear. Thus, for Walton, being aware of various fictional truths concerning Anna raises *fictional* pity, but not real pity; we do not pity Anna; it is *fictional* that we pity her. From within the game, we can talk about pity. From outside of the game, we can characterize such an emotion as “quasi-pity”.

Whether or not we subscribe to Walton’s conception of the emotions, whether it is pity that we feel for Anna, or quasi-pity, it is clear that we feel for her, and that we come to feel for her by means of the imagination that draws us to participate in a game of make-believe that consists of Anna and ourselves. Our encounter with fictional characters has a psychological component. Fiction often transforms the way we feel.

The transformation that we may undergo by means of our participation in a game of make-believe may extend beyond an affective change in our emotions; it may involve our beliefs too. It may have an epistemic component and may be described in terms of the acquisition of a new or a deeper kind of understanding.

How can imaginary characters and imaginary sequences of events deepen our understanding of reality? How can they teach us anything new? Even if they expose us to propositions, concepts, or ideas, which are valuable or true, what power do they have to lead us to accept those concepts and ideas? What justification do they provide for treating such ideas as true? After all, fictional narratives do not provide their own justification. Without justification, however, they cannot be counted as knowledge. (Lamarque and Olsen 1994).

Once we distinguish conceptual knowledge from empirical knowledge, and the respective procedures for the acquisition of each, we may begin to see why “imaginary cases suffice to get the mind moving over its conceptual map” and why “actual cases are not required to produce conceptual knowledge.”(Carroll 2002, 8). We may then appreciate the manners in which works of fiction, like the thought experiments that are used in our philosophical thinking, can deepen our conceptual understanding. (Carroll 2002; John 1998).

Thus, imagining and participating in worlds of make-believe may transform our emotional dispositions as well as our ways of thinking. It may “cultivate our grasp of what is known with finer distinctions”, and lead us to make new ones. (Carroll 2002, 11). *Anna Karenina* may transform a peaceful reader into a deeply agitated one. The book may bring one to tears. It may also challenge and perhaps even deepen the reader’s conceptual understanding of the relation (or lack of which) between various concepts, such as love and commitment.

In the next section, we shall look at the manner in which participation in a game of make-believe can transform completely one’s picture of the world, and lead one to adopt a new set of concepts, new patterns of behavior and a different way of life.

3. Conversion

The Jesus story is a complex one. Appreciating the story characteristically involves imagining Jesus doing various things: walking around the Galilee with his disciples, healing the sick and the possessed; it also characteristically involves imagining ourselves in relation to Jesus: hearing him give his sermon, watching him go up to Jerusalem, hearing him pray to God, watching him being crucified, and hearing his final despairing words on the cross, “My God, my God why have you forsaken me?”

Jesus’ story can transform the reader’s emotional dispositions. It may elicit a variety of intense emotions (or quasi-emotions), e.g., pity, anger, and despair. Moreover, the story may deepen the reader’s understanding. It may challenge and transform the reader’s understanding of the manner in which concepts such as “savior” and “salvation” can be used. Over and against the conception of the savior as the one who brings relief, victory, peace and prosperity, it presents a suffering man (rabbi/ prophet/ miracle-worker) who dies in shame and despair; over and against the notion of “salvation” as peace and glory, the story presents the crucifixion. The question whether the concepts “savior”, and “salvation” can be meaningfully applied in such a manner is a deep conceptual question, which the story raises and makes salient.

Being transformed by the image of the suffering, humiliated, despairing man Jesus, on the cross, and by the conception of salvation that is represented by means of this image, one’s picture of the world may be utterly changed. What previously has been perceived to be real, what previously has been conceived of as valuable: freedom from pain, social status, the quest for knowledge, life itself, may now seem empty and meaningless. The pursuit of happiness, health and wealth may be replaced by a surrender to suffering, which may now be conceived of as a medium for salvation, and as the primary means of self-improvement that is available to human beings. Participation in the Jesus story may, therefore, lead one to feel differently and think differently, to pursue a different way of life, to engage in a different set of practices, and to employ a different set of concepts.

Thus, the Jesus story, and the conception of salvation that it recommends can become subversive. Participation in this game of make-believe may rob the participant of a certain conception of reality or picture of the world around which her life has been previously arranged. In making this story her-story, the participant may deem fictitious what she has previously taken for real. The participant may come to see things in a new way. In other words, she may be persuaded or converted by the story.

The transformative power of the Jesus story, like other stories, rests on the imaginings that it prescribes. It does not rest on the historicity of its characters or events; it does not depend on whether the events represented are

believed to have taken place or not. When a story becomes subversive, it becomes subversive, first and foremost, by means of one's imagination. Belief may or may not follow.

Since preachers do not ordinarily use arguments for God's existence or probable existence that prescribe beliefs, but tell stories that prescribe imaginings, we may conclude that coming to faith is first and foremost coming to imagine, and coming to participate fully in a game of make-believe, or in other words, coming to live in fiction. Whether the fictional game of make-believe that is imagined is a fictitious one is a further question that I cannot answer.

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Can Program Explanations Save the Causal Efficacy of Beliefs?

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Frank Jackson and Philip Pettit offered the "program explanation account" (*PEA*) in order to vindicate the causal relevance of mental states such as beliefs. According to J&P, a property *F* of a cause-event *c* (potentially a mental property) can be causally relevant for an effect-event *e*'s having property *G* because "*e* had *G* because *c* had *F*" is an informative, non-redundant *program explanation*. If *PEA* succeeded, the causal relevance of beliefs would be vindicated and mental property epiphenomenalism would be avoided.[1] However, it doesn't succeed.

A "program explanation identifies a condition such that its realization is enough to ensure that there will be causes to produce the event explained" (J&P 1992, 119). Since the instantiation of a mental property *M ensures* the instantiation of a physical property *P*, an explanation of *e*'s having *G* in terms of *M* ("*e* had *G* because *c* had *M*") is informative and *M*'s instantiation *programs for* the existence of a property, *P*, with causal powers suitable to bring about *e*'s having *G*.

> The realization of [*M*] ensures … that a crucial productive property is realized and … that the [effect] event … occurs. [*M*] does not figure in the productive process leading to the event but it more or less ensures that a property-instance which is required for that process does figure. … [I]ts realization programs for the appearance of the productive property and … for the event produced. (J&P 1990a, 114)

Suppose the temperature of the water in a closed flask is raised until the flask cracks. The salient program explanation is "The flask shattered because the temperature of the water reached boiling point". The rise of the temperature did not itself cause the shattering, which was caused by the impact of molecules on the walls of the flask. Still, we "properly count citing the increase in temperature as explaining the shattering, for the increase programmes the shattering" (J&P 1988, 395). Therefore, although what is causally relevant is the impact of molecules, the increase in temperature is still causally relevant$_{JP}$, and this is enough, J&P claim, to reject mental property epiphenomenalism.

This suggests the following notion of causal relevance$_{JP}$:

> **Definition 1:** *c*'s having *F* is causally relevant$_{JP}$ for *e*'s having *G* iff (i) *c*'s having *F* is causally relevant for *e*'s having *G*, or (ii) *c*'s having *F* is causally irrelevant for *e*'s having *G* but ensures the instantiation of a property *H* of *c*, distinct from *F*, such that *c*'s having *H* is causally relevant for *e*'s having *G*.

But D1 is too weak. Suppose Hannah's aluminum ladder touches an electric wire and Hannah dies. The ladder has the dispositional property of *being a good thermal conductor*, which supervenes upon its categorical basis, a property of the cloud of free electrons that permeates the metal. The ladder's being a good thermal conductor thus ensures the instantiation of a property (the categorical basis), which is causally relevant for Hannah's dying, but the ladder's being a good *thermal* conductor was certainly not relevant for Hannah's dying.

If *one* lower-level property is the categorical basis of *two* distinct dispositional properties (like *being a good* thermal *conductor* and *being a good* electrical *conductor*), ensuring the presence of a causally relevant lower-level property is *not sufficient* for causal relevance$_{JP}$.

One might want to add that *F*, in addition to ensuring the presence of a causally relevant property, must figure in an informative program explanation. The result would be:

> **Definition 2:** *c*'s having *F* is causally relevant$_{JP}$ for *e*'s having *G* iff (i) *c*'s having *F* is causally relevant for *e*'s having *G*, or (ii) *c*'s having *F* is causally irrelevant for *e*'s having *G* but ensures the instantiation of a property *H* of *c*, distinct from *F*, such that *c*'s having *H* is causally relevant for *e*'s having *G and* "*e* is *G* because *c* was *F*" is an informative program explanation.

The above counterexample can then be avoided since "Hannah died because her ladder was a good *electrical* conductor" *is* an informative program explanation, while "Hannah died because her ladder was a good *thermal* conductor" is *not*. But *why* is the former, in contrast to the latter, an informative program explanation?

Here's a test of significance for any program explanation. Suppose that we have a program explanation of an event *e* by reference to an antecedent *P*, and that *P* explains *e* because its realization effectively ensures that some factor of type *F* occurs. Imagine now that we identify the *F*-factor in operation. *A useful test for the significance of the original program explanation is to ask whether it offers any information not available, at least under ordinary assumptions, to someone possessed of the F-explanation*. (J&P 1992, 124; italics S.W.)

But this test remains silent about why "Hannah died because her ladder is a good electrical conductor" *is* an informative program explanation but "Hannah died because her ladder is a good thermal conductor" is *not*. Explanations in terms of the thermal conductivity of Hannah's ladder certainly provide information not available to someone possessed solely of explanations in terms of clouds of free electrons. "Hannah died because her ladder is a good thermal conductor" is an informative program explanation, according to J&P's test.

It will not do to argue that "Hannah died because her ladder is a good electrical conductor" is informative because it mentions a property *relevant* to Hannah's dying. This would be tantamount to saying that those program explanations are informative that appeal to relevant properties, and obviously the attempt to ground the informativeness of program explanations in their appeal to relevant properties is hopeless if the causal relevance$_{JP}$ of a property is supposed to be grounded in its aptness to figure in informative program explanations.

Adding to D2 the requirement that the property in question figures in an informative program explanation does not lead anywhere, unless we can specify which program explanations are informative.

[1] J&P distinguish between causally *efficacious* properties (properties doing 'real' causal work) and causally *relevant* properties (properties which are either causally efficacious, or causally inefficacious but figure in program explanations). I will use 'causal relevance' instead of J&P's 'causal efficacy', and 'causal relevance$_{JP}$' instead of their 'causal relevance'. J&P claim, then, that a causally irrelevant mental property may nevertheless be causally relevant$_{JP}$ and that this suffices to avoid mental property epiphenomenalism.

In another paper, J&P have offered an account based on the idea of what they have called "invariance of effect under variation of realization" (J&P 1990b, 202).

We can express the basic idea behind a program explanation in terms of what remains constant under variation. Suppose state *a* caused state *b*. Variations on *a*, say, *a*', *a*'', ... would have caused variations on *b*, say *b*', *b*'', ..., respectively. It may be that if the a^i share a property *P*, the b^i would share a property *Q*: keep *P* constant among the actual and possible causes, and *Q* remains constant among the actual and possible effects. If you like, *Q tracks P*. Our point is that in such a case *P* causally explains *Q* by programming it, even though it may be that *P* does not produce *Q*. (J&P 1988, 394)

The idea underlying this relatively abstract formulation is simple. In cases of informative program explanations, the same effect (e.g. the shattering of the flask) would, in different possible situations, have been produced by different lower-level realizers of the higher-level property cited in the program explanation. This higher-level property is the property in common to all those possible situations, in each of which the effect would have been produced by a realizer and in one of which it has actually been produced.

If *any* of the realizers of the property cited in the program explanation, the actual one as well as the possible ones, would have brought about the effect – if there is *invariance of effect under variation of realization* – then this property is causally relevant$_{JP}$.[2] If, however, there are realizers of the higher-level property that fail to bring about the effect – if there is *variance* of effect under variation of realization – then this property is causally irrelevant$_{JP}$. This is why Hannah's ladder's being a good electrical conductor differs from its being a good thermal conductor (or its opacity, which is J&P's example):

> The reason being a good conductor of electricity is causally relevant to [Hannah's] death is that it did not matter ... what the categorical basis of that disposition was, for provided the causal role definitive of good electrical conductivity was occupied by a state of the ladder she would have died. ... And, of course, the reason opacity, say, is not causally relevant to her dying is that it might easily have been realized without her dying – as would, for instance, have been the case had the ladder been wooden. (J&P 1990b, 205)

The notion of causal relevance$_{JP}$ based on the idea of "invariance of effect under variation of realization" can be captured as follows:

> **Definition 3:** *c*'s having *F* is causally relevant$_{JP}$ for *e*'s having *G* iff for any property *P* of *c* such that *P* realizes *F*, if *c* has *P* in some world *w*, then *c*'s having *P* is causally relevant in *w* to *e*'s having *G*.

Yet, D3 is neither necessary nor sufficient for causal relevance$_{JP}$.

To see how the above example can be modified to yield a counterexample to D3, note that the causal irrelevance$_{JP}$ of thermal conductivity was due to there being realizers of thermal conductivity that are not causally relevant for Hannah's dying, namely those *that do not in addition realize electrical conductivity*. The existence of those realizers is responsible for the variance of effect in the case of thermal conductivity. This shows that all we need is a causally relevant$_{JP}$ property *F* and a causally irrelevant$_{JP}$ property *H*, such that *H* has *no* realizers that are not also realizers of *F*: In this case, if *F* is causally relevant$_{JP}$ to *e*'s being *G* according to D3, then all realizers of *F* will bring about *e*'s being *G*, but so will all realizers of *H*, because the latter are just a subset of the former. Hence, any property *H* for which $\Box\forall R\ (R \in \Pi_H \supset R \in \Pi_F)$ will also be causally relevant$_{JP}$ to *e*'s being *G* (where "$R \in \Pi_H$" means "*R* is a realizer of *H*" and the necessity operator '$\Box$' has whatever modal force is operative in our definition of realization).[3] Thus, we need an example such that:

(a) *c*'s being *F* is causally relevant$_{JP}$ to *e*'s being *G*;

(b) *c*'s being *H* is causally irrelevant$_{JP}$ for *e*'s being *G*;

(c) $\Box\ \forall R\ (R \in \Pi_H \supset R \in \Pi_F)$ and

(d) $H \notin \Pi_F$.

Suppose the worlds relevant to the notion of realization are the nomologically possible worlds. Then $\Box\forall R\ (R \in \Pi_H \supset R \in \Pi_F)$ means that $\Pi_H \subset \Pi_F$ in all nomologically possible worlds. Examples of properties *F* and *H* such that *H* does not realize *F* and $\Pi_H \subset \Pi_F$ in all nomologically possible worlds are easy to find since nomological dependence between properties is weaker than realization. Suppose a strict law of the form "all *H*s are *F*s" connects *H* and *F*. This does not entail that *H* realizes *F*. There may be a significant ontological independence between the instantiation of *H* and *F*, and we might not think of *H* as constituting *F* or as amounting to *F*, as we would in the case of realization. Nevertheless, if all *H*s are *F*s, $\Pi_H \subset \Pi_F$. And of course there is nothing incoherent in the claim that *H* and *F* are connected by a strict law and yet *c*'s having *F* is causally relevant$_{JP}$ for an effect while *c*'s having *H* is not.

Assume it is a strict law that all planets move on circular orbits. There is no reason why *being a planet* should be thought of as a realizer of *moving on a circular orbit*. Suppose Hannah has to prepare a list of all objects which have trajectories through space congruent with the ancient Greek's favorite geometrical figure. Hannah includes Pluto on her list. According to D3 Pluto's being a planet is causally relevant$_{JP}$ for its being included, since any way of realizing the former (within the range of nomologically possible worlds) would have resulted in the latter. But Pluto's being a planet is in no sense relevant to its ending up on Hannah's list; it does not matter whether Pluto is a planet. Had it been a spaceship or a satellite it would have been on the list as well.

This shows that D3 and with it J&P's last attempt to ground *PEA* fails, since D3 is not *sufficient* for causal relevance$_{JP}$. Moreover, D3 is not even *necessary* for causal relevance$_{JP}$.

Any account of the causal relevance of irreducible mental properties must account for Fred's desire's being a desire for beer being causally relevant to Fred's going to the fridge to get some beer, since no one can seriously accept that Fred's desire's being a desire for beer is causally irrelevant$_{JP}$. Nevertheless, there are circumstances where D3 renders *being a desire for beer* causally irrelevant$_{JP}$. Suppose Fred has desire for beer, and he knows that there is some *Corona* in the fridge, some *Canadian Dry* in the basement and some *Budweiser* in his study. There is no *invariation of effect under variation of realization*: not any realizer of *being a desire for beer* will

[2] Given that the counterexample to D1 was based upon the fact that all that mattered was the presence of the *actual* realizer, taking into account other possible realizers naturally suggests itself.

[3] This abstract remark captures a straightforward idea: if *F* is causally relevant$_{JP}$ because each of its realizers is causally relevant to *e*'s having *G*, then the instantiation of any property *H* such that $\Pi_H \subset \Pi_F$ will also entail the presence of a realizer property that is causally relevant for *e*'s having *G*.

eventuate in Fred's trip to the fridge. Some realizers of *being a desire for beer* will cause Fred to go into the basement or his study. *Being a desire for beer* does not satisfy D3 and hence fails to be causally relevant$_{JP}$, which I take to be an intolerable consequence, close to a *reductio* of D3.

J&P's attempts to define a weaker notion of causal relevance$_{JP}$ that can be attributed to mental properties even if the only causally relevant properties are their physical realizers fails. If mental property epiphenomenalism is false, it cannot be because *PEA* is true.

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Brandom, Sellars und der ‘Mythos des Gegebenen’

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R. Brandoms originärer Beitrag liegt nicht auf dem Feld der Theorie des Wissens. Furore machte er mit dem wirklich zu Ende gedachten Ansatz einer *inferentiellen Semantik*, den er 1994 in *Making it Explicit* vorlegte. Er verkoppelt darin den Grundgedanken einer *inferentiellen* Gliederung propositionaler (begrifflicher) Gehalte mit der Idee einer *sozialen* Gliederung derjenigen Praktiken, mittels derer wir unsere Wissensansprüche argumentativ einlösen, indem wir sie in geeignete Inferenzen einbauen. Der semantische Inferentialismus läuft auf eine anti-fundationalistische Theorie des Wissens hinaus. Um dennoch Raum für basale, nichtinferentielle Meinungen zu schaffen, weicht Brandom auf verlässlichkeitsorientierte Überlegungen aus. Der Schritt in den epistemischen Externalismus ist jedoch schwer mit dem Internalismus in Bezug auf Rechtfertigung in Einklang zu bringen, der den kommunikativen Praktiken des Gebens und Verlangens von Gründen ihre Pointe verleiht. Im Folgenden möchte ich zuerst die Zwänge aufzeigen, die Brandom zu seiner Revision auf dem Gebiet der Theorie des Wissens führte, um dann (zweitens) die tiefer liegenden Gründe zu beleuchten, die zu dieser Revision nötigten und die man bei Sellars nachlesen kann, um dann (drittens) eine Lösung vorzuschlagen, die sich der gemäßigten Spielart einer traditionelleren Denkrichtung, dem Fundationalismus, wie ihn beispielsweise R. Audi vertritt, annähert.

1. Brandoms Vorliebe für Verlässlichkeitstheorien

Wer einen Gedanken mit behauptender Kraft äußert, legt sich vor der Gemeinschaft der Sprecher und Hörer fest und übernimmt eine bestimmte “Leistungs-*Verantwortung*” (Brandom 2000, 261), nämlich zu zeigen, dass er zu der von seiner Behauptung ausgedrückten Festlegung *berechtigt* ist, falls das einmal in Frage gestellt wird. “Es ist die Verantwortung, etwas zu *tun*, die z.B. durch das Vorbringen weiterer Behauptungen erfüllt werden kann, die die ursprüngliche Behauptung *rechtfertigen*.” (Brandom 2000, 262) An dieser Stelle kann die Gründungseinsicht der inferentiellen Semantik einhaken. Der semantische Gehalt der durch die Behauptung ausgedrückten Festlegung besteht laut Brandom in ihrer spezifischen “inferentiellen Gliederung”, d.h. worauf sie den Behauptenden sonst noch festlegt, zu welchen Festlegungen sie die Adressaten in der Kommunikation berechtigt, was als eine Rechtfertigung von ihr gelten würde, etc. Propositionale Gehalte definieren sich von ihrer “inferentiellen Rolle” her, sowohl als Prämisse als auch als Konklusion in *Inferenzen* fungieren zu können. (Vgl. Brandom 2001, 22) Dass ein Gehalt diese Doppelrolle spielen, d.h. in rechtfertigenden Inferenzen als Prämisse und Konklusion auftreten kann, “macht ihn überhaupt erst zu einem spezifisch *propositionalen* (= behauptbaren und damit glaubbaren)” und darüber hinaus zu dem “speziellen wohlbestimmten Gehalt, der er ist” (Brandom 2000, 263). Die inferentielle Gliederung der eingegangen Festlegung einmal vorausgesetzt, wird der Behauptende seine Berechtigung zur Behauptung in der Weise einlösen, dass er Gründe für sie angibt, d.h. er wird zusätzliche Behauptungen vorbringen können, die als Prämissen dienen, aus denen die strittige Behauptung als Konklusion folgt. Eine *zweite* Art der epistemischen Rechtfertigung ist die Berufung auf die Autorität anderer Kommunikationsteilnehmer. Ich wälze dann alle Forderungen nach einem Berechtigungsnachweis auf den ab, der die Behauptung ins Spiel gebracht hat, und berufe mich auf seine Autorität. In der Kommunikation lassen sich nicht nur Festlegungen, sondern auch Berechtigungen vererben.

Die klassische Erkenntnislehre kennt einen *dritten* grundlegenden Modus, meiner Verantwortung nachzukommen. Ich kann geltend machen, dass ich zu dem Glauben, dass p, nicht durch anderen Glauben, d.h. inferentiell, sondern ´direkt´ gelangt bin. Gefragt, was mich zu dieser Behauptung berechtigt, werde ich keine weiteren Behauptungen auf den Tisch legen, sondern mich auf meine Wahrnehmung, mein Gedächtnis etc. berufen. Ich erkenne zwar an, dass meine Behauptung “sozusagen stromabwärts” (Brandom 2001, 250) inferentielle *Konsequenzen* haben mag, mache aber geltend, dass sie “stromaufwärts betrachtet” keine inferentiellen *Vorgänger* besitzt, d.h. keine Beziehung zu Gehalten aufweisen muss, die als Prämissen ins Spiel kämen, von denen die Berechtigung zum fraglichen Gehalt geerbt werden könnte.

Ein solches Argumentationsmuster ist für den Inferentialisten Brandom inakzeptabel. Auch er gibt zu, dass Inferenzen und Berufungen auf die Autorität dritter Berechtigungen zwar verbreiten und vervielfältigen, aber nicht fundieren können. Wenn wir beide Mechanismen, Inferenz und Berufung, kombinieren, kommt es zu komplizierten Regressen und Zirkeln. Man kann dann fragen: “Womit fangen diese multiplikativen Mechanismen zuallererst zu arbeiten an, so dass Vindikationsketten ein Ende finden können?” (Brandom 2000, 266). Auch Brandom kommt nicht daran vorbei, Klassen von Behauptungen Autorität zuzubilligen, die von ihrem Status als “Beobachtungsberichte” herrührt. Es handelt sich um Autorität, die weder inferentiell hergeleitet noch kommunikativ erborgt ist. Nichtinferentielle Beobachtungsberichte fungieren als “ungerechtfertigte Rechtfertiger”, die Berechtigungen liefern, die dann inferentiell oder kommunikativ vererbt werden können. “Die Beobachtung liefert also Regress-Bremsen und in diesem Sinn eine Grundlage für empirisches Wissen.” (Brandom 2000, 328). Auf der anderen Seite kann Brandom dem Fundationalismus keine Zugeständnisse machen, da er den Slogan Davidsons, “dass nichts als Grund für eine Meinung in Frage kommt, was nicht selbst eine Meinung ist” (Davidson 1987, 275), als verbindlich ansieht (Brandom in Sellars 1997, 122f). Er greift daher Sellars Vorschlag auf, die Autorität nichtinferentieller Berichte auf Verlässlichkeitsüberlegungen zu stützen. Brandom steht vor einem Dilemma: wenn er nichtinferentiellen Berichten in unseren Rechtfertigungsdiskursen keine Sonderrolle zubilligt, lauern die Gespenster von Regress und Zirkel; wenn er nichtinferentiellen Berichterstattern ungeschmälerte Autorität angedeihen lässt, beschwört er den ´Mythos des Gegebenen´ herauf. Es war nicht zuletzt Sellars Attacke auf diesen Mythos in *Empiricism and the Philosophy of Mind* (1956), die die zweite, post-positivistische Phase der analytischen Philosophie einläutete. Brandom fühlt sich Sellars Analysen auf der ganzen Linie verpflichtet und macht wie Sellars Anleihen bei verlässlichkeitsorientierten Erwägungen, um das Dilemma zu entschärfen. Verlässlichkeitstheoretische Analysen von Wissen verkörpern jedoch eine Spielart des

epistemologischen *Externalismus*, insofern die Beurteilungen von Verlässlichkeit und damit von Wissen auf Erwägungen beruhen, die gegenüber den Gründen, die der Wissenskandidat selbst besitzt, *extern* sind.

Der Rückgriff auf verlässlichkeitstheoretische Überlegungen ist um so verblüffender, als der normativ-pragmatische Ansatz in Bezug auf rationale Behauptbarkeit einem internalistischen Standpunkt in Bezug auf Rechtfertigung *und* Wissen gleichkommt. Brandom markiert den Unterschied zwischen seinem Ansatz und den gängigen Ansätzen in der Theorie des Wissens dahingehend, dass er Überzeugung, Rechtfertigung und Wahrheit (also Wissen) als "normative Status" und nicht als "natürliche Zustände" ansieht, so dass es ihm geraten erscheint, sich nach ihren "Richtigkeiten" (´proprieties´) und nicht nach ihren "Eigenschaften" (´properties´) umzusehen (Brandom 2000, 301 Anm.4). Er zählt sich unter diejenigen Philosophen, die von Gettierbeispielen nicht so beeindruckt sind, dass sie dahin tendieren, die auf Platon zurückgehende dreigliedrige Wissensdefinition (´wahre gerechtfertigte Überzeugung´) zugunsten einer vierten, externen Bedingung von Wissen aufzugeben (Brandom 2000, 299 Anm.1). Sein Ansatz ist von der Überzeugung geprägt, dass der Begriff des ´normativen Status´ einen Großteil der theoretischen und explanatorischen Arbeit übernehmen kann, der bisher dem Begriff des intentionalen Zustands zufiel. Im "sozialpraktischen Modell" epistemischer Rationalität wird der Begriff der *Überzeugung* (´belief´) durch den Begriff der doxastischen *Festlegung* (´doxastic commitment´) ersetzt. *Wissen* ist dementsprechend ein "komplexer hybrider deontischer Status", der sich in Begriffen der inferentiell strukturierten Interaktion zwischen zwei Typen des deontischen Status, *Festlegung* und *Berechtigung*, und zwei Typen deontischer Einstellungen, *Zuweisen* und *Eingehen*, die überdies verschiedene soziale Rollen verkörpern, verstehen lässt (Brandom 2000, 299). Wer Wissen zuerkennt, unterstellt dem anderen nicht nur eine gerechtfertigte Überzeugung, sondern muss diese Überzeugung selber für *wahr* halten. Statt nach einer verqueren (natürlichen oder metaphysischen) Eigenschaft des Wahr*seins* zu suchen, reformuliert Brandom die Wahrheitsbedingung mit Hilfe des Unterschieds in der sozialen Perspektive, "eine Festlegung (oder sonst einen deontischen Status) einem anderen *zuzuerkennen* und sie selbst *anzuerkennen*" (Brandom 2000, 301).

Man sollte meinen, dass die soziale Gliederung rationaler Rechtfertigungspraktiken auf Reziprozität und Symmetrie, d.h. die Möglichkeit der wechselseitigen Perspektivenübernahme hin angelegt ist. Das verlässlichkeitstheoretische Element in der Wissenszuschreibung stört die kommunikative Symmetrie empfindlich. Laut Brandom ist es hinreichend, dass ich den anderen als jemanden betrachte, der auf *verlässliche* Weise nichtinferentielle Überzeugungen ausbildet. Jemanden als verlässlichen Berichterstatter zu betrachten heißt, davon auszugehen, dass seine Berichte unter bestimmten Umständen höchstwahrscheinlich *wahr* sind. "Wenn man jemanden als verlässlich ansieht, tut man nichts anderes, als eine bestimmte Art von *Inferenz* zu billigen, nämlich eine Inferenz von der *Zuweisung* einer unter bestimmten Umständen erlangten propositional gehaltvollen Festlegung an jemand anderen auf die *Billigung* oder das *Eingehen* einer Festlegung mit ebendiesem Gehalt durch einen selbst." (Brandom 2001, 158) Die *soziale* bzw. *interpersonale* Gliederung unserer Rechtfertigungspraktiken lässt es zu, dass Chancen und Fähigkeiten nicht symmetrisch verteilt sein müssen.

Meines Erachtens verletzt Brandom eine wesentliche Bedingung rationaler Kommunikation: die Reziprozität und Symmetrie im Spiel des Gebens und Verlangens von Gründen. Wie sollen der andere und ich sich gegenseitig als Partner einer Praxis des Gebens und Verlangens von Gründen anerkennen können, wenn sich über den Berechtigungsstatus des anderen über weite Strecken nur in der 3. Person verhandeln lässt? Die Gründe, über die der *Beurteiler* des Wissens verfügt, müssen im Prinzip auch dem *Subjekt* des Wissens zugänglich sein.

2. Die Schwächen des klassischen Fundationalismus

Sellars Attacken auf den ´Mythos des Gegebenen´ besiegelten nicht nur das Schicksal des logischen Positivismus, sondern erteilten fundationalistischen Epistemologien eine heilsame Lektion. Der Mythos beruht in Sellars Rekonstruktion auf zwei Prämissen: (erstens) der Idee, dass gewisse innere Episoden, z.B. Farb- oder Klangwahrnehmungen, für den, der sie hat, eine intentionale Struktur aufweisen und direktes, nichtinferentielles Wissen verkörpern, das die Basis für spätere Inferenzen bereitstellt; (zweitens) der Idee, dass basales, nichtinferentielles Wissen nicht satzhaft strukturiert ist und weder den Erwerb von Begriffen noch das Verfügen über Begriffe (paradigmatisch durch den Sprachgebrauch) voraussetzt (Sellars 1997, sec. 7). Es ist schwer zu sehen, wie das Wahrnehmungserlebnis eines sinnlichen Gehalts, ein Partikulares, einen klassifikatorischen Akt wie das Behaupten eines Sachverhalts mit Rechtfertigung ausstatten kann. Sellars vergleicht die Versuche, epistemische Sachverhalte auf nicht-epistemische Sachverhalte zurückzuführen, seien sie phänomenaler oder verhaltensmäßiger Art, öffentlich oder privat, mit dem naturalistischen Fehlschluss in der Ethik (Sellars 1997, sec. 5). Der Übergang vom Wahrnehmungserlebnis zu einem nichtinferentiellen Glauben kann nur kausaler Natur, nicht epistemischer Natur sein. Nur Dinge mit satzhafter Struktur, nicht aber wie auch immer spezifizierbare partikulare Vorkommnisse, eignen sich als Prämissen in rechtfertigenden Inferenzen. "The essential point is that in characterizing an episode or a state as that of *knowing*, we are not giving an empirical description; we are placing it in the logical space of reasons, of justifying and being able to justify what one says." (Sellars 1997, sec. 36) Basaler, nichtinferentieller Glaube existiert gar nicht, wenn damit ein Glaube gemeint ist, den wir aufrechterhalten können, ohne sonst etwas zu glauben.

Die Spielart des Fundationalismus, der Sellars das Wasser abgraben möchte, umfasst folgende Thesen: (1) es gibt basale Überzeugungen, zu denen wir nichtinferentiell gelangt sind; (2) solche Überzeugungen hängen logisch mit keinen weiteren Überzeugungen, seien sie partikularer oder genereller Art, zusammen; (3) solche Überzeugungen konstituieren die letzte Berufungsinstanz sämtlicher Tatsachenbehauptungen. Sellars akzeptiert (1) und (3), verwirft jedoch (2). (Sellars 1997, sec. 32) Es geht darum, ein hierarchisches Bild des *Verstehens* zurückzuweisen, wonach begriffliche Gehalte in mentalen Episoden wurzeln. Sellars möchte in etwa sagen: nichtinferentielle Überzeugungen verkörpern unbeschadet ihrer fundationalistischen Rolle kein autonomes diskursives Stratum; keine Sprache ist vollständig, die nur nichtinferentielle Beobachtungsberichte enthielte; damit einige Sätze nichtinferentiell gebraucht werden können, muss es Sätze geben, die sich in Inferenzen gebrauchen lassen; nur wer nichtinferentiell erworbene Überzeugungen als Prämissen verwenden kann, die zu weiteren Überzeugungen führen, verfügt über propositional gehaltvolle Überzeugungen und damit überhaupt über Überzeugungen.

Im Anschluss an Sec. 32 reitet Sellars eine neue Attacke gegen den Mythos des Gegebenen, - diesmal in Gestalt Carnapscher *Konstatierungen*. Konstatierungen verdanken ihre Autorität vorsprachlichen Episoden, etwa der bewussten Wahrnehmung des *Grünseins* von etwas oder der Wahrnehmung, *dass dieser Fleck grün ist*. Vorsprachliche Episoden besitzen eine intrinsische Autorität, die sie an die sie zum Ausdruck bringenden sprachlichen Performanzen (Konstatierungen) vererben. Dazu merkt Sellars ironisch an: "These self-authenticating episodes would constitute the turtoise on which stands the elephant on which rests the edifice of empirical knowledge." (Sellars 1997, sec. 34) Gibt es eine Alternative? Ja. "An overt or covert token ´This is green´ in the presence of a green item is a *Konstatierung* and expresses observational knowledge if and only if it is a manifestation of a tendency to produce overt or covert tokens of ´This is green´... if and only if a green object is being looked at in standard conditions." (Sellars 1997, sec. 35) Der Schachzug besteht darin, induktive Evidenzen solcher Art zusammenzutragen, die uns in dem Urteil bestätigen, Person X sei unter Standardbedingungen oder unter noch näher zu spezifizierenden Bedingungen ein verlässlicher Lieferant einer bestimmten Sorte nichtinferentieller Beobachtungsberichte. Wir können dann sagen, Einzelsatzzeichenäußerungen (tokenings) von ´This is green´ sind verlässliche Indikatoren der Anwesenheit grüner Objekte, weil wir Person X die Ausübung einer "verlässlichen unterscheidenden Reaktionsdisposition" (Brandom 2000, 328) bescheinigt haben. X´s Behauptung ´This is green´ wird in unseren Augen durch X´s Verlässlichkeit zu einem Wissen, ungeachtet von X´s eigener Einstellung gegenüber dieser Verlässlichkeit. Wir befinden uns mit unserer Wissenszuschreibung im ´Raum des Gebens und Verlangens von Gründen´ (Sellars 1997, sec. 36), da wir unser Urteil über X´s Performanzen von einer Inferenz abhängig machen, nämlich der Inferenz von X´s Verlässlichkeit als Lieferant nichtinferentieller Überzeugungen zum positiven epistemischen Status der auf diese Weise erzeugten nichtinferentiellen Überzeugungen. Mit diesem Schluss legen wir uns explizit darauf fest, X´s Behauptungen für wahr zu halten.

Sellars insistiert darauf, dass derjenige, der diese Inferenz billigt, derjenige sein müsse, der den Anspruch auf Wissen erhebt (Sellars 1997, sec. 35). Brandom bedauert diesen Rückfall in den Rechtfertigungs-Internalismus. Er hätte vermieden werden können, so Brandom, wenn Sellars die soziale Gliederung der Zuweisung epistemischer Status beachtet hätte (Brandom 2000, 327). Es ist für Brandom hinreichend, dass die *Zuweisung* von Beobachtungswissen aufgrund von Verlässlichkeit mit dem *Eingehen* der entsprechenden Festlegung auf Seiten des Zuweisers verknüpft wird. Mehr Symmetrie ist nicht erforderlich. In Sellars Augen darf von Wissen nur dann die Rede sein, wenn die als notwendig angesehene ´Verlässlichkeitsinferenz´ symmetrisch vollzogen werden kann. Aber ist es nicht ein verquerer Gedanke, dass ich nur dann vor mir selber gerechtfertigt bin, den von mir geäußerten nichtinferentiellen Beobachtungsberichten Glauben zu schenken, wenn ich mich meiner Autorität mittels einer Inferenz, die von der eigenen Verlässlichkeit im Produzieren solcher nichtinferentieller Beobachtungsberichte ausgeht, vergewissert habe?

3. Gemäßigter Fundationalismus

Sellars Grundgedanke lautet, dass nichtinferentiellere Berichterstatter nicht nur verlässliche unterscheidende Reaktionsdispositionen aufweisen, sondern auch über Gründe verfügen müssen. Verlässliche unterscheidende Reaktionsdispositionen sind lediglich eine notwendige Bedingung für Beobachtungswissen. Papageien und Thermometer können solche Dispositionen haben und als Messinstrumente zum Wissenserwerb benutzt werden. "Das aber, was *sie* haben, ist nicht Wissen. Denn sie verstehen die Signifikanz ihrer Reaktionen nicht; sie betrachten sie nicht als Gründe für weitere Behauptungen, und sie verstehen Behauptungen nicht als potentiell begründungsbedürftig." (Brandom 2000, 317) Eine völlige Abkoppelung der epistemischen Berechtigung vom Begründen bedeutete einen Rückfall hinter die Gründungseinsicht der inferentiellen Semantik, wonach Überzeugungen, zu denen man berechtigt ist, nur dann als *propositional* gehaltvoll verstanden werden können, wenn man ihre inferentielle Gliederung, d.h. ihre Möglichkeit, sowohl als Prämisse als auch als Konklusion in Inferenzen auftreten zu können, begreift. An dieser Stelle legt sich folgende Unterscheidung nahe: "Es gibt Sonderfälle des Überzeugt- oder Festgelegtseins, die nichtinferentiell in dem Sinne sind, dass sie nicht Konklusionen eines inferentiellen Prozesses sind. Es gibt aber keine Überzeugungen oder diskursive Festlegungen, die insofern nichtinferentiell sind, als das, was von einem Satz ausgedrückt wird, *verstanden* werden kann, ohne die inferentiellen Relationen im Griff zu haben, die zwischen Gehalten bestehen." (Brandom 2000, 320) Es ist eine Unterscheidung, die Sellars in Sec. 32 von *Empricism and the Philosophy of Mind* vornimmt und die bei Brandom auf Ablehnung stößt. Einzelne Überzeugungen können *epistemisch* nichtinferentiell sein, aber keine Überzeugung kann *semantisch* nichtinferentiell sein. Festlegungen, die in epistemischer Hinsicht nichtinferentiell sind, sind in semantischer Hinsicht niemals nichtinferentiell.

Inzwischen haben auch fundationalistisch eingestellte Philosophen dazugelernt. So glaubt Audi, dass der Fundationalismus mit einer bestimmten Spielart des Kohärentismus vereinbar ist, nämlich einer Kohärenztheorie des Erwerbs und Gebrauchs von Begriffen: "According to this theory, concepts are what they are partly in relation to one another, and a person acquires concepts, say of (physical) objects and shapes, and of music and of sounds, only in relation to one another and must acquire an entire set of related concepts in order to acquire any concept." (Audi 1998, 198) Audis *Kohärenztheorie der Begriffe* kommt dem ziemlich nahe, was Brandom als ´inferentielle Gliederung´ propositionaler (begrifflicher) Gehalte thematisiert. Um zeigen zu können, wie der epistemische Fundationalismus mit dem semantischen Inferentialismus kompatibel ist, führt Audi die Unterscheidung zwischen *Fundierungsbedingungen* ("grounding conditions") und *Haben-Bedingungen* ("possession conditions") ein. Fundierungsbedingungen sind nichtinferentieller Natur, Haben-Bedingungen sind inferentieller Natur (´inferentiell gegliedert´). "Perhaps I cannot believe that music is playing if I do not have a concept of sound; I may even have to believe sounds with a certain structure to be occuring. And perhaps I could not have acquired these and other relevant concepts at a time. Indeed, it may be suggested... that at least normally we cannot acquire concepts without acquiring some knowledge or justified belief. Still, what it is that justifies a belief can be a matter of how it is grounded; it need not be a matter of the coherence conditions required for *having* the belief." (Audi 1998, 198f) Welchen Grund sollte der, der sich auf einen Beobachtungsbericht festlegt, auch anführen, um seine Berechtigung nachzuweisen, als eben den Grund, sich auf seine Wahrnehmung zu berufen. Verlässlichkeit ist in den normalen Begründungsdiskursen jedenfalls kein üblicher Grund, es sei denn, wir hätten es mit einer ganz außerordentlichen Fähigkeit unseres Berichterstatters zu tun.

(Verlässlichkeitstheoretische Abhandlungen gehen meist von extremen Beispielen aus.) Sich auf seine Wahrnehmung, sein Gedächtnis, auf Introspektion oder Intuition zu berufen, ist im Spiel des Gebens und Verlangens von Gründen ein recht passabler Grund. “Each of the four sources of belief and justification... may be said both to *provide* justification *for* believing and to *confer* justification *on* beliefs: on actual beliefs appropriately based on those sources.” (Audi 2001, 16f)

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On the Cognition of Laws of Nature

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In this paper I shall discuss the problem of cognition of laws of nature on the following different levels of understanding:

First level of understanding of laws of nature: the Greek Ideal of Science

Second level: Space Time Invariance

Third level: Dynamical Laws

Fourth level: Statistical Laws

Fifth level: Laws and Causality

Sixth level: Chaotic Motion

Seventh level: Initial conditions and Constants of Nature

Before I shall begin with the first level of cognition or understanding a short clarification of different meanings of the expression 'law of nature' will be given:

L1 the "law" as it "is" in the thought of the inventor or discoverer

L2 the "law" as it "is" in the things which are ordered or described by it

L3 the "law" as a law statement formulated in some scientific language

L4 the "law" as an ideal true law, w.r.t. which laws known at present in the sense of L3 are approximations

L5 the "law" as ideal conceptual entity more or less independent and separated from law statements.

First Level: the Greek Ideal of Science

In order to be able to describe and explain movement we need to distinguish something which changes relative to something which does not change. This important distinction is pointed out by Aristotle also as a criticism of Parmenides' theory of the universe which assumes only one being and nothing else. That what changes, moves was thought to be contingent (not necessary) in respect to the not changing (or even not changeable) necessary principle or law. In general this idea belongs to the Greek Ideal of Science which was more or less manifest in several Greek thinkers from Thales on but was elaborated in detail by Plato and Aristotle:

To describe and explain the visible (observable), concrete, particular, changing, material contingent world by non-visible (non-observable) abstract, universal, non changing immaterial and necessary principles.

Second Level: Space Time Invariance

Whereas the first level of understanding a law is concerned with invariance in general the second level of understanding is concerned with finding out a specific kind of invariance. Among these the oldest and most famous one is the invariance w.r.t. space and time. Or in other words: the invariance under changes of place and time.

Third Level: Dynamical Laws

D1 the state of the physical system S at any given time t_i is a definite function of its state at an earlier time t_{i-1}. A unique earlier state (corresponding to a unique solution of the differential equation) leads under the time evolution to a unique final state (again corresponding to a unique solution of the equation).

D2 condition D1 is also satisfied for every part of the physical system, especially for every individual body (object) as part of the system even if the individual objects may differ in the classical or in the quantum mechanical sense.

D3 the physical system S is periodic, that is the state of S repeats itself after a finite period of time and continues to do so in the absence of external disturbing forces.

D4 the physical system S has a certain type of stability which obeys the following condition: Very small changes in the initial states, say within a neighbourhood distance of ε lead to proportionally small (no more than in accordance of linearly increasing function of time) changes $h(\varepsilon)$ in the final state. This kind of stability which survives small perturbations and leads to relaxation afterwards is called *perturbative stability* and holds in many linear systems.

Fourth Level: Statistical Laws

S1 the state of the physical system at t_i is not a definite function of an earlier state at t_{i-1} . The same initial state may lead to different successor states (branching).

S2 Statistical laws describe and predict the states of the whole physical system but they do not describe or predict the individual parts (objects) of this system.

S3 Statistical laws describe only physical systems which are non-periodic, i.e. systems with extremely un-probable recurrence of the whole state of the system.

S4 the loss of information (and consequently the difficulty of prediction) about the state of an individual object (or a small part) of the whole system increases exponentially with the complexity of the system. On the other hand: the (accuracy of the) information about the average values of magnitudes (parameters) of the state of an individual object (or small part) increases also with the complexity of the system.

Fifth Level: Laws and Causality

Causal condition for dynamical laws:

CD The same initial state leads – under the same conditions – to the same series of successor states.

Causal condition for statistical laws:

CS The same initial state may lead to different successor states. But those successor states which belong to the same initial state obey the same statistics.

Sixth Level: Chaotic Motion

The discovery of chaotic motion showed something new which was not understood in connection with laws of nature so far. It showed that initial conditions, boundary conditions or mathematical proportions are not necessarily accidental but can play an important role w.r.t. several properties of the laws. The new discovery was that even within the area of relatively simple physical systems which perfectly obey dynamical laws of Classical Mechanics, like the spherical pendulum, such systems can change radically its behaviour. Thus a dynamical system obeying Newton's laws with strict predictability can become chaotic in its behaviour and practically unpredictable just by changing slightly some initial conditions. Experiments which prove such a behaviour of dynamical systems have been made since the seventies.

Seventh Level: Initial Conditions and Constants of Nature

The understanding of what a law is depends on the distinction between laws and initial conditions. This goes back to the Greeks (see first level of understanding). The deeper problems of such a distinction are very well described by the following quotations of Wigner and Wheeler (Wigner (1967), 3; Milne (1948), 4):

> "The world is very complicated and it is clearly impossible for the human mind to understand it completely. Man has therefore devised an artifice which permits the complicated nature of the world to be blamed on something which is called accidental and thus permits him to abstract a domain in which simple laws can be found. The complications are called initial conditions; the domains of regularities, laws of nature. … The artificial nature of the division of information into "initial conditions" and "laws of nature" is perhaps most evident in the realm of cosmology. Equations of motion which purport to be able to predict the future of a universe form an arbitrary present state clearly cannot have an empirical basis. It is, in fact, impossible to adduce reasons against the assumption that the laws of nature would be different even in small domains if the universe had a radically different structure."

Knowledge, Belief, and the *A Priori*

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1. The notion of the *a priori* underwent several changes since the time it came into existence in the Middle Ages. Originally it had been used to mark a certain form of argument, an argument that proceeds from what is prior to what is later, from cause to effect: *demonstratio procedens ex causis ad effectum* = *demonstratio a priori*. But this changed with Kant, for whom it meant not a form of argument but rather some special kind of knowledge (or elements thereof), namely knowledge that (a) is independent of particular experiences and (b) that makes experience in general (*Erfahrung überhaupt)* possible. Tied up with consciousness and the transcendental unity of apperception, Kant's understanding of the *a priori* was in the spirit of his transcendental philosophy. But this understanding changed again with the rise of analytic philosophy, in which we still find the first characteristic but not the second anymore. The idea of *Erfahrung überhaupt* was given up, partly because one naturally wondered what exactly this notion of experience in general, or experience universally conceived, should be. Where should we get it from, if not by way of abstraction and generalization from individual cases of experience? And would this not make it an empirical concept, so that the whole project of asking for the conditions of its possibility would not lead us to the kind of certainty, necessity and universality we expect from *a priori* knowledge? There would be no guarantee that in the future we would not make discoveries that would give us new kinds of experiences or that would show us our experiences in a new light. Thus, we would have to admit that these experiences did not satisfy the conditions of experience we had set up originally. The *a priori* conditions would have to be revised.

It seems that Kant did trust in our rational abilities in ways we do not any more. Kant believed that reason can understand itself and that we can find certainty. But it seems we no longer have such optimism, belief, or hope for absolute and certain knowledge. The idea of final solutions has been given up in many areas of research, and instead we have learned to be content with temporary solutions and various kinds of relative or approximate *a priori's*. Instead of requiring, as Kant did, that everything that happens must follow from something else according to strict and determinate universal rules, we are more modest now in merely demanding some kind of regularity. Part of Kant's rather demanding idea of the *a priori* has thus been given up. But does the entire transcendental project have to go as well? Or did analytic philosophy go too far by disregarding the second aspect of the *a priori* and by giving up the quest for the conditions of the possibility of experience in general? Already Hegel, often ignored by many analytic philosophers, did know how to relativize the *a priori* by conceiving of absolute knowledge as being relative to his time: Absolute knowledge is reached at the end of the *Phenomonology of Spirit* after we have worked through the history of consciousness from its beginning stages to its state in Hegel's day and age. From the very beginning of the *Phenomenology*, the present determines the perspective and limits of knowledge. Nevertheless, for Hegel as also for Heidegger in his analysis of Dasein as always already being-in-the-world, it is not a question of avoiding a vicious circle but of getting into the circle in the right way. Kant was still satisfied to acknowledge that in philosophy definitions come at the end of inquiry, and although Hegel expressed some reservations when he famously wrote in 1820, at the end of the preface to his *Philosophy of Right*, that philosophy always comes rather late ("die Eule der Minerva beginnt erst mit der einbrechenden Dämmerung ihren Flug"), both Kant and Hegel still trusted their holistic approaches and their preconceptions of *Erfahrung überhaupt*.

It is intrinsic to such a holistic approach that metaphysics and epistemology cannot be neatly separated. But since the development of modern modal logic and especially since Kripke taught us how to distinguish *aprioricity* from necessity, it now seems possible to make this separation. It is this kind of separation that I want to question. Kripke gave examples of statements that are necessary and *a posteriori*, or contingent and *a priori*. It is the latter, his notion of the continent *a priori*, that I want to criticize in what follows.

2. In his lectures, published as *Naming and Necessity*, Kripke states, "I guess the traditional characterization from Kant goes somewhat like: *a priori* truths are those which can be known independently of any experience" (35). Taking an example from Wittgenstein, he argues that the statement P: "Stick S is one meter long" is *a priori* (or known *a priori*) but nevertheless contingent. Wittgenstein actually wrote: "There is one thing of which one can say neither that it is one meter long nor that it is not one meter long, and that is the standard meter in Paris" (PI, par. 49). Kripke probably misinterprets Wittgenstein when he says, "I think he must be wrong" (NN 54), as has been shown, convincingly I think, by Heather J. Gert (see bibliography). But whether Kripke here misinterprets Wittgenstein or not, it seems to me that on purely systematic grounds and contrary to what Kripke claims P is *not* both contingent and *a priori*.

Kripke argues that the truth of P is contingent because heat could have been applied to the stick so that its length would have been different. He thinks of this as happening at the time of stipulation (NN, 55). In such a possible world the length of stick S would then not have been one meter. This is supposed to be part of the metaphysical status of P. On the other hand, the reference fixer knows P *a priori* because he knows that he used stick S to fix the reference of the expression "one meter." According to Kripke, "he knows automatically, without further investigation, that S is one meter long" (NN, 56). This is supposed to be part of the epistemic status of P. All this seems to make sense, and not only at first blush. Even after much thinking and contemplation this somewhat paradoxical example seems to convincingly show that there are statements that are both contingent and *a priori*. Nevertheless, I think this example does not show what Kripke wants it to. Let us look at P in the actual world wa and in an imagined world wi.

P(wa) = (stick S is 1 m long) (wa)

= stick S(wa) is 1 m (wa) long

In order to know P(wa) *a priori*, the reference fixer has to keep in mind that he used stick S(wa) to fix the reference of what he calls "1 m". That is, he has to think:

1 m (wa) = 1 m (S(wa)) and

P(wa) = stick S(wa) is 1 m (S(wa)) long.

In fact, the same applies to P(wi):

P(wi) = stick S(wi) is 1 m (S(wi)) long.

In wi stick S(wi) is used to carry out the stipulation, and therefore P(wi) turns out to be true as well; and the reference fixer in wi knows this *a priori*, as he did in wa. There is nothing special about wa in this respect. (I believe Kripke would not agree to this.) Nor is there anything special about the reference fixer. (Kripke would probably not accept this either.) We *all* know P *a priori* and the reference fixer is not in a privileged position. What we actually know *a priori* is not the statement P with respect to the *particular* stick S, but P with respect to *any* stick that happens to be the *Urmeter*. What we know *a priori* is the *possibility* of such a stipulation (which could be expressed in form of an if-then statement) and the fact that *whatever* we use as *Urmeter* is then "automatically", as Kripke says, one meter long. In the end, what makes P *a priori* is an if-then statement. This is my first main objection to Kripke's account.

Evidently, Kripke wants to understand it all differently. He takes the truth of P to be contingent: in fact, he wants P to be false in wi. He wants us to think of P in wi as:

Q = stick S(wi) is not 1 m (wa) long

Well, this statement is true, too, and we even know it *a priori*. But obviously this statement is different from P(wi). Now what should we take P to mean? How should we think of P in wi: as P(wi), as I suggest, or Q(wi), as Kripke wants it? As I said above, we have to think of "1 m" as being dependent on S. Otherwise we do not know P(wa) *a priori*. It is part of the *meaning* of "S" in P that it is the *Urmeter*. It is *essential* to S (in the context of P as known *a priori*) that it is the standard meter.

We cannot meaningfully say Q in wi, because you cannot refer to 1 m (wa) in wi. Kripke of course wants to say Q in wa and not in wi. But I think this changes the meaning of P. To know P *a priori*, the stick and the reference (the act of referring) to the meter have to be taken from the *same* world, because the latter depends on the former. This is my second objection to Kripke's account.

Kripke does not tell us how he thinks the meter is defined in wi. He thinks this not important. In wi the meter cannot be fixed as the length of S(wa), because there is no way to, so to speak, "go back" from wi to wa. Kripke is silent about this. But I do not think that we can afford to be silent here. We cannot simply say that we don't need to give an answer to this question just because we are dealing with the metaphysical aspect of P. Does God fix the reference of "1 m" in wi by taking it from wa ?

Let us have a closer look at wi while trying to make sense of what Kripke wants us to see, i.e., that P is false in wi. If S(wi) is the standard meter and is thus used to fix the reference of "1 m" in wi, P will be true. Thus Kripke must assume that S(wi) is not used as the standard meter and that the meter is defined differently in wi. Certainly the meter cannot be defined in wi by means of S(wa), because S(wa) does not exist in wi. It must be defined differently, by another stick, by means of the wavelength of light, or in some other way. But in whatever way this is done, whatever the definition of 1 m in wi might be, the probability that 1 m (wi) = 1 m (wa) is zero, because there are infinitely many, even uncountably many different lengths. (We can make sense of the intuitive idea that lengths between two worlds can be compared as long as these two worlds are not too different from each other, which we assume is the case between wa and wi.)

Of course S(wi) is longer than S(wa), and one can say that the length of stick S is contingent, that it just has the length it happens to have. But in the context of statement P, stick S has to be understood as the standard meter stick, be it in wa or in wi, and the reference of "1 m" has to be understood as being determined by stick S. Forgetting this in wi amounts to changing the meaning of P in wi.

Based on what I have said so far, it seems to me that Kripke has not given us an example of the contingent *a priori*.

Let us now have a look at Kant again. What would be *a priori* about P in Kant's eyes is, I think, the knowledge that there is a certain order and continuity in the world, especially that lengths do not change chaotically, that the concept of length therefore makes sense, and that we can set up a standard of length. We know for instance that if a stick S' is as long as S and another stick S'' as long as S', then S'' is also as long as S; or that if S' is twice as long as S and S'' again twice as long a S', then S'' is four times the length of S. In fact, to know P *a priori* we have to know many things of that kind and statement P has to be read as telling, or presupposing, a whole story, namely the story of setting up a standard of length and whatever this requires. The *a priori* aspect of P can thus be suitably expressed by an if-then statement, where a long story underlies (or should be expressed by) the if-part.

Kripke thinks that contingency is a matter of metaphysics and not of epistemology, which leads him to say that S(wi) is not 1 m (wa) long. But this is not what P says when you look at it as known *a priori*. P is about the *relation* between the meter and the stick S in *one and the same* world (and not about two items from two different worlds). Kripke distorts the meaning of P when he argues that it is contingent. Furthermore, we know *a priori* not only that P, but in a way (by imagination) we also know *a priori* that S(wi) is not 1 m (wa) long. I do not see how we can distinguish metaphysics and epistemology here, nor how we can ever circumvent or undercut the latter.

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A Note on the Late Wittgenstein's Use of the Picture Concept

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Introduction

In the following I wish to draw your attention to two related ideas that occur in Wittgenstein's later writings. In making this emphasis I am at the same time claiming a certain continuity in Wittgenstein's thought – a continuity of a quite particular kind. The argument that I shall present in the following can be summarised under three points: 1. in both his early and his late writings, Wittgenstein makes a natural-historical claim that, as humans, we are picture-creating and picture-using creatures; 2. the crucial analogy between the picture and the sentence that appears in the *Tractatus Logico-Philosophicus* is retained in Wittgenstein's later descriptions of language; and 3. the use of this analogy serves two diametrically opposed purposes when considered in relation to religious language, whereby the earlier use determines the propositions of natural science and delimits these from religious propositions, and the later use of the analogy provides the impetus for a grammatical investigation of religious language and religious beliefs.

1. Man – a picture-using creature

In neither the *Notebooks 1916-1918* nor in the *Tractatus* does Wittgenstein offer any argument for, or investigation of, the particular quality or ability that enables human beings to perform the experimental putting together (TLP 4.031) or constructing (TLP 4.023) of names in accordance with the criteria for logical description implied by the theory of representation. Instead, he simply affirms, in November 1914, that „[w]e can make ourselves a picture of it [a situation] [Wir können uns ein Bild von ihm machen]" (NB, 24). The wording of this remark allows us to regard it as a crucial premise underlying the theory of representation in the early philosophy. In essence, this premise is that humans are by definition picture-using creatures. This implies in turn that we are naturally inclined to create language, whereby the essential quality of language is assumed to be that it depicts the things that exist and the ways in which these are mutually related to one another. It is assumed that this kind of representation is achieved in virtue of the human ability to create such pictures in accordance with the criteria for logical representation. This premise is put forward anew four years later in the introductory remarks that summarise the representational theory of the picture (TLP 2.1-2.12). – „We make to ourselves pictures [[w]ir machen uns Bilder] of facts" (TLP 2.1). Here as well the premise has the form of a natural-historical assertion to the effect that, in anthropological terms, humans are picture-creating creatures. Somewhat earlier, in October 1913, when also framing linguistic philosophical reflections within a natural-historical perspective, he wrote: „Man possesses an innate capacity for constructing symbols" (NB, 100; TLP 4.002). The use of the verb „make/machen" in the two assertions just quoted encapsulates the account of sentence formation as an experimental putting together or constructing of names. The verb emphasises the human activity of *creating* pictures. With this emphasis in mind, it is worth noting that the corresponding summary of the picture theory in the *Prototractatus* implies a broader natural-historical field, for in that context Wittgenstein also asserts that humans *perceive*, understand and grasp propositions and facts in the world as (logical) pictures; or, as he puts it: „Facts are grasped by us [begreifen wir] in pictures" (PT 2.1). This also means that, in more general terms we should speak of humans as picture-perceiving creatures. It is these natural-historical facts that Wittgenstein presupposes despite his failure to investigate the question in depth: what is it that enables us to form pictures (thought as logical picture (TLP 3); proposition as (logical) picture (TLP 4.021)) of states of affairs?

Wittgenstein returns to the picture concept again after 1929, when it is integrated into and modified to suit his new account of language. One of the more prominent formulations in this regard is that, among the countless and diverse uses of language, there are certain forms of expression that can be described or classified as pictures. This claim is worded in a variety of ways that could in fact be confused with the earlier formulations of the assumed natural-historical premise that underlies the picture theory. In MSS 116 and 120, for example, he says that many of the difficulties (Schwierigkeiten) that we encounter and have to contend with in philosophical work result from the situation „that we make pictures for ourselves [dass wir uns Bilder machen]" (MS 116, 162; MS 120, 26); these pictures often tempt or encourage us to expect that words have some other use than they commonly have in everyday life. In the first half of MS 115 he says more generally: „To make pictures for ourselves is part of our life [uns Bilder zu machen ist Teil unseres Lebens]" (MS 115, 93).

Judging by this kind of formulation, it would appear that Wittgenstein adhered to his natural-historical premise, that we are picture-creating, or picture-using (Z '381) creatures. The reason for saying it would appear so is not least that the premise is only put forward in a weakened form; on the one hand, the forms of expression that are described as pictures cannot be equated with the pictures of representational logic of the *Tractatus*, and on the other, since the thesis only applies to *certain* or *particular* forms of expression, it cannot be regarded as extensively applicable to all language uses, as was the case in the early philosophy. Thus the premise is retained but only in a limited sense, insofar as it is posited in relation to a characteristic of certain elements or features of language use. – „The various positions [[d]ie verschiedenen Stellen] that a *picture* can assume in a theory (or in any kind of language game)" (MS 116, 226). – Features that are closely associated with other forms of language, such as physical gestures and reactions. In several contexts Wittgenstein is more precise in specifying the principal elements or features of language that the picture concept relates to, and these happen to be a relatively limited range of expressive forms together with their ideas and conceptions. I shall mention a few examples: „It is quite clear that the way of talking about [die Ausdrucksweise vom] memory as a picture is merely a picture" (MS 108, 33-34); „[A] certain picture, a certain idea [[E]in gewisses Bild, eine gewisse Idee]" (MS 115, 205); „A new arithmetical technique should provide us with a *new* picture, a *new form of expression* [ein *neues* Bild liefern, eine *neue Ausdrucksweise*]" (MS 121, 129); „You have a picture. (A form of expression.) [Du hast ein Bild. (Eine Ausdrucksweise.)]" (MS 121, 3).

2. The analogy – picture and sentence

With this focus in mind it becomes relevant to ask, what is it about such forms of expression that permits us to regard them as pictures? Or, what is the basis for retaining the analogy between sentence and picture in the late works?

At no point does Wittgenstein argue in any depth for reintroducing the picture concept, and in a sense it might seem surprising that he should retain such a central element of his early philosophy, since many of the ideas that are presupposed by this reuse of the concept stand in conflict to the earlier ideas about logical representation. No justification for the reintroduction of the concept is given in *Philosophical Investigations*, although one is sketched in the *Big Typescript*. In a brief section of Chapter 21 entitled „Ähnlichkeit von Satz und Bild" he says: „In what sense can I say, the sentence is a picture [[i]n welchem Sinne kann ich sagen, der Satz sei ein Bild]? When I think about it I wish to say: it must be a picture if it is to show me what I should do, if it is to let me act in accordance with it. But then what you want to say is that you act in accordance with it *in the same sense in which you act in accordance with a picture*. [Y] To say that the sentence is a picture highlights certain features in the grammar of the word 'sentence'. [Zu sagen, dass der Satz ein Bild ist, hebt gewisse Züge in der Grammatik des Wortes „Satz" hervor.]" (TS 213, 83).

Apart from the point that the reintroduction of the concept serves a heuristic purpose, Wittgenstein claims that the basis for retaining the picture concept is the insight that what is entailed in understanding, acting upon or acting on the background of a sentence is closely related to what is entailed in understanding, acting upon or acting on the background of a picture. To put it another way, our attitude towards and our use of certain forms of expression in language is in many respects analogous to our attitude towards and use of pictures. But can we say more precisely what aspects of approach and use (of sentence and picture) it is that are being equated? Only a few are suggested. Two are mentioned in the *Big Typescript*: (a) a semantic aspect: in many contexts the semantic content of a picture is like that of a linguistic description – „I can translate the description of the garden into a picture [ein gemaltes Bild], and the picture into a description" (TS 213, 83); and (b) a functional aspect: in many contexts a picture can prompt the same reactions as a linguistic description – „When the ugliness of a person affects us as repellent, it can do so in a picture, *just* as it can in a description, in words" (TS 213, 86). A third point of comparison is found in *Zettel*: (c) a discursive aspect: a picture, like a sentence, allows certain inferences or conclusions to be drawn – „Of course a picture in which the face smiles does not shew how it looks when weeping. But it does permit inferences" (Z '514). And finally there is (d) an explicative aspect: in many contexts a picture can play the same role as a linguistic explanation – „Take 'God created Man'. Pictures of Michelangelo showing the creation of the world. In general, there is nothing which explains the meanings of words as well as pictures" (LCA, 63).

The linguistic forms of expression – or of certain combinations of linguistic forms (PG, 170) – which Wittgenstein refers to as pictures can more generally be divided into two main groups: (A) particular linguistic forms of expression (pictures): here we are concerned with the afore-mentioned combinations of linguistic concepts, whose scope of application is limited to rather special or narrow fields of use; in this context, the picture (concept combination) refers to, for example, (Ai) a certain imaginative conception, such as there being a logical connection between a person's handwriting and that person's character (CE, 410-411; LFM, 239), and (Aii) a comprehensive or synoptic overview, such as a historic summary of developments in mathematics, which – as he puts it in the *Investigations* – can give „a *rough picture*" (PI '23) of the conceptual changes.

But following this, we find another main group, where the analogy between the sentence and the picture is used in conjunction with (B) constitutive or organisational linguistic forms of expression (pictures). Here we are dealing with combinations of linguistic terms that determine others, or that determine the formation of new linguistic combinations; in this case, the linguistic combination (the picture) is, as it were, decisive for the forms and categories of thought and is therefore to be regarded as a conceptual frame, which determines *partly* the way in which the world is perceived and comprehended (the picture establishes certain habits of thought), and *partly* the space within which criteria are determined for the meaningfulness of a term's application. Thus we are concerned here with those combinations of terms (pictures) that broadly constitute, on the one hand, a (normative) conceptual perspective („eine Denkform" (TS 220, 72)), and on the other, the ultimate (internal) authority for that conceptual perspective (justificatory authority). Our language and inherited habits of thought (Denkgewohnheiten) should therefore also be regarded as having developed in conjunction „with the oldest pictures [mit den ältesten Bildern]" (TS 211, 398). As examples of such constitutive or organisational pictures – „a picture which is at the root of all our thinking [ein Bild am Grunde alles Denkens]" (CV, 83) – we are given Augustine's account of language (PI '1), the definitions of mathematics (LFM, 112) and its proofs (LFM, 55), and natural scientist's or physicists theories about the most basic constituents of the world. In relation to the latter, Wittgenstein writes: „You are taking for granted the atomistic picture. What does this come to? We are so used to this picture that it's as thought we had all seen atoms. Every educated eight-year old child knows that things are made of atoms. We would think it lack of education if a person didn't think of a rod as being made of atoms" (LCA, 17).

3. A picture – religious language use

In his „Lectures on Religious Belief" Wittgenstein links his grammatical description of religious belief to the last of the concepts of picture mentioned above. He emphasises that the representational or expressive form of religious language can be regarded as pictorial. Thus he describes as pictures linguistic combinations such as „the Last Judgement" (LCA, 53), „God's eye sees everything" (LCA, 71) and „we might see one another after death" (LCA, 70-71).

These lectures would seem to constitute an attempt to rethink the distinction between the religious and the scientific use of concepts that formerly appeared in the *Tractatus* and in „A Lecture on Ethics". And as before, he points out the irreconcilability not just of the attitudes, but also of the linguistic practices and the orientations towards reality that apply in the two forms of discourse. The religious approach and sense of conviction are not founded on scientific method (in an arrangement of hypotheses and verifications, in the use of induction and of terms such as rational, assumption, probability, knowledge, facts), but rather in unshakeable faith, which manifests itself in very different linguistic practices. But in what way? And what are those linguistic practices? Wittgenstein says: „Suppose somebody made this guidance for this life: believing in the

Last Judgement. Whenever he does anything, this is before his mind. [Y] [H]e has what you might call an unshakeable belief. It will show, not by reasoning or by appeal to ordinary grounds for belief, but rather by regulating for all in his life. This is a very much stronger fact – foregoing pleasures, always appealing to this picture“ (LCA, 53-54). In short, religious faith manifests itself in certain practices that appeal to and are regulated by concepts (linguistic combinations) that can be described as pictures.

In the „Lectures on Religious Belief“ he presents neither arguments nor even any basic justification for introducing the picture concept, nor any detailed account of it; but the mention of the role and function that the picture assumes allows us to infer that he is thinking here of the above-mentioned constitutive or organisational aspect of linguistic pictures. It is linguistic combinations that underlie the thoughts and actions of the religious believer. When we study the picture concept in these lectures more closely, it appears to possess three essential characteristics. (i) Religious concepts and statements (pictures) do *not* refer like empirical sentences (the pictures constitute referential linguistic actions that are different in kind from ostensive definitions). If we were to show Moore some pictures of a tropical plant, at least there is in this case „a technique of comparison between picture and plant“ (LCA, 63) that we could resort to. But there is no technique of comparison when it comes to Michelangelo’s picture of God creating Adam. (ii) Combinations of religious terms are pictures that cannot be justified. In MS 121 he writes: „You have a picture. (A form of expression.) But you cannot justify it. In trying to grasp something behind the form of expression, you grasp at thin air. [Wie Du hinter die Ausdrucksweise zurückgreifen willst, greifst Du in’s Leere.]“ (MS 121, 32). And (iii) religious terms and statements (pictures) can*not* be reduced to or reformulated as emotive or theoretical forms of expression, since „[t]he whole *weight* may be in the picture“ (LCA, 72). The semantics of pictures in the religious context cannot be replaced by or transformed into other forms of expression. The pictures are untranslatable. Wittgenstein suggests these three characteristics – the picture’s lack of empirical reference, its lack of epistemological foundations, and its irreducible nature – when he writes: „Religious similes can be said to move on the edge of an abyss [am Rande des Abgrundes]. [Y] Religion says: *Do this! – Think like that!* – but it cannot justify this“ (CV, 29). „The similes of the NT [Y] are without foundation [[d]ie Gleichnisse des N.T. [Y] sind ohne Boden [var.: ohne einen Boden]]“ (MS 162b, 128).

But haven’t we seen these characteristics somewhere before? Indeed we have – in the description in the *Tractatus* of the domain from which the picture concept – as it appears in that work – is bounded off, namely the mystical, that which lies beyond all empirical *happening and being-so* (TLP 6.41), and which eludes any form either of meaningful conceptualisation or description, or of empirical or theoretical justification (TLP 6.522). So, to put it in a nutshell, the picture concept is a pivotal element both in the *Tractatus*’ logical description of natural-scientific sentences (that stand in contrast to non-empirical religious statements), and in the late Wittgenstein’s grammatical investigation of religious sentences (that stand in contrast to empirical natural-scientific statements). The analogy between the picture and the sentence is used in the *Tractatus* and in the late works (post 1929) in two distinct linguistic domains; the late use of the analogy in the „Lectures on Religious Belief“ simply lays claim to the characteristics from which the picture concept in the *Tractatus* was delimited!

This is one of the many shifts in his *Denkbewegungen* that Wittgenstein has in mind when in 1944 or later he noted: „My account will be hard to follow: because it says something new but still has egg-shells from the old view sticking to it“ (CV, 44).*

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Wittgenstein and the Internalism-Externalism Dilemma

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It can be said that Wittgenstein's Private Language Argument initiated the internalism-externalism dilemma. In one of its interpretations the argument is read as a criticism of methodological solipsism. Internalism, in turn, assumes that methodological solipsism is an adequate account of mental content. Therefore some externalists refer to Wittgenstein as their forerunner.

I argue, first, that the Private Language Argument does not support the claim of externalism that meanings are not in the head, even though it undermines methodological solipsism. I also claim that both internalism and externalism are not free from serious problems. Therefore we need a view that goes beyond the distinction in hand. To arrive at such a view I examine John Searle's account of mental content and argue that the real tension within the theory of content is between the first-person and the third-person point of view.

1. Terminological preliminaries

Let me begin with some terminological preliminaries. First, I shall define the distinction between narrow and wide content. The distinction has been introduced by Hillary Putnam in his article "The Meaning of 'Meaning'" (1975). The narrow content of mental states is fully determined by facts about these states. The content in question is sometimes described in terms of the functional or conceptual roles of mental representations. The wide content, on the other hand, consists in part of the referential relation mental states bear to social and natural aspects of their environment.

Putnam introduces the distinction in hand by means of the well-known Twin Earth thought experiment. The Twin Earth is just like our Earth except for the fact that the liquid filling the twin seas and falling from the twin skies is not H_2O. Actually, even though it is indistinguishable from water by our normal common-sense criteria, it has a complicated chemical structure abbreviated as *XYZ*. Imagine now that every citizen of the Earth has a doppelganger on the Twin Earth. Suppose next that $Oscar_1$ and his twin $Oscar_2$ are type-identical down to the last particle. Hence their mental states are also type identical. But when $Oscar_1$ and $Oscar_2$ utter the word "water", even though their minds are in indistinguishable functional states, they mean different substances. Whether they know it or not, $Oscar_1$ refers to the chemical compound H_2O, while $Oscar_2$ refers to *XYZ*. Putnam concludes that the description of the narrow content of a given mental state does not determine the thing the state refers to. Hence meanings are not in the head, since the determination of the referent of a given mental state calls for its description in terms of wide content.

The Twin Earth fantasy allegedly shows that the content of our mental states depends on physical and chemical properties of our environment. Another example aims to justify the view that our social environment affects the content of our mental states. Imagine a man, who – like Putnam in his own story – cannot tell beech-trees from elm-trees. The man attaches the same concepts – or, more precisely, the same stereotypes – to the words "beech" and "elm", though he knows that these terms denote two different natural kinds. However, Putnam points out, the extension of "elm" in the man's idiolect consists of elms and nothing else while the extension of "beech" in his idiolect is made up only of beeches. People who are ignorant about trees can nevertheless employ the words "elm" and "beech" correctly provided there are some experts in dendrology in their community. On the one hand, it is the case that an individual's narrow mental content fails to determine its extension. But, on the other hand, there is the so-called "linguistic division of labour" by means of which a given word on every occasion it is uttered has the constant extension, no matter whether the speaker is an expert or not.

According to Putnam the *Dendrologist Puzzle* and the *Twin Earth* thought experiment show that the linguistic content that is truly worth its name – namely the content that *does* determine extension – is to be described in terms of both social and natural aspects of the speaker's environment. In short, meanings are not in the head.

Now we can define other relevant concepts in terms of narrow and wide content. According to methodological solipsism – as well as internalism – the only notion of mental content we need in the philosophy of mind is the notion of narrow content. Externalists, in contrast, claim that the theory of narrow content fails to account for the referential character of mental states and therefore we have no alternative but to employ the notion of wide content. To determine the linguistic content of the words uttered by a speaker, one needs to take into account – in one way or another – the causal relations between his mind and external things. But the last remark gives rise to a real dilemma: whether the dependence of mental content on external factors is to be described from the first-person point of view or from the third-person point of view. The externalist adopts the third-person solution. He assumes, moreover, that the first-person solution inherits all problems from internalism. In my view, however, there is a considerable difference between the conception of narrow content and the first-person solution. While the former faces familiar problems, the latter seems to offer an account that goes beyond the internalism-externalism distinction and the problems it generates. In the rest part of my paper I examine whether the first-person account of mental content meets these expectations.

Before we get into details, however, it would be useful to say a word about Wittgenstein's influence on the discussion between internalism and externalism.

2. Wittgenstein on mental states

It is an interesting fact that some proponents of externalism suggest more or less openly that their views have their origins in Wittgenstein's remarks on the relation between language and thoughts. Granted, in the remark 304 of *Philosophical Investigations* Wittgenstein dismisses, as a misunderstanding, the idea that the main aim of language is to convey thoughts. In other words, thinking is not a language-independent process, the components of which serve as the meanings of our words. In fact, our words owe their meanings to their use as tools of social interaction. Describing our thoughts, then, we have no option but to employ public language. In short, the Private Language Argument undermines the idea that our thoughts provide

our words with meanings. It is rather the social process of verbal communication that provides our thoughts with mental content.

One could be tempted to count Wittgenstein's view as a form of externalism. Of course there are some remarks in Wittgenstein's writings that can be construed along externalist lines. For example Gareth Evans in his paper "Causal Theory of Names" (1973) revokes the famous remark from *Philosophical Investigations* that if God looked inside my mind He couldn't tell who I am thinking about. Besides, Putnam's slogan "meanings are not in the head" resembles other remarks to be found in the same book. In my view, however, Wittgenstein's positive proposal is not so clear. There is no doubt that his Private Language Argument amounts to the rejection of methodological solipsism. But he does not settle the dilemma whether the first point of view in the theory of mental content is adequate or is a mere "grammatical puzzle".

I assume the minimal interpretation of Wittgenstein's conception of mental content. There is no obvious step from his rejection of methodological solipsism to his alleged embracement of externalism. What is more, we should be very suspicious of this step, since the internalism-externalism distinction does not cover the whole variety of positions.

3. Internalism, externalism and their problems

Internalism claims that every mental content worth its name is to be identified with a functional or conceptual role. In short, every mental content is narrow in the sense that its adequate description makes no reference to external factors, whether physical or social. In this connection internalism promises a homogenous explanation of mental activity. It simply assumes that what affects a given mental state is, in most cases, another mental state.

Putnam's examples show that the explanation of mental states in terms of narrow content is not adequate. The decisive objection is that narrow content conceived as a functional state of mind fails to determine extension. In short, internalism fails to account for the referential or intentional character of mental states.

Externalism attempts to explain the intentionality of mental states. It assumes that mental content depends on external aspects of the physical and social environment of the mind. Roughly speaking, according to the externalist solution my mental state is about that particular object and not another because it is the very object that causes my state. There are, however, some reasons for believing that this explanation fails.

First, the externalist explanation seems to miss the crucial idea of intentionality. As John R. Searle has pointed it out, "the solution is from a third-person point of view" (1983, 63). It sets the conditions under which an observer can tell whether I refer to that object or not. But it says nothing about my intentions. Namely it does not set the conditions under which I take myself as referring to that particular object.

Second, there is a tension between the externalist moral drawn from the *Dendrologist Puzzle* and the *Principle of Charity* (I am grateful to Adam Grobler for this observation). If Oscar utters a sentence "One beech in our avenue has been blown down" and actually it is an elm-tree that he is talking about, an expert can answer "That's true. But actually, it is an elm". The Principle of Charity supports the assumption that Oscar has made his statement in accordance with his best knowledge. The expert also knows, first, that people often cannot tell beech-trees from elm-trees and, second, that the last storm has blown down one of the elm-trees in our avenue. All these assumptions lead the expert to the conclusion that the word "beech" as uttered by Oscar was referring to the broken elm. The conclusion, however, contradicts Putnam's opinion that due to the division of linguistic labour the word "elm" in Oscar's idiolect, on every occasion it is uttered, denotes elms. The point is that Oscar has used the term "beech" referentially in the sense introduced by Keith S. Donnellan, and the referential use calls, as I state in the next section, for explanation from the first-person point of view.

It turns out that both internalism and externalism face serious problems. Therefore the tempting solution is to advance a theory that goes beyond the distinction. I think that Searle has developed such a theory, even though he calls himself an internalist (1983, 198).

4. Searle on mental content

According to the account developed by Searle in *Intentionality* every mental act is intentional in the sense that it has an intentional content that sets its conditions of satisfaction. The conditions are to be described from the first-person point of view and their specification involves the idea of causation.

In this section I focus on three of Searle's claims. First, Putnam's Twin Earth thought experiment does not imply that meanings are not in the head. Second, the adequate account of linguistic content has to employ the first-person point of view. Third, contrary to appearances, the account in question has nothing to do with methodological solipsism, and hence is not subject to the Private Language Argument.

Searle argues that the Twin Earth fantasy can be spelled out along non-externalist lines (though, as I believe, not along internalist lines, for the reasons sketched at the end of this paper). Searle's main point is that the intentional content is self-referential. Namely, the description of an act's content makes reference to the act itself. Therefore $Oscar_1$'s tokens of "water" refer to the substance that has usually caused *his* previous utterances and perceptual experiences concerning water. Similarly, $Oscar_2$'s tokens of "water" refer to the substance that has usually caused *his* previous utterances and perceptual experiences concerning water. In short, we refer to the intended objects by means of their causal descriptions. The descriptions, moreover, makes reference to our own intentional states. The linguistic reference, therefore, is fully determined by what is in the speaker's head.

The first-person point of view, moreover, seems to be unavoidable in the theory of linguistic content. First, as the analysis of the Dendrologist Puzzle in the light of the Principle of Charity has shown, the interpreter has to take into account the supposed conditions under which the speaker *takes himself* as referring to that particular object. In this connection Putnam's idea of "the extension in one's own idiolect" has no application to the case under discussion, namely to the case of the referential use of the term "beech". Second, the interpreter refers to the world by virtue of the same mental capacities as the speaker does. The social linguistic authority, therefore, is not an abstract entity. It consists, instead, of particular people interacting with each other.

Finally, Searle's account doesn't involve methodological solipsism. It acknowledges, on the one hand, that we refer to the world by means of the descriptions of the way the world appears to us. Nevertheless, on the other hand, the descriptions are formulated in a public language, and hence they are subject to social control.

5. Conclusions

It turns out that the distinction Putnam has drawn between internalism and externalism calls for reformulation. According to externalism the mental content depends on external factors, both social and physical. The dependence, however, can be described either from the first-point of view or from the third-point of view. I have just argued, following Searle, that the former option seems to be adequate, while the latter faces serious problems.

I propose to replace the distinction with a somewhat more complicated picture. Let me start with two questions. First, can mental content be captured by that-clauses? Second, can mental content be individuated solely by means of factors internal to the mind? If the answer to the first question is "Yes" and to the second is "No", we arrive at the third-person solution or, in other words, Putnam's externalism. If the first question is settled negatively and the second is answered positively, we obtain internalism. If both answers are "Yes", we have the first-person solution.

The first-person solution is neither internalist nor externalist. It is not internalist, since it embraces the idea of truth-conditions and employs the notion of causal relations the mind bears to external things. Nevertheless, the causation is part of the internal, intentional conditions of satisfaction. Therefore the solution in hand cannot be counted as externalism.

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Some General Constraints on the Analysis of Knowledge and their Consequences for Warrant and for Substantive Accounts of Warrant

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1. General Data for the Analysis of Knowledge

An important methodological issue in the theory of knowledge is the question which kinds of items can serve as data that a proposal for the analysis of knowledge should cover. The common items are instances of knowledge or of some epistemic quality such as justification.

Yet recent discussion has become more theoretical in this methodological respect. General conditions have been defended that any adequate analysis of knowledge should fulfil. The most prominent instance is presumably the internalism/externalism distinction, internalism and externalism being highly general distinctions within accounts of justification or warrant (which latter are intended as parts of the analysis of knowledge).

The avoidance of Gettier counterexamples may also be seen as a general datum for an adequate analysis of knowledge. For Gettier counterexamples are thought to constitute a class which share a common property such as concerning false warranted beliefs that are possibly accidentally true or from which accidentally true beliefs can be inferred (cf. Gettier 1963, Merricks 1995, Howard-Snyder and Feit 2003). Since the avoidance of Gettier counterexamples is the issue the positive constraint on an adequate account of knowledge does not unambiguously follow, for there is no single constraint determined by *not* concerning false warranted beliefs that are possibly accidentally true or from which accidentally true beliefs can be inferred. This condition can be cashed out as warrant entailing truth or a warranted false belief being non-accidentally true if it were true (for details cf. Howard-Snyder and Feit 2003 and below).

In the remaining I want to introduce three general data that an adequate analysis of knowledge should cover. It turns out that these data have implications for the theoretical concept of warrant which is defined as that which (eventually redundantly) together with truth constitutes knowledge (cf. Plantinga 1993a). Finally I will investigate existing accounts of warrant whether they comply with these implications or not.

2. Non-Scepticism and the Consequence of Externalism

The first datum is *non-scepticism*. The scepticism issue is of course not decided in favour of non-scepticism. But one can pragmatically argue that the analysis of an issue has to take the existence of the analysandum for granted. In our case the analysandum is knowledge and the existence of knowledge implies the possibility of knowledge which latter amounts to the denial of scepticism, scepticism being the position that knowledge is not possible.

I now claim that by non-scepticism *externalism regarding warrant* is implied. For the internalist concept of warrant, commonly called *epistemic justification,* leads to scepticism.

Note first that the above argument does not make scepticism and an internalist conception of justification pragmatically incoherent. For the non-existence or the impossibility of knowledge does not imply the non-existence or the impossibility of justification.

The point of the sceptical implication of internalism is that an internalist conception of justification becomes indeterminate as to which belief amounts to being justified. In other words justification becomes wholly indiscriminative regarding beliefs. But it is the point of a sensible conception of justification that it allows a sufficiently conspicuous distinction between beliefs that are justified and beliefs that are not justified. For with an indiscriminative concept you will not be able to build a sensible conception of knowledge unless the concept of justification plays no substantive role in the analysis of knowledge. But then it has no function and thus no legitimate place in the analysis of knowledge. Yet internalists exactly claim that the concept of justification plays a vital role in the analysis of knowledge.

To see the indiscriminatoriness of the internalist concept of justification I remind that the core notion of the otherwise very contentious concept of the internal encompasses some causal and spatial restriction to the responsiveness of a subject's cognitive functions. Thus if you put yourself into a black soundproof box your cognitive faculties will react to almost nothing what is going on outside of your black soundproof box (below a certain threshold of course). Hence the spatial and causal constraints to the internal are rather close to the spatial surface of the subject if not underneath it. The indiscriminatoriness of the internalist concept of justification then follows by brain in the vat and analogous scenarios. Such scenarios reveal that what is internally determined may be wholly independent from what is actually the case. This is compatible with there being an actual distinction within our beliefs as to their justification, say by means of actual justificatory procedures guided by internal cognitive faculties. But the intended concept of justification should have some link with truth to be of use in the analysis of knowledge. For knowledge not only implies truth but non-accidental truth, as the Gettier problem most prominently reveals. And for justification to play a vital role in the analysis of knowledge it should contribute to the distinction between accidental and non-accidental truth. But such a contribution does the internalist concept of justification obviously not achieve as the compatibility with brain in the vat scenarios and the like shows. For they reveal that justification is compatible with any truth or falsity whatsoever.

3. The Lesson from the Gettier Problem

A second datum consists in general conditions that a solution to the Gettier problem should fulfil. Recently several epistemologists have argued that any solution to the Gettier problem is committed to an infallibilist account of warrant, that is to the position that warrant implies truth (cf. Sturgeon 1993, Zagzebski 1994, Merricks 1995, Bigelow 1999). Daniel and Frances Howard-Snyder and Neil Feit

(2003) however have aptly shown that the general condition on warrant derivable from the Gettier problem is rather that either warrant implies truth or that warranted false beliefs would be non-accidentally true if they were true. Since this consequence is a disjunction whose disjuncts are incompatible nothing definite can concluded from the Gettier problem alone.

4. Fallibilism and its Consequences

A third datum is *fallibilism*. Since at least on pragmatic reasons we endorse non-scepticism, the possibility of knowledge is taken for granted. The pragmatic rationale for non-scepticism yet entails even the existence of knowledge. On the other hand we know that many knowledge claims have turned out to be false. And we may suppose that all of our knowledge claims can turn out to be false. Yet because of non-scepticism this cannot happen at one fell swoop. This position is commonly called *fallibilism* and can sensibly be taken as a datum that any analysis of knowledge should comply with.

Now from fallibilism it can be concluded that any analysis of knowledge has to allow for a constituent concept of the concept of *warrant* that does not imply truth. It has to be the concept of warrant since truth *alone* as that which by definition (eventually redundantly) together with warrant amounts to knowledge cannot account for fallibilism because the implication of truth amounts to infallibilism, the contradictory to fallibilism. Yet the concept of knowledge without truth is by definition the concept of warrant.

Yet together with the result from the Gettier problem that warrant entails either truth or that if a warranted false belief were true it would be non-accidentally true, it follows that to cover fallibilism warrant cannot entail truth but has to have the property that if a warranted false belief were true it would be non-accidentally true.

Further with the first result from non-scepticism of externalist warrant it follows that any genuinely externalist aspect of warrant is not truth. For by fallibilism there are warranted false beliefs. Thus warrant cannot be truth. Finally this property of warrant has also to be present in warranted true beliefs, that is in knowledge.

We can summarise the results for warrant so far as follows: (i) Warrant contains an externalist aspect which is not truth. (ii) Warrant does not imply truth. It is possible that there are warranted false beliefs. (iii) If a warranted false belief were true, it would be non-accidentally true.

5. Consequences for Substantive Accounts of Warrant

What follows from this for a substantive account of warrant? It has been remarked (Merricks 1995, 841-842) that (perhaps sometimes even unbeknownst to the defender) many substantive externalist accounts of warrant imply truth such as defeater accounts (Lehrer, Pollock), tracking accounts (Nozick, Dretske, Luper-Foy) or reliabilist accounts (Goldman). These accounts are thus discredited by the results here developed.

What appears to be a most congenial account to the results obtained is proper functionalism as defended most prominently by Plantinga (1993b). The reason is that proper functionalism grounds its analysis of warrant in properly functioning cognitive faculties. And cognitive faculties can lead to false beliefs even if they function properly and in an appropriate environment (cf. Plantinga 1993b: 17-20). This is just an empirical fact about cognitive faculties. In other words cognitive faculties are fallible. Thus proper functionalism respects fallibilist warrant.

Further proper functionalism grounds the counterfactual that if a warranted false belief were true it would be non-accidentally true. For if a warranted belief is false under proper-functionalism there is proper function of the respective cognitive faculties in an appropriate environment and the belief just happens to be false because of some accident. But if this belief were true it would be non-accidentally true. For the non-accidentality of the true belief would obviously be founded in the fact that the respective belief did arise out of the properly functioning cognitive faculties and a world in which such a true belief would arise out of these properly functioning cognitive faculties is closer than any world in which such a true belief would arise in some other way.

It has been objected (Greene and Balmert 1997, cf. Plantinga 1997) to proper functionalist accounts of warrant that their non-implication of truth is incompatible with the infallibilist result regarding warrant defended by Merricks and others such as Sturgeon (1993), Zagzebski (1994) or Bigelow (1999). The result from fallibilism obtained here shows this objection to be inconclusive.

Epistemic virtue accounts of warrant are promising as well. For epistemic virtue accounts of warrant found warrant in epistemic virtues which, at least according to the most prominent accounts (cf. Sosa 1991 and Zagzebski 1997), are also constituted by cognitive faculties as they are empirically known and to which the notion of proper function in proper functionalism refers. Internalist accounts of warrant obviously fail.

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Deus sive atra

Christian Zelger, Schlanders

1. Einleitung

Als Baruch de Spinoza im 17. Jahrhundert die Formel "Deus sive natura" prägte, war dies Ausdruck seines Pantheismus (Russell 2001, 579f.). Der Titel des vorliegenden Beitrages - Deus sive atra, also svw. Gott oder die Schwarzen Löcher - zielt keineswegs darauf ab, hier eine Gleichsetzung vorzunehmen. Vielmehr geht es darum aufzuzeigen, dass sich Physiker und Kosmologen durch die Beschäftigung mit Schwarzen Löchern oft in Bereiche abseits der Wissenschaftlichkeit begeben, indem sie ihr angestammtes Gebiet verlassen und mitunter metaphysische Anklänge oder - zumindest implizit - sogar eine religiöse Komponente erkennen lassen.

2. Vorbemerkungen

2.1 Methode

Um darzulegen, dass Naturwissenschaftler methodisch im wahrsten Sinne des Wortes an die Grenzen stoßen, wenn sie sich mit Theorien zu Schwarzen Löchern auseinandersetzen, wird in der folgenden Abhandlung durch zwei Vergleiche gezeigt, a) welche Eigenschaften die Physik als Wissenschaft von Pseudo-Wissenschaften unterscheidet und wodurch sich letztere auszeichnen, b) welche Untersuchungsgegenstände damit für die Naturwissenschaften ausgeschlossen werden und schließlich, c) dass es zahlreiche Gemeinsamkeiten und Übereinstimmungen zwischen Gott und einem Schwarzen Loch gibt.

2.2 Definitionen

In der folgenden Abhandlung werden im Besonderen drei außer-philosophische Begriffe verwendet, die es zu definieren gilt:

- *Raumzeit* =def. vierdimensionaler Raum, dessen Punkte Ereignisse sind;

- *Singularität* =def. Punkt in der Raumzeit, an dem die Raumzeitkrümmung einen unendlichen Wert annimmt;

- *Schwarzes Loch* =def. Region in der Raumzeit, aus der auf Grund der starken Gravitation nichts entweichen kann. (Hawking 2001, 214)

3. Schwarze Löcher

3.1 Kurzer historischer Überblick

Im Rahmen dieses Beitrages kann die geschichtliche Komponente nur marginal angesprochen werden. Aus diesem Grund beschränke ich mich auf vier wichtige Ereignisse:

- Im Jahre 1783 befasste sich *John Michell* mit der möglichen Existenz genügend schwerer Sterne, von denen Lichtteilchen nicht entkommen könnten. Er stützte sich dabei auf die Newtonsche Gravitationstheorie und die Korpuskulartheorie des Lichts. (Al-Khalili 2001, 120).

- Ausgehend von Albert Einsteins Allgemeiner Relativitätstheorie, schaffte es *Karl Schwarzschild* wenige Monate nach Veröffentlichung im Jahr 1916 als Erster, eine Lösung für deren Vakuumfeldgleichungen zu finden. Sie beschreibt nicht-rotierende Schwarze Löcher mit einem Ereignishorizont und einer zentralen Singularität. (Börner 2002, 104)

- Erst über 50 Jahre nach Schwarzschilds Lösung wurde der Begriff "Schwarzes Loch" von *John Archibald Wheeler* geprägt, die Bezeichnung, die bis heute für diese vermuteten Objekte üblich ist, die mit Hilfe physikalischer Gleichungen beschrieben werden. (Guth 2002, 169)

- 1963 findet *Roy Patrick Kerr* eine Verallgemeinerung der Schwarzschild-Lösung. Damit können rotierende Schwarze Löcher beschrieben werden. Seither nennt man diese Form von rotierenden Objekten Kerr-Lösung. (Müller 2003, 3)

3.2 Eigenschaften

Bereits die Lösung Schwarzschilds beschreibt ein Schwarzes Loch als ein kosmisches Gebilde mit einer zentralen Singularität und einem Ereignishorizont. Das Schwarze Loch verschluckt Materie und Strahlung und der Ereignishorizont trennt dabei die Punkte, von denen ein Entkommen noch möglich ist, von jenen, die das nicht mehr zulassen. *Dieser Ereignishorizont ist eine mathematisch definierte Grenzfläche*. Die Fluchtgeschwindigkeit beträgt hier c, die Lichtgeschwindigkeit. Da diese laut Einsteinscher Relativitätstheorie die höchstmögliche Geschwindigkeit darstellt, wird jedes Signal hinter dem Horizont verschluckt. (Hawking 2001, 119 und 123)

Sofern das Schwarze Loch statisch ist, d.h. nicht rotiert, beträgt der Radius des Ereignishorizonts zwei Gravitationsradien; bei einer maximalen Rotationsgeschwindigkeit von c schrumpft dieser Wert auf einen Gravitationsradius. Jedes Teilchen, das den Horizont erreicht, fällt in das Schwarze Loch und erreicht die Singularität bei r=0. (Müller 2003, 4)

Alles, was sich hinter dem Ereignishorizont verbirgt, bleibt einem Beobachter von außen verschlossen. Roger Penrose sprach von einer "kosmischen Zensur", als er 1969 entdeckt hat, dass sich jede Singularität hinter einem Horizont verbirgt (Börner 2002, 108). Zudem hat John Wheeler mit seinem "No-Hair-Theorem" festgestellt, dass ein Schwarzes Loch lediglich drei Eigenschaften besitzt: Masse, Drehimpuls und Ladung. Alle weiteren Eigenschaften, die die uns bekannte Materie besitzen kann, wie z.B. Form, Farbe, Geschmack, etc., gehen verloren. (Hawking 1998, 119)

3.3 Probleme der physikalischen Theorien

Bereits die beiden vorangegangenen Abschnitte haben angedeutet, dass Schwarze Löcher auch heute noch, über 80 Jahren nach ihrer erstmaligen Beschreibung durch Schwarzschild, eine Reihe von Problemen aufwerfen.

- Sie stellen bisher lediglich *theoretische Konstrukte* dar. Der Nachweis einer tatsächlichen Existenz ist noch für

keine Form gelungen (Sedlmayr 1999, 120; Lasota 1999, 26). Man unterscheidet nach Masse und angenommenen Umständen ihrer Entstehung und Entwicklung vier Arten: primordiale, stellare, massereiche und superschwere Schwarze Löcher (Müller 2003, 4f.).

- Die Schwarzschild-Gleichungen, die nicht-rotierende Schwarze Löcher beschreiben, *versagen* bei r=0 (Börner 2002, 106f.).

- Die Relativitätstheorie *verliert ihre Gültigkeit*, sobald man versucht, mit ihrer Hilfe ein Schwarzes Loch in seiner Gesamtheit zu erfassen (Livio 2001, 196; Sedlmayr 1999, 122).

- Die Entwicklung einer Singularität unterliegt einer *Nicht-vorhersagbarkeit*, da sie wissenschaftlich nicht mehr beschreibbar ist (Hawking 1998, 156).

Ich möchte dem letzten Problem besondere Aufmerksamkeit schenken. Schon Roger Penrose hat darauf hingewiesen, dass es nicht möglich ist, mit der Relativitätstheorie ein Schwarzes Loch zu beschreiben. Der Fall weist damit einige Parallelen zum Urknall auf. Man kann ihm zeitlich fast beliebig nahe kommen, der Urknall selbst aber lässt sich wissenschaftlich nicht mehr fassen. (Livio 2001, 196)

Der Mathematiker Charles Seife sieht in der Null die Ursache für viele physikalische Probleme. Die Relativitätstheorie besitzt ihre Gültigkeit im Bereich des sehr Großen, d.h. für große Distanzen und Geschwindigkeiten, die Quantentheorie von Max Planck hingegen für das sehr Kleine, also für kleine Entfernungen und Massen. Beide Theorien beschreiben die physikalischen Gesetze für bestimmte Aspekte unseres Universums. Sie lassen sich jedoch nicht vereinen. (Seife 2000, 215)

Ein Schwarzes Loch ist aber ein Objekt, das beiden Bereichen angehört. Es ist äußerst massereich und gehorcht daher der Relativitätstheorie - Seife spricht davon, dass ein Schwarzes Loch eine Null in den Gleichungen der Relativitätstheorie ist und dass die unendlich hohe Dichte einer (mathematisch nicht definierten) Division durch Null entspricht -; andererseits ist es aber auch sehr klein und unterliegt damit der Quantentheorie. (ebd., 238)

Auch wenn Seife hier den Fehler begeht, dass das Volumen eines Schwarzes Lochs nach den Gesetzen der Quantenmechanik nicht wirklich gleich null sondern nur extrem klein ist, steht fest, dass die Physiker noch nicht wissen, wie man die Gesetze der Quantentheorie und die der Allgemeinen Relativitätstheorie gleichzeitig anwendet. (Al-Khalili 2001, 130)

4. Erster Vergleich

Um die Theorien der Schwarzen Löcher wissenschaftstheoretisch etwas genauer beleuchten zu können, muss man die Kriterien für die Wissenschaftlichkeit von Aussagen berücksichtigen.

4.1 Wissenschaften

Die Physik ist eine Naturwissenschaft, d.h. eine empirische Wissenschaft, die sich mit der Erforschung der Natur, ihren Gesetzen und den Voraussetzungen technischer Anwendung beschäftigt (Mittelstraß 1995, Band 2, 977). Bedeutsam ist dabei der Begriff des Gesetzes. In der Physik versteht man darunter einen hypothetischen, empirischen, d.h. durch Messung oder Experiment nicht falsifizierten Universalsatz (ebd., Band 1, 761).

Der Allsatz darf nicht falsifiziert, also auf Grund einer Basisaussage widerlegt worden sein, er muss jedoch falsifizierbar sein. Popper hat die Falsifizierbarkeit als Abgrenzungskriterium für erfahrungswissenschaftliche und sogenannte metaphysische Aussagen eingeführt. Er hat aber darauf hingewiesen, dass ein einzelnes Beobachtungsresultat nicht ausreicht, um ein Gesetz zu widerlegen, dass vielmehr anerkannte Basissätze nur dann eine Theorie falsifizieren, wenn sie gleichzeitig eine falsifizierende Hypothese bewähren (ebd., 631).

In einer Untersuchung über die Rededauer von Vortragenden auf philosophischen Symposien könnte die folgende Hypothese aufgestellt werden: "Jeder Vortrag auf dem 26. Kongress der Ludwig Wittgenstein Gesellschaft dauert maximal 60 Minuten". Eine solche Aussage kann dann wissenschaftlich genannt werden, wenn sie falsifizierbar ist. Sie ist tatsächlich falsifizierbar, da es einen Basissatz der Form "Am ... um ... wurde von ... ein zweistündiger Vortrag gehalten" geben könnte, der den obengenannten Allsatz widerlegt. Aussagen, die an der Erfahrung scheitern können, werden damit als empirisch gehaltvoll und somit als sinnvoll bezeichnet.

Eine Aussage wie "Jede Handlung des Menschen wird von Gott vorausgesehen" hingegen erfüllt diese Kriterien nicht. Sie ist nicht falsifizierbar. *Knapp formuliert fällt damit Gott aus dem Gegenstandsbereich der Naturwissenschaften.*

4.2 Pseudo-Wissenschaften

Auch wenn man sich heute eingestehen muss, dass wohl alle Versuche, ein einheitliches und für alle Zeiten gültiges Sinnkriterium aufzustellen, gescheitert sind (Reutterer 1999, 160), so gibt es doch einige Minimalbedingungen für eine gute erfahrungswissenschaftliche Theorie. Pseudowissenschaftliche Theorien zeichnen sich demnach u.a. durch folgende Merkmale aus:

- innere und/oder äußere Widersprüchlichkeit
- fehlende Kritisierbarkeit und Überprüfbarkeit
- Immunisierungsstrategien. (ebd., 161f.)

Es geht hier in erster Linie nicht darum, die Astrophysik und ihre Methoden anzugreifen, auch nicht die Existenz bestimmter kosmischer Objekte generell zu bezweifeln, sondern vielmehr darum die Art und Weise zu kritisieren, wie Schwarze Löcher zu Teilen scheinbar wissenschaftlicher Theorien gemacht werden.

Von den oben genannten Merkmalen fällt besonders die fehlende Kritisierbarkeit, also die fehlende Möglichkeit zur Falsifizierung ins Auge. Wissenschaftlich-sinnvoll sind Sätze, die an der Erfahrung scheitern können. Gerade das aber ist bei Schwarzen Löchern nicht immer möglich. *Durch die kosmische Zensur, die jede Singularität nach außen hin abschirmt, ist es uns nicht möglich, eine Hypothese die Materie hinter dem Ereignishorizont betreffend zu überprüfen* (Börner 2002, 108f.; Al-Khalili 2001, 129).

5. Zweiter Vergleich

5.1 Gott

Prinzipiell kann ein Vergleich wie der folgende, der mehr provokativ als wörtlich zu verstehen ist, auch mit anderen transzendenten, höchsten Wesen einer Religion gemacht werden. Das Christentum bietet sich jedoch für unseren

Kulturkreis an. Exemplarisch werden zwei Quellen herangezogen, eine theologische und eine philosophische.

In der Bibel wird der christliche Gott als schaffender Herrscher dargestellt, der Himmel und Erde, Menschen und Tiere erschaffen hat (u.a. Gen 1,1; 1,27; Apg 17,24; Jer 27,5) und dafür sorgt, dass die Welt erhalten bleibt (Ps 89, 38). Er gilt als unbegreifbar, unerkennbar (Ijob 37,5ff.; Jes 22,11) und unaufhaltsam (Jes 43,13). Er wird zudem als unsichtbar und ewig betrachtet (2 Kor 4,18).

Nikolaus von Kues - und ihm folgend Giordano Bruno - betont in seinem Werk "Von der Wissenschaft des Nichtwissens" das Zusammenfallen der Gegensätze in Gott, die sogenannte "coincidentia oppositorum". (Mittelstraß 1995, Band 2, 1018f.)

5.2 Schwarze Löcher

Wir haben nun gesehen, dass Gott:

- unsichtbar ist;

- sich außerhalb von Raum und Zeit befindet;

- erschafft und erhält;

- die Einheit der Gegensätze darstellt;

- unbegreifbar ist.

Genau dasselbe können wir aber auch von Schwarzen Löchern behaupten:

- Sie sind unsichtbar, weil die Gravitation so stark ist, dass selbst Photonen nicht entkommen können (Al Khalili 2001, 122; Lasota 1999, 26).

- Raum und Zeit verlieren die gewohnte Bedeutung (Sedlmayr 1999, 121f.). In ihnen steht die Zeit still (Hawking 2001, 117f.), sie sind sogenannte "Abnäher in der Raumzeit" (Cole 2002, 22).

- Sie könnten für die Entstehung von Baby-Universen verantwortlich sein (Davies 1996, 266). Außerdem hat Stephen Hawking 1974 nachgewiesen, dass Schwarze Löcher nicht vollkommen schwarz sind, d.h. dass sie Teilchen emittieren. Nahe am Ereignishorizont können durch quantentheoretische Prozesse Teilchen entstehen (Hawking 1998, 128ff.; Kiefer 2002, 110f.).

- Ähnlich wie Neutronensterne sind sie so kompakt, dass Atome nicht mehr ihre ursprüngliche Form behalten und die Elektronen in den Kern gedrückt werden (Al-Khalili 2001, 123). Die Individualität der Eigenschaften der Materie geht verloren (Hawking 1998, 119).

- Der Nachweis der Existenz stellt die Wissenschaftler genau wie die dahinter stehende Theorie auch heute noch vor große Probleme (Müller 2003, 17).

Und nicht zuletzt werden sowohl Gott als auch Schwarze Löcher von ihren Anhängern für alles Mögliche und Unmögliche verantwortlich gemacht - ohne dass überhaupt deren Existenz nachgewiesen wurde. Schwarzen Löchern werden deshalb gerne folgende Funktionen "angedichtet":

- Ein Universum mit zufälligen Anfangsbedingungen würde viel eher Schwarze Löcher als verteilte Materie hervorbringen (Davies 1996, 105). Soll die Tatsache, dass man bisher keine Schwarzen Löcher nachweisen konnte, ein Beweis dafür sein, dass das Universum kein Zufall sein kann?

- Manche Wissenschaftler spekulieren sogar, dass Schwarze Löcher Übergänge zu anderen Universen darstellen (Livio 2001, 197).

- Damit man Aussagen über die Zukunft des Weltalls machen kann, muss man genaue Daten über die Menge der Materie besitzen. Meistens reicht die sichtbare Materie nicht einmal ansatzweise aus, um das Verhalten von Galaxien und ähnlichen Objekten zu erklären (Krauss 1990, 54ff.). Die Aufgabe, die fehlende Masse zu stellen, kommt gewöhnlich sogenannter dunkler Materie oder eben Schwarzen Löchern zu (Sedlmayr 1999, 188; Hawking 2001, 195).

- In der Stringtheorie werden sogar Elementarteilchen als extreme Schwarze Löcher aufgefasst. So verschiedene Dinge sollen letzten Endes nur unterschiedliche Manifestationen der gleichen Grundeinheit sein. (Livio 2001, 69f.).

6. Zweifel in den eigenen Reihen?

Die vorangegangenen Abschnitte haben einerseits gezeigt, mit welchen Problemen die Theorien der Schwarzen Löcher kämpfen, andererseits aber auch mit welchem Eifer an den Annahmen festgehalten wird und welche große Rolle mehr oder weniger fundierte Vermutungen und Glauben in einem weiteren Sinn spielen. Viele Physiker sind sich jedoch bewusst, welche Schwierigkeiten mit Singularitäten verbunden sind.

Im Jahre 2002 wurde von Pawel Mazur und Emil Mottola eine Alternative zur Theorie der Schwarzen Löcher präsentiert. Die sogenannten Gravasterne - zusammengesetzt aus Gravitation und Vakuum - besitzen keinen Horizont und keine zentrale Singularität. Die Quelle des Gravitationsfeldes ist eine Blase aus dunkler Energie sowie ein gravitatives Bose-Einstein-Kondensat, das in einer dünnen Schale angeordnet ist. Vom ästhetischen Standpunkt aus haben Physiker lange nach einer Raumzeit für Schwarze Löcher gesucht, die eine Singularität vermeidet. Durch die Theorie der Gravasterne wurde ein Punkt beseitigt, in dem die physikalische Beschreibung versagt. (Müller 2003, 3 und 16f.)

Ob damit alle Rätsel und Schwierigkeiten beseitigt werden können, lässt sich zum momentanen Zeitpunkt der Forschungen noch nicht abschätzen. Auch bei diesem neuen Ansatz der Gravasterne gibt es noch zu viele offene Fragen und Unstimmigkeiten. Deus sive grava?

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R A I F F E I S E N K A S S E
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In den vergangenen 50 Jahren war die vorherrschende Auffassung, dass Bemerkungen über richtig und falsch möglichst nicht als der Versuch verstanden werden sollten, die Welt zu beschreiben, da es keine moralischen Fakten gibt. Statt dessen glaubte man, dass moralische Urteile andere Funktionen haben, wie etwa die Haltungen oder Vorlieben des Sprechers auszudrücken. In den letzten Jahren wurde diese non-kognitivistische Position mehr und mehr von moralischen Realisten angegriffen, die darauf beharren, dass es moralische Tatsachen gibt, die von unseren Meinungen unabhängig sind und die wir zu entdecken versuchen.

Leider ist der Großteil dieser interessanten und wichtigen Debatte für Studierende nicht leicht zugänglich. McNaughton stellt beide Seiten des Streits klar und verständlich dar, so dass kein philosophisches Vorwissen nötig ist. Während er diese entgegengesetzten Perspektiven entwickelt, geht er auf viele zentrale Themen der Ethik ein. Das Buch argumentiert abschließend für eine radikale Form des moralischen Realismus, in dem moralische Tugend gefunden werden kann – nicht als Folge korrekter moralischer Prinzipien, sondern eher durch die Entwicklung moralischer Sensibilität. *Moralisches Sehen* ist eine klare und engagierte Einführung in eine wichtige und oftmals beunruhigende Debatte.

***David McNaughton* ist Professor der Philosophie an der Universität Keele, Großbritannien. ISBN 3-937202-16-1, Hardcover € 30,00**

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Kernthese ist, dass es einen signifikanten Aspekt praktischer Gründe gibt, der in der gegenwärtigen Debatte übersehen worden ist: praktische Gründe müssen Personen *zugänglich* sein. Nur in McDowells Ansatz stellt dies einen endgültigen Einwand dar, da sich die beiden anderen Positionen so umformulieren lassen, dass sie der Zugänglichkeit Rechnung tragen können.

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