Hegel's Analytic Pragmatism

INTRODUCTION

1. Standard arguments against Hegel's philosophy talk about his alleged philosophical system and suggest that the days of such systems have gone, fortunately. Moreover, what Hegel is attempting under the allegedly misleading label "*Science of Logic*", is, according to such arguments, *metaphysics*, *ontology* or even *onto-theology*. Indeed, one can cite his own words in order to support this view, which seems to show, in turn, that any 'pragmatist' or 'semantic' reading of Hegel's texts is misguided and anachronistic from the very beginning. Such arguments are directed against proposals of a conceptual and analytic interpretation of Hegel's logic, as, for example, in my 1992 book *Hegels Analytische Philosophie* or in the works of John McDowell and, especially, Robert Brandom on Hegel's *Phenomenology of Spirit*, somehow in the tradition of Wilfrid Sellars. In the meantime, one even speaks of a Pittsburgh reading of Hegel.

However, there is quite some ambiguity or obscurity, perhaps due to ignorance, in our present day understanding of the words "metaphysics", "logic", and even "pragmatism". Misunderstandings of 'Isms' like "idealism", especially in their polemical use, and belief-philosophical world-views like materialism and physicalism have to be removed first – before we are open to start new readings and understanding possible arguments. In their usual understanding, metaphysical claims are 'independent of empirical experience', referring in an 'a priori' way to some world 'beyond all appearances', as a poem or prayer of Gregor Nazianzenos addresses God. In fact, Hegel, like Descartes, Spinoza, and Leibniz frequently talks about God. He does so, for example, when characterizing the topic of logic as the '*thoughts of God before the creation of the world*' – a form of thought, which we already find in Plato's *Timaeus*, presented by the image of a *demiourgos*, from where it entered Judaic, Christian and Islamic theology since Hellenistic antiquity. It may be important to notice the fine irony in Hegel's phrase. Hegel deeply mistrusts not only medieval philosophy, from Avicenna to St. Thomas, Averroes to Duns Scotus, but also Kant's attempt to explain the finitude of human life and knowledge in contrast to the infinity of God's almighty power and all-knowing intelligence. In his early works form 1804/5, for example, he significantly avoids the word "god" and talks about the highest being, obviously referring to Robespierre's *l'être supreme* and, hence, to the secularized civil religion of the French Revolution. The contrast to the anthropomorphic picture of a personal God in traditional religion should be clear. Moreover, even Kant's doctrine of postulates, which seems to allow us some use of the image of a God behind all appearances, is, according to Hegel, absolutely

misleading. It cannot serve at all as a good foil for any understanding of ourselves in our finitude.

In other contexts, Hegel declares, however, that the very topic of metaphysics are *God, Spirit, and Freedom*, just as Kant had named God, Freedom, and Immortality as the topics of philosophy. The question now is why God, Spirit, and Freedom are the themes of philosophy and how any knowledge about these things can be developed and understood in something like a *Science of Logic*.

In a very first step, we remember that Aristotle's metaphysics originally stood under the title "*first science*" or "*proto-science*". I would urgently propose to translate "*protē philosophia*" in this way, meaning '*system of* (*conceptual*) *foundations of any (scientific) knowledge*'. If we understand metaphysics in this way, it is obviously just the opposite of '*belief philosophy*' claiming or teaching dogmatically some alleged 'non-empirical knowledge' about transcendent objects beyond inner-worldly experiences.

The talk about God plays the role of reflecting on the totality of truth and reality *sub specie aeternitatis*, which we must reconstruct in its double negativity. Eternity and infinity negate the limits of any entity or process, knowledge claim and action in the world. However, the use of these negative words is only to make explicit the very finitude of everything there is in the world. In other words, negative philosophy is the true heir of negative theology. All positive theology and any belief in a *Ding an sich* or world beyond experience is superstition. It is based on a conceptual misunderstanding of the contrast between knowledge and belief.

However, Hume's empiricism, the atomism of Hobbes, LaMettrie's materialism or present day physicalism are no object-level and world-related scientific theories. They do not express any possibly true knowledge about the world and our cognition of the world. They are rather expressions of religious attitudes. That this is so, seems to be surprising, especially in view of Thomas Hobbes's 'scientific' attitude to matter and things, John Locke's physiology of cognition, David Hume's alleged 'common sense' and his 'naturalist' approach to the processes of human understanding. It is, ironically, the supposed metaphysician Hegel who dismantles all these 'theories' as *speculations*, as total world-views, if not already even as totalitarian ideologies. These 'Isms' turn out as versions of an atheistic metaphysics. They are 'positive theologies without God', belief-philosophies. They confuse claims about nature with attitudes to the world. The even overlook the ambiguities of the word "nature". As the object of the sciences, nature is not identical with the world. This holds for quite many respects, as Hegel shows. The same

ambiguities hold for the word “being” – namely as referring to (domains of) so called entities and to their performative mode of existence. Martin Heidegger’s talks about an ontological difference and tries, again, to show the importance of the distinctions; but Analytical Philosophy of the 20th century does not seem to understand it. It overlooks the peculiar grammatical form of speculative reflections on the totality of some well-determined domain of discourse. This holds already for philosophy of mathematics. There is no sufficient analysis of the mode of being of numbers and geometrical forms. Following Gottlob Frege, one presupposes the domain for the variables. In a flight from Platonism, one follows even David Hilbert’s axiomaticism and arrives at merely dogmatic beginnings with arbitrary, allegedly intuitive, axioms. The deep issue that all domains of object are limited (‘finite’, as Hegel misleadingly says) and must be constituted, as Kant famously says, is totally forgotten. Such realms are the limited realms of all (natural) numbers, of all pure sets of Naïve Set Theory, of all (possible) persons or of all (bodily) things, But there is no well-defined domain of all (possible or actual) events or states of affairs (‘in the world’). There is no well-defined set of possible worlds outside the merely mathematical models of Naïve Set Theory. There is no well-defined sortal manifold of impressions, which Willard V. O. Quine calls stimulus meanings, and no set of sensations or sense data, as Bertrand Russell, Rudolf Carnap and Alfred Ayer assume in their silent revivals of Locke and Hume.

The deepest logical problem, which is not understood in the empiricist and materialist tradition at all yet, is to grasp the peculiar meaning, use and truth-conditions of speculative sentences about totalities like “the world”, “reality”, “possibility”, or “necessity”. The same holds for our talks about the “creation” or, if you wish, the beginning of the world in which we live, call it “God” or “Big Bang”, and about the “ending of all things”, i. e. the end of the world. It is just prejudice to belief that Charles Darwin was the first to teach the gradual emergence of life on earth. His grandfather Erasmus Darwin already had proposed similar views and is approvingly cited by Hegel – who knows, of course, of Lamarck and agrees in principle with his foundational idea of evolution.

According to my reading, Hegel proposes to understand a whole group of speculative sentences just as reminders of the basic fact that everything in the world is finite. However, they express this fact not in the ‘neutral’ way of a scientific theory of generic facts and typical events in the world. They also do not support the depressing mood of 19th century nihilism. The goal is, rather, to save the religious attitude of awe in relation to the very basic, and grand, fact that we actually live in the world with the open eyes of at least some wisdom and with the light of some knowledge about the world.

Another problem appears if we reflect on language changes in the last 300 years, especially with respect to words like “speculation”, “science”, “philosophy” and “spirit” (*Geist*) – which depend, in part, on institutional changes, in part on ideological battles and quite some misunderstandings of traditions in canonized and schematized histories of cultural development or *Geistesgeschichte*. For more than 23 centuries, the word “philosophy” had been a label for *theoretical science* or *explicit knowledge* – as Hegel also reminds us at the beginning of his *Encyclopaedia of the Philosophical Sciences*. Newton’s title “*philosophiae naturalis principia mathematica*” clearly translates today as “mathematical foundations of *the natural science*”, not “*natural philosophy*” (*Naturphilosophie*). Even when Friedrich Schiller talks in his famous inaugural lecture at Jena of a *philosophical* historian (he says “*philosophischer Kopf*”), his aim is to replace historical narratives by *scientific historiography*, tendentious historical novels by some structural understanding of how the multitude of local intentions and actions add up to global history.

In Hegel’s meta-philosophical reflection on philosophy after Kant, the task of “philosophy” narrows down to a development of *scientific self-consciousness*. The main organ of self-knowing knowledge is *logic*. Hegel develops the need of self-knowing knowledge in his masterpiece, the “*Phenomenology of Spirit*”. The very title implicitly claims to be the first book that brings human sapience, understanding and reason into an immanent view of a phenomenology, i. e. of an analysis of the manifest appearances of understanding and reason, real cognition and intelligence, in short, of the human spirit, which is, in its very form the only divine thing in the world. This contradicts all usual readings of Hegel’s seemingly grand sentences about what spirit allegedly does and does not. These sentences do not talk about entities at all, as especially English speaking readers are too ready to assume, following Hume’s ‘common sense’ and his autodafé of all generic sentences as allegedly ‘metaphysical’. Instead, Hegel everywhere talks about *concept* and *form* (*Begriff* and *Idee*, *eidos* and *idea*) in the tradition of Plato’s dialectics and Aristotle’s “organon”, “metaphysics” and “philosophical psychology” (*de anima*). The main topic is human sapience and knowledge, science of nature (*Naturwissenschaften*) and knowledge about human institutions (*Geisteswissenschaften*), including all the historical and social sciences.

The very title of Hegel’s second main book, which is until today heavily underrated, especially in the English-speaking world, is not less demanding, even quite boastful: “*Science of Logic*”. It expresses the program of turning logic (including philosophy of mathematics) into a *real science* after it has been a merely technical *doctrine* for more than 2000 years. In fact, formal logic is

until today still taught in the mode of mere technique, as a kind of applied science for logical engineers or subtle sophists, the opponents of Socratic irony and dialectics.

The third main book of Hegel, the "*Encyclopaedia of the Philosophical Sciences*", has again a grand title. It expresses the program of making the order or system of all *self-conscious sciences*, not just of 'philosophy' explicit. In other words, Hegel's system is not a system of philosophy but a system of the topics and principles, objects and methods of the sciences. The word "philosophical" marks the distinction between a mere doctrine and a science. The *differentia specifica* is *self-conscious* knowledge about the very form and idea of the discipline in question, which includes knowledge of its limits of scope depending on limits of research method and theoretical language or mode of representation. The basic insight is that there is no universe of discourse, nor domain of all existing objects and entities like London or the number 5, facts and events like the French Revolution in contrast to non-existing things like Pegasus or the largest prim number. Frege, Russell, the early Wittgenstein and all followers in the 20th century still miss the importance of this insight into the 'finitude' or, better, boundedness or limitation of any well-defined sortal domain and its set of predicates and relations. This is a most important insight into the heavily limited meaningful use of formal schemes of logical deductions and alleged general validity. As a result, logic is much more than an inquiry into formally valid inference in sortal domains, which, in their ideal forms, always already are purely mathematical. In other words, Frege's famous title of his concept-script (Begriffsschrift) "a language of pure thinking built in analogy of the language of arithmetic" is quite misleading if we do not read "pure thinking" just as "idealized mathematical thinking". In fact, forma logic after Frege is just mathematical logic, the logical system of defining the truth- or fulfilment conditions of logically complex predicates in an ideal sortal domain which is, as such, already a purely mathematical domain. This is so because in the real world, outside mathematics, there are no substances, no eternal or time-general objects or entities at all. There are no real, i.e. ideal, sortal domains of entities outside our mathematical models. However, we must presuppose sortality for the logical rules of any formal predicate logic with its quantifications and variables, or else the schemes of defining classes and sets do not work properly and the scheme of logical deductions do hold only in special cases, not in general or universally. This problem concerns not at all only the two-valued system of Frege with its principle of the excluded middle or *tertium non datur*, but to intuitionistic logic and all nonstandard formal logics as well.

But not only is Hegel's argument against formal logic and the corresponding problem well understood, nor is Hegel's influence on the very development and canonization of the scientific

disciplines in the modern university known. As a result, the real meaning of the two books on scientific logic and on self-conscious science is still undervalued. The Encyclopedia obviously was a comprehensive handout for his students. Following Fichte's example in Jena, Hegel invented a new form of lectures. In fact, Fichte and Hegel were the very firsts who did not just read texts of books by other authors in order to comment on them but talked about their own work. In support of Wilhelm von Humboldt, the minister in Berlin, they invented together with Friedrich Schleiermacher the modern research university. The crucial step was teaching the content of own scientific results. Moreover, Hegel had developed as rector in Nuremberg, together with Immanuel Niethammer in Munich, the curricula of the higher classes in the Bavarian (later German) Gymnasium, the predecessor of modern college education. The new topics and practices of education, especially of lecturing for advanced (today: graduate) students was introduced to England some 20 years after Hegel's death (namely by reducing the power of the Church of England and the 'reverends' in higher education). It has turned today into a standard in all disciplines and all over the world.

Anyway, what we today count as philosophy, in its pure and *theoretical* sense of an academic discipline, almost totally coincides with Aristotle's "*prima philosophia*", i. e. 'metaphysics, or so I claim. The topics of what we call philosophy are indeed those of traditional metaphysics – if we put the 'applications' in what Hegel calls '*Realphilosophie*' into brackets. Unfortunately, we today rather follow a proposal of Kant and view '*Practical Philosophy*' as if it were independent of 'Theoretical Philosophy' or 'metaphysics'. This and the almost infinite differentiations of special applied philosophy, from philosophy of culture via philosophy of the human body or of sports to something like neuro-philosophy, do not yield all too good results. Already Hegel ridicules a philosophy for hairdressers and science of gardening, of course without knowing ahead that after 100 years technical sciences will develop applications of the theoretical sciences virtually for all human practices and co-operations. Anyway, there is no small thing to see that metaphysics just is, at its heart, logical and conceptual analysis. This includes the insight that logic cannot be reduced to a handful of schematic rules governing the use of singular words like "and", "for all", "not" in regimented sentences about sortal domains. Modal words are not needed in mathematics. This is the reason why modal logic is a hybrid form the beginning. It formalizes operators like "it is possible" and "it is necessary" in nested constructions, in which we turn sentences into predicates defining subclasses in a presupposed set or system of 'all possible worlds', which are modelled as structured sets. However, such a 'formal' logic with or without modalities only holds in the higher arithmetic of pure set theory and thus turns logic into a sub- or better side-discipline of mathematics.

In its wider sense, however, logic should at least include the investigation of the peculiarity of the strongly regimented mathematical sentences, the all too special logical form of ideal truths expresses mathematical sentences and the formal resp. purely schematic inferences made possible in this science only by corresponding syntacto-semantic regimentations. Moreover, we need to understand the contrast to all other fields of knowledge and to all other forms of conceptual content and inferences. All this gets lost in the prejudice that 'formal logic' already were 'general logic'. For understanding Hegel, it is therefore crucial to see that and why it his basic insight and not his basic mistake to *separate* general logic from formal logic. Adolf Trendelenburg's highly influential attack on Hegel, his return to a formal understanding of syllogisms and defense of Leibniz's and Wolff's formalisms are, for example, no steps forward but a fall-back into pre-critical dogmatism and rationalism.

Until today, it is difficult to leave merely formal logic behind and understand that the topics of general logic are the *different forms of conceptual inferences* and the *different ways to use words and sentences* in *different domains* of discourse and on *different levels* of thinking. There might be, indeed, different forms of expressing contents that do not allow for a schematic deductive logic at all, be it of the limited Aristotelian form or of some post-Fregean tradition as in contemporary analytic philosophy.

In any case, Hegel does not support Kant's view of the relation of general logic and domain-specific logic. For Kant, general logic is just some formal logic which is picked up from a given tradition of teaching formal logic, be it the 'Aristotelian' tradition of formal mereological syllogisms together with its development in the famous 'logic of Port Royal' or, as today, Frege's mathematical logic.

Frege's logic fits to a mathematical language in order to make the logical form of mathematical thoughts explicit. The way Frege proceeds is well known, namely by developing a system of syntactically regimented sentences and a system of rules or schemes of deducing sentences form sentences in such a way that the deductions fit to an underlying 'semantic' but still formal system of truth-evaluation. The general fitting condition is that the deductions should be such that they lead from sentences that are formally evaluated as 'true' to 'true' sentences. We are often inclined to add that they should not lead from true premises to false conclusions. But talking about falsehood is ambivalent. It may at least sometimes too hastily presuppose that we have only two values for the sentences, the value 'true' (called by Frege "the True") and the value 'false' (resp. "the False"). These 'truth' conditions for deduction or schematic inferences are merely formal, just as the difference between a value 1 ('the true') and 0 ('the false') is only

formal. As such, they are independent from any possible non-formal meaning of the underlying evaluation of sentences ‘as true’ or ‘having the value 1’. This formal feature of deductive logic *does not* make this logic *general*. The reason for this claim, which may seem outrageous to all friends of Frege’s and post-Fregean logic, is this: The rules of deduction, for example in Frege’s predicate calculus, are reliable only as long as we move only inside a mathematical set sentences that already have the syntacto-semantic form that is necessary for applying the rules with good reason. In the same vein, the rules of formal syllogistics are reliable only as long as we move in already well-defined mereological taxonomies as envisaged by Aristotle.

Philosophers and scientist wish until today that ‘precise’ languages and ‘precise’ definitions fulfil the conditions that make it possible to calculate with the formal inference rules of Aristotelian resp. (post-)Fregean deductive logic. What is overlooked in this form of ‘argument’ is the presumption that only such a language is clear and well-understood that is already formally regimented in the corresponding way. The misleading result of this view is that, in the end, only mathematical thinking appears as logically ‘clear’ and ‘exact’. Moreover, it is not even known how ‘mathematical’, hence ‘idealistic’, already Aristotle’s taxonomical syllogistic is.

The real task of general logic is to rescue non-formal rigor of strictly scientific thinking from idealist or wishful thinking and the corresponding prejudice in the all-too general identification of rigor with exactitude, i.e. of rigorously logical thinking with merely formal calculation.

With respect to logic, Kant himself thinks quite formally and supports a kind of two-partite system. It consists of general logic which is identified with the formal logic of the given tradition on the one side, a special applied logic, Kant’s transcendental logic on the other side. Formal logic is still viewed as general logic. The specific transcendental logic, resulting from a transcendental analytic, wants to make the form of our way of *talking about real objective things* explicit as we use it in our empirical experiences in which we deal with physical objects, or rather, with ‘middle sized dry goods’, as we should say slightly ironically from the outset. For we talk about much more ‘things’ (objects, entities, topics) than merely mathematic objects like numbers and physical objects like stones, mountains and stars. We talk, for example, about qualities and relations, use mass terms like “water” or “gold” that do not behave in the same way as ‘sortal predicates’ like “even number” or “female animal” do. In the latter case, we must already presuppose a domain of individuals in which we can sort some individuals out. Of course, we do this in the case of chemical stuff also, but only with respect to different stuff or matter. Moreover, we talk generically about ‘man’ or ‘tiger’ as in geometry about ‘the circle’ and ‘the straight line’, without already talking about each singular man or individual straight lines.

This way of speaking about man in a generic sense may or may not already silently exclude females. The complicated and perhaps dangerous form of generic sentences shows up when we talk about ‘the German’ and ‘the French’. In such cases, we do not talk about each singular German or singular males, just as we do not talk about the many different, and differently well drawn, empirical realizations of circles when talking about ‘pure’ circles. Even inside ideal geometry, we distinguish between the ‘one and the many’ with respect to a geometrical forms, as Plato already had seen. And it is no small matter to understand that there is, indeed, *only one* (generic, ideal) circle or straight line *as such*, even though there are *many pure circles* (even of different sizes) and many purely straight lines (even of different directions), namely as *subforms* of a *complex* geometrical forms. The important question of ‘unity’ of an object of thought thus turns into the question of how to understand pure or generic ways of talking about them. The ancient example of geometry is crucial here. For as a form, i.e. generically, *there is only one circle,* which does not have any size; it is *size-independent*. There is only one straight line, which does not have a direction or a breadth or a position in actual space. All this sounds strange at first. But it is part of our *logic of generic talk*, which, of course, is not easy to understand and might be even extremely dangerous, as we can see, for example, when we think of uses of generic sentence about ‘the German’ or ‘the Jew’.

The point to make here is that we actually often use generic ways of speaking, without already saying something to the effect that we should do so or that we better replace generic ways of speaking by the seemingly ‘more precise’ way of talking about ‘many or all’ singular things in some sortal domain of objects. In generic talk, we do not mean all humans, only a majority of mountain lions, many numbers, or all or some points in space.

In order to understand now more clearly what metaphysics is, it might be helpful to insist, however, already now that we cannot dispense with generic ways of making thoughts and forms of inferences explicit. If we see this, we also might see that the topics of metaphysics and general logic turn out to be the same. They are altogether *conceptual*, but also already *material*, *generic*, but not only *formal* forms of inferences as they are presupposed in understanding the very contents of our own words. As such, they function as *preconditions of any articulated ‘empirical’ knowledge*, for example about the specific objects in the different sciences. A particular theme we have to address is, however, the special question why and how talking of God and the soul, of Spirit and ‘the absolute’ belongs to the very topic of general logic or general metaphysics.

2. My second main claim then is that, in his logic, Hegel connects an Aristotelian understanding of metaphysics or ‘purely theoretical philosophy’ with a radicalization of Kant’s critical episte-

mology and ontology. He does so in a stepwise analysis of categorical and material, though still conceptual, presuppositions of articulated human knowledge and sciences with their specific domains of objectives and methods.

If we look at the overall structure of these steps, we already now can say (in an extreme dense and 'speculative' way, of course) that Hegel's logical or conceptual form of metaphysics starts with the most abstract and general distinction between *being* and *not being*, as it must be founded in present *Dasein*, which, in turn, presupposes some general pre-knowledge about the basic fact that any *real thing* is *finite* in the following sense: It *changes* its *appearances* in many ways, it changes its relative *movements* with respect to other things (and ourselves) and its very *existence* is temporally finite, i.e. it has a beginning and an end. We shall see, indeed, that the recognition of, and reconciliation with, the finiteness of any real existence is not only one of the goals of Hegel's analysis but, at the same time, *an absolutely basic conceptual truism*. Without its acknowledgment, we will never develop conceptual self-consciousness or authentic understanding. One of the tasks of his philosophy is, in the end, to make this very fact explicit. Insofar, Hegel is, according to my reading, *the philosopher of finitude.* This might be astonishing for all who believe about themselves to know what Hegel's philosophy is about. But we shall see that and why or rather in which sense this is really true.

In contrast to the basic fact that any (finite and fallible) knowledge of (finite and 'inner-worldly') things always already is relational and perspectival, there is, however, also some '*absolute*', i.e. *non-relative*, knowledge, namely *practical knowledge*. Practical knowledge is, as such, a kind of *self-knowledge*. But it proves itself as knowledge not in 'saying' or 'claiming', but *in doing things*. This is, as I would propose, the deep kernel of Hegel's pragmatism. It is an analytic or logical pragmatism because it contains a kind of argumentative 'proof' that 'absolute knowledge' is 'practical knowledge' and 'practical knowledge' consists in actually performing actions on the ground of some 'rational faculty' or 'competence' that shows itself in our actual acts. I must hasten to add, however, that 'absolute' practical knowledge as *it shows up in action* does not (necessarily) involve that it already is of the form that 'I know what I do'. It is, rather, of the form that, whatever I do, I do it in some sense independently of the 'only relative' truth of what I think or believe or judge what I do.

Hegel's talk about 'the absolute' has always mystified his readers, but especially the non-readers in the self-declared 'analytical' camp of 20th century philosophy. It is a conventional tradition since G. E. Moore and Bertrand Russell to define the clarity of Anglo-American Analytic Philosophy in contrast to obscure 'Continental' philosophy and as part of a self-declared 'Anti-

Hegelian' (and, as Alberto Coffa's book nicely shows, an Anti-Kantian) movement. Unfortunately, Moore and Russell rather react on McTaggard[1] and Bradley and do not seem to know much of Hegel's writings at all, not to speak of its meaning and importance, its topics and ways of speaking. This is all the more understandable if we know how ironical Hegel's presentations can be and that no good translations have existed until quite recently. To understand figurative speech in a nonnative tongue is quite difficult, as we should never forget. British humor might seem as alien in France and vice versa as German wit and irony in an English speaking community. But even important catch-words might have different meanings than expected. It is, for example, crucial to notice from the beginning that "the absolute" refers to the identity of subject and object in practical knowledge, even if this can be 'proven' only at the end of Hegel's long and twisted argument he produces in the logic. If this result is correct, the usual idea that Hegel was heading for some 'absolute knowledge' about some 'transcendent absolute world' is utterly misleading. I claim, indeed, that it is wrong from the start; at least it does not give credit to Hegel's arguments and thoughts in the context of his considerations but just picks some sentences out of the contexts.

If we should learn anything by reading Hegel's logic then it must be this: Sentences have their meanings and truths only in specific contexts and domains of discourses with their specific topics, distinctions, inferences and argumentative needs and commitments. This does not mean that we do not understand the sentences at all if we take them out of context. But it means that we usually do not understand them well enough. Hence, the 'anti-Hegelian' argument of Russell's or Wittgenstein's 'logical atomism' which claims it impossible that knowledge of whole texts could precede the understanding of singular sentences that make up the text is by far not as well-founded as it seems to be at first sight. Just as the meanings of words depend on the use of the sentences in which they play a differential role, as Frege and Wittgenstein have seen, the meaning of many sentences is not independent of the context. We must always understand the local differential function the sentence plays, for example in contrast to its negation.

Moreover, Hegel's insight into the absoluteness of performing acts or actions must be understood as a revised version of Fichte's claim that there is a primacy of being an actor over being

[1] McTaggart disqualifies his reading of Hegel's logic, as I believe, when he writes: "It seems to me that the whole of Hegel's treatment of Measure is invalid. He has no right to the fundamental conception of Measure … till we reach Essence. … all the categories of Measure must be abandoned …" (McTaggart 1910, 50). This just means that McTaggart cannot make sense of Hegel's order of thought – just because he has his own ideas about the 'transition of categories'. In other words, McTaggart would have wished that Hegel wrote another book, one that fits McTaggart's ideas better.

a theoretical thinker and of actions over the objects of thought or theoretical, as such mainly verbal, knowledge. The performance of a role of actor in actions is always already presupposed in any actual act of knowing something theoretically, whatever the object or objective of this knowledge is, something in world, the world itself as such or I myself. This insight into the 'absoluteness' of the performing subject in contrast to the (perhaps intended) generic 'form of action' obviously corresponds in some way to the primacy of the *thinking I* and to Kant's 'principle of transcendental apperception', as we shall see more clearly below. Here, we must be content with some general hints: The peculiar status of practical knowledge, though not under the title of 'the Absolute', has been rediscovered by the Elizabeth Margaret Anscombe in continuation of the insights developed by the later Wittgenstein. It might not be without interest to see that Hegel's logic ends, indeed, in a kind of 'proof' of this *logical primacy of our performative forms of actions and practices* as they are presupposed in any allegedly true claims about the real world, referring to singular empirical objects or to generic principles or 'laws' of nature, which, in the end, turn out to be conceptual laws of thinking about nature.

All in all, this ultra-short sketch already could help us to interpret another deep and difficult notion in Hegel's logic, the 'speculative' notion "*the idea*". For it can be now also already 'seen' that this title-word labels the *constitutive forms of our practices*, including the *practices of our sciences*, as guiding principles for good human action and true human knowledge. The overarching label "the idea" corresponds, in fact, in a certain way to the parallel label "*the concept*" or "*the notion*", which refers to the system of generic, i.e. time-general, *knowledge* of material inferences that always already are *conceptually presupposed* in our *object-level understanding* of what we perceive and what we hear or read. Insofar, *the notion* is nothing else than the whole set of implicit normative criteria that are presupposed in any attempt of 'understanding' whatever is said, perceived, held true or judged as good and beautiful. Insofar, *the notion* is *the normative precondition of any possibility of proper and correct thinking and thought*.

Since thinking as an access to thought and thought as produced in thinking together mark the difference between the mode of being a human person and the mode of merely living an animal's life, *the logic of the notion* is, at the same time, an analysis of what thinking and thought is and an enterprise in 'differential anthropology' – if we understand it as a conceptual investigation of the general, or rather: generic pre-conditions of taking part in what Hegel calls "Spirit". Spirit is, then, nothing else than the we-subject in our own practice of using and developing thinking, language, understanding, knowledge, science, and all other 'institutions' that make up our joint human form of life, irrespective to ethnic and ethnological differences or peculiar cultures.

One of the deepest logical insight then is that nobody can even meaningfully say "*I*" or consider himself as a '*person*' or 'thinking subject' without reference to this generic 'we', which carries the label "Spirit". In fact, there is logically no "*I*" without a "*You*" or "*Thou*" and no '*I and You*' without a '*we*', irrespective of how different languages express these personal pronouns. More importantly, there is always a distinction between a 'distributive we' (as in: "we all learn to write" which obviously means that each of us learn to write) and a 'generic we' (as in 'we know that there is no actual god' which obviously means that some of us know this about the complicated usage of the words "god", "there is" and "actual").

To say that a logical or conceptual analysis of thinking and thought is a piece of differential anthropology now obviously refers to the difference between mere animals and humans, not to the difference between the forms of practices in different ethnic or political communities, even though such differences can come back into view when we reflect on different levels of development. Whereas *rationality* or *understanding* (*Verstand*) then consists in a proper grasp of 'the concept', i.e. in the ability to use or 'follow' pre-given norms properly, *reason* (*Vernunft*) consists in participation at our practical form of a good joint development of 'the concept', i.e. of the generic truths or laws of the sciences, or, to be more precise, of the whole system of human institutions. It is clear that and how reason presupposes rational understanding, just as technical invention presupposes some technical skill.

One important step in a reasonable development of institutions, especially in the fields of scientific knowledge and linguistic articulation, is to make implicit norms of some practice explicit. This can happen in one way or another, by mere labels or by expressly articulated rules or schemes of action. In either way, we can improve the institutional forms of cooperation immensely. Other steps can follow, for example those that reduce all kinds of generic in-consistencies, systematic misunderstandings or mistakes that can hamper already merely individual goal-orientations or 'strategic' rationality and even more so successful communication and cooperation.

If we now ask what all of these reflections on the real institutional status of knowledge, science and knowledge-backed understanding of conceptual content amounts to, we might give a short answer: Hegel develops here the one and only philosophy of freedom that does not sacrifice intelligence. Such sacrifice is still common. Its first version consists until today in subscribing to the belief that either *God* or some *overall system of natural laws* is such that all things that happen in the actual world are *pre-determined* from the very beginning. As a result, Augustinian or Calvinist *predestination* and materialist or physicalist *predetermination* are very close rela-

tives. It is not our task here to dwell on the sophisticated subtleties by which the theological believers in an all-pre-knowing God or an all-mighty system of ‘natural causes’ try to conceal the incoherence of their beliefs with the fact that we can perfectly well distinguish between a domain of ‘natural’ events that happen without any interference of human actions, including occurrences or happenings in or at our own body for which we are not responsible, on one side, free acts as more or less self-consciously controlled actualizations of possible action-schemes or generic acts on the other. To deny this difference is not so much a skeptical act against some allegedly mysterious ‘free will’ but a step back into an archaic self-misunderstanding on an arbitrary high level of scientism. The term “scientism” is used her for a deeply incoherent attitude that can be defined as ‘believing blindly in what the sciences in the canonized declarations say’. To show the incoherence of this attitude, if compared to a really scientific understanding of scientific knowledge and its logic, is the very task of Hegel’s science of logic. It is, therefore, metaphysics only as far as we can read it as an enterprise of meta-level conceptual reflection on our object-level verbal knowledge about the physical world and on our practical knowledge or competence in the physical world.

The ‘real’ opponent of Hegel’s logical analysis of what there is and what we know is neither rationalistic materialism nor theological rationalism. These positions are, in a sense, already outdated, at least for those who see the impact of Hume’s powerful empiricist attacks against any transcendent belief in divine pre-knowledge and natural causation. These attacks have, as he himself famously says, awakened Kant from his ‘dogmatic’, i.e. rationalist ‘slumber’.

Hegel’s opponent is now, in fact, Kant with his *compatibilist theory* of free action and free will. This is not to say that Hegel does not appreciate Kant’s attempt to make the idea of natural science as *the* overall criterion for what there really is coherent with the idea of free responsible action. Indeed, Kant overcomes the incoherence in Hume’s declaration that each of us ‘knows’ only as much of the world as she has experienced by her senses – just as animals do. Not only Newton’s physics, as Kant’s prototype for any decent natural science, but already any form of joint human knowledge surpasses this hidden subjectivism in the Humean idea of ‘empirical knowledge’ by far. The problem of Kant is, however, that in his account the problem of subjectivism reappears on some higher level. In short, Kant is turning the subjective idealism of Hume (which is, in fact, despite the appeal to common *sense*, a solipsism, even autism, as we see it in the behavior of all the beasts or animals) into a kind of generic inter-subjectivism, expressed by generic sentences about the form of apperception of the knowing person. In fact, the ‘transcendental *I*’ and its faculty of ‘intuition’ and ‘understanding’ must already be understood

as a *generic I* or as *generic person*. As a consequence of this reading, causality in Kant's approach appears as a *categorical 'moment'*, as we could say with Hegel, in the very *constitution of possibly objective knowledge about real things in the real world*. In order to see that Kant's transcendental *I* already is a transcendental '*We*', we do not have to go far beyond Kant. The sociality of reason and knowledge therefore is not really the issue.

Locke and Hume, not Kant, claim to know something about *how the individual subject* or his brain processes sense-data, i.e. bodily sensations, 'perceptions' and 'impressions'. Kant rather reflects, as Hegel clearly knows, generically on the way *we* refer to things in the world by talking about them.

Kant's main problem, however, remains this: He wants to make space for a kind of 'belief in freedom' by restricting the domain of validity of 'the causal law' to the realm of 'merely empirical appearances'. At the same time, he claims that we cannot know anything about how the world is *in itself* (as a holistic '*Ding an sich*'). And he uses this claim for his 'compatibilist proof' if not of the reality of free actions so at least of their possibility in his *Critique of Pure Reason*. The reality of free will and action follows, according to Kant, (only) from the necessities of practical philosophy, i.e. of moral and legal judgments. The ominous form of proof runs under the familiar quotation "thou shall, hence you can" (*du kannst, denn du sollst*).

It is now not difficult to see the intellectual sacrifice Kant expects us to commit. The very first is this: As Gerold Prauss already had noticed[2], the direction of proof should lead us from what *we can do* to what *we should do*, rather than the other way around. The leading principle is "*ultra posse nemo obligatur*", i.e. nobody is obliged to do what he cannot do. This principle marks the difference between a reasonable practice of laws, morality, and sanctions on the one side, a still 'barbaric' practice of mere 'retaliation' on the other. As long as only the 'causes' for bad consequences are eradicated or 'punished', one does not make a difference between, say, an animated or 'divine' Bosporus destroying the bridge of Xerxes, a woman who steps on the foot of the Grand King by accident, a messenger of bad news and a deliberate and free warrior fighting against his throne or person. Non-barbaric ethics and laws must distinguish these cases. This distinction must be accessible, even with some contested intermediary cases, *before* we can reasonably determine I what a person *ought* to do.

Kant does not seem to take this order of things as seriously as he should. He cannot just 'prove' the faculty of free action by a given *practice* of moral and legal law. For any such law must be

[2] Gerold Prauss, Kants Handlungstheorie.

already ‘non-barbaric’. That is, it must already be thus that *we can obey it*. Every other methodological order would be a *petitio principii*. Of course, Kant appeals to our conviction that even in a case in which a person is tortured or threatened by death if she does not commit treason with respect to her friend(s), the person is still free not to comply. But this case, though true, nevertheless begs the question. For the question does not concern our actual convictions or form of judgments. It concerns if our convictions, or differentiations, are, or are not, threatened by the ‘principle of causality’ or ‘sufficiently pre-determining causes’ which says, in short, that any event is the necessary consequence of preceding events and some causal laws. Kant certainly wants to answer this question also, namely by distinguishing between a ‘determination’ of an action (e.g. by some ‘causality of freedom’, if the action is willed) and the (alleged) ‘pre-determination’ of the happenings in and around our body while performing the action.

On Kant’s account, reason and free will belong to the ‘noumenal causes’ that determine the action. The problem is how such a merely ‘intelligible’ causality out of freedom (*Kausalität aus Freiheit*) should be *compatible* and co-exist with the further idea that any empirical event in the physical world, including the results of our bodily behavior, movements and doings, ‘could be in principle’ explained by preceding events and causal laws, if we only knew enough. If it would be true that the whole realm of appearances is pre-determined in this way, everything is pre-determined. Hence, Kant’s attempt to ‘limit knowledge in order to make space for belief (for example in free will) or ‘faith’ (for example in God) cannot work. In fact, I agree with Hegel’s irony that we should marvel at anybody who holds *compatibilist views*: he just does not realize that they are *incompatible*, or rather *incoherent*. This is the real reason why Hegel attacks any belief-and-faith-philosophy so fiercely, especially in Jacobi and in the camp of a so called ‘popular philosophy’ (*Popularphilosophie*) which was mainly Humean or empiricist, but also when it is put forward by post-Kantians like Reinhold, Fichte and their followers.

It should be obvious now that we can solve the problem of (post-)Kantian compatibilism only if we start again a thorough enough reflection on the status of causality and causal laws, on the status of scientific knowledge with respect to reality and truth, on the methodological and logical order of action and theoretical knowledge and, altogether, on the very notions of ‘being’ or ‘what there (really) is’, including the notion of possibility and necessity. In precisely this sense, philosophy is systematic or it *is* no *real* philosophy but mere – *belief*.

The importance of the consideration seems to be clear: The task is to limit the scope of science to its proper domain, to avoid ‘transcendent’ or ‘sweeping’ conclusions and beliefs about what

science allegedly teaches us and to (re-)gain self-conscious control over what can really count as a true and reliable orientation and what are mere assurances.

A most important further point is this: Even though the whole consideration seems to be obscure (Hegel himself ironically uses the word "*abstrus*" for it) it is not a question of *subtle distinctions and consequences* but of saving or vindicating *coarse and general distinctions and consequences* against all too subtle arguments. The overall logical situation is well known since antiquity: Just as there is no sharp and situation-independent borderline between what can count as yellow and green or already as a heap of beans instead of only an assembly of beans, there is no sharp and situation-independent borderline between 'mere behavior' and more or less free, responsible, and 'self-consciously controlled' action. But to conclude from this fact that there were no differences between yellow and green, heaps and non-heaps, animal behavior and human action, animal perception and human knowledge is obviously nonsense. The world is, in most respects, continuous. We have to impose on it schematic distinctions that are not just self-understood or trivial, just as, to name some analogies, mathematization and digitalization are not. These differentiations are, at bottom, qualitative, and develop into quantitative distinctions and conclusions.

To use the continuity of 'nature' as such as an argument against ('the truth of') our (always practical and somehow self-interested) differentiations, as, for example, Nietzsche famously does, is in the end as 'barbaric' or all too crude, just as to return to Xerxes and his focusing on the pleasant or unpleasant results *for him*, accompanied by a refusal to distinguish between a storm in the Bosporus, non-controllable behavior, accidental occurrences or freely responsible human actions.

3. The first Chapter explains now the relation between logic and metaphysics and argues against the confusion of critical metaphysics and metaphysical assurance. It shows that we can understand Hegel's 'gnomic' or 'oracular' texts only in view of the basic problems that are dealt with, which all relate to a controlled or self-conscious understanding of what it means to claim that something is true or to be entitled to say that one 'knows' something. A special problem is the difference between the finiteness of any actual truth-claim and the 'infinite', 'ideal' and, as such, only abstract form in which we *reflect on* the conditions of 'absolute' fulfilment and *talk about* truth and knowledge instead of claiming to have some knowledge or assert something as true. In such 'speculative' or high-level talk *about* 'absolute' fulfilment or truth we always transcend, by the very form of this reflection, the perspectival finitude of any real judgment and control. In speculative sentences we talk 'sidewise on' and 'by a view from nowhere' about our

own idea of ‘absolute’ truth. But then, we better distinguish between what we talk about here and what is really ‘absolute’, namely our actual judgments and actual actions. In order to understand all this, we need to see what it means to making performative forms of action explicit. More special problems concern the reference to the real world by intuition and by linguistic or other forms of representations and the overall plan of Hegel’s critical analysis. It starts with the wrong ideas of immediate references to real and abstract things in the logic of being, followed by a criticism of mystified essences, grounds, forces, or causes in the logic of essence(s) to the insights into the logical form of conceptual frameworks and the onto-logical structures of practices in an overall form of life, called ‘the idea’.

In the second chapter, the need of systematic thinking in philosophy is justified by the core problem of modern philosophy after the rise of the mathematically formulated natural sciences, namely how to understand the relation between freedom and determinism in a self-conscious way correctly. Like other ‘dogmatic’ philosophical ‘theories’, Kant’s compatibilism still makes intellectual sacrifices, as the following chapters will show in more detail. Hegel sees that there is no satisfying answer to the problem without a logical map that determines the real place for our knowledge about the physical world and about ourselves (i. e. the spirit of all forms of actions). Nature as an object of knowledge is developed in the natural sciences. As such, it stands in contrast to Spirit or culture as the domains of institutional forms we humans have developed and each of us has to learn to take part in some proper ways. In knowledge about nature and in knowledge about possible actions and co-operation the overall forms of knowledge transcend by far the methods of mathematical articulation as well as of ‘empirical’ (observational, experimental) proof or disproof. This is so because of the limited conceptual generality and because of the material presuppositions in the very concepts we use in empirical cognition of this and that, here and there. This observation leads to the task of reflecting on the very status of generic forms of conceptual differentiations and the attached default inferences in a logical order and methodological order of scientific knowledge and the corresponding conceptual framework.

In a sense, Hegel supports Fichte’ radically pragmatic philosophy of freedom, but without buying his preachy dogmatism which remains, in the end belief-philosophy or ‘*Weltanschauungs-philosophie*’, just as (Schopenhauer’s) Humeanism and related forms of a new ‘empiricism’ and ‘metaphysics’ in contemporary analytical philosophy. To change this impasse, we need, as the third chapter shows, a kind of meta-critical development of Kant’s critical philosophy and of his transcendental logic. The central point is not, as it is often believed, the insight that conceptual

frameworks change in time, but that science itself is nothing but a collective work on ‘the concept’. In the sciences, we – more or less consciously – develop our conceptual frameworks for understanding the words we use in further communicative acts and cooperative practices. This includes any act and practice of understanding ourselves. Such a scientific development of ‘the notion’ or work on ‘the concept’ is reasonable only if it has a certain form, namely when it improves our intellectual and practical competence on the individual level of instrumental thinking as well as on the collective level of communication and cooperation. Merely singular empirical knowledge or merely historical narratives are never good enough reasons, especially because empirical knowledge implicitly presupposes all kinds of conceptual pre-knowledge. The dangers of logical incoherence in empiricism are therefore to be compared with sawing on the stem or tree on which we and our understanding sit.

In the fourth chapter, we come back to Kant’s idea to distinguish the two ‘moments’ of perceptual intuition and conceptual understanding as foundations of objective knowledge. Beyond the development of terminology, the ambivalence of spontaneity is an issue, followed by the important transcendental principle of apperception, i.e. the logical status of the ‘I think’ which must possibly accompany any representation and the concept of pure forms.

In chapter five, Hegel’s logic is presented as a critical theory of meaning which does not explain in details the techniques of conceptual understanding – something we might expect from a ‘grammatical’ theory of linguistic semantics. Hegel develops a methodological order of general principles and ‘moments’ in our conceptual reference to the real world and our judgments about possibilities in the real world. A first step consists in a critique of any ‘Platonist’ misunderstanding of abstract objects. Abstract or ideal ‘entities’ we refer to in pure thinking are defined by equivalence relation between representations. Representations are not just happening or occurrences, but always also something we can do and produce, if only in symbolic ways, in language and cartoons, diagrams and other images. Without a phenomenological analysis of the practices of representing and judging about what can count in a context as equivalent we just do not understand meanings at all. This holds not only for the logico-linguistic or techno-conceptual constitution of abstract, pure, ideal or mathematical ways of talking or writing.

The real place of such pure ‘objects’ are speculative reflections on semantic or theoretical forms in the process of making generic forms explicit which we use in empirical or object-level judgments and inference. In all cases in which understanding is not just applying schematic schemes or ‘calculations’ of some sort, we need ‘charity’ and ‘trust’ as the main two ethical

conditions of communication, cooperation, and interpretation. Charity and trust are, so to speak, ethical presuppositions for any good understanding and judgment as readers or hearers.

In chapter six, the topic is the peculiar role of logical thinking about concepts, as they are used in empirical statements. It demands that it takes place, so to speak, on a meta-meta-level of reflecting on contents and concepts, the level of 'speculative' thinking, as Hegel calls it. The corresponding speculative sentences have a peculiar form, which can be tentatively characterized as aphoristic or oracular syntacto-semantic metaphors. For example, the expression "contextual holism" characterizes Hegel's insight that we can understand sentences (as linguistic forms, with which we can articulate different propositions) only in silent relation to relevant contexts, never context-free. This middle range 'contextualism' denies all versions of logical atomism (Bertrand Russell) as well as sweeping holism (Jacques Derrida). But it entails the insight that names and predicates have their meaning only in the context of corresponding sentences, as Frege and Wittgenstein later also see. Moreover, the 'natures' or 'essences' by which we explain appearances are, in fact, posited by us as 'best scientific explanations' available. As the 'subjective' logic of the notion shows, the corresponding theories play the role of frameworks for any conceptual inference and content understanding.

The seventh chapter analyzes different forms of generic truths that support non-monotonic default norms or rules of inference. Such inferences are 'intensional' insofar as they do not only depend on classifications corresponding to conceptual differentiations but also on the articulated paradigm cases or generic types that function as 'essential semantic forms'. Communicating empirical information presupposes, in addition, a kind of dialogical semantics according to which a speaker must give notice of relevant differences from the default standards of the concrete case(s) she talks about. Already according to Kant, possibility or necessity cannot be understood via talking about mystical possible worlds. We rather have to look at modal speech acts and their evaluations. The same holds for causal explanations. Causes are the accepted contents of causal explanations and nothing else. As a result, the reality of causes, contrasted to the merely actuality of the explained phenomena or empirical appearances, must be understood as objects of thought, constituted by the spirit of science, and not just as immediate objects of sensation, as empiricism thoughtlessly claims.

This leads us, in the eighth chapter, back to Hegel's analysis of reality as a modal notion and the narrow relations between the logical form of a speech act in which we evaluate an explanation as reasonable and a speech act in which we declare something about real causes. Any talk about reality on the object level is already constituted on the ground of reflective evaluation of

causal claims and does not immediately correspond to a concept- and judgment-free ‘objective’ world in itself. Objectivity is evaluated inter-subjectivity. Kant’s insights into the conceptual as the formative form and structure of the subject therefore must be the result of an argument and cannot remain an assurance as in Kant’s very beginning of his transcendental ‘analytic’ which is, as such, no ‘analysis’ at all but a synthetic construction that already presupposes the most crucial claims, namely that the basic forms of the world, its spatial, temporal, and ‘causal’ structure, are forms of our subjective intuition and understanding. Hegel shows that there is no knowledge about structural forms of the real world and there is no reference to any possibility or necessity, to grounds or causal forces if not via our own conceptual framework. That is, without some sacrifice of our intellect we cannot coherently understand claims or arguments that presuppose any ‘immediate’ reference to the world or to a system of possible worlds as if there existence was ‘given’ independently of their conceptual determinations. In other words, talking about the ‘reality’ of actual facts or even of dispositions and causal forces never can abstract totally from the ‘expressivist’ reading of such modalities, despite the fact that we in fact are all ‘modal realists’ in the sense that we distinguish between what we as an arbitrary group of person judge as possible and real and what *is* possible and real independently of ‘our’ judgments – this “our” referring again to a limited we-group. However, to say that p *is* real or that q *really is* possible is still the same as saying that *we*, taken generically, *should* take p as real or really possible.

The last, ninth, chapter looks back to the logic of being and Hegel’s critical analysis of mathematical entities and structural propositions. This reconstruction is crucial insofar as it proves that Hegel had a deep understanding of what it means to constitute abstract objects or theoretical entities by logico-linguistic techniques of abstraction and ideation. In order to hold the threshold of formality in the main consideration as low as possible in order to make it possible to follow the main arguments without all too deep mathematical pre-knowledge, I have put these considerations in a kind of appendix that gives a short introduction into Hegel’s philosophy of mathematics and formal abstraction. One most important result of this analysis is that any belief in ‘infinitesimal forces’ is just misreading our mathematical techniques of representing accelerated movements by curves and functions and to use calculus for characterizing the curves or functions locally (in differentiations) and globally (in integrals) in an ontic, mystifying, and transcendent way. Without a proper philosophy of mathematics there is no enlightenment that could lead us from scientism with its almost religious, in the end however only still Pythagorean or Platonist, belief in an alleged overwhelming power of mathematical knowledge to a more pragmatic and all in all immanent and finite understanding of what we do when we use mathematical

theories by expressing generic knowledge. What are the limits of formalizations? What does it mean to think rigorously scientific? And why are only formally exact deduction not enough? The point is that they always start with belief-philosophical axioms. Even if there are assurances of their alleged ‘pragmatic utility’, these assertions frequently are not rigorously enough controlled. On the other hand, Hegel does not think that a mathematician who believes in Platonism makes, with necessity, a *mathematical* mistake.

Just as the Christian believer does not make a *religious* mistake in his worship of God and his liturgical celebrations, the physicist does not make a mistake *as a physicist* when he believes in the reality of all his stuff and matter, particles and forces, expressed by mathematical functions in some theoretical framework. In all these cases, at least more often than not, the problem of the ‘realist’ attitude of believers is *not her practice* but *what she says about it*. This is the reason why critical philosophy can and must, at least in wide respects, leave the practice it analyzes intact. Insofar, philosophy leaves the world as it is, as Ludwig Wittgenstein famously has said, and is ‘quietist’ about ‘revolutions’. It might, therefore, be of some interest to see that Marx’ criticism of philosophy that it only ‘interprets’ the world and does not change it characterizes Hegel’s own version of quietism fairly correctly. To preach revolutions is not the task of philosophy. People are willing to revolutionize their institutions all too willingly. All this can also throw some bright light on John McDowell’s Wittgensteinian quietism. For it is part of the method of understanding a practice not to jump all too fast into proposals of reformations and revolutions but first try to understand and ‘supersede’ or ‘sublate’ prima facie criticisms by ‘saving’ well-functioning practices as long as they are functioning. Hegel’s notorious appeal to ‘reconciliation’ between the philosophical critic and the scientific or religious believer has precisely this meaning: The problem is most often not the practice and the practical content of the belief, but a lack of self-consciousness, if the belief is still all too naïve.

CHAPTER 1: CRITICAL METAPHYSICS VS. METAPHYSICAL BELIEF-PHILOSOPHY

1.1 PROBLEMS OF PHILOSOPHICAL INTERPRETATION

After my beginning in the introduction with the main results of the whole argumentative journey on which Hegel leads us in his Science of Logic, we better take some time to reflect on how to read his difficult texts. Immediate or 'philological' interpretations of philosophical texts frequently underestimate how much pre-knowledge is required in order to dive, so to speak, into the systematic topics and arguments, just as one had, according to Socrates, to dive for the pearls in Heraclitus' aphorism. The problem already appears when we think, for example, of how to understand the advice of the god of Delphi 'to know oneself' and the way Socrates tried to follow it by his basic insight, that nobody can know anything just from his subjective perspective. At the same time, there is no divine perspective of an all-knowing God. There is no view of the world *sub specie aeternitatis* at all – if not in the difficult mode of dialectical negative philosophy.

Knowing oneself does not consist in (subjective) introspective or 'intuitive' reflections but, rather, in questioning the *general forms* and *ideas* of given practices and their usual explications. Accordingly, already Plato and Aristotle widen the focus from (informal) *individual ethics*, the topic of Socrates, to a good understanding and reasonable joint development of *human institutions* and the corresponding forms of practice and action. Special interest is given to a (new) foundation of the institution of science named 'philosophy'. It is understood as a system of disciplines as mathematics (mainly geometry), music (together with the notations of tones and harmonies), writing and speaking (grammar, formal semantics or 'logic and dialectics', style and rhetoric), Plato's newly founded political science and ethical psychology, Aristotle's zoology and the biology of Theophrastos, just to name the most important examples of beginning science. In his political science, Plato tries to make the constitutional forms of a well-established republic explicit. In the biological sciences, Aristotle and Theophrastos write about the forms of life of animals and plants fitting to a taxonomical classification into species and families, as it later was developed by Linné in our times. In these newly developed approaches, Plato and Aristotle go far beyond early Pythagorean mathematics and Eleatic or Megarian logics. And they reflect on the very form of such a science as '*theoria*': Its task is always to make the most relevant general *forms* or generic *structures* explicit, not just to produce merely *empirical* narratives about singular things and merely contingent events as in a '*historia*' or 'empeiria'. In other words, empirical knowing or cognition is indexical, subjective, perspectival, anecdotic, in contrast to generic

knowledge. As a result, it is slightly misleading if we call the generic or eidetic ‘descriptions’ of typical life forms of a species in biology “natural history”, as Michael Thompson does, because this form of taxonomical and ethological science is already really science and theoria, even a conceptually foundational one, and not just ‘historia’. It is, therefore, rather a sign of conceptual confusion if modern post-Darwinisms or evolutionary and genetic biology views taxonomies and ethological descriptions of typical behavior as a kind of pre-science. What is true is this: Modern evolutionary biology and genetics are biological sciences or theories on a logically higher level than ethological taxonomy. For they *presuppose* taxonomical pre-knowledge without which our evolutional narratives of the phylo-genesis of present day species (as they are mostly dying out because of losing their habitat to human expansion) and other species (that already have died out) cannot be conceptually understood.[3]

Ironically, evolutionary theory is in much closer sense merely ‘natural history’ than ethological taxonomy, which is a science that relies on present day observation. Therefore, ethological taxonomy produces in a more fundamental sense a ‘scientific theoria’ than our reconstructions of the historical genesis of species, just as terrestrial experimental and observational physics produces, after all, still more fundamental theories than the astronomical histories about the genesis of the universe.

But coming back to Plato, his main topic is, indeed, the ‘idea’ of a republic, i.e. the form of a good constitution of a political society of burghers or persons, which includes the question of how to educate the ‘*souls*’ of the persons, i.e. to form *the character* of a good citizen. The main topic of Aristotle is the *normal and good life* of *animals*. His friend and successor, Theophrastos, then develops an ethological taxonomy of *plants.* But notice that *all three* philosophers are also already concerned with the *differential form* of *being a human person* whose life has to be understood *in its basic difference* to *merely animal life* and of animal life in comparison to ‘lower’ life-forms.

We now can make a big leap to the end of Hegel’s science of logic and say that any scientific or theoretical knowledge tries to make a central idea *(Idee)* explicit. But then we must understand this word “idea” in the peculiar Hegelian sense. Such *an idea* is, as I would like to put it, a *performative form of being*. It is the life-form of animals or plants if our topic is the form of life of animals or plants. When we return our interest to us humans, *the idea* is*,* accordingly, *our* performative form of being, namely human life. The crucial insight is that we (can) make an idea or the idea explicit (only) by turning it into an *object* of reflection. Such a reflection is called

[3] Michael Thompson, Forms of life

‘speculative’ when it is of some very high level, talking about a totality of things, including the forms of reflection on concepts and even the very notion of reflection itself. In any such reflection, we use ‘generic descriptions’, which, in turn, are in the end the same as a conceptual articulation of a performative form of being *in its genericity* or ‘as such’, at least if we succeed in our attempt of making things explicit. But saying this is, again, looking back on Hegel’s text from the end of his analysis.

We have, as we hopefully can see now, to cope with three problems, which are, in fact, Hegel’s own. The first is the problem of *ordering* and *beginning* the argumentative journey of Hegel’s logic; the second has to do with a proper understanding of the ‘*speculative sentences*’ that constitute the argumentative line of thought, together with the ‘*categorical labels*’ that work as sign posts; a third refers to *dialectics* as a *method of analysis* in relation to *formal logics* and its *synthetic method* of formal definitions and deductive inferences.

In order to appreciate the first point, we have to understand that and why Hegel cannot start with any of the ‘results’ named above. He cannot do so because he wants *to show us* that there is no other alternative to understanding the objects of the sciences, the truth of scientific explanations and the reality expressed by scientific laws or scientific explanations. Hegel’s whole ‘system’ is nothing but *an attempt to avoid any mere assurance* as we find it in mere doctrines as they are taught in schools and universities of applied sciences to apprentices and future experts. Dogmatic belief-philosophy and naïve readings of what the sciences allegedly know about what is really true is, in this sense, only for ‘case workers’ and not for ‘architects’, only for schematized understanding (*Verstand*) as the competence of rule-following (Kant, Wittgenstein) not for autonomous reason (*Vernunft*) of developing new rules by some criticism of following given norm blindly. The same holds for the hearsay on how one usually distinguishes ‘really scientific’ knowledge from what allegedly only ‘appears or seems to be real or true’. If we understand the problem of this distinction we see why and how Hegel’s critical journey in the science of logic begins with a criticism of any naïve ‘idea’ or ‘belief theory’ of being and truth as in so-called correspondence theories or some assurances of the positive sciences as the measure of all real truth and real existence which assert, just as theological sciences before modernity, to know something about some underlying reality – which the normal person allegedly does not know.

Hegel’s radical criticism of all belief philosophy and, at the same time, of a naïve ‘*scientia mensura*’ thesis (including a Sellarsian assurance that the natural sciences allegedly are the measure of all things, that they are and that they are not) leads us, first, to a criticism of any

version of so called Platonism or overrating mathematical forms of knowledge, proof, and argument. It is followed by a reflection on the very constitution of abstract objects and theoretical entities in his '*logic of being*' to a '*logic of essence*'. There we find a reflection on generic 'natures' of things by which we explain singular appearances and empirical experiences. The final insight of the '*logic of the notion*' is, then, that the very concept of an essence or a real reality that explains an appearance must already have a *conceptual constitution*.

As a result of the whole argument, Fichte's claim of the primacy of (scientific) practice does not remain a mere assurance or belief. It is vindicated *without reasonable alternative* in the following sense. Whoever still believes that natural science is the measure of all things (if they exist or do not exist, as Brandom also says), commits the same sacrifice of his intellect as those who still believe that a real ontic God has created the world and is the master of truth, beauty and the good. Believing in the sciences is as good, or rather as bad, as believing the declarations and doctrines of canonized theology. This is so because the scientific attitude of self-conscious knowledge does not have the form of a belief. And it is so because no particular form of knowledge like, for example, physical mechanics, can boast to have found the stone of wisdom for explaining causally all events or movements of things, including the coming into being and perishing of all things and beings, matters and processes in the world. As a result, the connotations of the word "science" in the English language already betray ideologically the idea of *scientia*, *Wissenschaft*, which always needs the self-consciousness of *Geisteswissenschaft* as the knowledge about the history of scientific institutions and of philosophy as the practice of making their real forms, leading ideas and corresponding limitations explicit. Science without philosophy is *Pythagoreanism*, which Hegel nicely calls the *childhood of philosophy* in the sense of scientific self-consciousness.

With respect to the so called 'speculative sentences' in Hegel's high-level ,meta-logic, as for example "*the truth of mechanism is teleology*", it is crucial to see that they are, in a sense, formally similar to *oracles*, to *Heraclitean riddles*. Like for laconic aphorisms, we have to find the right context in order to understand them properly. If we change the context, the negation of such an oracle can also turn out to be (somehow) 'true'. This very fact explains, why Hegel can say, for example, that *freedom is the truth of necessity* and, on the other hand, that *freedom is 'inner' necessity.* The first sentence means that any proposition or rule that we evaluate as necessary counts as *necessary only by mediation of our free evaluation.* If we read the second oracle in the right way, is says: Freedom of action always already is a consequence of some

'inner' necessity, namely of rational thinking – which is just opposite to 'arbitrary' and, as such, 'merely contingent' *free choice*.

This leads us to a more reasonable reading of Hegel's ominous dialectics as most of his friends and foes seem to propose. Dialectics is, altogether, the art or technique of dealing with seeming and real conceptual inconsistency and incoherence in the right way. Hegel does not, as is frequently believed, 'accept' incoherence without further ado. But he denies any *a priori assumption* that says something like the following: Our conceptual system is already in such a good shape as to exclude all possible inconsistencies, any inferential dead end ('*aporia*'), misunderstanding or systematic mistake. In his opposition against a naïve, 'Platonist', belief in a pre-established heaven of divine ideas or ideal concepts that already are freed of any possible incoherence and inconsistency, Hegel does not deny that, ideally, we hope and strive for consistency and coherence. On the contrary. But we have to admit that *any* real system of conceptual norms and material inferences that govern our real understanding of things in the world outside pure mathematics is and always will be finite and limited.

A first result of this 'realist' and 'pragmatist' recognition of finiteness in our very practice of using language and concepts (taken as meaningful words, sentences, images or just distinctions) is Hegel's further acceptance of the fact that there always remain many 'possibilities' of real incoherence that necessarily have to be removed if we want to make progress in our joint understanding. We remove them, hopefully, by jointly developing our system(s) of generic, canonical, knowledge – and its concepts, consisting of conditions of proper differentiations and theoretically articulated forms of conditioned inferences defining the dispositions we attribute to typical things and processes. No empiricist (Humean, Carnapian) and no naturalist or physicalist (Lockean, Quinean) theory of language ever has understood and ever can understand the notion of dispositions and possibility sufficiently. This claim expresses, of course, only my conviction that those who nevertheless believe that there are such theories are in an admirable way just happy with the explanations they accept – and therefore most probably will not joint my proposal to think first about the fulfilment conditions of an account of dispositions and possibilities, with which we can or should be content.

A second result of Hegel's insight into the fact that there is no pre-established harmony or consistency in our real system of conceptual differentiations and inferential default expectations is this: Finding out about such inconsistencies, about incoherent inferences, systematic misunderstandings and generic falsities is the *very motor of making progress* in our development of scientific knowledge or, what amounts to the same, our conceptual development of

language, Hegel's *Arbeit am Begriff*. Scientific progress is not just quantitative. It is a development of our conceptual system of making generic distinctions and corresponding default inferences explicit in a way such that we can learn them easily by heart or can use recursive schemes of expressions and calculations.

Contradictions always show that we have something to do in order to solve a problem in our verbal or diagrammatical (iconic, model-theoretic) teaching of generic knowledge. We have to 'supersede' or 'sublate' the contradictions either by new, more adequate but still generic conceptual distinctions or by new theoretical frameworks that solve the newly found problems without destroying older achievements. Newton's mechanics has, for example, arrived at a decent model theory for explaining ballistic movements on earth and in the skies on the ground of Kepler's diligent modelling of Tycho de Brahe's data, Galilei's theory of accelerations of falling bodies and the basic notion of mass (defining corresponding forces). The theory is immensely better than Aristotle's explanation of falling bodies or Eudoxos' or Ptolemaios' theory of planetary movements.

Dialectical 'sublation' in its easiest form is, since Plato and Aristotle, an absolutely well-known method of logical analysis and theory formation. It starts as a method of disambiguating words and other expressions by making finer conceptual distinctions somehow explicit in such a way that the new generic distinctions fit better to a set of generic inferences that are attached to the conceptual articulation of the distinction. And it ends in theory change. Such changes are virtually never really revolutions as Thomas Kuhn and his followers love to dramatize the rather harmless changes that lead from Newtonian to Einsteinian models of space and time on the ground of some deeper philosophical reflections on the notion of time and simultaneity and the Lorentz-transformations in the electrodynamics of moved bodies.

A third point is already addressed by Socrates in his critique of formal sophistry as the most dangerous form of corrupted science. Plato sees, accordingly, that we never should blindly use the rules of any system of formal logic without checking if the conditions of their sound application are (sufficiently) fullfilled. To do so requires more meta-logicals knowledge than any eristic sophist has. Such a sophist is a logician who does not know or care about free dialectical judgments about the applicability of merely formal logical schemes. Such schemes hold, in the end, only for pure ideas and ideals. To know and appreciate this is the hidden truth of any decent 'idealism' which should never be confused with the George Berkeley's empiricist claim that the only things that can be said to really or actually exist are those entities that are more or less immediate 'objects' of perception.

If and how far Hume's skepticism, Kant's 'transcendental idealism', and finally Fichte's and Schelling's later so called 'German' idealism are distinct from Berkeley's empiricism is still a topic to be discussed in more detail – together with the question what Hegel wants to subscribe to when he talks of "absolute idealism" in characterizing his own position. Only one precautious hint should be allowed already now. Hegel most probably wants to say that in any knowledge claim we presuppose '*the notion*' in the sense of *the contemporary system* of *the best available generic scientific knowledge* as defining *the content of our words and sentences* by *the material conceptual inferences* corresponding to proper differentiations. Moreover, we presuppose '*the idea*' or '*Spirit*', which is nothing else than the *implicit life form of being a human person.* It is this idea that can be identified with the very *faculty of making rational and reasonable judgments*. In performing this faculty (more or less correctly), any person 'takes part' in 'the idea'. In additional reflective acts, the person identifies herself explicitly with the human life form or Spirit. In doing so, she takes part in a practice of 'absolute Spirit'. The celebration of Spirit as the form of sapience that turns us humans into persons is part of the performing practices of religion, art and philosophy.

Now we can, and must, also already say something about the difference between ideas in Hegel's sense of the word, which fits to Plato's "*idea (to agathou)*", the English word "idea" in the sense of "mental representation", fitting more or less to the German word "*Vorstellung*", and the talk about 'ideals' or 'ideal principles'. Whereas the English translation of the Platonic word "*eidos*" by '(conceptual or structural) *form*' can be very helpful indeed, we still need a distinction between being a form of meta-level talk and being a form-in-use. The latter is a 'performative form' or '*Vollzugsform*' as I would like to say. If a form is already an 'inner form', we may call it "content" or "meaning" or "concept". In a high-level (meta-level) context of *reflecting on* meanings, contents or concepts they appear as 'objects' of 'speculative' talk and are, as such, objects of semantic, conceptual or structural reflection. Their 'real' existence, however, are the forms and norms that actively govern the performances of our actions in practices. Hence, Hegel's 'idea' as the system of performative practices is the real mode of being of forms and norms. All such forms and norms can nevertheless turn into objects of (self-)reflection, from syntactical or other 'outer' forms via meanings and contents as 'inner' forms to all sorts of formed institutions. The difficult thing here is that human forms always are reflected, i. e. they are performative forms that are already topics of talking about forms, subject-objects like the form of being a person and talking about myself as a person. In fact, the very word *I* signals in my speech acts about myself that I am a personals subject reflecting on myself as such a subject.

In a sense, Heidegger's famous talk about the ontological difference between being taken as an *object* of thinking or perception (German: *Seiendes*, Greek: *to on*) and being taken as a *performative process* or *practice* (German: *Sein*, Greek: *einai*) is a kind of re-invention or re-cognition of Hegel's distinction between '*the notion*' and '*the idea*'. The notion is the domain of concepts as objects of reflection. The idea is the whole of *performative conceptual forms* as they (hopefully) show up in our personal life. This life is informed by generic knowledge, which is in part, since some 2000 years, developed in certain particular forms of practices called "science" and "philosophy", "theoria" and "episteme".

"Spirit" is just an alternative title for 'the generic we' at which we take part when we 'think', i.e. speak, judge resp. infer judgments in rational understanding or more or less reasonable proposals. In this sense, Spirit (*Geist*), or its form, The Idea (*die Idee*), are, as such, not (just) *objects* of reflection' but (if you wish: hidden) *subjects* in any of our individual thoughts, judgments and conclusions. Whoever says that language speaks through us (Heidegger), or that, with respect to the content of a sentence p, not I say that p but "p" says that p (Wittgenstein) expresses essentially the same insight.

It is now only a short step to see in which sense Hegel interprets religious talk about God as a still metaphorical way of reflecting on Spirit as the performative form of practice – which makes us into thinking persons if we take proper part in it, that is, if we let 'Notion' and good judgment reign over our individual actions and collective practices. Praying to God or praising God now turns out as a practical attitude of humility and thankfulness, perhaps accompanied by joy and bliss, with respect to the very basic and 'absolute' fact that we exist as human beings or thinking persons. This radical secularization of the very concept of God and the Soul is one of the many agendas in Hegel's logic, which explains why God is a recurrent theme in his texts.

In contradistinction to The Idea as a whole of performative forms, an *ideal* is a specific means of articulating generic orientations. Ideals cannot and must not be used directly as criteria or fulfilment conditions for actual things or actions in the real world. Hence, ideal knowledge is, by definition, utopian and inaccessible. Actual knowledge is always finite, limited, fallible. It is nevertheless often good enough for the corresponding individual or joint purposes. Any use of any ideal theory or sentence, structure or image needs non-schematic experienced judgment (*sophrosyne* and *phronesis*) as Plato and Aristotle already know. This is the practical faculty of *'projecting' ideal forms onto the real world*, for example when we say that particular cases can count as paradigms for the application of 'ideal forms'. This application is also called 'parti-

cipation (in form).' The corresponding Platonic words are "*metalambanein*" and "*metechein*", resp. "*methexis*".

In order to articulate the form of judgments about form-participation and other forms in our practices or institutions, including our ideal and generic way of talking about them, we obviously have to overcome some deep logical problems. Understandings and reconstructions the principled insights of philosophical protagonists like, for example, Heraclitus, Parmenides, and Plato, or Kant, Fichte, and Heidegger presuppose knowledge about these problems. Unfortunately, the usual 'common sense' reception of these philosophers more often than not turns their logical insights into the opposite of what they really are by assuming that they talk about mystical objects or subjects and attributing transcendent properties to them. Instead, we have to understand speculative sentences as expressing performative forms of action and life, of being, not of entities. One of the main reasons for the usual misunderstanding is the naïve idea that all meaningful sentences must tell us something about some or many or all empirical objects, as if all statements were narrative, object-level claims, about the world of things and events, facts and properties. But generic sentences express conceptual default norms in a rule-like way and do not claim that something were true for any singular individual object as member of a genus or species, a class or set of things. Examples are: ice melts at 0 degree Celsius and water boils at 100^0C 'under normal conditions' i. e. ceteris paribus. Speculative sentences, instead express meta-level reflections on our conceptual and perceptual access to the real world or even as meta-meta-level or 'speculative' reflections on the very constitution of 'the concept' as a system of meanings and 'the idea' as a system of practices.

1.2 THE QUESTIONS OF METAPHYSICS

Like Kant, Hegel does not just criticize the empiricist tradition but dwells on it. Kant's transcendental analysis somehow wavers between a merely subjective reflection on what I can know and how to express presupposed criteria of truth and knowledge. Hegel sees much more clearly tha Kant the cooperative feature of knowledge, content, thought, and language as the source of normative truth and validity: Science and knowledge must be always understood as (the result of) joint investigative work. Traditional epistemology focuses much too much on the Cartesian quest for subjective certainty. Instead, we should ask: *What is it* to *properly participate* in a *joint practice of joint knowledge*? And how should we understand the tensions and relations between our own ideals of perfect knowledge and our real knowledge? These questions are not just epistemic, but *onto-logical*, if you wish to use this word, but hopefully hyphenated, namely in the double sense of giving an account of what it means *to attribute being or reality* to an object of

thought, which might be a whole system of thoughts or propositions, and what it means *to be* in the first place.

In contradistinction to what empiricist minded authors like Hobbes, Hume, or Russell think and say, belief and propose to burn in an autodafé, metaphysics, properly understood, now reappears as *critical analysis of what there is*. As such, it contains reflections on the meaning of "being" and "truth", on the formal and practical constitution and the pragmatic significance of the distinction between being and non-being, truth and falsity, and on the notion of self and self-knowledge. Ironically, the very *avoidance* of such a critical metaphysics leads to dogmatic metaphysics, which I prefer to call here a mere *belief-philosophy* on ontological matters.

Belief philosophy starts, uncritically, with merely axiomatic intuitions, assumptions, contentions, or (self-)assurances. This is the very reason why Hegel says that a human world without critical metaphysics is a deplorable state of affairs. By this, he does not deplore that people have lost their religious or otherwise metaphysical faith. The problem is, on the contrary, their lack of explicit reflection on the very concepts of being and truth, rationality and reason, self-consciousness and spirit. The problem is that people use all these terms in a fairly naïve way – or, if they do not use them at all, they already have stopped to strive for knowledge about themselves. This holds for traditional systems of beliefs governed by positive religions through their few books and many preachers as well as for political correct public opinions in a secular society or for any belief-science. The deepest problem is, in fact, scientism. Scientism is the blind belief in the sciences. As such, it obviously contains an inner contradiction, a *contradictio in adiecto*. It is a speculative doctrine that turns the results of the sciences into mere belief-philosophy or, as we could also say, into an 'ideology' in the sense of German '*Weltanschauung*' – such that 'scientism' coincides with '*wissenschaftliche Weltanschauung*', for example the scientific ideology of the Vienna Circle or, much worse, the pseudo-scientific doctrines of biologist racism.

In consequence, one of the tasks of critical metaphysics is making the different conditions for existence and identity of objects in different domains of discourse and the different criteria for the validity or 'truth' of corresponding assertions explicit. Any knowledge claim has such logical preconditions. Dogmatic contentions or 'metaphysical' beliefs always somehow forget (to reflect upon) these presuppositions – which results in a lack of clear understanding of the very content of the beliefs, the very meaning of holding something true. One sign for this lack are unclear criteria of truth and knowledge, another insufficient control of their fulfilment.

In the following, I try to say something about Hegel's first logical turn of the metaphysical question *what there is* into *what "being" means*. His turn is a return from the concept of what something is to an 'absolute' understanding of being in life practices and its performative forms. In showing this, I try to sketch the main argumentative structure of Hegel's *Science of Logic*.

1.3 MAKING FORMS OF INTUITION AND UNDERSTANDING EXPLICIT

It may be helpful to begin with Kant's distinction between a sensible world of appearances (*mundus sensibilis*) and a world of things of mere thought (*mundus intelligibilis*). Kant's claim or basic assurance is a result of his agreement with David Hume: The only things that 'really exist' are things that can be experienced, that is, objects in the sensible world. To this world of appearances we have access by *Intuition*, which I already take (perhaps too charitably) to be something like *joint observation* of present things including present movements of things, present changes of gestalts and colours and so on. The consequence of such a robust reading of intuition as referring to present objects by making use of our senses in a systematic change of perspective on the same thing by working with suitable equivalence relations (practically) is this: One of the two main differences between Kant and the empiricists consists in Kant's distinction between (animal) sensation as a merely subjective motive for (animal) behavior or self-movement, as described in Alva Noë's notion of an 'enactive perception' and jointly formed (human) intuition. The latter already is an action that must be understood as part of a joint human practice which consists in a spatial ordering of things that results, in the end, in only 'one' space, and only one time-ordering of movements, one time.

Unfortunately, Kant uses in his analysis the linguistic form of talking about a generic *I* or *transcendental subject* when he tries to make these forms of actions that constitute the unity of 'our' space and time explicit. Therefore, he does not have the verbal resources to explicate on the meta-level the changes of perspective involved in all cases in which I refer to the same thing from my point of perception as you do from yours and someone else from his point of view – as we need it when we produce the unity of reference, the unity of space and the unity of time, or rather, the unity of space-time and matter as structural moments of the one and only real physical world.

On the object level, the linguistic practice of naming or describing objects of reference 'conceptually' are means to secure perspective-invariant reference. In present intuition, names and words, though helpful, may not always be necessary. The thing itself is present, and such presence is Hegel's domain of *Dasein*, of being there. But we need words or similar symbolic representations, Hegel's *Vorstellungen*, when we want to refer to non-present things.

Furthermore, we should limit our notion of the conceptual at least in a strict reading of Kant to verbalized concepts and not try to include merely practical or behavioral inferences into the notion of the ‘conceptual’ as it is usually done, with the result that the forms of intuition must already be called “conceptual” and Kant’s attempt to separate the moment of intuition from the moment of understanding must fail. But Kant is right to distinguish between the forms and norms constituting our practice of present reference to present object (with or without object description) from our practice to produce ‘spontaneously’, i.e. at will, linguistic representations of (possible) objects. Unfortunately, Kant uses ‘material’ language when he analyzes ‘thinking’ and ‘thought’. However, his title ‘synthetic unity of apperception’ just refers to the unifying act of identifying an object of intuition in a perception of an actual thing with thinking or describing the same thing. Hence, we can read apperception as shorthand for ‘apperceptive intuition’ and such an act we refer to the same present object by intuition and by thinking or describing it.

In a next step, Kant focuses on the function of pure geometry resp. pure arithmetic. He makes their role tentatively explicit by saying that in geometry we represent the overall form or structure of outer, i.e. spatial, intuition. In arithmetic we represent the form of ‘inner’ intuition as it appears when we *count* a sequence of different events. Think, for example, of the time-beats like those of our heart or of clock. In counting, we always compare such sequences with our own production of a sequence of number terms. Pure intuition is the form of intuition used when doing mathematics by dealing with geometrical drawings of lines or diagrams, with sequences of numerals or arithmetical equations and using a regimented language in talking about geometric forms or about pure natural, rational and real numbers as proportional forms.

Anything ‘beyond present appearance’ is, in this picture, always an object of ‘mere’ thought. Important examples for such mere things of thought are (for us and for Kant) pure forms, pure sets and pure numbers – as we use them, for example, in time measurements. We cannot observe these abstract entities as such. And we cannot evaluate the truths of pure number theory or of pure geometry merely by empirical observation. Nevertheless, the truths of geometry play an important role in empirical judgments about the non-pure gestalts of bodies or other spatial relations. The arithmetical truths tell us something about sets of elements that can be counted. Therefore, we cannot ‘define’ these things by arbitrarily chosen axioms – such that mathematics altogether is not just an ‘analytical’ science – if analyticity is understood in Kant’s terms, namely as consequences of merely verbal conventions without any material content, as we known them from pure abbreviations like “bachelor” for “unmarried man” or “C” for “Celsius”. Whatever empiricist or logicist critics of Kant later might say, his demarcation between analytic

and synthetic sentences as rules of inference was much clearer and more precise than later talks about implicit axiomatic definitions that are not at all arbitrary but already contain most general material knowledge as transcendental presuppositions of the very meaning of words are representations of material concepts like ‘straight line’, ‘parallel’, ‘rectangle’ and so on.

It is of some interest to notice already now that Hegel uses the word “analytic” in a wider sense than Kant, such that all arithmetical truths turn analytic, just because they are consequences of our definitional ‘positing’ the truth values of arithmetical sentences.

As a further result of these terminological considerations, we must distinguish between different uses of the expression “there is an ‘object’ or ‘entity’ *x* with the property A” (or “such that A(*x*)”). Its *general* meaning is expressed by the famous phrase of W. V. Q. Quine: *To be is to be the value of a variable*. Quine forgets, however, to reflect on the fact that there are always only local domains of such values. There is no universe of discourse and there are no unrestricted quantifiers. In fact, we always must distinguish *different formal ontological domains* for the corresponding propositions and objects of discourse. Quine, like Frege before him, underestimates this. We might refer to real things in the real world of sensible objects, which even can be named individually (like “le tour Eiffel à Paris”). Or we might refer to abstract and ideal entities or to merely fictional entities. For we can say, with some good sense, that in Conan Doyle’s novels *there is* a friend of Sherlock Holmes with the name “Dr. Watson”.

Since Pegasus and Jupiter belong, as fictional entities, to the world of mere thought, the task is to figure out which entities in the *mundus intelligibilis* are *merely* verbal constructions, and which of them have a certain function in making implicit forms of a real practice explicit. Kant’s own central example for this difference is already arithmetic and geometry, as it still is today in analytic philosophy. He sees, at least vaguely and in general, that mathematical truths relate to a practice of counting real things in the real word of appearances and of forming solid bodies or of positing things in a temporal and spatial order of things. All this amounts to a deep and difficult insight: The ideal forms that are made verbally explicit in pure mathematics correspond to some *formed practice*. Such a practice is actualized by corresponding individual actions of individual persons. Insofar as the actions fit to the form, the form functions as a *norm* for *proper* or *correct* action, or its results, for example of calculating or of forming plane surfaces.[4] In a sense, it is the *implicit* form, not just its ideal explication (e.g. by so called principles), that ‘explains’ how we act when we (intend to) act according to the form. Or, as I would like to say, it

is an *empractical* [5] form or norm that can turn into a 'reason' for acting in a certain way, namely according to our joint cooperative practice and knowledge that includes canonized standards of correctness or sufficient or necessary fulfilment conditions. The forms of successful cooperation are, in the end, the grounds for any norm. Since knowledge and science are cooperative practices of canonizing correct forms, they define the norms of correct judgement and inference in general for all particular applications. Of course, however, we frequently must still count with contingent chances, mishaps, unintended behavior or failing cooperation and communication. [6] There are no absolutely fool-proof cooperative forms, norm or rules. On the other side, any *norm* of correctness according to which we can act 'properly' in one way or another corresponds to a *form* of joint action or cooperative practice. Thus, forms of actions and practices and their normativity are just two sides of one and the same coin. Any 'Humean' attempt to develop 'norms' out of merely successful satisfaction of desires just overlooks the conceptual gulf between action and behavior, truth and success, normative correctness and subjective satisfaction of desires.[7]

In actual use, pure forms always turn into empractical forms. Such an empractical form is a "form-in-performance" (a "*Vollzugsform*") as I have said and will say in the following. The question is *how* a certain *generic* or *pure* "form-as-object" (*Bezugsform*) corresponds to an empractical form. As an abstract object of reflecting talk, a for as an object of thought is already transposed into a merely 'intelligible' entity as such or *an sich* – as Hegel would say for merely generic or formal objects of reflections or forms-as-objects. The classical example is, of course, the relation between the practice of producing plane surfaces and the talk about ideal geometrical or planimetrical forms, or between an empractical form of language use and a corresponding linguistic form, norm as it is made explicit in a grammar-book by a rule or a paradigm, a title or description.

The domain (or 'world') *an sich* (*per se*, as such) is now, according to my reading of Hegel's terminology, a *mere realm of generic meanings* of names, predicates and sentences. Such an abstract realm must be distinguished from a world *für sich* (*pro se*, for itself). The latter is, more or less, the realm of possible appearances or rather, of things as they relate, according to our norms or ideas, to themselves as animals do if we leave them alone or physical nature does if

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[4] The (em)practical forms of joint reference to an object in common space and time are made explicit in geometry and kinematics by talking about purely mathematical forms. The domain of such pure forms is the domain of *pure* intuition.

[5] This very useful term "*empractical*" goes back to Karl Bühler.

[6] By the way, we should always remain aware of the difference between unintended behavior and unintended consequence of an action.

we do not intervene by our actions and technical practices. In an actual appearance of an underlying 'real' thing or event we refer to the thing or event that appears as 'in and for itself', '*an und für sich*'.

In a sense, a thing *as such* or *an sich* is an object of conceptual thought. A thing for itself is an object as it relates to itself and appears to us in (ap)perceptive Intuition. The thing in and for itself is a proper reference to the thing in the world, either by thinking something true of it or by perceiving it truly. In a sense, Hegel's three-partite differentiation replaces Kant's distinction between an object of conceptual thought, an object of mere perceptive intuition, and an object of conceptually informed perception or apperceptive intuition resp. of empirically backed thinking. Hegel's distinction between an 'object of discourse' *an sich*, the mode of being of the object referred to *für sich* and our reference to it *an und für sich* replaces, in a sense, Kant's distinctions, but it does so by turning it into a distinction of general logic and avoiding the very notion of intuition, which is somehow replaced by presence, *Dasein*. This has the advantage that we can get rid of all the obscurities that abound in Kant's *Transcendental Aesthetics*. It has the further advantage that we do not have to bother about the question if perceptual reference to a physical object at present, in the mode of *Dasein*, is or is mot already 'conceptually informed' (Terry Pinkard)[8]. It usually is, as John Mc Dowell is right to stress. But it also has some disadvantages. One of them is this. Until today in colloquial English resp. German the difficult expressions "in and for itself" or "*an und für sich*", but also already "for itself" or "*für sich*" are usually also used in the *same* sense as Hegel wants to use only the expression "in itself", "as such" or "*an sich*", which, in turn, is all too often confused with Kant's use of these expression.

The central logical principle of 'formal existence' is expressed today by Quine's formula "there is *no entity without identity*". The principle includes the insight that the world as a whole does not present itself without further ado as a *sortal domain*[9] of *distinct objects* for which, by their natures, so to speak, identities and differences are defined independently *of our criteria* which we use in our identifications and differentiations of these objects. Only higher animals present themselves as individuals through their whole life-span. This means that we cannot cut them into halves such that both parts continue to exist, i. e. to live. Therefore, their '*Fürsichsein*' or *ontological identity as individuals* seems to be fairly independent of *our* criteria for *identification*. But already plants *need some 'conventional' criteria of identity and difference*, not to speak of mountains,

[7] Cf. in contrast to this the Humean attempts of Peter Stemmer in Normativität … to define normative situations so called without any appeal to cooperative forms and trans-subjective norms.
[8] Cf. Terry Pincard … in: Angelica Nuzzo, …
[9] In a sortal domain X, equalities of the form x=y and inequalities x≠y are defined, and some predicates of the forms A(x) such that quantifications like "there is an x such that A(x) make good sense in X.

ships or states, or, for that matter, species, despite the limits of actual cross-fertilization. The same holds for signs and other institution-dependent 'entities'. More precisely, the identity-conditions of any of these objects highly depend on our conceptual practices. Any 'ontology' that denies this is in a profound sense 'pre-critical', which is to say that it commits, hopefully unconsciously, an intellectual sacrifice that excludes it from self-conscious critical thinking.

If we consider a practice or an institution like a republic or a university as a complex paradigm for the distinction between *an sich*, *für sich* and *an-und-für sich*, the following gets clear: The republic or state *an sich* is what a (good) state (usually) should be. Judgments in the logical mode of the '*an sich*' tell us what we (should) agree upon when (we succeed in) making the normative condition for a (good) state explicit. In the same vein, when we talk about an animal *per se*, let us say a mountain lion *as such*, we produce *generic* sentences about the way of being and good life of mountain lions. In such cases, we do not tell narrative stories about singular mountain lions.[10] Sentences about mountain lions as such have a peculiar logical status of *genericity* (*Allgemeinheit*) – in contradistinction to sentences with the status of singularity (*Einzelheit*) in which we talk about few, many or all individual elements in a sortal domain. It is not yet the place here to explicate in more detail the application of generic statements to singular cases via filters of *particularity* (*Besonderheit*). But any object of objective experience must be conceptually determined in its identity *an sich* and, at the same token, exist *für sich* in such a way that it can appear to us as the object '*an und für sich*'.

If we understand the *Fürsichsein* of an object as that moment of its being or existence that is thought to be independent from our access to it, it is clear that this concept is intrinsically incoherent: We cannot remove the access relation from the object without turning it into nothing. At least, there can be no *immediate* access to the *Fürsichsein* or identity of the objects we refer to, neither in mere thinking or speaking nor in perception or intuition. This is so because our *access* to reality is always *mediated* by conceptual determination *an sich* and conceptually informed observations of 'its' appearance.

The things *an und für sich* in the real world are the 'objects' of *concrete* knowledge (*Erfahrung*)[11]. In such knowledge, our joint conceptual distinctions and our joint perceptual and practical access to the object already are 'grown together' (*con-cretum*). Thus, real knowledge always is *mediated*: either by *conceptually informed perception* (or rather Intuition), as Kant

[10] Cf. M. Thompson, "The Representation of Life", in: Rosalind Hursthouse et al. (Hg.), Virtues and Reasons: Philippa Foot and Moral Theory, 1995 Oxford. S. 247-296.

seems to say, or by *perceptually and experimentally informed thought*, as I would like to add with Hegel, Pinkard, and McDowell.

Using the terminology developed above, we now can make Kant's widely misunderstood claim more perspicuous that there are synthetic a priori or conceptual truths presupposed in empirical sentences: Conceptual truths express criterial or transcendental preconditions of conceptually articulated world-related knowledge. They make empractical forms or norms of our joint practice of intuition and of the inferential commitments and entitlements of empirical judgments explicit.[12] Kant's 'Transcendental Analytic' thus turns into a logical or structural analysis of meaning and truth in the realm of *generic experience*. This is, as such not the merely subjective sensation of animals, the true idealists as Hegel ironically says, probably in a hidden commentary on Berkeley and Hume. Experience or *Erfahrung* is a very vague word. In Kant's sense, it presupposes *sentences* and *statements* with generic *content* that can be used in many typical empirical situations, which are, as such, particular and parochial.

But when we now turn to the three fundamental questions of traditional *metaphysica specialis*, the following question is still open: Can we say, and what does it mean to say that *free will*, an *immortal soul*, or *God* exist?

It is clear from the outset that all three 'entities', the will, the soul and God, belong to the world of mere thought. By definition, they all cannot be *observed* as such. They are no empirical things. They do not belong to Kant's *mundus sensibilis*. They are no 'finite' things in Hegel's sense. As a result, we better look out for the difference between the possible mode of existence of the human soul, free will, or even God in possible contrast to the mode of inexistence of Pegasus or Jupiter. The basic question is if "soul" and "will" are mere metaphors without 'real' content and if "God" also is just a word in the end – as Hegel says himself often enough for anybody who can read his texts.

In some respect, Kant and Hegel agree in the following: The soul is the 'essence' of man (*das Wesen des Menschen*). But this essence is just a generic form of being, a performative

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[11] It is fairly crucial here not to translate Kant's word "Erfahrung" as "experience". The word "experience" has with its all too subjective and empiricist connotations in the English language not only of philosophy. In the same vein, we should distinguish merely individual cognition and joint knowledge.

[12] R.B. Brandom has famously developed these thoughts including the importance of normativity. My approach departs from his in stressing the trans-subjective, 'generic' and 'historical', mode of existence of institutions or other forms of cooperative practices as the *real ground for all normativity* – far beyond merely *individual* score-keeping and *singular* sanctioning of defection in dialogical language games (David Lewis) or in the context of other forms of cooperation. I fully agree, however, that scorekeeping, praise, criticism, and even threats of punishment play important structural roles in keeping up our joint forms of practices.

character, not an entity. It is a term for reflecting on forms (*Reflexionsterminus*), in fact, on a perfomative form of being, the form of person I am as an individual human subject.

Free will is the ‘essence’ of action. But both, soul and free will ‘exist’ only in our ways of reflecting on *human life and schemes or forms of practices and actions*. Moreover, the very existence of an ‘essence’ consists in ‘its appearances’. By stressing this, Hegel brings the relation between will and action into an analogy to the relation between force and movement. This is, logically, the same sort of relation as between energy and the actual changes produced by it.

Hegel’s basic insight now seems to be this: Any understanding presupposes some mastery of schematic differentiations and inference. Rationality and understanding consists in the competence of following norms or rules properly, just as Kant says. But the schemes of rationality do not remain ‘unmoved’ and ‘unchanged’. In the course of our joint development of joint knowledge and our joint practices, we develop the forms or norms of our practices – including our linguistic practices. In contradistinction to the (‘conservative’ or rather ‘student-like’) rationality of more or less schematic rule-following, reason is a joint practice of (‘experienced’) evaluation and development of (the constitutive forms and norms of) practices. There always is some need for such developments. This is so because merely schematic rule-following *always* will produce some (more or less important) practical ‘contradictions’ that have to be removed without destroying the achievements of the traditional practice. In other words, reason as the form of resolving such practical contradictions is ‘dialectical’ insofar as the successful forms of a traditional joint practice have to be saved and an all too schematic understanding has to be improved. Only if this condition for a good development of a practice is fulfilled, we can call the development “reasonable”.

Dialectical reason thus consists in a shift from an implicit joint acknowledgement of a less reasonable practice and its constitutive norms and forms to a conscious explication and practical acknowledgement of a more reasonable one. Moreover, it is just a truism that we never can avoid ‘all possible contradictions’ because of the finite nature of all our practices, forms and rules. They are more or less schematic forms of cooperation which, as such, never will solve all problems of cooperation. Therefore, they *always* can be improved.

Real contradictions consist, according to this reconstruction, in some breakdown of joint understanding or some insufficiency of cooperation and communication and not just in the formal fact that one person says ‘p’ and she herself or another person says ‘non-p’. But if the

latter case appears, some possible ‘material’ contradiction has to be resolved, if only by an explicit disambiguation of language use, i.e. of different forms or norms of distinction and inference for the same expressions in different contexts or situations.

1.4 THE PROBLEM OF INTELLECTUAL INTUITION

A most difficult challenge to any anti-metaphysical reading of Hegel is this: Hegel seems to claim that thinking has the power of proving the existence of real (*wirklich*) things (as ‘essences’) even without the help of actual intuition. But Kant had shown that ‘*intellectual intuition*’ is an empty concept: In reality, only such things exist that can be, could be, or could have been ‘observed’ or ‘perceived’, if somebody is, would be, or could have been in a proper position of observation. Mere thinking or speaking as spontaneous *re-presentation* of possible objects does not *produce the represented objects* for receptive observation. What thinking produces are mere symbols or signs, ideas or *Vorstellungen*, representations.

Kant had already made clear that the ‘direction of fit’ of empirical knowledge (“*Erfahrung*”) is opposite to that of spontaneous production (*poiesis*) of signs or other things in (planned) actions. In the first case, the description is true if the world is such as the description says. In the second case, we *produce* something that fulfils some satisfaction conditions or falls under a ‘description’ (articulation) of the intended goal. Being a mere object of thought is not enough for empirical existence. *Only God* is imagined to be able to ‘produce’ the whole world, including the sun and the stars, animals and men, just by *calling them into being*. According to the Bible and in the Koran, God just has to will that some of his thoughts representing a possible world come into being and, lo and behold, it turns into the real world.

My claim now is that Fichte’s and Hegel’s defense of non-empty ‘intellectual intuition’ does not really, or better: not at all, contradict this Kantian analysis, despite the contrary assumption of their critics, down to Friedrich Albert Lange. Both rather point to another important aspect which I already have mentioned, namely the contrast between knowing things *by doing* (or *in action*) to knowing things by *observation* (perception, intuition). The point is that we can *practically* know our mental faculties through their actualizations like thinking and reasoning, intending and doing *without* self-observation, without mirroring our own behavior, even without describing ourselves or attributing properties to ourselves. The paradigm case certainly is that I *know how to do* something like riding a bicycle and even *know that I know how to do this* without self-observation and without *representing* what I am doing (in details and in another act), for example by words.

Hegel, at least, is clear about this: '*Introspective intuition*' is a totally *impossible 'method' of coming to know something about myself.* If I close my eyes and try to look into myself, I do not see anything, just a black hole, says Hegel ironically. *Introspection* is a wooden iron, a self-contradicting concept. The same holds for '*inner intuition*', taken literally. Unfortunately, the English word "intuition" and the German word "*Anschauung*" are most frequently confused or identified with introspection or mantic fantasy. This is the very reason why Hegel tries to avoid the concept in his own analysis and more or less only comments on the usages of others.

Unfortunately, our mental vocabulary is altogether full of similar contradictions. Or rather, we use metaphors that always are in need of filtering out non-intended or inappropriate inferences and connotations. This holds already for our talk about *rational faculties* like (self-)consciousness and (inner) understanding. The general problem is this: Inner faculties, so called, exist only in virtue of their actual performances. The object of self-consciousness is neither the self nor consciousness, it is *the whole world we actually live in* – including the institutional world, which gives us the opportunities to think and act freely in a certain realm of freedom, namely by taking advantage of general knowledge, generic inferences, predictions, on the ground of causal dispositions or forces attributed to certain types of objects or processes.

Understanding is no inner process. It shows itself only in an *outer action and practice*. Talking about my (inner) reason (*Vernunft*) is misleading, too. Reason is always, if we view it generically or as a form, a joint enterprise. It is already an *institution*, rather than a merely *subjective faculty*. The subject can take part, after she has learned the relevant things to do, for example in speaking and silent thinking, judging and inferring. The same holds for knowledge. Talking about 'my reason' or 'my knowledge' at best expresses *my affiliation* to joint reason or joint knowledge. Hegel's *Phenomenology of Spirit* thus questions our usual mental vocabulary with its subjectivist connotations of autistic or solipsistic empiricism.

Hegel does not agree, moreover, with the merely 'negative solutions' in Kant's Transcendental Dialectics, e.g. in the chapter on the 'paralogisms' of the soul. Hegel rather aims at a more positive, but still critical, analysis of consciousness and self-consciousness, and at an analysis of the very constitution of human sapience or spirit by the institutions of our social and cultural life.

1.5 PROVING THE EXISTENCE OF THINGS BY MERE THINKING

One of Hegel's crucial insights is that generic knowledge expressed by basal principles of material truths and inferences in a domain of discourse or experience and the conceptual framework

of the domain are one and the same. In other words, if we understand the notion of a concept properly, it is the institution of science in which we develop our concepts. We do so by developing generic knowledge and canonical forms of inferences. We use such canons of knowledge and inferences in our very understanding of the content of empirical statements about singular things and events. In a sense, therefore, the canon of generic knowledge and ('conceptually proper') inferences defines 'the notion' or 'the concept', i.e. the content of 'all' linguistic acts that can be understood. We make this content explicit in the form of 'conceptual' judgments.

As a result, *a* concept is not just a linguistic expression together with some merely 'analytical' rules or merely formal logical inferences – resulting from merely conventional ('stipulative') definitions. A concept, rather, consists in *a functional role of an expression or (symbolic) image in the context of a whole system of expressions together with its use that is governed by a canon of learned 'generic knowledge' about proper differentiation and differential inference*. The expressions or symbolic images thus function (always already) as 'labels' for a *whole domain of generic knowledge*: Their very content consists in the corresponding system of conceptual distinctions and conceptual inferences.

Here we find the key for Hegel's only seemingly 'idealistic' and 'metaphysical' claim that we can learn something about the 'real world' by 'mere thinking'. Any reader who finds this outrageous should remember, again, that Hegel's concept of thinking is *not* to be confused with producing arbitrary assumptions about possible states of affairs. It is rather *an application of generic knowledge* (however faulty) or, if it is itself accurately controlled as far as possible from the standpoint of a speaker, a participation in a meta-level practice of reflecting on our *real* concepts, i.e., on the corresponding *generic knowledge*. In any *empirical* use of concepts, such knowledge is always already practically *presupposed.* If someone says, for example, that what he has seen yesterday or what he is hearing now or what I would or will be able to meet at a certain place is a deer, she does not only presuppose that we are able to jointly differentiate deer, say, from antelope, but that we also know what we can rightly express that deer normally do, how they live, look like, sound, mate and so on. Without these inferences, the information given above would be almost empty: we are never interested in mere classifications of things if not in view of relevant inferences. Moreover, we almost always need and use an additional logical form of making distinctions between a 'real' X and a merely 'seeming X' explicit, as when we distinguish between real gold and something that only seems to be gold, or between a real scientist and a merely seeming one. It is no small matter to see that it is precisely the last distinction Plato articulates by the words "philosopher" and "sophist".

Socrates and Plato also already see that there always are implicit or better empractical criteria for classifying things, especially with respect to the difference between a real or a true or a good and a merely apparent or seeming X. The same holds for inferences. It frequently can help all lot of we make such criteria or inferential norms verbally explicit when we want to stabilize or develop joint understanding and individual competence. Therefore, we have some interests in articulating some inferential norms by explicit (entitlement preserving) rules of the form "X ⇒ Y" which may say that we can (normally, generically) expect that any X is a Y, or that it X prevails, Y prevails also, and if a speaker knows that this generic rule does not apply, he must inform us. If you, for example, know that an animal over there is dead, you might be obliged to say: "What you see there is a cat *but it is dead*. You might *not* be entitled to say 'it is a cat'. The same dialogical or dialectical rule holds for any distinction between a real and a merely apparent X. If one says, for example, that Gorgias is a great logician, one should, perhaps, add, as Socrates proposes: But Gorgias abuses formal logics in sometimes merely rhetorical, sometimes merely eristic arguments and is therefore a sophist, not a *real* logician. A *real* logician like any *real* scientist knows about and respects the *limit*s of his techniques in proper use.

In order to get a more accurate idea of how to make an implicit or practical differential and inferential content of object-level use explicit on a meta-level of 'speculative' reflection, we now may again consider the example of pure numbers. *Practically*, we seem to know already what numbers or magnitudes are. And this means that we *know how* to calculate 'with numbers' correctly and how to prove arithmetical truths. But this is not yet self-conscious theoretical knowledge. Knowing what pure numbers are includes explicit knowledge about their symbolic or linguistic constitution and the limits of their use. Frege looked down with contempt to this path from the numbers of small children to the pure and abstract entities of mathematics as a science. Frege was wrong however. There is no other method to explain without hidden circularities or a *petitio principii* what numbers are. This is, however, not the place to show the truth of this claim. For us, it suffices to see the problem. For this, is would help to know why Frege's approach fails and must fail to define numbers in the form "x is a number if and ony if A(x) holds. There is no purely sortal domain D for the variable x defined that includes the natural numbers, which does not already presuppose an independent definition of the domain N of exactly all the natural numbers in some way or other.

Knowledge is always a result of what Hegel calls a *logical development*, i.e. of a kind of speculative, i.e. logically reflecting, analysis of the very *concept of a pure number* or, what is the same, of *pure arithmetic*. The task is to develop the concept, i.e. not to produce and prove true

arithmetic statements, but to produce and demonstrate 'true statements' *about* the concept of (natural and real) number or, what turns out to be the same, about our whole practice of pure arithmetic.

In such a logical analysis or development we usually run through seemingly self-contradicting statements like the following: A pure number is some abstract thing. As such, it cannot be perceived. But a thing that cannot be perceived does not exist for us, or so it seems if we use an empiricist criterion of existence. But then it would be nothing, at least for us. Hence, we do not know anything about pure numbers: All our knowledge starts with empirical perception. But what we perceive in the case of arithmetic are not the numbers, rather our signs and symbols. We do not even perceive 'sets', rather heaps of things. Already a set of things is an abstract object that cannot be perceived as such. This is so because of the abstract notion of set-identity (or set-equivalence, respectively) defined by an abstract member-ship relation and not just by perceiving an assembly of things. Therefore, the 'truth of the pure numbers', as we may say shorthand for any truth in pure arithmetics, seems to lie in *the form of use of the numerical signs*. But signs or numerical expressions are no numbers. Signs *refer* to numbers. They *stand for* numbers. So we arrive at the following contradiction: Pure numbers are what numerical signs refer to. But they cannot refer to anything, because we cannot refer to things that do not exist. So how do the numerical signs and the numbers relate? In which sense do numbers exist? How can we know any truth about numbers? And what do we do, when we presuppose the truth of arithmetical sentences?

The only possible and, hence, correct answer seems to turn conventional wisdom upside down. According to it, philosophers (now in the sense of those who take part in a Socratic practice of reflecting dialectics) seem to walk on their heads, as Hegel nicely says, in contradistinction to the 'Platonist' mathematician or the 'scientist' who believes in a pre-established world of mathematical or physical truths. But in reality it is the (dialectical) philosopher who remains sober, because she is looking at the *concrete form of existence of the objects of our talk*. In our case of numbers the result is this: *We* determine what pure numbers are and what arithmetical truth is. We do so in *our arithmetical practice*. Part of this practice is a form in which we evaluate arithmetical sentences as true, or by which we would evaluate them as 'true' according to certain conditions of formal truth established by our own norms or rule.[13] Mathematical knowledge comes, therefore, in two steps: The first step consists in knowing how to calculate correctly and to produce sufficient proofs for mathematical truths (truth-claims). The second step consists in

[13] If we wish, we can call this insight "objective idealism". I would rather omit this label.

learning how we had determined the criteria for correct calculations and how we have laid down formal truth conditions *before* we have developed some means to control their fulfilment, which often surpass schematic methods that could lead to a decision for a given sentence in finitely many steps.

1.6 THE NEED OF A SYSTEM IN DEFENSE OF FREEDOM

We now can turn back to Hegel's main problem – which is, in the end, *the* main problem of traditional metaphysics. It is the problem of free will vs. the belief in causal pre-determinism, or rather, the tension between the point of view of *practical action* and of *theoretical knowledge* about the world. Fichte, famously, had thought it were clear that we have to make a *primordial decision* between the 'dogmatic' position of 'believing in scientism' and a 'philosophical insight' into the presupposed fact of freedom of acting and willing. Fichte attacks, indeed, the metaphysical assumptions of materialism and physicalism. He defends a transcendental pre-knowledge of rational faculties and know-how-to-act-freely.

Hegel is unhappy with Fichte, not with respect to his result but to the way, he wants us to persuade of his doctrine. Fichte is a mere preacher of freedom and subjectivity. As a result, the 'Fichteans', as we could call his romantic followers in Jena, especially Novalis and Friedrich Schlegel, adhere to a mere belief-philosophy. What Fichte teaches us is not yet a truth that we have to accept necessarily if we only understand its content and do not arbitrarily decide not to understand or not to comply with reason as a skeptic always does, if we understand the reason of the fact that no skeptic can be convinced of anything. The skeptic is a sophist. True skepticism is speculation, according to the Greek word *skeptomai*, to look from above, by the Latin *speculari*.

On the other hand, Fichte is, in a sense, the first to develop a crucial distinction that can be already found in Kant, but only in an implicit form, namely the differentiation between presupposed forms-in-performance (*Vollzugsformen*) and forms-as-objects-of-reflection (*Bezugsformen*). When we make empractical forms in actions or practices explicit we have to talk about them. We need the level of speculative reflection when we want talk of a totality of such forms, for example about all natural numbers, all pure sets of Cantor's higher arithmetic, about all chemical matters or stuff or about all entities of physics. All these 'ontological' domains are totalities and their explications are of a speculative or higher-level form. Ironically, only on this level we return to a concrete understanding of what numbers or matter or theoretical entities really are. Not the philosophers, merely applied sciences think in the abstract, not the theoretical

sciences but common sense, as Hegel ironically shows in one of the wittiest pieces of the philosophical tradition, namely “Who thinks in the abstract?” (*Wer denkt abstract?*).

Be this as it may, Fichte is also the first to claim the conceptual priority of practice or the empractical, long before Wittgenstein’s later reflections on rule following lead us to a similar path of thought.[14] But Fichte could not make his arguments well understood. His problem is almost obvious: The appeal to a basic decision between being a ‘dogmatic materialist’ as someone who believes in causal determinism and being a ‘philosopher’ as someone who believes in free will and free action turns the whole business into a question of basic ‘meta-physical contentions’ or belief-philosophy. In both cases, the result of such a ‘basic choice’ would be just the opposite of critical metaphysics or logical analysis.

Hence, the task is to show that, in fact, *we have no choice*. Or rather, we need an argument that there is only one correct view on the matter – which cannot be a result of some arbitrary choice, contrary to what Fichte seems to say. It must follow from our understanding and analysis of the problem and its resolution. Independently of the question if Hegel succeeds in his attempt to vindicate Fichte’s results by better arguments, I am sure that he thinks that his *Science of Logic* in fact resolves Fichte’s problem for anybody who can read and think and does not turn into a skeptical sophist in the course of argument unknowingly or deliberately. Moreover, he is convinced that he has also resolved the antinomies of Kant’s Transcendental Dialectics.

Hegel’s general claim is this: If we understand the arguments brought forward in the *Science of Logic*, all belief-philosophy and all traditional metaphysical assumptions can be shown as incon-sistent or superficial. They are just signs for *not understanding* the logical connections and presuppositional relations between different part of our knowledge, practical or theoretical, and different parts or aspects of our conceptual framework, which lies at the ground of our knowledge. In particular, Platonisms, mentalism, empiricism, solipsistic idealism, behavioristic or phrenological cognitvism, materialism, naturalism, and last but not least Newtonian and post-Newtonian physicalism are all metaphysical belief-systems that start with some set of axioms or confessions, like other religious beliefs. To proceed this way is the opposite of doing philosophy, despite all subtle arguments that want to show the alleged inner consistency of the system.

Formal consistency as such is still of very low value here, especially because the content of a belief and the chance of being true and valid beyond subjective preferences does not improve at all if we bring its expressive articulation into a mathematical or deductive form.

[14] Cf. Lütterfelds, Fichte & Wittgenstein.

Most readers seem to think that Hegel, too, like Fichte, just proposes ‘his own’ belief-system as an alternative to the dogmatic systems listed above. But this is not so. To see this, we have to read Hegel’s arguments for a scientific ‘system’ of philosophy and a ‘science of logic’ such: Precisely because we need a watertight argument supporting the insights of Kant and Fichte, we need another approach. Kant tries to present seemingly ‘best’ solutions to dialectical dilemmas and thinks it enough to show the formal consistency of the belief in free will and action if we reduce causality to the predictions in the domain of appearances. Fichte claims dogmatically that the acceptance of the priority practice and action is the only non-dogmatic ‘position’. In both cases, we still find some belief-philosophy, just as in all axiomatic theories or systems of the deductive sort. They all turn into dogmatic beliefs at one point or another, starting their deductions with more or less arbitrary, unproven, sometimes not even well understood sentences or claims.

1.7 FROM BEING TO ESSENCE

But what could an unproblematic beginning be that avoids the obvious problems of axiomatic theories and deductive arguments? A first sketch of the main structure of the program of Hegel’s *Science of Logic* could show the leading idea: Altogether, logical analysis is, for Hegel and, hopefully, for all of us, a method of gaining self-consciousness about concepts in their practical use, about their role in thinking and about the very notion of truth and reality, including the notions of valid inference and argument. If we use the word “being” as a title for all valid propositions, as the whole philosophical tradition since the times of Parmenides has done, we can make things short and say, somehow mnemotechnically, that logic is reflection on the notion of *pure being*. The word “pure” signals here only that the object of reflection is the *generic* form of distinguishing between being and not being. As such, it is a form-in-practice (*Vollzugsform*), expressed by meta-level *form-as-object-in-reflection* (*Bezugsform*). In other words, the difference between being and pure being is analogous to the difference between (the use of) numerals (as in “5 meter”) and (the use of terms for) pure numbers.

The question of how to begin the science of logic as a meta-level logical analysis of logical analysis or meta-logic then gets the following answer: Let us start with a notion that is general enough to embrace the whole domain of ‘the logical’. Only then we can be sure that the analyzed notions do not turn out to be too parochial or regional. If we would identify the topic of logic with the investigation of the schematic rules of inference according to which we use the three words “not”, “and” and “for all” in logically complex sentences about sortal domains, as modern predicate logic does, the scope of logic and logical analysis would be narrowed down to merely

mathematical logic, as in the tradition of Frege's logic and the formal branch of modern analytical philosophy. It is obvious that such a definition of logic cannot yield a sufficient method for an analysis of all the different notions of truth and existence relevant for critical metaphysics, i.e. philosophy. To reduce logic to an investigation of the valid forms of deductive inferences of the three words mentioned (namely "not", "and" and "for all", from which we can define truth-functional "or" and "if") leads to an all too narrow method. It is in itself a 'dogmatic' beginning. If we would proceed this way, we would define 'the logical' by an arbitrary choice of certain words or certain schemes of formal inference. The question why these words and schemes should define the whole domain of 'the logical' would remain unanswered. In fact, it remains unanswered in Frege's (Russell's, Carnap's, and Quine's) logic, even though Frege thinks that his logic is the (comprehensive) science of 'pure' thinking and pure thought. He even would have been right – if he only would have seen what it means that his idea of 'pure' thinking *reduces* to formal thinking about the totality of *mathematical* entities as developed and represented in Cantor's Naïve Set Theory, the domain of all consistent sets *quod maius cogitari non potest*. Anselm's defining formula of God applies here obviously for the totality of all purely mathematical entities.

Frege's logic is merely mathematical logic, i.e. it is merely pure logic of purely mathematical thinking. It is no general logic. Using Frege's calculus for proving sentences thus already presupposes the constitution of a mathematical domain of discourse, as I have shown elsewhere.[15] We cannot comprehend the projection of merely formal, e.g. mathematical, calculi onto the real world if we only use formal logic: This much was already clear to Kant. It was the rationale for his developing a 'transcendental' logic or analytic.

Hegel now says that he could have started his reflection also with the notion of a beginning, or 'principle' (*archē*). This is so because this notion also leads immediately to the differentiation between being not yet there and coming into being – which is just the topic of Hegel's analysis. But we better begin our reflection with the notion of being because this is what we want to know: What does really exist and what is only seemingly true? So let us start with the question how to distinguish between '(what there) is' and '(what there) is not'.

Now we see why general logic and hyphenated onto-logy amount, in the end, to the same. Their main question is what it means that something (really or truly) exist, or that some proposition is (really or truly) true.

[15] PSW Grundprobleme der Logik.

In our times after Frege, there is no wonder, however, that the form of logical development proposed by Hegel seems to be a rather outlandish way of doing logic: We got used to formal logic as an enterprise to single out general syntactical forms of semantically valid inferences. Hegel starts, instead, with most general *labels* (or 'categorial notions') like "being" and "nothing". And he declares that these labels, or rather, the corresponding 'concepts' or 'meanings', already 'conceptually contain each other'. This is in fact a strange claim. What does it mean to say that 'being' *contains* its contradiction 'nothing' – and vice versa? And what does it mean to say: This contradiction is 'superseded' or 'sublated' ("*aufgehoben*") by a new concept, namely "becoming" (or "beginning to be")?

Obviously, it is a terminological metaphor to say that a notion 'contains its opposite'. It implicitly refers to a well-known and standard way of using the same words a subtitle and supertitle. We do so in our use of "cat" as a super-title for she-cats *and* bob-cats such that we *generically* can say that that 'the cat' contains the male *and* the female cat, which means that any singular cat is male *or* female. In precisely this sense, "being" is a conceptual title for 'being' *and* 'non-being'. In the same sense, the notion of a *beginning* or *becoming* resp. coming into being 'contains' being *not* yet here and *then* being here. Coming into being presupposes, in turn, the notion of being then here or *Dasein* and its negation, namely not being *here at present*.

Another application of this observation is this: We distinguish in any domain labelled by "X" a 'real', 'true' or 'perfect' X and a 'merely seeming X' as the most interesting kind of being 'non-X'. We distinguish, for example, 'real' numbers from 'imaginary' numbers and 'non-standard' numbers or, as Hegel famously had seen real magnitudes (as elements in an Archimedian ordered set) from non-standard 'infinitesimal' magnitudes 'dx', which are no magnitudes at all as long as they lack identity conditions. At first, at least, they are mere 'moments' in more complex expressions like dx/dy, as Hegel famously has seen.[16]

If we master the corresponding practices including our ways to comment on them we might now also understand the difficult notion of *determinate negation* in a domain. Such a 'negation' is nothing but a standard, i.e. well-defined, distinction between a predicative concept A(x) and its negation non-A(x) *in an already well established sortal domain* X in which we can interpret the variable x and the predicate negation non-A(x) as determining a complement set in X to the set of those x that fulfil the condition A(x).

[16] A precondition for any serious interpretation of Hegel's arguments is a thorough understanding of Hegel's anti-essentialist and anti-Platonist criticism of 'infinitesimal' magnitudes and 'forces': Infinitesimals do not exist because there are no rules for identifying them by representations. Notice that Hegel's notion of pure magnitudes is the same as our concept real numbers.

If we continue our path through Hegel's logic, we now can see that "being" is a label for the general domain of all existing things in some overall reality. We can also count all true assertions, or rather, what they say, to this domain. As such, being somehow already 'contains' the determinate negation of being and non-being. This corresponds to the fact that saying *yes* does not have meaning without the contrast of *yes* and *no* (or Quine's *yok* and *evet* in *Word and Object*). Any claim of existence already presupposes a proper distinction between existing and not existing things, as we are inclined to say. But saying this obviously produces an apparent inner contradiction which cannot be solved without admitting that we use the expression "thing" at least in two ways: as a label of 'objects of thought' or possible objects as such and as a label for objects in a more or less well-determined domain like the domain of real, not only possible, numbers or physical things. Hence we can *speak* of 'a largest number' or about an 'infinitesimal magnitude' dx, just as we can *speak about* unicorns and say that there 'really' are none. Without the corresponding distinction, we would not know what truth or being is. Hence, we must presuppose a realm in which the distinction between 'real' and merely 'possible' (or 'fictional') takes place. (I do not talk about Russell's way out in *On Denoting* here).

Following an idea of Spinoza, Hegel asks if there is an overarching domain in which we can make all our differences according to the principle: *determinatio est negatio.* It says: Something is determined only if it is negatively distinguished from other things.

When we strive at schematic inferences, we always prefer already well determined sortal domains with well-defined conditions for equalities x=y that define identity and individuality, and with corresponding predicates A(x) that fulfil the nice principle that if y=x and A(x) then A(y), which can be called the *Leibniz-principle*. This principle holds in any mathematically well-constituted domain. But such domains do not come for granted. They usually must artificially constituted. Quine has at least seen this in outline and proves to be thus the great logician he really is. And we must master the projection rules to the actual world. For the actual world presents itself to the sense as merely continuous 'appearances'.

Only in extremely rare cases, as for example in the case of higher animals, a domain of real things consists just by its nature of 'atoms' or 'individuals' that cannot be split in parts without destroying them. The domain of higher animals might be the only 'natural' domain with a naturally defined identity of the individuals: It is not the gestalt of a body, its form or its physical 'matter' but only its individual life that defines the identity "=" for higher animals and the difference "≠", which also applies to humans – such that we have an absolutely robust foundation for any question of 'personal identity' if we just stick to basic facts of life and do not

drift into science fiction stories or fables which we ironically still find in the empiricist traditions of Locke and Hume. Notice already now that ‘being’ in the case of animals is the same as ‘substantial being’ or ‘substance’ resp. *substantia* in the sense of the English resp. Latin translation of Aristotle’s ‘*ousia*’. Until today, we use the word “being” in referring to an *individual* in its bodily existence expresses as well as to its form of existence, its life. *Individuals* are generically addressed as a topic in ancient Greek philosophy by the title ‘*to on*’. Philosophical German translates this title by the neo-logistic expression “*Seiendes*”, as it is widely used e.g. by Heidegger. Being as the form of existence is in Greek expressed by “*eidos*” (or “*idea*”), which Hegel translates into his philosophical German by “*Leben*” (*life*) and “*Idee*” (*idea*), which both refer to *life-forms*. The actualization of a life-form or of a form of being stands under the Greek titles “*einai*” or “*to einai”*, in German “*Sein*” and “*das Sein*”, which correspond somehow to the English infinitive “to be”, rather than to “being”, if we want to make the intended differentiation in the tripartite use of “being” at least somehow explicit.

As a result of these perhaps already all too concrete and detailed examples in a most general consideration, we arrive at two usages of the notion of being: Firstly, it stands for the whole realm, *in which* we make the distinction between being and not-being. Secondly, it stands for that part of this distinction which is opposed to not-being. In other words, we must distinguish between merely possible things *an sich* and real things *für sich*, possible truth *an sich* and real truth, possibility and reality, *Ansichsein* und *Fürsichsein*.

But how do we distinguish between merely possible beings and beings that exist, that are here or there? Our first and basic insight had been already that any claim about what really exists must be understood in contrast to mere possibilities. As a result, *being, reality,* and *existence* turn into *modal notions*. The traditional identification of God with pure being, beyond which there is nothing, i. e. with *all actuality* (Spinoza), turns in a second step to an identification of God with *all possibilities* (Leibniz), beyond which we cannot think anything consistently. Moreover, God turns into the beginning or *archē* of all things, which contains as such all being and non-being, in a sense ‘before the real creation of the actual world’. This mirrors the beginning of Hegel’s logic with the speculative concepts or ‘total domains’ of being, nothing, beginning, becoming and being here or there (*Dasein*). Their inconsistency should be clear now. There is no universe of all discourse, no realm of all entities for object-variables at all; and we cannot think of such a universe coherently if we do not silently identify a part with the whole, like bodily things with all there is.

But why should the dialectical steps in reducing such inconsistencies be interesting at all? How can we arrive at determinate negations inside such too ‘grand’ conceptual labels like “(pure) being”? What kind of development should lead us stepwise from the qualitative distinctions in the domain of being there (which we can take as a kind of replacement of the realm of Intuition in Kant’s approach) to quantities (like sortal magnitudes, which lead, in the end, to Cantor’s universe of all pure sets as a standard domain of all purely mathematical entities with all sortal domains as subclasses)? And how do we arrive, via a logic of essence, to a ‘subjective’ logic of ‘the concept’? I.e. what is the systematic scheme of thinking behind Hegel’s methodical development of ‘the’ system of logic?

The following is a very general description of the whole road (*met-hodos*) upon which Hegel leads us. The road starts in the book with the title ‘logic of being’, as we have seen, with the most abstract and general distinction between *being* and *not being*. The distinctive form is founded in present *Dasein,* which already is embedded in a whole of *changes*, of becoming, such that empirical reference presupposes a time-structure of now and then and a spatial structure of here and there. This leads us via an analysis of qualitative distinctions in the realm of present observations (here and now) to the constitution of quantitative sets of things and schematized forms of bodies and movements. Abstraction by setting equivalence relations between reproducible forms is the key method. Therefore, Hegel uses the word “gleichgültig” or “equivalent” hundreds of times. The next step in the logic of essence starts with the following question: How can and must we understand ‘causal’ explanations of actual phenomena by underlying structures and models with forces and dispositions attached to local things or entities? In the sciences, these structures and models count until today as the essences of the phenomena. The logic of essence is, as such, also a logical reflection on the *importance of judgment about relevance*.

The step from the logic of being to the logic of essence can now be understood as a step from merely descriptive, narrative or historical, i.e. empirical, talk about some or many appearances (*Erscheinungen*) to *explanations* of their typical and in part predictable occurrences by causes, forces or other underlying ‘essences’. Theoretical ‘essences’, constituted by human thought in our theories, are said to ‘produce’ the appearances in empirical actuality, here and now. This ‘Here’ and this ‘Now’ refers, of course, always to an observing subject and is, therefore, indexical, subjective. Hence, empirical cognition is basically ‘idealistic’, as Hegel says for this principle or foundational fact. However, what we count as a really real (*wirklich*), with or without using the additional word “essence”, lies by conceptual necessity somehow ‘behind’ or ‘below’

merely subjective phenomena or appearances; and it is an object of thought, not of immediate sensation.

There obviously is a deep ambiguity when we talk about essences, which gets especially clear in comparison with related words in other languages. The Greek word "*ousia*" translates into Latin as "*substantia*" and also as "*essentia*". It translates into German as "*Wesen*", which can stand for an individual being, corresponding to Aristotle's 'first ousia', as well as for a generic form, Aristotle's 'second *ousia*', a genus or species, which translates, in turn the Greek word "eidos", which also means form and concept. As a result, as genus or species is not just a set or class of '(living) things' but an essential mode of being something of some sort or domain of beings. The logic of essence therefore is concerned with the deep logical fact that we never only refer to appearances but always talk about appearances as appearances of some underlying essence that explains what actually appears such and such, and is, in fact, such and such. When we talk about real reality and say that something that appears or seems to be such and such really is this, we use this logical form in confronting an apparent appearance with its essential or relevant explanation of what it really is.

In this context, Hegel's basic insight will turn out to be Aristotelian and to some degree anti-Kantian. A first Aristotelian theme is this: When we refer, for example, to an animal, we are interested not only how the animal appears but how it really lives. The real life of the animal is its life-form which explains how a singular animal and its behavior normally looks like and why it behaves or moves as it does. When we explain the actual behavior by the competence or character (Greek: *psychē, '*soul*'*) of the animal, we explain its empirically actual life by a generic form. But any 'essence' in the sense of a second *ousia* by which we explain the actual appearance or behavior of some things is nothing but a *generic form*, which is often already an abstract structure, represented by a theory. Hence, the topic of a logic of essence is also what it means to 'explain' actual appearances in theories and what it means to use 'theoretical entities' in such explanations.

Theories as such tell us in a generic mode of language or thinking how things are *an sich*. Therefore, it is obvious that theories refer to the actual world only via a proper projection on the appearances. Nevertheless, we can say that the *real* things are distinct from the actual appearances. As a consequence, what we call reality or the real world is, as such, obviously something generic, abstract, and ideal. To deny this fact is to deny an actual form of using language and, hence, to sacrifice our intellect. To say, we should not talk that way does not help, for it blurs what we do when we explain actual appearances by what is real. It leaves implicit,

unexplained, what it means to contrast merely phenomenal or empirical actuality to some real reality (*Wirklichkeit*), by which we explain the corresponding actual appearances.

When we talk about how something is as such or in itself (*an sich*), we refer, as Hegel sees, to our own theories, by which we define the conceptual relations between words and determine their differential and inferential use with respect to the actual world. We declare that all that really exists, which exists in and for itself. By doing so, we do not refer to some unknowable domain that somehow is situated behind our scientific knowledge, but to a domain of generic forms or beings, to the second *ousia* in Aristotle's sense. On this ground, Hegel can say, against Kant, that we do not know anything better than what a thing is in itself. We know this because this is what we have *learned* about the defining *type* or genus of the thing we want to talk about. In other words, a thing in itself is, in fact, a generic thing, an 'essence'. It is something on the logical level of *generality* (Hegel's *Allgemeinheit*), which corresponds (hopefully in a proper way) to the individual things we actually (want to) refer to. There is no well-defined reference to anything if we do not know already – somehow a priori or in advance – the defining genus of the thing. This is the deep truth of Quine's inscrutability of reference, even though obscurely presented in his writings.

On other words, when we want to talk about the real reality of concrete things in contrast to mere appearances or subjective phenomena we express this reflectively by the emphatic form '*an und für sich*', '*in-and-for-itself*'. A concrete thing really exists if and only if we can explain by it sufficiently *its* corresponding actual appearances. We always do this in a generic way. As a result, it is the practical 'success' that shows up in our experienced use of generic knowledge, by which we can say that some knowledge is really 'true'. The real world, to which we refer in our knowledge claims, is always already conceptually formed through and through, as John McDowell does not get tired to repeat in his writings. The crucial point, which Hegel adds, is this: Conceptual understanding and mastery of *generic knowledge* is one and the same thing. In consequence, development of science is development of the concept, i.e. of the canonical framework of all trans-subjective contents of possible articulation and representation of *empirical*, *singular* knowledge.

Rationality is the capacity to use canonical knowledge. Reason is the competence to take properly part in conceptual development. I.e. rationality (or understanding: *Verstand*) is the individual faculty of proper rule following, as Kant has said already. Reason (*Vernunft*) is the form of joint development of 'the concept', taken as a whole system of human institutions. Emphatic words like "essential", "true" or "real" are often used when we claim that a new proposal in such

a development is reasonable. In precisely this sense, but only in this sense, the real is reasonable and the reasonable real.

It should be also clear now, however, that we must distinguish between the *actuality* of singular empirical phenomena (in German: *Realität*) and *real reality* (in German: *Wirklichkeit*) of the objects or things, even of theoretical 'entities' like gravitational force, that appear in our generic explanations of actual phenomena. Hegel sees that both, actuality and reality, are modal notions. But whereas actuality (in the sense of merely actual *Dasein*) belongs to the logic of being as the realm of 'possible' objects constituted in the actuality of present recognition, real reality already belongs to the logic of essence, to some relevant modelling of recurrent forms of being and change. Ironically, the eternal or time-general quantities of pure sets and numbers belong to actuality, therefore to the logic of being. They exist (only) on the ground of easily reproducible present forms of sounds, letters, diagrams, formulas, and sentences.

Hegel's insight into the distinction and relation between real essences and actual appearances, *Wesen* und *Erscheinung*, is, in the end, the deepest truth of objective or absolute idealism. It includes the relation between force and movement, soul and body, intention and action etc.[17]

From his 'logic of essence', the line of thought leads to a 'logic of the concept'. This logic is called 'subjective' because its topic is the actual use of our rational capacities. It starts with acknowledging the fact that what we call "reality" behind the phenomena always already depends at least in part on what I would like to call conceptual 'constructions'. We use such constructions in verbal representations of the generic types by which we explain the actual phenomena with respect to what they really are and how they really are to be explained – on a logical level or in the logical form or mode of *particularity* (Hegel's *Besonderheit*). This is the logical form of making generic knowledge concrete with respect to singular cases.

1.8 FROM CONCEPTS TO THE IDEA

From here it is only a small step to the 'absolute' presuppositions of the *knowing I* in the sense of us as living persons taking actively part in joint practices. Hegel brings these practices, *taken as performative forms*, under the label "*idea*", which I would propose to translate as '*effective form*' or 'performative form'. This 'idea' in the sense of Plato's *idea tou agathou* makes individual life and action possible and real, namely in sufficiently good actualizations of the corresponding forms of life. Moreover, Hegel declares that 'the concept' is the real 'substance' of the whole

[17] Everybody who does not grasp this part of Hegel's analysis must be counted to those who do not count any more as serious thinkers about these matters, as we can say using a pun invented by Plato.

world as an *object* of our generic knowledge. It is the situation-invariant conceptual framework, which gives content to singular empirical knowledge-claims. As such, generic knowledge is categorically distinguished from merely subjective appearances, or from how the world only *seems* to me or you. Obviously, Hegel uses the expression "the idea" also in reference to Kant's notion of 'Idee' as a 'regulative' form of talking about '*life as a whole'*. Like the word "concept", it is a *singulare tantum*. Its use is similar to the use of mass terms like 'water' or 'wellness'. The idea is the performative form of human life (*Lebensvollzugsform*). As such, it is the idea of the good in Plato's sense: It is the most general norm, i.e. the whole system of implicit criteria, according to which we can judge in a not merely subjective and parochial way if a certain part or a whole life is good – taking the particular situation into account: The idea (of the good) is the (normative) form in which we evaluate a singular subject or person as a good one with respect to some presupposed standard or paradigm. Moreover, judging about the generic good is much more basic that judging about particular truth. With the word "true" we evaluate sentences and propositions, speech acts and responses as 'good enough', presupposing a corresponding canon or standard for what we evaluate as true, what not.

It would be utterly misleading to object against this pragmatism that any such evaluation always is 'dogmatic' or 'subjective' and does not grasp the real meaning of "true". Rather, we have to distinguish between the logical observation that we always proceed in this way, if we notice it or not. Of course, there always can be a dispute about the quality of the standard or the relevance of the paradigm in question. On the other hand, 'the idea' as the actually acknowledged set of normative forms has *real power* in our life. And it has real reality, namely in the sense that it 'explains' the singular actions and judgments not only with respect to their genesis, but also to their teleology. It should be noted that I am not yet interested in a more fine grained explanations of the notion of truth or, for that matter, of efficient causes; we shall come back to this later. However, we can already understand the essential point: In the end, the only 'absolute knowledge' consists in *how we to do things*. Or rather, the only *'absolute being'* is *performative being*, either the being of an individual *I* or of a collective *We*. This *I* is a *We* with respect to the content of its competence; and this *We* exists through the doings of the singular persons. Both are 'absolute'. They are absolute in the sense that doing something is, in its direction of fit, only relative to some content, form or intention. In and for itself, doing is absolute. I can lie and err, but the speech act is, what it is. In the sense, being as performing one's own life is absolute and not dependent on fulfilments of conceptual conditions. This does not hold, of course, for leading a *good* personal life or for talking the truth, for fulfilling the norms of good cooperation or for taking part in a practice of joint knowledge. Actually leading our life is presupposed in any

intuition and judgment, even though true judgments and drawing the right, canonized, inferences in evaluating future or past possibilities might be a very important aspect of human life. This is the deep reason why there is no ‘decisive’ argument against a skeptic who decides freely not to listen to rationality and reason and thus turns himself into an autistic animal, a mere creature of sensations and animal appetites, if only verbally, as Hume does, or even into a plant, as Aristotle already had said to this kind of sophistry ironically.

But how does all this show anything about our problem of freedom and determinism? And why do we arrive here at a critical metaphysics in contradistinction to a belief-philosophy as a system of metaphysical assumptions and contentions?

The answer is difficult and easy at the same time. Any content of any scientific claim must be shown as valid and reliable in the performative course of our life. This is Fichte’s and Hegel’s pragmatism. And this primacy of the practical cannot be doubted if we only understand what reasonable doubting is. In a sense, the argument is Cartesian. Or rather, it is a ‘transcendental’ argument. But it does not lead to any claim of a *res cogitans* or thinking self, rather to the insight that thinking is, in itself, already free action, just as, on the other side, all other free actions depend on thinking. That is, in thinking and acting we take part in pre-given forms of human practices, including joint developments of such forms. These forms make our individual rational faculties possible. Reproducing generic knowledge and using the corresponding forms of conceptual inferences properly is one of these faculties. It is the conservative rationality of a ‘student’, an apprentice or even an expert for detailed ‘pre-cut’ or ‘precise’ case work – which lies at the ground of all linguistic communication, information and individual knowledge. In a sense, only after we master this level of rule-following can we take part in a joint culture of reason – just as a composer of advanced music has to master traditional forms of composing, and a good writer, advanced or not, has to master classical forms of writing.

The reason why the formal possibility of so called determinism now turns into a science fiction that is as convincing as Mark Twains travel to King Arthur’s court, is this: According to this: All possible laws of nature or principles of causality or rules for predicting futures are justified only insofar as they fit to our performative *Erfahrung*. Hence, they cannot deny this *Erfahrung*. And this includes the impossibility of denying the reality of our distinction between free actions und mere behavior, not to speak of mere occurrences (*Widerfahrnisse*). We cannot doubt the possibility and importance of this distinction, at least not in general. In particular, the cases in which a generic causal explanation of some singular event might, by chance, fail are not different from the singular cases in which a person might, by chance, be mistaken about her

free intention and her differentiation between her own free action and some occurrences to her body, perhaps even produced from outside. In other words, the truism of the finitude or 'fallibility' of our limited knowledge and abilities cannot be used at all for arguing in favor of an alleged 'possibility' that free will and free action are mere illusions. If they were, the actions by which we have produced the generic knowledge of the natural sciences and the acts of belief of the determinist would be such illusions as well.

It is absolutely crucial, however, to see that the differentiation between free action and causally determined occurrences is of a generic form, just as the distinction between the ability of a good swimmer in contrast to the inability of a non-swimmer. A swimmer can swim at will, even though, under certain conditions, even a good swimmer might drown. In the same vein, humans can actualize many generic acts freely, even though, under certain conditions, they might be mistaken about the range of the competence. But usually, we can show in repeated actions what we can do freely and at will.

As a result, we arrive at a resolution of Kant's third antinomy which is different from Kant's own. It is a resolution in which causal explanations are understood as finite attempts to *explain* reproducible and reproduced *courses of events* 'in nature'. But this concept of 'nature' refers only to those parts of the event that occur independently of human interference. In experiments, we start the process. The start occurs on active interference and as such does not belong to '*nature*' – in the sense explained above. The whole setting of the experiment is deliberately produced by us. As such, it belongs to what Hegel has labelled by the logical titles "Reason" and "Spirit", i.e. to the *culture of our scientific practice*. Of course, all this takes place in the only one real *world* in which we life. But this is another matter.

In any case, the causal and non-teleological explanations of purely *natural* courses of events (in our sense) are of a totally different logical form than the teleological explanations of actions by 'reasons'. Not to see this is a standard weakness of our logical education today, especially in the sciences, but also in modern philosophy. Moreover, there cannot be no doubt that we do not have any positive knowledge about an alleged possibility of an 'overall causal explanation' of 'all actual events', natural and cultural, as it is implicitly involved in the assumption that any event, including our own action, is an 'effect' of some 'natural' cause, taken as forerunning 'natural' event.

The problem here is that it is not easy to see that not any formally consistent set of sentences articulates a possibility, at least not a possibility that we should take into account in our

judgments and actions. From a logical point of view, believing in naturalism or the possibility of determinism is of the same metaphysical status as believing in an eternal soul or a god as a personal creator of the whole world: Nobody can be *hindered* to believe such things. This is so because performative actions like claiming or believing *always* have a first person authority. But precisely because this authority is limited to the performative expression of the belief, it is frequently neither clear *what* one believes (because all contents belong to a public domain) nor why anybody else 'should' *share* this belief. As a result, we need a much more robust, i.e. more down-to-earth and less sophisticated, 'smart and subtle', differentiation between *reasonable* beliefs that pass the filter of critical metaphysics on one side, the *idle talk* of metaphysical belief philosophy on the other, which includes scientism as well as traditional theology, physicalism as well as mentalism, naturalism as well as supernatural Platonism, with all their formalist arguments about an alleged consistence of their arbitrary, hence merely dogmatic, system of belief.

After this first overview, we are already in a position to understand better how Hegel reacts on the well know criticism of German Romantics like Novalis (Friedrich von Hardenberg) and Friedrich Schlegel against 'philosophical system-building' in general, 'Kant's system' in particular. Again, we have to distinguish between traditional metaphysical theories, speculative images, which transcend our immanent and always finite knowledge in the wolrd, and Hegel's meta-logical and meta-scientific encyclopedic system. This system is a topical ordering of the sciences and, at the same time, of their limited topics and categorically different onto-logical realms of subject-matters, which ask for different conceptual forms of representation and investigation.

Hegel's proposals of distinctions – which are virtualye nowhere claims of special truths but always reminders of what we obviously know and can do – makes implicitly or empractically well-known forms and things explicit. The result is a systematic defense of Fichte's doctrine of the primacy of us as actors with respect to any knowledge claim or scientific theory. Fichte defends this doctrine in a merely dogmatic way. I.e. he appeals to us to believe his assertions and proposals without giving cogent reasons.

Moreover, Hegel's reflections on the status of the principle of causality and on the possibility of using mathematical methods in science show why any 'compatibilist' solution of Kant's third antinomy is insufficient. Any clear analysis and synthetic reconstruction of what it means *to see to it* that certain things get done has to admit the competence of free action. Nature as the

object of the natural sciences is, by conceptual reasons, grounded on a specific concept of experience that embraces only partial moments in the one and only world we live in.

CHAPTER 2: THE QUEST FOR THEORETICAL SYSTEMS

2.1 CRITICISM OF PHILOSOPHICAL THEORIES

Long before the later Wittgenstein criticized theory-building in philosophy, Friedrich Schlegel and Novalis, romantic followers of Fichte in Jena, had launched their critique against philosophical systems in their writings. Novalis says in a famous text with the working title „*Pollen*“ („*Blüthen-staub*“) that all those who construct ready-made systems in philosophy do so in order to avoid the difficult task of reflection. Furthermore he adds: The more narrow-minded a system is, the more it will please the public. As examples, Novalis refers to the doctrines of Helvetius and of Locke, which he calls “materialistic”, and he says that Kant’s system will always find more adherents than Fichte’s.[18]

These quotations lead immediately to a fairly general question: Why do certain philosophers object to theories whereas others think that any philosophy worthy of its name must be systematic ore even scientific? More or less the same question was posed by Dieter Henrich and Michael Dummett some time ago: Is systematic philosophy possible at all? And even if philosophy can be systematic, should it be?[19] In fact, we can distinguish a romantic type of philosophy from a systematic type: The romantic philosophers argue in a subjective mode. They love aphorisms, irony, local criticisms and destructive reflections. A systematic philosopher, on the other hand, develops, or so it seems, inferentially well-ordered terminological systems and scientific, i.e. formalized, theories (which, one hopes, are somehow deductively consistent), and tries to prove his theses in such systems. At least at first sight, it seems fairly clear who belongs to the romantic type: We could begin with Montaigne and Pascal as romantics *avant la lettre*, go via the German Fichteans to Kierkegaard and Nietzsche and end in the 20th century with Adorno and Wittgenstein. It also seems clear that philosophers like Descartes, Spinoza, Kant and Hegel, Frege and Carnap, David Lewis or Bob Brandom, just to end the list in the present age, belong to the second type. There are obvious affinities within each group, as we can see, for example, in Wittgenstein’s affinity to Kierkegaard or Brandom’s affinity to the entire second group. But it is not clear whether the romantic or the systematic type of philosophy is more popular – contrary

[18] Novalis writes: »Je bonirter ein System ist, desto mehr wird es den Weltklugen gefallen. So hat das System der Materialisten, die Lehre des Helvetius und auch Locke den meisten Beyfall unter dieser Klasse erhalten. So wird Kant jetzt immer noch mehr Anhänger als Fichte finden«: *Athenaeum*, ed. by Friedrich & August Schlegel, vol. 1, 1798, p. 106; cf. also p. 83.

[19] “Can Analytical Philosophy be Systematic, and Should it Be?”, in: D. Henrich (ed.) *Ist systematische Philosophie möglich? Hegelstudien, Beiheft 17*, Bonn 1977, pp. 305-326.

to what Novalis maintained – nor what kind of systematic philosophy we need, if any at all. Other questions emerge: What could be the reason that Novalis places Fichte's philosophy or the *Wissenschaftslehre* over and above Kant's allegedly more narrow minded system? And how should we understand and evaluate Hegel's defense of system against romantic criticisms? In fact, according to Hegel, we need more than merely aphoristic philosophizing – which Novalis, by the way, sometimes, in a rather mysterious way, calls "*Fichtisieren*".

One apparent problem of systematic doctrines in philosophy has to do with attributions and self-attributions of terms like "idealism" and "materialism", "dualism" and "monism", "skepticism" and "positivism", "naturalism", "compatibilism" or "incompatibilism". Such titles sometimes serve only the task of advertising, or polemical distancing. Under the heading "Inexpressive Reason. A farewell to fully completed skepticism (Hegel's) in Brandom's pragmatist positivism", Prof. Dieter Wandschneider from the University of Aachen says, for example, that Brandom's idea of making things explicit contradicts anything (at least according to Wandschneider's view) essential to Hegel's philosophy.[20] I do not know what could count as 'essential' here independently of what *we* attribute or accept as essential. And I say this only in order to show that it seems worthwhile to reflect anew on the systematic impact of Hegel's considerations as well as on the use of general characterizations of philosophical doctrines.[21]

Hegel still has a fairly bad press, not only in analytical philosophy, but in the natural and social sciences, too. He is widely viewed as one of the last metaphysicians. Even Adorno[22] and Habermas[23], who apparently defend a kind of Kantianism, follow this hearsay when they talk about the final collapse of Hegel's system – a collapse without any chance of revival. But if we read the texts of the period of classical German philosophy with some accuracy, we should instead rather object to Kant's transcendental idealism, i.e. to a dualism between an objective world of experience and a merely intelligible world of noumena, and even more so to Schopenhauer's sweeping metaphysics of an unconscious will-in-itself, just to name some relevant examples, rather than with Hegel's system.[24] In sharp contrast to these philosophers, Hegel avoids talking about his own system in philosophy.

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[20] See also Angelica Nuzzo …

[21] See also Schnädelbach und Horstmann

[22] Cf. e.g. the final passages of Theodor Adorno's book *Negative Dialektik*, Frankfurt/Main (Suhrkamp) 1984.

[23] Cf. e.g. HABERMAS 1985 p. 33.

[24] Schopenhauer turns Fichte's pragmatism upside down by praising the attitude of an uninterested, in the end deedless, contemplative spectator. Unknowingly, Nietzsche turns back to Fichte by accepting, like the American Pragmatists, that any knowledge and any science already is embedded in a practical and pragmatic context.

In fact, Hegel's original insights are rather opposed to what Dieter Henrich[25] and his followers claim to be the basic idea of classical German philosophy or so called 'German Idealism' – and what Ernst Tugendhat[26] and Jürgen Habermas[27] attack as an allegedly mere philosophy of subjective consciousness: Hegel sees how empty any philosophy of merely subjective self-reflection is. The same holds for the claim of an alleged irreducibility of the subjective *I*.[28] Hegel joins Fichte in the basic idea that there is only one true, i.e. sufficiently professional, philosophy – which determines at any given time what should count as a good philosophical argument and what should count as an anachronistic belief. For Hegel, however, it does not suffice to say that it is a matter of character whether such truths are accepted or not. For Fichte, a true philosopher acknowledges the primacy of the actor over the spectator and opposes allegedly wrong dogmas of materialism and physicalism. But Hegel is not satisfied with Fichte's rather preachy approach to philosophy, nor with Schelling's doctrine of 'objective idealism', which is a kind of pan-subjectivist philosophy of nature. Therefore, when Hegel is attacked for identifying philosophy in general with *his* version of philosophy, he is erroneously placed in too close company to Fichte or Schelling.

For Hegel, philosophy is a general and joint enterprise of critical conceptual or logical analysis. He himself certainly talks about his own contributions to such an analysis. But it is not by chance that the later Hegel replaces the talk about a system in philosophy with talk of an encyclopedia of the philosophical sciences, and that he uses Plato's word "dialectics" as a title for his implicitly dialogical form of logical analysis.

An encyclopedia is no system, at least not in a stronger sense of an axiomatic-deductive theory. It is, rather, an ordered representation of different realms of knowledge and objects, aiming at a kind of conceptual overview. As is well known, the later Schelling not only notices, but also criticizes, the fact that Hegel does not share his aspiration to build a formal metaphysical system. In particular, Schelling is quite concerned that Hegel's approach does not allow for a sharp distinction between *knowledge about the world* and *conceptual truth*. If we reflect on this criticism today, we would be well advised to take Hegel's side. In fact, for Hegel, the *philosophical* sciences are meta-level conceptual reflections on object-level practices, for example in the sciences. For these speculations, Hegel does not assume an absolute or ideal standpoint outside actual knowledge. He argues from within. In fact, 'speculation' in Hegel's sense is analysis of the met-

[25] Cf. HENRICH 1982, pp 57 ff. ("Fichtes "Ich"").
[26] Cf. TUGENDHAT 1979/1986, Lectures 13 & 14.
[27] Cf. HABERMAS 1985 p. 79.
[28] Cf. FRANK 1991, pp. 18ff, 94ff and 143.

hodological presuppositions as they appear in any well-determined human knowledge(-claim). Such an analysis aims at an explicit account of different conceptual systems for different language games and of how individual competence depends upon a generic cultural practice or a whole form of human life.

In the end, Hegel also turns Schelling's holistic naturalism from a dogmatic thesis into a kind of insight into the topical and holistic form of self-reflection: If relevant, we must potentially enlarge the realm of things in focus when we want to make the meaning of a certain limited (linguistic) practice clear and its place in real life explicit. Therefore, embedding a (linguistic) practice into a larger realm is one of the important methods of presuppositional analysis. Hence, we should read Hegel's so called speculative system as a *topical ordering* of different realms of philosophical reflection, which mainly are the different, but limited, domains, topics and methods of the different sciences – about action-free nature or the institution-dependent spirit of culture. Only when we understand the leading ideas, relevant questions, and problems that motivate the chosen order, will we appreciate the methodological difference between Hegel's idea of systematic philosophy as the self-consciousness of knowledge and science on the one side, what we find in the systems of Kant, Fichte, or Schelling on the other. A first hint to this difference is already present in the fact that Hegel avoids the use of words like "a priori" and "transcendental"; i.e., Hegel does not find it too helpful to follow the Kantian approach of classifying *singular sentences* as "empirical", "analytical" or "synthetic a priori"; nor to follow the Kantian idea of transcendental *deductions*. Of course, such deductions are not, as many readers still think, schematic derivations of sentences along logically valid rules of inference. They are, as Kant says clearly enough, *justifications* of principles, by which we make necessary conditions of a certain rational faculty explicit. Hegel agrees with the idea of presuppositional analysis; but he criticizes Kant's merely (inter)subjective, or, what amounts to the same, merely epistemological, approach.

Kant starts, in a way similar as Descartes, by reflecting on the very concept of (articulated) empirical knowledge, or rather, on our competence to know something by experience. Later, he reflects in a similar way on the form of moral deliberation. In doing so, Kant constructs a system of categories, logical forms, and principles. Hegel agrees with Descartes, Kant and Fichte that logical reflection has to begin with the fact that any act of speaking or thinking, of assertion or skeptical questioning, must be understood as the performance of an individual subject in a first person perspective. He also acknowledges that certain categories or principles are always already used when the competence in question is performed in a proper way. But he sees that

Kant's transcendental method expects too much from terminological constructions, considerations of formal consistency and, especially, formal logics – as it already then was closely related with mathematical thinking. We rather have to analyze the *objective* preconditions for individual performances of intelligent acts of all different kinds. Hegel finds these preconditions in social practices. These practices depend, in turn, on a corresponding historical development, which he addresses as the (self-)development of Reason and Spirit with capital letters, which refers to nothing else than our own development of our own human culture. The title "Reason" thus stands for the general conditions that make individual intelligent judgment or action at a certain time or in a certain epoch possible. The title "Spirit" stand for a generic we-subject, that is for 'us humans' in the generic sense in which we in fact are the subject for all institutional acts, from the acts of a state or a civil society to the acts of speaking, writing, reading and understanding in knowledge and science. As a result, Hegel replaces Kant's 'ideal' transcendental system by a much more 'realistic' analysis of a methodological or pre-suppositional order in the development of our intellectual competence. The aim is not merely to replace Kant's dualism by Fichte's 'insight' into the primacy of action, the acting *I* or the personal subject, but rather to give an analytical account for this primacy together with its dependency on the *really absolute I*, Spirit as the generic We of *our traditions* of *joint practices* and of our developments of the idea of being human, that is, of our human life form. This We is, in the end, the whole genus, mankind, even though particular forms always are locally developed, by leading groups of people, as, for example, science, philosophy and democracy in Ancient Greece.

2.2 KANT'S SYSTEM

One of the central problems of philosophy at least since St. Augustine, Luther or Calvin in the context of theology, of Hobbes and Descartes, Helvetius or Hume in the context of philosophy is the antinomy of free will and action on one side, of the speculative idea of causal pre-determinacy of all events in the world on the other. Kant's own system of transcendental idealism can and must be understood as a kind of masterplan for a solution of this main dialectical problem. The upshot is his third antinomy, which is paralleled to other dilemmas in the areas of cosmology and psychology. Ultimately, Kant wants to convince us of a certain kind of compatibilism. The basic idea is this.

The principle of causal connectedness, according to which any event has its sufficient reasons in the Aristotelian sense of efficient causes – which *produce* the event *with necessity* – is, according to Kant, neither a *metaphysical law* in a transcendent world of *'ontic'* things in themselves

(in Kant's sense), as rationalists like Leibniz presume, nor a merely subjective form of pragmatic *expectation* that the future will somehow resemble the past, as Hume and his empiricist followers claim. According to such a (sufficiently consequent) empiricism, causal explanations have, in the end, only a stochastic and subjective form. This is a very nice assumption; for it leads to a very easy and 'clear' philosophy: No categorical difference is needed and can be formulated between subjective certainty, with which we expect some future behavior of, say, the movements of the planets, of a cat or of a person, and knowledge. Hence, there is no categorical difference between believing and knowing. There is also no categorical difference between believing something about nature at large and about ourselves, i.e. about human behavior. By this vagueness, Hume also wants to solve the problem of freedom and determinacy. He does so in a way which should not satisfy us, since he just gives up all significant distinctions – such that, in the end, the original problem can no longer be formulated in the first place. Whoever follows this course of arguments resembles, in the end, those who do not care for the question at all. Such empiricism is renouncing philosophical reflection and self-consciousness altogether. It is basic for the intellectual sacrifice of our times.

However, Hume is correct in his attack of any presupposed transcendent world of things in themselves. (We use here Kant's later reading of the expression). But Hume goes much too far in his criticism. He assumes all too hastily, together with all kinds of followers, that the very concepts of 'cause' and 'freedom' (of the will or in action) both are 'metaphysical' in a bad sense of the word. What we would need here is not just getting rid of the words but understanding the differentiation between natural events that can be represented as consequences of efficient causes on the one hand, free and responsible actions on the other hand.

Kant sees, therefore, that and why Humean empiricism fails to explain the contrasts between 'necessity' and 'contingency' resp. '(scientific) knowledge' and '(arbitrary, dogmatic) belief' – even for the realm of experience, which goes beyond merely subjective sensations, enactive perceptions and states of expectation. Therefore, Hume does not give a sufficient account of the *conceptual form of human knowledge*, not to speak of *the very idea of science*. The problem we should have with Hume's empiricist skepticism is, in fact, that it levels down the categorical difference between beasts and humans, animals and persons. It only knows of subjective expectations, not of scientific explanations. Humeans ignore until today not only the categorical difference between probabilities, fitting to hitherto well-observed sequences of events, and objective explanation by not just stochastic laws, but also between the stochastic and deterministic models as we develop them together in our joint culture of scientific traditions and their proper

usage in particular and singular cases. Moreover, objective probabilities, as they are used, for example, in thermodynamics and quantum physics, are often confused with subjective probabilities of a Humean or 'Bayesian' kind – or, rather, the problem of the distinction is not taken seriously enough. In the end, Humeans cannot account at all for the difference between sensation-guided orientation of animal behavior and sapience-guided human actions that presuppose culturally mediated practices, in the sense of the competence of actualizing generic actions of some definite form *spontaneously* in Kant's sense of spontaneity, i.e. *at will*.[29]

According to Kant's transcendental reflection on our experience of objects, we do not just bring some arbitrary subjective order into a given flow of individual sensations (or perceptions). We use general laws in our objective experience with its object-related reference to the real world. Therefore, the doctrine of the *analogies of experience* holds a prominent and foundational place in Kant's account of these laws. These analogies are dynamical postulates. They refer essentially to lawful changes of properties and relative movements of objective things or physical bodies. The most general principle is this: »Experience is possible only through the presentation of a necessary connection of perception.«[30] Accordingly, I read the three analogies of experience, roughly, in the following way:

The *first analogy* says that the very concept of an empirical object in an empirical judgment presupposes the identity of the object at different times and from different spatial perspectives; i.e. the empirical object must be a *substance* – which means that the category of substance and the corresponding presuppositions of space- and time-invariance apply in a sufficiently good way: »In all variations on the part of appearance, substance is permanent and its quantum in nature is neither increased nor decreased«.[31]

The *second analogy* runs as follows: »All changes occur according to the law of the connection of cause and effect«.[32] It tells us this: When we say that an *empirical event e* occurs or would occur under the condition that another event *e** should occur, we presuppose certain *natural laws* that regulate the relation of *cause and effect*. The lawful relation of causation is, in a sense, constitutive for an objective ordering of the time at which the events occur – in contrast to a mere subjective ordering of our individual sensations. It is also constitutive for the very possibility of identifying a body that leaves the realm of our observation and later returns back into this realm. But it is nevertheless only a regulative principle. Kant calls the constitutive definition

[29] Cf. Brandom 1994, pp. 4-8 et passim.
[30] Cf. Kant, *Critique of Pure Reason* (=CRP) B 247 (and B 158).
[31] Cf. Kant *CRP* B 252. I do not comment here on the gross exaggeration in Kant's formulation.

of the identity of the body “mathematical”. This obviously is a structural metaphor. It means that whatever laws we actually use when we *identify* a substance, i.e. an empirical object or thing in time, its *identity* is already defined by the ‘mathematical’ principle of *continuity* according to the axioms of observation and the anticipation of sensation (or rather: of perception) – and *not* (yet) by the *dynamical laws of cause and effect*.[33] In other words, the continuity of the movement of things refers to the level of appearance at present: In presence (present *Dasein*) we must be able to follow the path of the movement the thing takes. Causal explanation refers, in contrast to this, to a level of describing how things move outside the domain of observational control and of explaining their course by causal laws and ‘forces’. The paradigm case is Newtonian mechanics or dynamics.

The *third analogy* says, accordingly: »All substances, insofar as they can be perceived in space as simultaneous, are in thoroughgoing interaction.«[34] When we say that an empirical state of affairs *s* holds or would hold *at the same time* when another state of affair *s** holds or should hold, we presuppose a certain order of *spatial coexistence*, called »community«. The expression »thoroughgoing interaction« refers to a general rule like the following: No two physical objects can occupy the same place at the same time. This is a fairly general idealization of the very general, therefore only in a wide sense empirical, fact that physical objects always show *some* resistance, for example when we want to remove them or when we just touch them. The maxim of the sequence of time (2. analogy) has to be seen in narrow connection with the maxim of reciprocal interaction or simultaneity (3. analogy).

These three analogies lead, in a sense, to a comprehensive notion of a physical body and the central principle: *every bodily thing is heavy.* This sentence expresses a synthetic a priori rule.[35] This is so because it is no merely verbal, conventional definition or a logical, merely formal consequence of such definitions. I.e. it is not analytic in Kant’s sense, but holds, nevertheless, a priori. This is so because all bodily things move relatively to each other and the formal cause for such movement are the forces attached to the local bodies. Their mass now is proportional to the gravitational forces.

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[32] Cf. Kant CRP B 259.
[33] This distinction between identification and identity refers, in a sense, to the distinction between epistemology and ontology.
[34] Kant, CRP, 276.
[35] The *postulates of empirical thinking* are the combined conditions of meaningful empirical knowledge-claims, contemplations on empirical possibilities, assertions of empirical reality, or statements about universal empirical truths. Kant distinguishes between an empirically possible state of affairs, actual empirical facts, and necessary conditions which must be fulfilled when we want to refer successfully to a possible or to the actual world of objective things and facts.

Like Descartes, Kant counts the extension of *res extensa* in three dimensions as a definitional or analytical property of being a body.[36] For both philosophers, there are no *merely logical* or *terminological* reasons why there could not be extended objects without weight or mass. Having weight means to be subject to *gravitational forces*; and having mass means to be subject to the law of *inertia.*

All this seems very reasonable. But Hegel protests against this. The point is not that he disagrees to the a priori form of our attributions of mass-numbers to bodies (measured by weight or impulse). He rather criticizes Kant's all too narrow idea of conceptual or analytical truth.[37] For Hegel, to be a body already means to be an object in our system of thing-related experience. This system includes already conceptually relevant knowledge about typical generic movements of bodies.[38] Therefore, it is conceptually unintelligible that a real thing could disappear from one second to another without any cause. Since all real bodies move with a certain velocity and acceleration – if we compare them with other real bodies –, and since we have to use the concepts of mass and weight in describing these relative movements (as Leibniz and Newton realize against Descartes), *every body has mass and weight*. This is *not* just an *empirical* property of bodies, nor is it a *synthetic a priori* statement in the sense of a transcendental feature of our mental or scientific constructions; i.e. it is no merely subjective feature of our system of knowledge about bodies. Having mass and moving about according to some laws is at least no local or individual property of a body.[39] Causation, too, is no local affair. A mechanical cause for a dynamical effect can only be a certain distribution of material substance in space together with at least some history of relative movements and processes in time.

We may be interested in local relations of cause and effect. But in reality, causation is always global. It always refers to a whole state of affairs in the world. This insight, which can be attributed to Spinoza, follows from the fact that the state of movement of a body is not defined independently from a reference system. This was already clear to Galileo. It is the very reason why Hegel says that having mass and being prone to gravitational forces is an *analytic* property of

[36] Cf. GARVER 1969, p. 254.
[37] Hegel presents fairly similar arguments as Winch 1987, ch. 7.
[38] For Kant, it is an 'empirical fact' that bodies move (see, for example, "Metaphysische Anfangsgründe der Naturwissenschaften, 1. Hauptstück, Erklärung 1, Anmerkung 2"). This is astonishing because matter is defined by its very possibility of spatial movement, which should be understood as relative movements with reference to other bodies, not to some 'space'.
[39] When Hegel says that light is weightless (in his *Encyclop. of Phil. Sciences*, §§ 275 ff incl. supplements) he does not only say that the propagation of light does not fall under the concepts of inertia and gravitation (which we today consider as false). He claims that electricity, magnetism and light are physical phenomena that cannot be described in the Kant-Newton-system of moving particles.

being a body. It is an empirical question *how* the bodies move, not *that* they move. As bodies, they belong to a whole system of moving bodies.

In the same vein, a number as such belongs to a system of numbers. Therefore, long before Frege and Carnap, Hegel also already claims, against Kant, that all arithmetical sentences are analytic: Something is a number named by a number-term only in the *whole system* of arithmetical terms and sentences.

Kant assumes that the possibility of causal explanation of relative movements of things according to generic laws is *constitutive* for any object-related knowledge claim. And he accepts at least this much from Hume's anti-metaphysical skepticism: He claims that these transcendental conditions do not refer to things in themselves – about which we do not know anything –, but *to the realm of possible experience* or phenomena – as they are controlled by us in joint observation or *Anschauung*.[40] But, according to Hegel, Kant remains too dependent on Hume and Descartes – such that, in the end, his merely epistemological system of transcendental idealism or subjective criticism turns into an agnostic system of complete skepticism.

Before we can say more to the effect why this is the case, we have to come back to the main philosophical problem. It is the problem of determinism, free decision or will and responsible action. Actions should bring about changes in the world of experience. However, »all changes occur according to the law of the connection of cause and effect«. If this should be so, how could free choice (free will and free action) be possible? Kant answers to this central problem in the *Critique of Pure Reason* somehow like this: When we talk about free choice or spontaneous will, we do not talk about *a cause in the world of phenomena*. *Free will* is a pure *noumenon*, only an 'intelligible' entity, constituted by thinking, which, by *definition*, is no object of empirical investigation. According to Kant, it is, therefore, a mere tautology to say that we shall never find anything like a free elective will by empirical research. The only thing Kant wants to achieve in his *Critique of Pure Reason* is a proof that we can *consistently think of*, or *talk about*, free choice or will or action. Kant thinks that in his resolution of the third antinomy he has provided such a proof of consistency. In other word, natural science as a set of 'empirical theories' of causations in nature cannot contradict the possibility of free will and action, which we need as basic prerequisites for moral and legal judgements and actions.

[40] We definitely should avoid the subjective connotations of the word "intuition". Since the words "Anschauung" and "observation" both presuppose (possibly joint) reference to the same object, I would propose to translate the German word "*Anschauung*" (at least as used by Kant, Schelling and Hegel) by "*joint observations*" – for lack of better alternatives.

It might be a good place to interrupt again our consideration of Kant's argument and throw already now a short look on Hegel. Hegel sees that the status of force as a determining cause in our explanation of the course of movements of bodies in the natural sciences is just of the same logical status as the notion of free decisions or will together with the chosen forms of actions in explaining actual acts of humans. In other words, free will and causal force are, at least at first, *both* theoretical objects of reflective talk, by which we make our very form of accounting for human actions in one case, of natural, i.e. action-free, movements of bodies on the other side explicit.

Coming back to Kant now, a positive deduction or justification of the reality of free will is not given in the *Critique of Pure Reason* but rather in Kant's *Critique of Practical Reason*. The argument runs like this: You *can* freely act according to certain normative principles (by which you can justify subjective maxims as morally correct) because you *ought to*. Obviously, this argument begs the question. It presupposes that the *normative law of duty* does not ask me to do what I cannot do. Kant seems to assume, as we already have seen, that there is a kind of pre-established harmony between our moral duties and what we can do. He asks us to believe in the rule: ought implies can. But the rule limits the ought, as we know it from the legal principle *ultra posse nemo obligatur*.

The problem is not that Kant talks about a realm of noumena or a world of merely intelligible entities, of objects of mere thought, and that this talk is metaphysical or transcendent; it is not. The problem is how any appeal to such a realm should solve the dilemma of free will in a satisfying way. If the statement »all changes occur according to the law of the connection of cause and effect« were universally true – for whatever reason, transcendental or empirical –, how could we avoid the conclusion that any talk of free choice and responsible action is just a *paper tiger*, produced by a mere mode of speech. As a result, (neo-)Kantians like Vaihinger talk of a an 'as-if-philosophy': We talk and judge as if there were something like free will.

Hegel's most basic point seems to be this: if we say that we only talk as if there was free will, why not saying as well that we only talk as if there were causal forces? Both ways of talking are of the same logical form. Hence, the reality of causal laws about forces and the reality of free elective will are basically of the same logical form.

Lewis White Beck and many followers of Kant ascribe to Kant the doctrine of dual aspects.[41] The doctrine goes, in a sense, back to Spinoza's differentiation between *natura naturans* as the

[41] Cf. BECK 1975.

realm of being-in-performance (think, for example, of living beings as-they-are-living) and *natura naturata* as the realm of mere objects of (our) perception and knowledge. As long as we investigate the behavior of men scientifically, as *spectators*, we are entitled to assume the principle of causal connectedness. But a*s actors*, in performing possible schemes of generic actions, we have to assume the principle of freedom of will, namely in view of our moral duties or, more generally, in view of the normativity of correct (true) judgments and right actions. That is, I have to ascribe the correspondent responsibilities and, hence, possibilities of free decision to myself. But again, this self-ascription could be a paper tiger if we hold it against the light of the claimed possibility that we could, in principle, explain our behavior causally – if we only knew enough. In other words, we need a much more rigorous and much less rhetorical account for the relation between the first and the third person point of view. But what are the limitations of free elective will on one side, of causal explanations along the lines of Kant's three analogies on the other?

Kant's talk about a 'causality of freedom' shows the problem even more clearly. Causality was explained only for processes in the empirical realm of phenomena. How could a merely intelligible entity with a mode of existence outside of space and time, similar to the mode of existence of abstract numbers, have any real causal effects? Schelling and Hegel see the problem clearly. In the end they agree with what Peter Strawson later says as well, namely that a perspectivist world-dualism of actors and spectators – or rather the corresponding parallelism of an intentional stance and the realm of possible explanation – does not lead us out of this problem. Therefore it is doubtful that the reality of free elective choice can be shown by transcendental arguments at all, namely as a presupposition of the very fact of normative and moral judgments.

Nevertheless, by making a distinction between the *constitutive* rules in the mathematical conditions of objectivity and merely *regulative* norms for a framework of causal explanation,[42] Kant clears the ground for Fichte's next step and for Hegel's solution to the problem of freedom: They both defend the primacy of action and attack the dogmatic belief in an allegedly universal causal nexus. For them, the very fact that we can distinguish between human actions and mere events shows that there are gaps in causation.[43]

2.3 FICHTE'S FUNDAMENTAL INSIGHTS

Many things that later are attributed to other philosophers, especially to Nietzsche, already follow from Fichte's basic insights. These insights are twofold. The first could be labeled "*per-*

[42] To see how much Kant himself has achieved on this path of thought would need a longer treatment. Cf. Kant, CRP, B 161.
[43] Cf. STEKELER-WEITHOFER 2003.

spectival pragmatism". It can be sketched like this: Any reference to objects presupposes performative acts and, hence, the perspective of the speaker or actor. The second insight concerns the problem of the identity of subject and object in judgments of self-reference or self-knowledge. In such judgments, we distinguish between the performative subject or speaker who judges and the object or grammatical subject of the judgment, and identify them at the same time. Notwithstanding what Dieter Henrich says about Fichte's account of the never-ending reflection on me as a subject, according to which I am already identical to myself as the object of my reflection,[44] Fichte realizes that in judgments of the form "I have the property E" the word "I" has two functions at once: It refers deictically to me as the speaker, and it is also the syntactical subject, i.e. the semantic object I am talking about. In a judgment about myself, I attribute properties to myself. Fichte expresses this fact by saying that I as a performative subject make myself into the object of a judgment. Thus, I refer in judgments about myself at the same time to some semantic object and to myself.

This whole reflection on the form of reflection on me is fairly formal. Nevertheless, a corollary to its subject-object-structure should be acknowledged as a basic insight of the early German Romantics, including Friedrich Schiller. It can be called the paradox of analysis with respect to self-reflections or my statements about me. It says that it is systematically impossible to make the implicit totality or *pleroma* of my performative and practical attitudes as a whole explicit. A famous epigram by Friedrich Schiller expresses this indeterminacy of myself with respect to my subjective states of mind in quite a nice way:

"Why is it that the mind cannot appear to the mind? If the soul starts to *speak*, not the *soul*, alas, is speaking any more."[45]

In performances of generic actions, especially in performances of speech acts, the real subject is not the individual body, but rather the *I* as a concrete personal subject who actualizes a general form. Therefore, in any attempt to express myself, it is, so to speak, not a totally singular *I* but already a general *We* who is, in a sense, the *real* subject who speaks.[46] Or rather, not *I* say that p, if *I* express something by uttering a sentence *S*, but the sentence *S* uttered says that p – as Wittgenstein says in the *Tractatus*.[47] In precisely this sense, the word "*I*" refers in any speech act at the same time to me as a singular speaker in a particular situation and to *any* of us, to any possible speaker. This and only this is the reason why *the content of what I*

[44] Cf. HENRICH 1982, p. 61.
[45] Cf. Friedrich Schiller, *Nationalausgabe* (Vol. 1, Weimar 1943) p. 302 (or vol. 2, p. 322). Cf. also W. Franzen, „Spricht die Seele, so spricht ach! schon die Seele nicht mehr. Einige Erwägungen", in: HOGREBE 1998, pp. 87-103.
[46] This insight is, once again, also shared by Schelling.

say, properly reconstructed, can be understood by anybody. In the same vein, Hegel says that what *I* mean (in German: *meine*) and what is only mine (*mein*) is always the most unimportant thing and not at all the most important thing, as Schiller's verse and Dieter Henrich's philosophy make us believe.

It is true that we always have problems expressing ourselves. But it is only a sentimental idea to deplore the conceptual limits of making ourselves understood because of the perspectival finitude and conceptual indeterminacy of our own being. Perspectival limitations are a necessary feature of experience and understanding in all actualizations. We must accept them as brute and basic facts. They are the reasons why any attempt to have exactly the same feelings (sensations or perceptions) as other subjects or creatures is futile, an incoherent idea. It is important to distinguish, however, between the conceptually impossible enterprise of having exactly the same feelings as other subjects and the human practice of perspective-transformation in joint *Anschauung*.

Fichte's idea of the primacy of the actor and speaker with respect to any object of knowledge and judgment can be reconstructed as a kind of speech act theoretic transformation of Descartes' original insight into the primacy of the thinking subject, the *res cogitans*: Any performance of a judgment or action presupposes a speaker as an actor. For Fichte and his followers, this consideration gains its importance within the context of an anti-empiricist or anti-Humean distinction between merely animal perception and human apperception. In fact, we can read Kant's transcendental principle of apperception thus: "For any *Vorstellung* (in the sense of a presentation of something in a possibly joint present observation (intuition, *Anschauung*) or in a spontaneously produced symbolic representation of something) it must be possible that it is accompanied by an "*I* think of it"". The word "apperception" just means a perception to which a conceptual determination of that which is perceived is already or can be added. It is a perception, presentation or representation that is or can be implicitly or already explicitly accompanied by a corresponding concept by which we make (silently or publicly, in inner thinking or overt speaking) explicit what it is that is perceived. Therefore, Kant says that the principle is *analytic*, namely with respect to the very concept of apperception itself. It is transcendental insofar as *apperception* is a necessary condition for actual *observation* or *Anschauung* of already trans-subjectively well determined real objects in the real and actual world.

Hegel shifts the focus from the apperceptive *I*, i.e. from the individual subject who perceives a conceptually determined object, to the generic form of conceptual thinking and the generic form

[47] Cf. Wittgenstein, *Tractatus Logico-Philosophicus*, § 5.541 –5.5422.

of *joint apperception* or *Anschauung*. That is, Hegel does not stress, in this context, the *subjective and individual I*. He rather sees that the *I* is *the form of conceptual thinking* and the *possibility of a change of perspective while referring to the same object* that is responsible for the categorical difference between animal perception and human *Anschauung* in the sense of (possibly joint) observation of an object, a *gestalt* or thing or present process. This is a kind of *anti-Cartesian* move that is also directed *against Kant and Fichte*.

According to Hegel, the *I*, as the subject of my (speech-)acts, is not a mysterious entity with mysterious powers of individual thinking or inner intuitions. The *I* is, in a sense, nothing else than *my competence of taking part in a joint practice of intuition and conceptual determination of what is observed* that makes all the difference between animal sensation and human perception on one hand, and human *apperceptive intuition* in a present situation with its possibilities of demonstration or *deictical showing and verbal labeling and describing* on the other.[48]

2.4 HEGEL'S IDEA OF CONCEPTUAL ANALYSIS

In a sense, Hegel joins the romantic criticism of individual subjectivism and theory building, which I sketched above. He defends a philosophical method of *purpose-related analysis* as we know it from the tradition of Ludwig Wittgenstein as it leads down to John McDowell's meta-philosophical comments which also refer to his own accounts of the relation of *mind and world*.[49] Even though Hegel seems to appreciate the importance of Fichte's insights into the primacy of the first person, the actor, he is not satisfied with the all too formal representation of Fichte's ideas.[50] Instead, Hegel goes back to the *ancient method of analysis and synthesis* as sketched by Pappus. In order to understand this method correctly, we should not follow its axiomatic interpretation, down to the book of Hintikka and Remes.[51] The main point is this: The paradigm case for analysis *is not abduction* in the sense of Charles Sanders Peirce, i.e. it is not a search for *axiomatic hypotheses and appropriate schematic rules of deductive inference*, fitting to a given set of theorems, which we can then 'prove' or 'deduce' from the axioms.[52] The paradigm case for Hegel's method is the solution of elementary planimetric problems like, for example, the construction of a pentagram by limited construction methods with circle and ruler. This method

[48] Hegel's word for Deixis is "Monstrieren". Brandom gives an account of the two forms of language use, labeling and describing, as they are only mentioned here without a more detailed analysis of the difference.
[49] John McDowell, Mind and World.
[50] The fact that Fichte's way of speaking is too formal is nicely shown by the fact that Henrich's representation of Fichtean ideas is much too formal as well.
[51] Cf. HINTIKKA/REMES "The Method of Analysis. Its Geometrical Origin and Its General Significance" (Sythese lib. Nr.75). 1975.
[52] The word "deductive" in its modern meaning of formal derivation stands for what Hegel calls "apagogic" – in direct reference to Plato and Aristotle.

of analysis proceeds in the following way: We start with a rough sketch of the problem and a description of a possible or expected result. Then we consider necessary presuppositions for arriving at a solution (‘superseding sublations’ or *Aufhebungen*) of the problem. That is, we analyze the whole problem by splitting it up methodologically into steps and sub-problems. A *resolution* is a final solution of such a sub-problem or of a whole series of sub-problems that jointly lead to a solution of a complex problem. The final synthesis is, therefore, a final construction. If it is more complex, it is a sequence of constructions or a description of a method for describing such a sequence in a theory, which does not have to be an axiomatic-deductive theory, though it can be of this form. The synthetic resolution in such an analysis obviously puts the (partial) *solutions* into an appropriate order. Insofar as theory- or system-building as a final resolution in binding the results together stands at the end of the process, the abductive reading of analysis obviously shows into the right direction. As far as the deductive paradigm fits, we can agree with the analysis of ‘analysis’ in the book of Hintikka and Remes, but only as far as it reaches.

For Plato in the dialogue *Philebus*, this procedure is a most general method of science. Hegel refers to it in his critique of Newton and Kant for their merely synthetic or constructive procedure: Since they forget the corresponding analysis, especially in its relation to limited and local problems, they loose sight of the proper place of the constructed theoretical model in a solution of a well determined problem. As a result, the claims of their theories and systems turn out to be all too sweeping and general.

Hegel’s philosophical dialectic is now not much more, and not less, than a general application of the combined method of analysis and synthesis. It is used in the context of making different realms of experience explicit: phenomena in nature as well as implicit forms of human practices. Its most important feature is that it only answers to concrete, though fairly general, problems. These problems and the corresponding judgments of relevance-dependent satisfaction conditions must always be kept in mind. Therefore, no theory represents or explains the phenomena ‘in an absolute way’, but always via some ideal ‘model-structures’. The ‘entities’ we talk about in such structures are abstract or theoretical entities. Think, for example, of geometrical forms. They are objects of ‘pure thought’ that allow a formal use of formal logic. The entities we talk about in this mode of speech of pure mathematics do not exist in ‘actual reality’. They are objects of mere thought. But they serve most important *regulative purposes*. They are means for making general properties of spatial forms of real bodies explicit. We make use of them in forming bodies, i.e. in techniques of shaping bodies and controlling the shapes or

spatial forms of bodies, which are not just visual shapes, as the word “Anschauung” in is sense of ‘visual perception’ misleadingly suggests. We rather use geometry in making our practical orientations in and for our reproducible practices explicit.

All in all, Hegel turns Kant’s constructive system into what it really is: He reads it as a presuppositional analysis of forms and categories used in objective experience and in practical judgments. Hegel proceeds the same way with Newton’s theory: He shows that Newton develops a mathematical solution to the problem of combining Galilei with Kepler. But he also shows that there are many mystifying interpretations of Newton’s success. One interpretation talks about infinitesimal forces. But no such forces exist. Even in mathematics, infinitesimals do not exist. Moreover, there are no non-accelerated movements in nature. Clocks are cultural products. The same holds for the very idea of inert movements. We need clocks and the idea of inert or straight lines in Newtonian space-time when we want to measure time and accelerations of bodily movements – and when we want to give the results a mathematical treatment in analytic representations of curved lines in an already mathematized space-time. Hence, our concept of force, by which we *explain* the free movements of the planets around the sun, already depends on our practice of measuring straight lengths and time; and it depends on our mathematical practice of determining the lengths of curved lines by linear approximations. In other words, the very concept of gravitational force is a result of our forms of doing mathematical kinematics and dynamics. The forces of gravitation do not ‘explain’ the observed movements in the sense of an efficient cause. They are only part of our system for describing observed and observable movements of bodies generically, as far as it goes.

A map of a city does not give causal explanations. The only reason why it is natural to say that (Newtionian) laws of nature *explain* bodily movements causally lies in the fact that their generic descriptions support law-like (counterfactual) conditionals of the following form successfully: “If a body moves thus …, or is brought into this … position of movement, then this … will happen.” In this sense, gravitation is, according to Hegel, analytically included in the very concept of a body, which already must be understood as an element of a system of possibly moving objects. Hence the sentence that any body has mass is not, as Kant says, synthetic, but it is – in Hegel’s holistic sense – analytic: It articulates a certain kind of some partial conceptual necessity. It is the necessity that any body falls under the laws of gravitation and of those that are connected with other physical ‘forces’.

Ultimately, Hegel provides a detailed argument for why it is *unscientific* to *believe in* ‘Newtonianism’ as a version of ‘scientism’. In contrast to Newton’s physical mechanic, if it is applied to

the proper domain of phenomena, Newtonianism is unscientific speculation. It confuses successful explanations of specific things and events in the world by theoretical models with representations of how the whole world allegedly really is in its totality. It is also unscientific because it does not see that real reality just shows itself in the success of our theories and actions. Hegel thus shows *ex negativo* that we do not have to *believe* in Fichte's idea of the primacy of action in science. We rather can make explicit what this idea means and why it is true. I.e. we *know* that this is so.

The early German Romantics had already criticized a latent scientism in Kant's conceptual reconstruction of objective experience and knowledge. Kant claims, indeed, that a system of knowledge is really scientific only insofar as it has been brought into a mathematical form. This means that the paradigm case for real science is Newtonian physics. Insofar, Kant is a supporter of a corresponding idea of the unity of sciences. This unity is defended by an appeal to the unity of the one and only objective world of experience.

Hegel joins Kant only in his criticism of Hume's all too weak empiricist idea of a unity of knowledge in the context of perception and behavior. But he attacks Kant's 'too great love of physical things'. Hereby he follows Schelling's philosophy of nature. In fact, we can attribute the following insight to Schelling, which can be seen, in turn, as a development of Spinoza's ideas: There is one world in which we live; but there are different domains or realms of objects of knowledge, *characterized by different forms of change, becoming and movement*. Therefore, we need different forms of representations in order to *make explicit the different forms of being* of, say, bodily things, chemical substances, electromagnetic phenomena, plants, animals and humans.

Hegel's encyclopedic system is, then, at the same time, a topical mapping of onto-logical realms of beings and of corresponding forms of human knowledge. The basic insight, which Hegel adds, is this: Any realm of objects, properties, relations and processes already is, in a sense, finite or limited. There is no universe of discourse in which we can talk about all things that really exist in objective experience, namely physical objects. Therefore there is no theory of everything, not even in principle. The reason is not, as already Kant makes it appear, a matter of our limited knowledge as humans. The reason is an (onto-)*logical* one, not an *epistemological* or merely *practical* one. It lies in the fact that any meaningful reference to a possible *sortal realm* G of objects of discourse presupposes the following things:

1. a domain of possible presentations and/or representation for possible objects in G;

2. a relevance-dependent equivalence relation "=" which defines what are presentations

and representations of identical objects;

3. a corresponding set of properties, relations or typical processes (like movements) of the objects. This set always is limited because it does not allow for distinctions finer than that of the identity-defining equivalence-relation. The conceptual reason for this is given in Leibniz's proposition, as Hegel calls the logical principle of substitution of equals.

This principle of Leibniz can be represented schematically as follows: If g=g* holds in G, we can infer A(g*) form A(g) for all G-properties or G-differentiations A(x). It is this very principle, which limits the expressive power of any well-established (and therefore finite) realm of discourse G. It shows in which sense identity always must be seen as a relevance-dependent negation of negation – meaning that we cannot make finer distinctions than those that the corresponding equivalance-relation or *Gleichgültigkeit* allows.[53]

The same reasoning shows why we need different realms of objects when we want to articulate different phenomena not only in different granularity, but in different settings of relevant differentiation and orientation. Even when we sometimes 'reduce' the realms or domains, for example when we re-incorporate electro-magnetism into a comprehensive system of physical dynamics, we still have *different* realms or domains of experience.[54]

Hegel now adds a further point into the picture which he takes from Aristotle, namely, that any reasonable understanding of nature and natural science presupposes some pre-knowledge about categorical distinctions. These distinctions do not just refer to the different *things* and their merely present spatial *gestalts* or forms, but also to their different forms of relative movement and change *(kinesis)* and their different modes of being in time, i.e. to their *different processes of change, to different forms of movement and behavior.* As a result, talking about human action must be acknowledged as a special logical form, which presupposes a clear conceptual differentiation with respect to mere animal behavior and inanimate processes and movements. The first difference can be seen, roughly, from the fact that we refer to intentions and plans that talk about the future when we give reasons for actions, whereas we have to explain animal behavior by present motives. The second difference can be shown thus: A dead corpse still is an object of physics and chemistry; but as a whole it is no longer an object of biology. Therefore,

[53] Whatever a 'philological' critic of Brandom's interpretation of Leibniz, Kant or Hegel says, without an investment of all our knowledge about modern developments in logical, conceptual and structural analysis, we do not understand philosophy in its historical and systematic development at all.

[54] Hegel is interested, like Aristotle, in the differences found in the conceptual forms of investigation and representation that define the different realms of sciences. He sees that already with the conceptual framework we have defined limits of possible expression.

natural science and philosophy have to differentiate not only between different things but also between *different processes*, for example between purely mechanical, chemical and electro-magnetic processes, on the one hand, and biological changes and developments, animal perception and movements, and intentional actions, on the other.

Hegel's further point is that when we come to the specific human forms of actions and practices, we need a different concept of science. Actions and practices as such cannot be (fully) described and explained in the methodological framework of the natural and technical sciences. The basic reason is that the natural and technical sciences neither use, nor analyze, a full-fledged concept of *Vernunft* (Reason with capital R) or *Geist* (Spirit with capital S).[55] There is no *use* of Reason in technical science as long as we only learn to use what is known and do not develop knowledge. Merely 'technical' knowledge or rather, mere application of knowledge is, as such, rational knowledge or a matter of mere *Verstand*, i.e. of scientific rationality. The paradigm example is learning the techniques of basic arithmetic. Whoever cannot count and calculate with decimal numbers and does not understand that the rule or function x+2, applied to numerals like 1000 and greater lead to the series 1000, 1002, 1004 rather than any other series like 1000, 1004, 1008, is not a deep thinker but must be sent back to school.

The reason for making a difference between Rationality (or rational Understanding: mere *Verstand*) and Reason in Hegel's terminological use of these words (which goes back to Kant) is this: Reason should be used only when *we reflect on or evaluate actual or possible changes* of the forms of joint practices or of the norms of human cooperation. Such norms include all kinds of object-level criteria of judgments about truths.

Now we can continue thus: There is no explicit analysis of Reason or Spirit in the natural sciences, because any such analysis *is heavily historical and philosophical*. The very topic of an analysis of Reason is the development of human practices. As such, it cannot be reduced to an empirical investigation of individual competence or behavior. This shows why we obviously cannot translate *Vernunft* without further ado by "reason" (without capitalizing); and why anyone who translates Hegel's *Geist* with "spirit" should be aware of the fact that Hegel talks about reasonable forms of human life in their development, and not about a merely subjective and individual competence (here and now). In fact, there are many, quite different ways of giving and asking for reasons. One important way is to ask for reasons why we can rely on certain assertions as true. The speaker has to tell us, then, how he knows that his assertions fulfill already

established conditions of truth or satisfaction. Another way of asking for reasons expects an answer to the question concerning why someone has acted in a certain way; a third asks why we should act in this way or another, a fourth why we should change an established practice or a system of norms according to some particular proposal (put forward by some proponents).

Hegel's account of the natural sciences as well as of the 'humanities' or '*Geisteswissenschaften*' may seem fairly traditional today. This is so just because it had been so influential, down to our days. It was indeed Hegel who had proposed the very idea of a science of logic as a general reflection on the special performative form of human knowledge, which is essentially the same as what Hegel calls 'Spirit'. And even though the word *Geisteswissenschaft* in the sense of a 'science of the human spirit' was coined later, it was Hegel who developed the insight concerning why we need categorical distinctions and different methods in different realms of knowledge, in those, which refer to merely 'natural', action-free, events, and in those, which refer to actions, practices, institutions and institutional developments.[56] Different forms of investigation, reflection, argumentation, and presentation are needed because of the differences in the modes of being in the world.

2.5 MOMENTS OF PROCESSUAL BEING

Hegel sees also that not all 'beings' are just to be taken as 'bodily objects' or 'things'. Beings must be understood in their mode or way to be. This is a most general 'Aristotelian' insight. Think, for example, of the process of life in contrast to being a dead thing, or of the form of human action in contrast to merely animal behavior. It was Spinoza who had helped us to mark these (logically and onto-logically absolutely crucial) differences by the replacement of the word "object" in the sense of *natura naturata* by "being" in the sense of *natura naturans*. If we understand this *ontological difference* (Heidegger), we might, in the end, see that and why the different forms of being make different forms of investigation and different linguistic or theoretical forms necessary, namely in representing the different processes, changes and movements of the 'substantial' beings we talk about. We also need different forms of explaining them. The same holds for making forms of human actions and practices explicit.

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[55] Hegel's defense of a scientific investigation of 'Spirit' (*Geist*) sets up the task of a structural investigation of the systematic presuppositions, historical preconditions and teleological reasons of human actions and practices against a fairly weak backdrop of the idea of historical and literary education (*Bildung*) in the humanities.

[56] R.B. Brandom talks of 'histories' where I prefer to speak of 'developments' and 'traditions', which are (the results of) joint actions and practices. Then I can happily agree that the forms of human life are determined by traditions and developments, whereas the forms of animal or, more general, organic life are determined by 'evolution'. Unfortunately, we do not have enough standard words such that we also speak of 'the development' of the universe or physical world when we talk about its coming into being.

With respect to physics, we have already seen that Hegel puts some emphasis on the fact that we should distinguish between the method of experiments (of un-free movements) in technical mechanics and the method of observation (of free movements) in celestial mechanics. Moreover, electricity, magnetism and physiology are distinct realms of physics. We can wish to incorporate them into a satisfying general theory. And sometimes we are very successful, as the case of statistical thermodynamics and post-Einsteinian dynamics show. The latter is a unified system of Maxwell's electrodynamics and a mechanics of moved solid bodies. There is no a priori ground that could make us sure that we will always succeed in fulfilling our wishes without any loss of information or expressive power. The same holds for chemistry, biology or the physiology of perception, e.g. of colors: Reductionism is in all these cases just wishful thinking, at least as long as we do not evaluate the resulting reductive theories with respect to their explanatory powers on one side, their limitations of proper use on the other.

In his critique of reductionism as a version of scientism, Hegel supports Goethe's idea that the apperception of colors already presupposes a culturally formed setting for color-concepts. They include conceptual inferences in our orientation in the world. Therefore, a reduction of colors in a Newtonian setting is one-sided, to say the least. It is at least misleading to say that in reality color just is refraction of white light.

Moreover, Hegel sees that we should accept a special notion of teleological explanation of developments and movements of biological beings, plants and animals, which has to be distinguished, on the one hand, from mechanical movements and dynamical processes, and, on the other hand, from a notion of explaining individual actions and collective practice by intentions and reasons. It is nevertheless not only a matter of convenience, not only a *façon de parler*, if we connect life-processes with a special logical form of teleological but non-intentional explanations. Explaining animal behavior teleologically is not just a way of speaking in the mode as if, which could be reduced in principle to merely mechanical explanations.[57]

Philosophy of Spirit in Hegel's sense is, in the end, methodological reflection on the *Geisteswissenschaften* and topical analysis of their themes and realms at the same time. These realms are the state and the law, history and education, human psychology and economy, morality, religion, and the arts. Precisely because the topic of a philosophy of spirit is a meta-level reflection on our knowledge about the world including ourselves and, in the latter regard, about the implicit forms and norms of practices that make individual intentionality and action possible, the methods of reflection become a central theme. This is the reason why there really is a full

circle in Hegel's encyclopedia of the philosophical sciences: The general idea of logic as the dialectical, i.e., analytic-synthetic method of critical reflection (or speculation) on basic presuppositions of judgments and knowledge had been Hegel's starting point. Now the whole practice of knowledge, including the practice of logical reflection becomes a partial topic of the philosophy of spirit. In other words, the very method of making things explicit by conceptual analysis and theoretical synthesis has to be understood in its role and importance as a part of human practice. In a sense, therefore, we have to read the encyclopedia twice.

The quest of system in philosophy can now be turned into the following questions: Under which conditions, and for which purposes, do we need an argumentative order of our logical considerations, corresponding to a methodological order of presuppositions that have to be made explicit. And how does this order relate to the order of topics or themes? What are, in the end, philosophical arguments or even proofs?

With respect to the basic problem of determinism, the thesis that any event is causally pre-determined on an ontic level of some world as it is in itself, we need only counter-arguments that show in which sense the premises is a merely transcendent metaphysical assumption. This might be counted as one of Kant's insights, even though it presupposes already a fairly charitable reading of Kant's *Critique of Pure Reason*. It is an insight which Hegel develops in more detail.

The belief that for any event or change in the world there is an explanation of a basically mechanistic form according to the basic idea of *causa efficiens* is the main issue. With Fichte, Hegel sees that any such belief is transcendent and dogmatic. There is no empirical or transcendental proof for it. On the other hand, to say that any event is caused by other events is true when it just means the following: Bodies usually move in some sense *continuously* in space and time and corresponding events hang in many ways together in the one and only world there is, namely the world in which we live and make experiences. To say more than this is more than we have good reasons for. Of course, we can *wish* to explain all events in the framework of a mechanically (i.e. dynamically) determined *causa efficiens* (the stochastic form of modern quantum dynamics included). And we certainly are entitled to look for such explanations in singular and particular cases. But physicalism as a version of scientism would say that such explanations *ought* to be always possible *in principle* and for all events, not only for partial aspects of what is going on but as full, complete, explanations of the whole movement, behavior, or change of things.

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[57] To this, cf. the fine and important texts THOMPSON 1995 and ROEDL 2005.

The inner contradiction of physicalism is concealed by the usual vivid admittance that there are limits on our actual *knowledge*, which, perhaps, never will be surpassed. This is precisely a kind of 'Kantian' retreat. The physicalist admits that *we* never will be able to really explain all actual processes, but that 'in principle' it is, allegedly, 'really' possible. I.e. ideal physics would be able to know about the pre-determination of any actual event. Of course, nobody knows what ideal physics is if we only view it as similar but different to or more perfect than our actual physical sciences, just as nobody knows, what God is, if we assume that this objects of thought is similar to a human person but only infinitely more powerful and wise.

For Hegel, any such infinite idealization is empty, at least in its naïve understanding. In the same vein, the expression 'in principle' loses any sense. The same holds for talking about what *ought to be possible.* Such an 'ought' is always in great danger to be *a*n empty ought, *ein leeres Sollen*. It is, without precise limitation of its application to a proper domain of real possibilities, a dogmatic, totally arbitrary, judgment. As such, it merely verbally fulfils some (secret) wishes of scientism and, at the same time, some (secret) fears of a depressed 19thcentury, as we can see especially clearly if we look at followers of Schopenhauer. Moreover, any particular search for causal explanations in the *causa-efficiens* sense presupposes judgments about the possibility of finding such explanations. Ideally, such a claim should always be proved before the search. This possibility should be more than verbal, that is, formal consistency is far from enough. And we have to be utterly careful with respect to phrases as "in principle." By using them we often talk about *utopian possibilities* – which are, as such, just the same as *impossibilities*, as Hegel says not without irony. In the same vein, a concept of *pure being*, without further hold in joint present observations of ongoing changes and movements of things, *would collapse into pure nothingness*.

The problem is to distinguish between a concept of real possibility and a formalist concept of possibility. Something is merely formally possible, if it is merely 'terminologically possible'. In such a formalist setting, we cannot rule out, for example, the 'logical' possibility that the world came into existence 5 seconds ago and will end in a minute. Philosophy in Cambridge of McTaggart's and Russell's time seems to have loved such examples. In reality, to take such possibilities seriously is utter nonsense. This is the deep reason why Hegel, who uses a much more robust and down to earth notion of conceptual possibility and necessity, dismisses the idea that we could define a reasonable concept of possibility merely on the ground of the empirically still wholly empty a priori forms and rules, as Kant still thinks we can. According to Hegel, the relation between generic knowledge about the world and conceptual truth is much more intricate

and complicated than Kant's picture leads us to believe, and as the mainstream tradition in philosophy and science still thinks today.

In fact, Kant knows only of an *epistemic concept of possibility*. But any thick concept of free action needs a concept of real, not only epistemic, possibility with respect to possible outcomes of our deeds: If we can *see to it* that something happens, this something must be conceptually distinguished in a strict and rigorous way from what we can guess regarding what may have happened, what may just happen or what will happen. In other words, what we urgently need is a clarification of the conceptual or logical distinction between statements of the form "*e* is possible because *we do not know* if *e* has happened or is happening right now elsewhere or might happen in the future" and "it is possible that *e* might happen in the future not only because we do not know if it will happen or not, but because the happening of *e depends on what we will do or see to it that it happens*." My (or our) actually seeing to it that *e* cannot depend on our *knowing* ahead that *e* will be the case (or not). If we can know ahead that *e* will be the case anyway, we cannot see to it that *e*.[58]

Theories must save the phenomena. Scientific explanations cannot contradict actual and real experience, as it is controlled in present *Anschauung* and our competence to act, i.e. to reproduce forms of actions.

We certainly have only immanent criteria for making a distinction between free action and pre-determined natural events – which are natural in the old sense, namely that they are *not* results of actions. We should nevertheless not confuse the fact that there is *one world* for all beings, including ourselves, with a problematic thesis of naturalism or naturalistic scientism, claiming that everything existing is a natural being can be fully explained in all facets of its being by the natural sciences. The obvious problem is the vagueness and ambivalence of the concepts of nature and natural science. Hegel shows that, and why, we need to maintain systematic differentiations between the natural sciences and what he calls philosophy of spirit, out of which the modern social sciences and *Geisteswissenschaften* develop.

[58] Nuel Belnap's logical analysis of '*branching time*' and of what it means '*to see to it that an event e will happen or a state of affairs p will be the case*' in his 'Stit-Theory' presents structural features of 'time' and 'ontological possibility' which are absolutely important for *any realistic logical analysis of the concept of action*. One of his central distinctions refers to the difference between events *e* or states of affairs *p* that are *settled* (here and now) and those that are not. A past or present event *e* or state of affair *p* is always settled. Some future events *e* or states of affairs *p can* be already settled now, *but only some are*. If *e* or *p* is settled now, statements about the possibility of *e* or *p* (now) can only be interpreted in an *epistemic sense*. But if *e* (or *p*) is not settled, we must distinguish between the *objective* (or *ontological*) possibility that *e* will or might happen (or that *p* will be the case) and merely *subjective* (or *epistemic*) attitudes of expectation with respect to the future possibility of *e* or *p*. I do not want to say that Hegel already had a similar insight. But he sees that the notion of possibility is the most difficult notion in logic and critical metaphysics.

Hegel's deepest insight now seems to be this: Any real understanding is finite and depends on context and relevance. This is so because explicit reference to the *whole space in which understanding is situated is not available; or rather, it is only available by a vague use of most general, speculative, title-words and head-phrases.* Real knowledge is, by necessity, perspectival, situation-bound and the result of a free cooperation. It should not be modeled by the idea of grasping pre-determined and fixed meanings, nor of guessing what the author might have meant.

Since Plato or Aristotle, philosophers have tried to resolve dilemmas, paradoxes and other controversies. They do this not only by differentiating schematic definitions of expressions (words, sentences), but also by putting whole systems of articulation in their proper places. Hegel sees, for example, that any object of meaningful discourse (or thinking) presupposes a relation of equivalence (*Gleichgültigkeit*) between different presentations and representations of the same thought in an already limited realm. This holds for thinking or speaking about quantities, sets, cardinal numbers and proportions or real numbers as well as for talking about bodily things. If no clear realm of such presentations and representations is given, or if no clear equivalence relation is defined – such that it can be turned into an identity, respected by relevant predicates –, there are no objects to be talked about at all. Leibniz had wished to talk about infinitesimals and Newton about time dependent fluxions in pure mathematics. But taken as such, both has turned out as wishful thinking, not coherent with the principles of decent mathematics. As a result, we had to replace their approaches by new foundations of calculus and mathematical analysis, as Hegel, well-educated by Lagrange, shows without any doubt. In fact, any ontological question must be turned into a question regarding how the realm of objects we want to talk about is constituted. If this insight suffices for calling Hegel's philosophy idealistic, we may call it thus. But then, any critical philosophy is idealistic.

2.6 WITTGENSTEIN'S SPADE AND KANT'S METAPHYSICS OF THE CONCEPTUAL

Human knowledge, in contra-distinction to merely animal cognition, is competence to participate properly in already well-established forms of non-linguistic cooperation in jointly dealing with certain things at presence and an already linguistic practice of spontaneous re-presentation of such forms and of things and persons that are possibly here but do not have to be here. Successful cooperation is the last criterion of all norms and proprieties. In meta-level judgments about correctness and failure we control a corresponding framework of conceptual inferences that govern linguistic representations of joint knowledge. Such knowledge is generic (*allgemein* in Hegel's sense). It represents general (not necessarily universal) conceptual inferences ('for any of us').

Cognition is merely empirical in a narrow sense if it only refers to singular (though perhaps frequent) situations. Empirical cognition always stems from particular perspectives of individual speakers. ‘Mathematical’ schemes of logical deduction are defined in idealized, therefore *ana-logical*, models that represent some conceptual forms of spatial forms on bodies or spatial and chronological orderings of their relative movements. Experienced judgment or *Urteilskraft* (Kant) is needed when we use such schemes in physics.

Wittgenstein’s later philosophy can now help us to develop a deeper understanding of Kant’s concept of synthetic a priori judgments and their role as ('transcendental') presuppositions of empirical knowledge, for the spade of meaningful possibility finds its hard rock in generic knowledge that counts as a jointly controlled and jointly acknowledged ‘system’ of conceptual normality and conceptual inference. Surpassing these normality conditions can lead to merely verbal possibilities which are as empty as assuming that 10 is the number of angels that find place on a needle tip. In a similar way, we normally should not count with the possibility of singular exceptions and contingent accidents like the one that I might fall dead in minute. If we are wise, we account for such accidents in general, not particular way.

Human knowledge goes beyond animal cognition. It does so because it is not just a disposition to react on sensory inputs in a certain prefixed way. It opens our thoughts to possibilities which transcend by far what we can see with our eyes or touch with our hands and fingers. Hegel’s deepest and least understood insight is, that only by thought and reason we have access to real reality.

Thinking as such is already the competence of participating in a complex human practice. This practice includes complex forms of conscious reflection, i.e. of collectively controlled meta-level judgments about correctness and failure. In fact, human consciousness (*Bewusstsein*, *con-scientia*) should never be equated with (animal) *vigilance* (in contrast to *sleep* or *blackouts* of any sort) or *awareness* (in contrast to a distraction of awareness of any sort) or *attention* (in contrast to inattention). Consciousness is always *controlled intentionality* in the sense of Franz Brentano (not of John Searle). Following Brentano, Husserl and Heidegger see that intentional acts always already refer to merely ‘possible objects’ or state of affairs. Generic forms govern the corresponding *fulfilment conditions* that might tell us (now or later) if the merely ‘possible’ object or state of affairs ‘really’ exists. Such fulfilment conditions surpass by far all merely ‘subjective’ states of satisfaction as we find them in animal appetite, as we should read Hegel’s ‘desire’, i.e. *Begierde*, which is, in contrast to a wish, not yet an intentional or mental state at all, rather a physiologically transmitted sensation in enactive bodily reactions.

In other words, consciousness of something at present presupposes apperceptive intuition. As such, it is a relation to a possible object which is judged, on the ground of some attentive perception, as really and actually existing. The Brentano-tradition sees, in a sense, that the possible object of an intentional act is always already conceptually formed. It already is or can be represented by words. Searle, in contrast to this, (mis)understands intentionality as a merely 'biological' or 'animal' capacity of the 'mind' or 'brain'.

Judgments about the fulfillment of a conceptual condition rest, in turn, on a presupposed framework of conceptual inferences. These inferences usually connect particular, but already conceptually determined experience in the sense of apperceptive present Intuition (full *Anschauung* in Kant's sense*)* with possible speech acts. They connect, for example, individual and joint observations with individual assertions or joint acknowledgments. They also connect different linguistic acts with each other, like proper questions with proper answers. And they connect speech acts with non-linguistic actions, like promises with fulfilling deeds.

Norms of correct inferring, implicitly learned by taking part in an already well established practice, ‚tell us' what we are *entitled to do or say* or what *we are obliged to do or say* under certain conditions, as we say metaphorically. In a literal sense, norms as such do not *tell* us anything at all, of course. The corresponding *propriety* of an action is rather *implicitly presupposed* in a community of competent persons who play the role of knower and learner or of speaker and hearer *in a proper way*. We can, however, make implicit norms of conceptual inferences (in some way or other) explicit. The resulting rules or sentences are called '*conceptually valid*'. In general, the attribution of such validity or, what is essentially the same, of generic truth, just means that we are entitled to use the sentences or rules in inferences. Logical validity in a more narrow sense is a sub-case of conceptual or generic validity. Logical validity is due to the merely conventional inferential form(s) according to which we use a certain logical vocabulary like the words "and" or "not" or "all".

In formal logic, especially if we use Gentzen type systems of sequences and not only of natural deduction, it is in a sense easy to see that any sentence can be seen as an expression of a valid scheme of inference with or without further premises. Any rule of inference of the form A,B,C⇨D with A,B,C as premises can be expressed by a hypothetical sentence of the form A&B&C→D. In this sense, the following Latin motto holds: *Sententia et regula convertuntur.* We can turn forms of hypothetical inference into rules or hypothetical sentences. In doing so, we still have to know how to use inferential forms or norms like the rule 'modus (ponendo) ponens' in practical conclusions.

As I have said, sentences or proposition that are formally evaluated as ‚true' can be seen as articulating admissible rules of valid inference. This is, in a way, trivial in cases when the sentence already has the form ‚if p then q' – if we do not read it in the merely technical sense of Frege's two- valued material implication. But it is clear for other sentences, too. We use sentences as premises in further inferences. In such cases, we use them as a kind of rule without further hypothesis, just as we use axioms in mathematics. If we see things that way, we can talk about rules of inference or implicative sentences, as we wish. Thus, formal logic, systems of terminological rules and systems of analytic sentences, defined as logico-terminological consequence of logico-terminological rules become important means in a logico-linguistic technique of explicit information processing. They make it possible to express whole systems of (possibly empirical) propositions as 'analytically' implied consequences of few premises. The set of sentences implied is defined by relatively clear and distinct ways of 'producing' the consequences deductively, i.e, via formal schemes of derivations, along the inferential lines which are made explicit by the 'valid' logical and analytical rules of deduction. To master such a system of more or less clear and distinct, non-arbitrary and jointly controlled, schemes and rules of analytic inference is a necessary condition for articulated knowledge that can be taught and learned by means of speaking and listening, writing and reading. Therefore, certain forms of logical and terminological regimentation are, indeed, always necessary conditions for a good development of situation-invariant knowledge and trans-personal understanding. The problem is that they are by far not sufficient.

If we neglect details, the picture I have drawn until now is more or less a short representation of some of the core ideas in Robert Brandom's inferentialism. The main difference is that Brandom avoids talking about *conceptual* inference in favor of a much more general concept of *material* inference. He avoids talking about *validity* and prefers to talk about individual *entitlement* and *commitment* in concrete situations and dialogues. In fact, the norms of inference appear in speech acts in these two flavors, as Brandom says, just because if you say, for example, "if a then b", *I* am entitled to use the sentence as a rule whereas you are committed to show, if necessary, that the rule is admissible – however we understand this 'admissibility' in detail. The most interesting version are the default admissibility of generic sentences that tell us how certain things or plants or animals usually behave, how institutions and practices are formed and what counts as normal or rational or reasonable action, judgment or inference. In fact, commitment-preserving rules of the form "A ⇒ B" tell us that if we are committed to A we are committed to B. Entitlement preserving rules say that if we are entitled to A we are entitled to B.

Brandom avoids talking about the widely contested distinction between *analytic, synthetic-a priori and empirical inferences and judgments* and about such vague things as *forms* of a *practice*. I do not. Avoiding the problems of vague and difficult concepts in favor of exact and easy ones can create even deeper problems, as the story of deductivism and behaviorism shows.[59] Brandom is utterly right, however, when he says that logical vocabulary is an important means of making implicit norms of valid inferences explicit by turning them into rules and sentences. But the correct use of these rules and sentences presupposes the mastery of at least some of the inference schemes, as can be seen in the case of modus ponens: The notation of the inference rule by a sentence like ‚(if p then q, and p) then q' presupposes the '*empractical*' mastery of the technique, as Karl Bühler already had said (1934). Lewis Caroll already had shown this. Wittgenstein had repeated it in his considerations on rule following.

Language is *a social art*.[60] Even if this much is granted, it is often seen as merely *coordinated individual behavior*. The best example of this picture is presented in David Lewis's book *Conventions*.[61] The problem of understanding is seen here as a problem of *individual interpretation* of particular *intentions* or of general *patterns of (linguistic) behavior*. W.V. Quine uses the *analogical picture* of *radical translation.* Donald Davidson uses the *formalist simile* of *model theoretic or Tarskian interpretation* in order to 'explain' what we do in attempts to 'understand' what was said or, for that matter, when we 'learn' a whole ‚language'. Quine leads us into linguistic behaviorism or 'regularism', as Brandom calls it. Davidson lead us, like Noam Chomsky, at least implicit into a version of regulism, which presupposes a whole set of rules of logical interpretation that gets somehow wired in the brain.

But first we have to say something to Quine's famous attack on the concept of meaning in general, the analytic-synthetic distinction in particular. As far as the attack is directed against reading meanings as Platonist ideas, it is very important: From a logical point of view,[62] words like "meaning" or "sense" or "proposition" or "sentence" function in many cases as context-de-

[59] There is no way to identify conceptual norms of correct inference in an *exact* way. There are no *sharp boundaries* between conceptual and empirical inferences. The vagueness is due to the peculiar 'cultural', 'historic' and 'implicit' form of the existence of such norms in an already well established practice. This vagueness might be the reason why „conceptual inference", „practice", „form" and „experience" do not belong to Brandom's words. But avoiding these words produces at least some costs. Like Quine, Brandom also runs the risk that his concepts of norms or proper action collapses into patterns of individual behavior and dispositions, especially when he tries to explain the existence of norms via the existence of ‚sanctions', and the existence of sanctions via the existence of certain patterns of reaction.

[60] Quine, Word and Object

[61] D. Lewis, Conventions

[62] Quine From a logical point view.

pendent nominalizing operators.[63] We use them when we feel some need 'to talk about meanings' or 'about propositions'. The corresponding abstract objects and, hence, the corresponding realms for variables or other anaphoric devices, are *locally constituted* by an implicitly presupposed equivalence relation. The logical form could be learned in arithmetic. There, words like „number“ or „set“ or „proportion“ or „ratio“ are abstractive operators as well. Realms of rational, algebraic or real numbers are defined by turning an equivalence relation between *possible representations* of such numbers into an identity. That is, an object-level identity like 7+5=12 or 3/5=6/10 for natural or rational numbers is *defined* by a seemingly meta-level equivalence relation between the expressions “7+5” and “12” resp. the ‘ratios’ or ‘proportions’ 3:5 and 6:10. But, in fact, any non-trivial identity of the form A=B already presupposes that “A” and “B” can be differentiated in one way or another, count as equivalent in certain respect and name the same object if we talk in the proper object-level domain. Insofar Hegel is absolutely right to say that any non-trivial identity ‘contains’ in some sense some non-identity or difference. This hold even, in a sense, for the trivial identity A=A.

In addition to turning an equivalence relation (in the sense of *irrelevant distinction*) into an equality and corresponding identity, we *restrict the admissible predicates* to a certain class that (hopefully) fits to the equivalence relation. The formal criterion is that the relevant *invariance condition* of Leibniz‘s principle of substitution must be fulfilled. We proceed that way in order to create new domains of entities to which we can systematically refer and which we can use in our talking about abstract objects in such a way that we can make complex reflections on possible rules for numerical expressions, ratios, convergent sequences and algebraic equations together with certain predicative distinctions explicit. In a similar way, the method of abstraction via operators like „meaning“ and „proposition“ develops our linguistic means to reflect explicitly on particular or general language use.

Wittgenstein was the first modern analytic philosopher to see that when we talk about abstract meanings of words or sentences we in fact talk about forms of performative usage of these words. His notion of ‘use’ or ‘usage’ (*Gebrauch*) therefore refers to a generic form of usage, which is as such a performative form. It must be distinguished from actual usage in the sense of a singular actualization of such a generic form. And it is not just the object defined by implicit equivalence relations between different reflective representations of the same usage in our talks *about* meaning and use.

[63] We must distinguish meanings as abstract objects defined in certain linguistic forms of semantic reflection from meanings as systems of implicit norms for conceptual inferences which we are entitled or commited to under appropriate conditions.

In a sense, meaning as generic usage is the type to all the tokens in actual use. The basic question is, however, a question of methodological primacy: The generic form or type governs the actual use by defining the normative distinction between proper and improper usage. The type is not just a set of singular cases of use. In a sense, the performative form or generic usage called “meaning” is a *technique*, which is called “competence” if the individual person has some mastery in it. Moreover, it is always already part of a joint practice.

The use of abstractive operators and the method of abstractive constitution of formal realms of reflective discourse *presuppose*, as we see, *relevant* equivalence relations, which can highly depend on the *context*. In the case of meaning, reference, sense, or intention, there are indefinitely many relations of *synonymy*, defined by some of the many possible criteria of substitution without change of *relevant distinctions* in *relevant contexts*.

Quine would have been totally right if he just would have told us that it makes no sense at all to talk about *the* concept of synonymy or the concept of equivalence, equality, identity, meaning or concept. But he did not say anything like this. Even Frege’s famous distinction between *the meaning* of a singular term as formal reference in a pre-established realm of discourse, where the domain is defined with respect to some relevant predicates and identities, and *the sense* of such an expression should better be understood as a *relative* distinction. *If* an equivalence relation is invariant with respect to certain predicative distinctions, and *if* it is used to define an identity, a realm of formal objects and, hence, a formal concept of *reference* or *meaning* (in the terminology of Frege) is defined. However, there always are some *finer equivalence relations*. Therefore, we can talk about *different senses* of expressions that *have the same meaning*. We do so, for example, in view of different oblique contexts. It does not make sense, therefore, to search for *the* sense of an expression, not even for *the* meaning or *the* reference of a singular term, if we allow its use in different domains of objects, as we almost always do.[64] “2/7” such can name a ratio, proportion, or a rational or real number, depending on the context. From a logical point of view, the distinction between reference, meaning, and sense is a *purely formal and relative* one. It refers to possible applications of the corresponding logical technique of *abstraction as the constitution of realms of formal referents or objects of discourse*. Unfortunately, Quine knows only set-abstraction, which has the result that abstraction as such is not understood properly – as in the whole Carnapian tradition of Analytic Philosophy in the 20th

[64] It is a mistake of Post-Fregean logic (down to Kripke and Putnam) to assume that there is a well defined domain of *physical things* that can be viewed as a realm of context-independent and absolute referents of possible ‘rigid’, i.e situation-independent and, hence, time- and space-invariant designators. Such ‘things’ do not exist, because all things change ‘in time’, as Heraclitus already knew. And they are difficult to identify ‘in space’, if they are far away. In

century.[65] However, in a comparative view to Hilbert's and Carnap's idea of *implicit axiomatic definitions* of whole theories, Quine brings a deep problem to the surface just by asking the following question: Which axioms and theorems of a *holistically defined deductive theory* should be called *analytic*, which axioms or theorems *synthetic*? When we look at a most relevant example, namely the famous axiom for the parallels in geometry, the question is this: Is it a holistic *meaning postulate* for straight lines and angles on a plane, or if it is a *synthetic claim*. If it is synthetic, is it empirical? The Hilbertian approach to *implicit meaning postulates* is too shallow to give any reasonable answer.[66]

The holism of axiomatic meaning postulates poses peculiar problems, indeed. But even a sentence like „no mammal is a bird" is neither made analytic by mere stipulation nor can it be revised on merely 'empirical' grounds of observation. We *want* to separate mammals and birds, and we succeed in making the classes disjoint in any epoch of time in which we can already classify whole species of animals as being *either* mammals or birds. The fact that we succeed is not just an 'empirical' fact. It is not just the result of frequent observations. It rather depends also from our conceptual principles of making distinctions as premises for informational default inferences and expectations. If we succeed in this, we say that the generic conceptual truths correspond to real reality. But there is no picturing relation in this talk about correspondence. There is no mirror of real reality.

Moreover, no merely singular case can destroy our general order of generic or conceptual knowledge. On the other hand, there is a danger that a too sophisticated criticism of important differentiations produces a kind of sophistic non-differentiation. This case show up when we look at all animals on earth at all times. Then, all animals belong to only one class – since all are somehow related, just as all humans are. The result is that there were no species at all. But then, we cannot even talk of the origin or evolution of *species*. In other words, we need a methodological order in which the present fact *that there are* species has some primacy over a Darwinian natural history that tells us a reconstructive story of their origins. Again, ethological taxonomy in biology proves to be at least as scientific as evolutionary natural history.

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other words, the rigidity of reference (and its degree) depends on our principled possibilities to identify the 'things' in question in processes. Only as long as we can presuppose such identities can we establish rigid designation.

[65] The technique of abstraction is *much more general* than the *particular* technique of forming sets and classes, especially because there are absolutely special problems of infinity in mathematical set theory that should be kept separated from the general technique. Like most mathematical logicians, Quine does not seem to see this. He only uses set-theoretic abstractions. But reducing abstraction to set theory destroys our very understanding of abstraction.

[66] Quine's own proposal of a nonstandard set theory is even more Hilbertian, i.e. axiomaticist or formalistic than the standard versions of Zermelo referring to the models of cumulative Cantorian Naïve Set Theory.

As we already have seen, it is wrong to say that *any* talk about meanings is senseless or metaphysical. It is as well wrong to say that there were no clear enough relations of synonymy – at least if we take the relevant contexts into account and make the implicit relation as explicit as needed. And it becomes a sophism to say that there were no clear enough differences between conceptual (or analytic) and empirical (or synthetic) statements. The differences exist if we *make* them. And the differences are as good as we can use them successfully in local communication and cooperation. There is no need of absolutely situation-independent criteria. Any understanding and orientation is finite anyway.

Critical philosophy needs a distinction between analytic and synthetic sentences.[67] One reason for this is that mere terminological truths or tautologies or methodological principles are often misinterpreted as *claims about the real world*. This mistake occurs as often in science as in metaphysics or theology.[68] At least in some readings, the following are rather analytic truths or tautologies than empirically contentful claims: „The fittest will survive." „No thing can be at the same time at different places." „There are no things without positions in space-time".[69] There might be disagreements about what counts as merely *terminological rules or definitions* and *logical* deduction. But there are enough clear cases, especially if we include *explicit terminological reconstructions* into our considerations and do not just talk about normal language with its intuitive definitions. We may even agree with Quine that the basic definitions can be a matter of decisions resting on complex pragmatic considerations, since the distinction between analytic and synthetic, or rather, between conceptual and empirical judgments is indeed a question of *function*. Moreover, *conceptual* truths – having the analytic as a subclass – are different in their *presuppositional status*. The difference in *justification* may often be a matter of *methodological order* and *generality.* That a right hand glove does not fit on my left hand is fairly general and can, and must, be seen as a *conceptual* truth: No further experiment is needed to convince us, and no attempt to refute it is really reasonable, even though Wittgenstein in his earlier days had thought that the difference between a movement and a mirroring were no logical distinction. But

[67] Quine's position of holistic scientism and his project of naturalizing epistemology and formalizing ontology is, in a sense, "*post-analytical*". Quine consequently belongs to those who argue in favor of an *end* of critical conceptual and hence philosophical analysis of methodological orderings of norms and forms. Quine denies that philosophy has such a peculiar task and method.

[68] If, for example, the sentence „God is the ens realissimum", is accepted as a definition, the sentences „God is the whole world" and „Everything existing is a part of God" become more or less analytically true. Moreover, the assumption that there is at least one object leads analytically to the claim that God exists. But we do not know if other ‚definitions' like „God is the best world possible" are coextensive or even coherent with the definition above.

[69] The same holds for a synthetic a priori norm like: „Any physical event is ‚caused' by other events". The problem with the vague concept of 'causing' used in such a statement is this: There are always more or less coherent stories about the genesis of an event *post hoc. They* are usually not distinguished clearly from really realible rule- or law-governed predictions *praeter hoc*. Even if we agree, that this distinction will never be sharp, the distinction is very important.

later he had seen that here the conceptual spade hits some impenetrable ground. There is just no way of fitting a right hand glove on a left hand. There is no way, of traveling in no time to distant places or even into the past. These are no unscientific prejudices but foundational limits of any real possibility.

Hence, we have found quite some examples of generic statements that hold ‘universally’ – if we discard mere science fiction or merely verbally consistent novels. We certainly can produce counterfactual possibilities by verbal imaginations. But then we do not really know precisely what we talk about. What would it mean to say that I or You lived at the time of Caesar’s murder? I do not know. It does not make sense. There are only other persons at that time who could have said “I”. I am not among them, nor are you.

Moreover, all true sentences of elementary Euclidean geometry articulate in some way or other universal generic statements about the forms of bodies and bodily surfaces. Think, for example, of the fact that no straight line can have more than two points in common with a circle. Or think of the fact that a pyramid with equilateral triangles as sides is ‘the’ three-dimensional figure with the smallest number of plane surfaces. We do not show this ‘empirically’ or ‘inductively’ by singular observations of many singular bodies but as a generic truth about geometrical forms in pure intuition. The ‘purity’ means that we know how to construct the forms *ad libitum*, at will, in many margins of precision and many sizes. – Notice that I did not say that Euclidean geometry is the true or best theory of space. Space is the domain of all spatial relation *between* all kinds of bodies and other physical things that are *moved or movable relatively to each*. Such a space cannot be described without essential use of time and, hence, is already the subject matter of kinematics, not only of pure geometry.

However, nothing can be empirically true if it cannot be situated into the one and only space-time there is. This is one of the central insights of Kant, which is more often than not overlooked or underestimated in its critical impact. It is totally independent from the question if three-dimensional Euclidian space together with a directed time-line suffice as a mathematical modell for expressing all forms of relative movements in a good way or not.

I cannot give a whole story here about the status, justification, and development of ‘the’ set of generic truths articulating conceptual rules of default inference that defines the material meaning of empirical sentences. I only want to say this: Science is not an assembly of empirical truths about singular things, no set of data, no mere *historia*, but a controlled enterprise to develop generic knowledge as general default forms for conceptual inference. In other words,

scientific development and developing conceptual frameworks for conditioned dispositions and forces that explain processes are one and the same. If this is the right way to look at conceptual truths, we cannot abstract from the *context* if we want to understand the difference to claims that still count as empirical. On the other hand, just because of their greater generality the basic feature of *conceptual* inferences or sentences consists in their relative *context-independency*. Empirical statements typically are contingent in the sense that there is a hidden parameter referring to concrete situations (of possible observation) and to particular contexts that are *not* made explicit in the sentence.

Even if it is certainly too coarse, I nevertheless tend to say that sentences that express eternal truths can be seen as sentences that make conceptually valid inferences of some sort explicit. If I am allowed to use the earliest essay on logic and method in history of philosophy for illustration, the search for eternal or divine truths in the first part of Parmenides's poem could be seen as a search for a *stable encyclopedic framework of awakening science*. Encyclopedic truths should not change if the situation changes. Therefore, there is no change of truth values in the realm of real, i.e. ideally encyclopedic, knowledge, just as there is no change of truth values for mathematical sentences. In contrast to this, the claims in the second part of this poem *On Nature* represent best available empirical hypotheses. These claims may be deceitful. As empirical claims, they are in need of further checks and control. Moreover, if I refer in empirical statements to this object here and now, the truth value of the sentence changes if the speaker, the object, the time or the spatial perspective changes.

The (admittedly rough) idea of identifying encyclopedic knowledge with conceptual knowledge amounts to this. The project of piling up encyclopedias is at the same time a project of storing historic data, *enlarging situation invariant knowledge* and *developing our system of reliable conceptual differentiation and inference*. In this perspective, we arrive at a new kind of differentiation between conceptual sentences and empirical propositions. The conceptual sentences are standing sentences, but not just in the sense Quine contrasts them to occasion sentences. In distinction to time-general conceptual rules, empirical propositions still are indexical and refer to a set of particular situation of perspectival observation, hence to a particular perspective of a still limited group of persons. Empirical propositions lack the generality and the explicit form of conceptual sentences.

However, material rules of conceptual inferences *can* be a *result* of empirical investigations. But they are a result of a certain kind and form. They are *general* truths that are canonized with the aim to use them independently of the peculiar empirical situation. As a result, the method of

their canonizing is a dialectical struggle about the best possible norms for the corresponding differentiations and inferences, just as in the case of legal rules. Hence, a statement like this dog over there is female is in a totally different sense an empirical truth than the statement that female dogs can have puppies or that there are gravitational forces. Even a historically contingent sentence like the one that Napoleon lost the battle of Waterloo can turn, in a sense, into a conceptual statement. This has to do with the fact that historical concepts or meanings of historical names rest on historical facts, which are made explicit by historical knowledge or standing sentences that (hopefully) do not change in their truth values. In other words, there is an important distinction between (settled) historical knowledge and what still counts as historical assumption or hypothesis which we should learn to master with some good judgment just because there is no schematic criterion for it.

We usually presuppose a huge system of such standing material sentences and inferences. We could label this whole system by the title “a priori knowledge”, if we only would read the expression “a priori” in the right way: We usual know the validity of the (content of the) sentence (or rule) before we start to do normal empirical investigations. In any representation of knowledge we presuppose a priori systems of conceptual inferences.

If I look at a creature and say “this is a dog”, the inference from what I see over there to the sentence is a material and empirical, but a synthetic-a-posteriori inference.[70] If I continue by saying “therefore it is a mammal”, I draw an analytic conclusion. The reason is that we already have settled what I am entitled to say if I am entitled to say that X is a dog. Only after you have learnt many inferences like this, you belong to us who can speak our language. If I say that this dog probably belongs to my neighbor, I once again rest on some empirical inference. If I continue, “therefore she is not my property”, I use a conceptual inference. It is not too clear if we should label it “analytic” or “material”. In the later case, the judgment would carry the label “synthetic a priori”. This makes sense at least insofar as norms of property rights are not just *linguistic* norms.

We can distinguish between a *normal* change of knowledge in a coherent and consistent increase of material knowledge, i.e. of sentences that are formally evaluated as true or reliable in a given conceptual framework on the one side, a change of the conceptual form of knowledge-representation on the other. Modern investigations of belief revision see, of course, that a mere increase in the set of true sentences is a rare, non-normal, case. This is so because *prima facie*

norms of empirical inference are only valid under some *ceteris paribus clauses*. This means not much more than this: Typically, *empirical inferences* are *not monotonic*. That is, if condition A suffices to *infer empirically* that C (in default cases), then A&B *often does not* (always) suffice to infer C. This is so because B could entail that the default case does not apply.

In reality, things get fairly complicated. This is already a conceptual truth or truism about our conceptual frameworks. An increase of knowledge most often includes the task of revising certain previous beliefs, even fairly general ones, in a consistent way. But we do not know ahead how to make the revision in detail. Sometimes we can distinguish normal developments of science in a stable conceptual framework from scientific revolutions so-called, in which we have to re-structure whole conceptual frameworks. This is to say that the ideal of timeless truth is not perfectly realized in reality.

It is no argument against the formal, relative, distinction between conceptual knowledge as necessary conditions of empirical knowledge at a certain time and the contingent status of knowledge that still count as empirical at the time in question. It does not really make sense to say that scientific revolutions take place every day. Sometimes there might have been wrong particular judgments with respect to the distinction between standing sentences of a sufficiently stable conceptual framework and merely empirical hypotheses, even of fairly large generality, as the example of geometry and measurement show.

2.7 SYNTHETIC A PRIORI JUDGMENTS RESUMED

There is a deep distrust against our perspective, especially supported by Reichenbach and his school, like, for example, Adolf Grünbaum or Alberto Coffa. The claim is that analytical philosophy as such is to be characterized by a certain semantic tradition, which allegedly stands in opposition to the assumption of synthetic a priori truths.

> „The semantic tradition originated in opposition to Kant's theory that a priori knowledge is based on pure intuition and the constitutive powers of the mind,"

says the preface to A. Coffa, *The Semantic Tradition from Kant to Carnap*.

> „By the end of the nineteenth century, it had become clear that a priori knowledge could not possibly be what Kant thought it was" (Coffa p. 2.).

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[70] I feel competent as an observer of present things and processes around me and as a speaker of my language, if *performatively feel* entitled to judgments about present things and processes. It is a difficult question if I am 'really' entitled to them or not. It has to do with what you will or would say and what all the others of us should say about it.

The early Wittgenstein and Carnap allegedly produced the first genuine alternative to Kant's conception of the a priori (Coffa p. 3.). They have managed to overcome the

> „shallowness of the synthetic a priori". „Synthetic judgments are only possible under the condition that an intuition underlies the concept of their subject",

says Coffa about Kant and attributes to him an argument like the following: Something must ground synthetic judgments and it cannot be concepts. Hence it must be intuitions.

> „Bad semantics was at the root of Kant's appeal to pure intuition" (p. 19). „He confused conceptual knowledge with definitional knowledge."

But it could be that bad interpretation of Kant's texts lies at the ground of Anti-Kantianism in Logical Empiricism. Let me note, first, that the English translation "(pure) intuition" might have mislead Coffa because of its mentalist connotations that cancel out the perfective inferences in the German word "*Anschauung*": Such an *Anschauung* of X *presupposes* that X is there, in contrast to sensations that are merely subjective. Intuition in the strong sense of *Anschauung* stands for any possibly *conceptually articulated reference to some really existing object or event in real apperception* – such that the same object can or could be perceived by others as well. *Pure intution* is a label for the mere *form* of such an objective reference to objects of perception – including the corresponding spatial and temporal transformations of perspectives if there are different observers at different places or if we refer to the same object or event from different times. Kant's expressions "*inner" resp. "outer form" of intuition* should be read in the sense of "*temporal and spatial conceptual form of perceptual experience"*. We get an uncharitable, or rather ridiculous, reading if we attribute to Kant an *immediate knowledge of something that cannot be perceived at all* under the label of intuition and if we read the word "a priori" in the sense of "*empirically irrefutable*". Instead, a statement is said to hold from a priori reasons if it is a conceptual presupposition of the very meaning of certain class of empirical statements. When we say, for example, that an empirical object like a ship or a piece of wood has moved down the stream, we (have to) presuppose that it is clear what it means to talk about one and the same object or substance in the course of a process like this.

It is to be admitted, of course, that Kant was not too clear in his distinction of synthetic and analytic, empirical and a priori statements. He did not say explicitly that a priori truths express *presupposed norms of common representations of inter-subjectively testable experience*. Nor did he ever realize that some such norms possibly can or even must be changed if experience shows that they cannot be fulfilled in certain realms of empirical investigations. If we, for example, want to talk about particles in quantum mechanics, the usual logic of stable substance

and continuous paths of movements are not fulfilled. But if we talk about mere *gestalts* in *Anschauung*, the presupposition of substantial identity is not part of the language game either.

Coffa himself makes fairly vague uses of phrases like "*in virtue of meanings*" and "*conceptual knowledge*", as if Quine had not yet attacked phrases like these. But it is even more ironic that Kant's presuppositional analysis of the complex structure of scientific knowledge is much less foundationalist than Carnap's *Aufbau,* which is a constructivist epistemology that starts with individual sense-perceptions and certain operations of the mind. Carnap uses Hilbert's implicit definitions of complex structures in order to turn *semantics into logical syntax*. Thinking turns into logical deduction. As a result, the peculiar linguistic competence to deal with complex syntactic structures (Chomsky) seems to be enough in order to explain the basic difference between animal cognition and human knowledge. In Logical Empiricism, speculative metaphysics of Classical British Empiricism is updated by *logical syntax*.

But the speculative theory as such is misleading. It results in a picture of Artificial Intelligence, not of human sapience. Despite all the efforts of a formal reconstruction of a structured world on the ground of a phenomenological relation of memories of resemblances („*Ähnlichkeitserinnerungen*"), Carnap's speculative theory lacks most important features of how human knowledge works, what we do when we take part in a tradition and project of human knowledge. The main reason is that there is no account for the peculiar, trans-personal and trans-historical existence of conceptual knowledge, as it is passed down from generations to generations and developed in view of new needs and new knowledge. We do not learn only by following explicit rules, expressed by sentences. We learn by taking part in an ongoing practice. At the bottom of any knowledge lies a complex system of practical know-how, a competence defined by proprieties that go far beyond individual dispositions of behavior and individual satisfaction (with respect to the ‚results' of my own or your behavior).

Like Carnap, Quine also is pre-occupied with foundational questions in his pleas for naturalization of epistemology and theory of language – based on individual learning and behavior. Quine's own project is, in a sense, characterized by a refusal to reflect on the *peculiar preconditions* of human knowledge (Brandom's *sapience*) in distinction to animal cognition (Brandom's *sentience*). Like Carnap, Quine does not realize the peculiar, parochial status of formal deductions and theories on one side, of natural sciences on the other. Science is a particular enterprise to enlarge and test technical and prognostic knowledge. The topics of natural science, so called, are processes outside the reach of human actions – if we cut out of our picture the crucial fact that we produce distinctive starting conditions in our experiments. But by

far not everything in the world of real experience lies in the realm of the topics of this form of science. Therefore we should not identify the real world with nature and nature with the set of objects of natural science. If we do so, we are uncritical with respect to the very method of science and the methodological order of knowledge.

The task of philosophy is the development of our understanding of different language games in general, scientific methods and results in particular. The main method is a critique of problematic forms of language use, especially in our commentaries of science. Cosmological explanations of the genesis of individual or collective knowledge by mere embedding it into a story of evolution of animals is *not* the main task of philosophy. If it were, philosophy would altogether become what most people think it is, a battle ground of dogmatic, metaphysical or speculative world-views.

Even if we accept that the basic norms and rules used in our systems of representation of knowledge are not totally irrefutable by experience, they can still have the status of *synthetic a priori* statements or judgments – insofar they cannot be refuted or corroborated by *singular empirical tests*. Geometry is an outstanding example. We cannot interpret the axioms directly in a realm of sense data. Nor is there a direct way of talking about *the geometry of space*. Conceptual questions like the following cannot even be posed if we do not leave Hilbert's or Carnap's framework of implicit definitions behind: Why can we read geometrical sentences as truths about geometrical forms? Under what conditions can we use a 3-tupel (or 4-tupel) of numbers as a name of a point in space(-time)? Which kind of (real and ideal) geometrical measurement is presupposed in such an interpretation? Which norms govern our judgments how precise a real measurement is?

No axiomatic, algebraic or analytic geometry, be it Euclidean or non-Euclidean, Riemannian or Einsteinian (Minkowskian), does have a direct model in real space. Or rather, it is fairly unclear what people refer to when they talk about real space. Applications of geometrical statements presuppose different levels of projective de-idealization by judgments about the real properties of the method of measurement used. If we use the velocity of light in spatial measurements of cosmological distances, we rest on some pre-knowledge about its constancy. As a result of the independence of the radiation of light from the peculiar inertial framework which might have been chosen for describing the movement of the source, Euclidean geometry *cannot* be used in the corresponding *spatio-temporal interpretations of numerically given distances and angles*. But we still need geometry and chronometry as a *system of projection rules* for a physical interpretation of numbers for angles, distances, and time. At least locally, the Euclidean con-

cepts of spatial directions (straight lines and angles) still play an important role. These norms tell us how to judge – of course with respect to quite many margins of precisions – *how plain* a surface of a body is or *how straight* a line on such a surface is or *how well formed* a cube or rectangular solid or rectangular wedge is. In other words, even after the developments of non-Euclidean mathematical models of geometry, we still work with synthetic a priori truths that govern our interpretations of certain classes of measurement and judgments about the quality of a corresponding apparatus.

The new system of measurement of spatial distances in cosmological sizes by time-measurement is expressed by Einstein's special and then by his general theory of relativity. The place left for Euclidean geometry is the realm of the infinitesimal, or rather of the local tangent planes of the Riemannian structure. There is a mathematical, rather than a physical reason for this: There is no other way how to express in mathematics that the norms of Euclidean geometry remain in full force locally, for example when we measure angles. There are no infinite planes or straight lines outside mathematics anyway. But exactly this was what Kant had said: Geometry is a system of ideal sentences that express forms of spatial relations. Geometrical space is only a *pure form* of spatial *Anschauung*.

Certainly, the system of ideal geometrical truths is not established independently from very general facts. Most important is the fact that there are quite good samples of rectangular solids and cubes in many sizes. We use the sentences of Euclidean geometry as norms when we measure how good, in what margins of precisions, the samples exemplify the forms sufficiently.[71] The use of time-measurements in our measurements of distances rests on more complicated and, in a sense, less general pre-knowledge about the relative velocity of light c. This velocity c functions as a kind of *synthetic a priori norm* for interpretations of time-numbers by which we express distances. Obviously, the interpretation of numbers expressing (large) distances is not independent from chronometry.

The question if real space *is* Euclidean or if it *has* three dimensions gets an almost straightforward answer now. Space *is* Euclidean if we talk about local spatial orientations at solid objects in a pure or ideal way. We do so by talking about size-independent geometrical forms. Hence, Euclidean geometry is not false at all. But its formal truths are not just descriptive and have a special realm of application. They do not describe the (quantitative) structure of empty space, in which relative movements of solid bodies and other physical phenomena like the

radiation of light takes place and in which we measures distances by using local clocks (as certain dynamical systems!) on the ground of basic assumptions about the relative behavior of electro-magnetic phenomena and moving solid bodies, including the clocks.

2.8 METHODICAL CONSTRUCTIVISM

Does this not show that Quine is right when he claims that we cannot distinguish between empirical ("synthetic") and a priori ("analytic") components in our systems of descriptions, statements, explanations, and norms? I think: yes and no. No, insofar as there are many norms that function in well-defined areas as relative a priori truths, even if they are by no means mere linguistic conventions or consequence of such conventions. Yes, insofar as there are only few absolutely non-refutable, non-empirical, yet non-analytical truths. Does *this* mean that the idea of conceptual foundations of knowledge and the idea of a distinct realm of conceptual schemes versus a distinct realm of empirical truths is just a mistake? I think not. To show why not, I try to defend some Kantian insights against the attacks in analytical philosophy from Russell and Hilbert to Carnap and Quine. Some of the differences concern the philosophical foundations of mathematics and formal logic, some refer to the relation between scientific theories or formal models and the empirical world of real experience and human practice.

If we give up the distinction between analytic and synthetic, empirical and a priori statements, there is a tendency to take sides with Hume and against Kant. But Hume does not have the conceptual resources to express the difference between human and animal cognition, which is always merely subjective and does not allow for any trans-perspectival control. Hume does not have an idea, much less an analysis of generic knowledge.

Human knowledge claims always rest on generic forms of conceptual inference that are jointly controlled in a peculiar institution called “science”. It also rests on some mastery of co-variance that allows for keeping track of perspectival changes. Even empirical claims about singular experiences are true, if they are true, in a generic sense, for anyone. I.e. there is an appeal to general acknowledgment: If I say that p, I say that we can accept p as an expression for some good orientation. Any claim for truth in general is nothing but being good enough in this sense. This fact is the ground why we can be asked for reasons and must answer to such questions by giving reasons. Asking for and giving reason is the joint control of *con-scientia*, of joint knowledge. A person’s consciousness is nothing but the performative form of taking part in it.

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[71] The ideal planimetrical forms of Euclidean geometry are ‚defined‘ by terms t that tell us in one reading, how we can construct a planimetrical figure with certain means. In another reading and by some definable equivalence relation with respect to other terms t‘ we can use the term t as a name of an abstract and ideal planimetrical form.

The distinction between merely subjective animal cognition and human knowledge is *not due* to a mere distinction between some inborn, merely naturally or 'causally' development of basic skills of cognition and the addition of some deductive system of rational calculations, exemplified by first order predicate calculus or formal arithmetic. Such calculi may be installed into a computer or a robot. But it is at least unfounded to assume that we *in fact* use such a system in drawing conceptual inferences outside mathematics. And it is wrong to assume that we always *should use* it if our inferences are to be valid. *Formal deductive logic is no system of correct thinking outside mathematized systems of formulas and syntactically regimented sentences as in mathematical geometry, kinematics, arithmetic and set theory. These theories do not allow* for a direct *empirical* interpretation without some use of a kind of canon for generic forms of projections – as Wittgenstein had noticed quite early. In other words, Frege, Quine and Davidson are wrong to view predicate logic as a deep structure for (correct) human reasoning.

Any formal logic is a technical construction, a peculiar mathematical language device, a schematic language design. We develop it in the context of a formalization of scientific language. We use it in mathematical idealizations of some pre-theoretical talks about qualitative forms and measurable quantities. Pre- and proto-theories are still needed if we want to be conscious or explicit about our own projections of mathematical sentences and models onto the real world of experience.

In such projections we use certain forms of regimented observation and measurement. Therefore, there always is some need of making theoretical and practical presuppositions explicit, since they govern our practice of measurement, experiment, empirical tests and external interpretations of numbers and formal structures. One of the leading questions is this: Which forms of measurement and which presumptions about the behavior of the measuring apparatus is already invested when we relate numbers and functions to real, empirically observable objects, events or states of affairs?

Hilbert's defensive concept of implicit, axiomatic, definitions and Carnap's corresponding reduction of semantics to internal or Tarskian, i.e. set-theoretical semantics is misleading even in the context of the internal constitution of mathematical models and theories. The trick is to avoid the discussion of basic questions like this: How are the *relevant* standard models of geometry, arithmetic and set theory constituted? This was the leading question of Wittgenstein's philosophy of mathematics. An additional question is this: How do formal, mathematical, models work as intermediary steps in the context of applying fully formalized systems or axiomatic-

deductive theories to real experience? How does, for example, Euclidean geometry relate to standards of measurement?

A new perspective on empirical statements and conceptual presuppositions emerges which is similar, but different to what people usually take as a result of Quine's considerations. What looks as analytically true from the *internal* and holistic Carnapian perspective of a formal theory or a model (which can be seen as a system of half-formal definitions of internal truths) can externally be a synthetic-a-priori truth in the following sense: Sentences of the theory or model can be used as norms to judge if a measurement or the devices in experiments are in good order. In such a case we may talk about measurement-related a priori truths.

Such truths are neither just conventionally stipulated, nor can they be empirically tested by singular experiments or observations. They function as preconditions for our interpretations of the quantitative (numerical) results of the measurements in questions as long as there is no need to review the whole practice. This is a very general argument why we should not only accept that there are important (relative) synthetic a priori truths or conceptual and still material inferences in the natural sciences, but that their normative status is of peculiar interest – as Kant, indeed already had seen and Hegel much more so. There is no way of interpreting the formulas deducible in axiomatic theories directly as representations of structures of phenomenal experience or of explanations of phenomena. Carnap's *Logischer Aufbau* on the ground of sense data does not work at all.

But also for the case of probability models, we have to reflect anew on the complicated fact that Bayesian coherence might be by far not good enough to exclude materially totally irrational applications of subjective probability estimations. In other words, the Bayesian criterion that excludes what certainly is irrational might be too wide for positive evaluations of rational probability estimations. In fact, there is a deep ideological danger in Bayesianism in cases where we have almost no independent grounds for fixing the probability values we work with in our calculations with risks or (alleged) grades of uncertainties. The danger lies in possible self-fulfilling prophecies of certain decision- and game-theoretical foundations of rationality theory and of corresponding theories of cooperation. In such cases we produce the predicted result by an arbitrary fixation of *praeter hoc* numerical probabilities and a corresponding advice to act in a certain way. A similar problem lies in the decision to call non-cooperative action in cases of prisoner's dilemma "rational". Not any avoidance of personal risk is reasonable, and not any trust in *common reason* is unreasonable, even in our times. We still often make things so by saying so without noticing that we do and that we can do better.

CHAPTER 3: HEGEL'S META-CRITICAL DEVELOPMENT OF KANT'S CRITICAL PHILOSOPHY

3.1 REFLECTION IN PHILOSOPHY

The most general difference between Kant and Hegel has to do with the status of synthetic a priori or conceptual statements. In his *Science of Logic* (and at some other places), Hegel praises Kant's deep remarks on synthetic axioms (*Grundsätze*) a priori.[72] Moreover, he agrees with Kant that the root of these axioms is the unity of authentic understanding or self-consciousness.[73] But there are two important modifications that turn this praise immediately into a form of criticism. The first is the seemingly strange explanation of self-consciousness or unity of authentic understanding not as a form of individual perception and thought, but as the identity of the concept with itself.[74] This means that *I* think only if *I* actualize a form of thinking which is designed for anybody. This explanation stands in line with Hegel's criticism of Kant's subjectivist understanding of transcendental apperception and *object-securing intuition*. The conceptual statement that expresses the principle of transcendental apperception says: Any representation of something (X) by imagination or symbols must allow the addition: „I think (of X)". This is a conceptually true statement. It is especially relevant for any apperceptive intuition in the sense of (conceptually) well-determined perception of objects that are situated (as moving) in a present spatial and chronological ordering of moved bodies. It is of central importance insofar as it denies any free-floating thoughts without thinkers, and stresses the fact that thinking and speaking, judging and inferring are acts that presuppose an actor.

Hegel's critique of Kant in this context consists in a rather obvious shift of attention from the (unity of the) transcendental ego to the (unity of the) form of thinking.[75] The unity we need in understanding is not so much the unity of some mysterious thinking self[76] but the unity of the concepts in a system of concepts and the unity or coherence of the acts of a speaker and actor.

Locke, Berkeley, Hume, and even Kant had started with the unity of me or my self as an individual person with my memory, my sensation, and my reflections. Empiricism and Kantia-

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[72] Cf WdL II, 445: "Indem Kant die tiefe Bemerkung von synthetischen Grundsätzen a priori aufgestellt und als deren Wurzel die Einheit des Selbstbewusstseins, also die Identität des Begriffes mit sich erkannt hat, nimmt er doch den bestimmten Zusammenhang, die Verhältnisbegriffe und synthetischen Grundsätze selbst von der formalen Logik als gegeben auf; die Deduktion derselben hätte die Darstellung des Übergangs jener einfachen Einheit des Selbstbewusstseins in diese ihre Bestimmungen und Unterschiede sein müssen; aber die Aufzeigung dieses wahrhaft synthetischen Fortgehens, des sich selbst produzierenden Begriffs, hat Kant sich erspart, zu leisten."
[73] See fn. 1.
[74] See fn. 1.
[75] Cf. WdL I, 12 (Preface), where Hegel praises Plato and especially Aristotle because he had made the form of thinking to the main topic of philosophical reflection.

nism share the idea of a foundational philosophical reflection on the concept of (reliable) knowledge with Descartes. They start with reflection on oneself in some way or other. By doing so, Cartesians, Empiricists, and Kantians presuppose a *res cogitans et percipiens* or a transcendental mind with the competence of reflection. This holds true even for those empiricists who want to identify this thinking thing with the *brain* or with the whole (neuro-)physiological system of the body. In fact, the dispute between neuro-philosophy and Cartesianism conceals the fact that both suffer from the same disease. Both do not realize that we first have to clarify what it means to talk about a personal subject, what human apperception and intuition is in contrast to animal perception and what it is to think and understand.

For Hegel, therefore, the general topic of philosophical reflection is *authentic understanding and thinking* as the mark-stone of the difference between being human and living a merely animal life. The first, undeniable, fact is that each of us has to learn to think, to use language and images, diagrams, architectonic sketches, even cartoons in silent acts of representation or public forms of communication. This use must be follow some rules in a proper way – if any person, including myself, should understand the ‘content’ or inner form of the representation. In this sense, thinking and understanding is necessarily ‘normative’. Any act that wants be an act of thinking falls under the norms of being at least understandable or rational in some basic sense. Moreover, it can and often must also be judged as ‘reasonable’, ‘good’, or ‘true’, for example when we evaluate how good it serves, perhaps in its newly proposed form, cooperative practices including informative acts about facts in the world.

We reach authentic understanding and self-consciousness not by subjective introspection. What is needed, instead, is a kind of ‘topical analysis’ of the human situation as a whole. This includes some determination of our place in the world. The following analogy shows what such a topical analysis is: The question: "where am I?" cannot be answered by looking around in my immediate surroundings, pointing to my place and saying ‘here!’. In the same way, the question: "who am I" cannot be answered by immediate reflection, neither along Cartesian lines, nor by empirical or transcendental reflection on myself. What is needed is a kind of map in which I can identify my position in relation to the world. This world is not only a system of natural objects and events, but a world of human persons and culture with institutions and historical developments. I take it that this is the basic insight, and shift, of Hegel’s philosophy in comparison to Kant’s philosophical thinking.

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[76] This fact was noticed by Lichtenberg, too.

The main problem of understanding Hegel's logic and his philosophy of science and nature consists in placing it into the right context. For this, we need a preconception of its topic, i.e. of the basic questions. These questions are: What is self-consciousness in the sense of authentic (self-)understanding? What is an intelligent mind – taking part in Spirit as the totality of personal faculties? What is rationality? What is reason? The traditional answers, including those of Locke, Hume, and modern neuro-philosophy are still in a deep sense Cartesian, or Hobbesian. They take the questions in a merely 'subjective' or 'individualistic' meaning, as if it were a question what I or my brain has to do in order to understand or judge rationally or argue with some good reasons. In such an individualist approach, *it is already presupposed what it means to understand, to think, to be conscious of something or of oneself, to reason and to give reasons*. The common fault of Cartesianism, Empiricism, and Kantianism is, in fact, this: They all act and judge as if the possibility of (well-determined) perceptions, intentions, and reflections were immediately given. They overlook the fact that we must *presuppose* the faculty and competence to use 'concepts', i.e. to understand language and verbally transferred knowledge, not to speak of other partly 'technical', party 'social' faculties as controlling the fulfillment of 'norms' governing joint attention and joint practices and jointly working with images and other forms of symbolic acts and practices.

We should not wonder, therefore, that Hegel's first book, the *Phenomenology of Spirit*, is a deconstruction of the illusion of immediacy in the traditional understandings of the mind as the competence to deal with concepts. It is a criticism of the subjectivist, empiricists, and transcend-dental approaches to understanding and reason in modern philosophy of mind. Moreover, it is a refusal of any foundationalism in philosophical constructions that forget the analysis of the status of their elements in particular, of synthetic theories in general.

When Hegel claims that philosophy must form a system – which he describes metaphorically as an encyclopedic circle of three circles[77] –, he just sees that there is no way to pursue the questions of philosophy if we separate philosophy of mind (including ethics) as a kind of special enterprise from logic and epistemology and from philosophy of science and nature.[78]

3.2 FROM PHILOSOPHY OF MIND TO SPECULATIVE ANALYSIS

Our system of science is a kind of well-established division of labor. It would be arrogant if only one person would claim to know enough about all departments of science. But when we want to

[77] Cf. WdL II, 504.
[78] Most critics who oppose Hegel's allegedly too ambitious 'system' do not bother to think about the specific questions of philosophy. They do not ask why these questions have to be treated in a topical, not a foundational analysis.

have a structural map of the whole system of knowledge, departmental analysis will not help. The situation is similar as in the case of orientation in a large area: A sketch of the whole helps more than a detailed picture or photograph. Whoever wants to criticize the imprecision of Hegel's attempts to present a picture of the whole landscape of human spirit should be clear about the limited interest of Hegel's project – even though its topics are totalities.

The basic problem of understanding Hegel's way of thinking and writing consists in the demand of a radical change of perspective on what philosophy is and what it is good for. We need a change from the idea of a (formal) construction or mere synthesis to a kind of topical analysis, from the search of foundations for individual certainties or absolute knowledge or truth to an analytic reflection on the concept of knowledge and science or rather on the institutions of knowledge and science. Hegel's own term for such a topical reflection is "speculation" – as Hegel calls his own method of drawing maps of whole landscapes of conceptual frames, and, in the end, of a whole system of forms of human practice (under the title "objective spirit") and of the overall situation of man in the world. The word "speculation" refers to a view at things from a very general and high viewpoint – according to the basic meaning of the Latin "*speculari*": to overlook an area from the high perspective of a watch-tower. But the words "*speculation*" and "*speculative*" are used today for *unfounded claims* and *dangerous bets*. It is perhaps a deep irony that if we criticize Hegel's philosophy today as speculative in our new sense we disregard Hegel's own usage of the word "speculation".

There is no immediacy of consciousness in the sense of conceptually controlled understanding, not just of (animal) awareness. Consciousness as conceptual understanding ("*Bewusstsein*") and authentic self-understanding ("*Selbstbewusstsein*") are both always already mediated by concepts. They depend, *ipso facto*, on a tradition of language use and on a practice of articulating knowledge that can be learned.[79] This holds good for the practice of reflection on the cognitive competence of humans and on the conditions of meaningful discourse as well. Any distinction of conceptually correct judgments and inferences and any judgment about conceptual possibilities refer to pre-given practice, not to some 'foundation'. This is, in a nutshell, the anti-foundationalist result of large parts of Hegel's consideration in his *Phenomenology of Spirit*. Amazingly, the erroneous contention prevails until today that Hegel wanted to outbid Descartes's and Kant's foundationalist efforts.

[79] Of course, there are also necessary conditions for *learning* and *education*. We rely on basic functions of behavioral reactions to sensations and on some other facts in the world.

No merely subjective reflection gives sufficient answers to the question what authentic self-understanding or self-consciousness actually is. Therefore, Kant's philosophy of transcendental reflection is illusionary if we would read it as a safe and certain beginning of any knowledge. This is so because when we ask what it is to think and to have access to a realm of concepts we already must be able to think conceptually. Therefore we already must know many things and take many things for granted. In fact, we have to distinguish the subjective question what I or you or we have already to know and do in order to use concepts correctly from the objective question what a concept or a system of concepts is, such that I and you and we can use it properly. The access to it is mediated by understanding the contents of meaningful utterances in a sufficiently accurate, correct and satisfying, way, which, in turn, means to take proper part in a project of joint conceptual understanding, meaningful and true knowledge, and reliable science,

Now we can also understand the second modification in Hegel's praise of Kant. He complains that Kant takes the forms and norms of traditional formal logic (more or less in the version of the Logic or Port Royal) as given and fixed.[80] Kant's justification[81] of the allegedly a priori axioms of transcendental logic depends heavily on this assumption. This is the reason why Hegel's skeptical criticism against the allegedly absolute status of traditional formal logic applies also to Kant's transcendental logic or transcendental analytics.[82]

3.3 CONCEPTS, NORMS AND RULES IN PRACTICE

The main problem, which not only Kant underestimated, is the dialectical status of the norms or normal rules of conceptual inference that define empirical concepts in distinction to mere mathematical or formal concepts as such. The status of empirical concepts and of the corresponding norms that define them is called "dialectical" because it is neither a-temporal nor merely historical. The idea of an objective realm of concepts in the sense of Platonism is as untenable as the assumption of a mere subjective or psychological way of existence of concepts. However, logical and conceptual forms do not exist in an eternal and divine realm of Platonic forms either, nor are they subject to introspection or merely empirical investigation, at least insofar as for the such investigations the understanding of concepts is already presupposed. These insights can be traced back to Kant; but Hegel is still unsatisfied because he thinks that Kant did not draw the consequences of his own insights.

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[80] See fn. 71 (§ 3.1).
[81] The terminological word in those days was 'deduction'.
[82] Such a justification would have to show how the *simple unity of authentic understanding* can be made explicit by these axioms and how they express *essential distinctions and determinations* (identifying definitions) of the very unity of concepts that should be explained by them.

Instead of accepting the ambivalent, dialectical, and local status of conceptual truths, Kant himself remains ambivalent. He still has a subjectivist understanding of the faculty of mind, reason and transcendental reflections on the form of this competence. At the same time he makes objective claims about the norms of conceptually determined perception and objective experience in distinction to their genesis – and nevertheless just takes the traditional forms of logical analysis for granted. Only in his *Critique of Judgment*, Kant comes close to see the problems at stake. There he realizes that any good application of a seemingly eternal rule or abstract principle or general norm or ideal form needs experienced judgment. Moreover, whereas „Rationality“ is a title for our competence of using rules and concepts schematically, „Reason“ turns into a title for the free competence in taking part in a joint development of conceptual frameworks by new distinctions and identification. Rationality needs discipline and education. Reason needs personal experience in life. But since the real existence of rules or norms or ideas consists in their applications, the question arises what we do and refer to when we talk about the rule as such, the abstract form in itself or about the identity of a concept with itself. This is only a more precise, even if less understood, version of the modern question what meanings, intensions, and intentions are.

There is a diachronic dimension of forms and norms of a joint cultural practice to be taken into account, especially the dimension of conceptual change. Such a change is not just a change in the meaning of the words, or rather, in the relation between words and eternal concepts as such. The wrong belief in such a realm of eternal meanings is one of the problems that has to be dissolved. When Hegel talks about bad infinity, he talks about a defective, Platonist, understanding of the objects we talk about in a reflection on the use of language and on our practice of differentiations and inferences. What is known as Platonism can be seen, indeed, as a result of a misunderstanding of the status and function of our talk about concepts and ideas, forms and rules, principles and axioms.

For Hegel, a concept is not just given by a word or an expression. It is, as Wittgenstein later sees as well, a whole system of conceptual distinctions, identifications, judgments and inferences. Hegel sometimes uses the expression „the concept“ in order to refer to a whole system of concepts in a culture.[83] Such a system is not independent of our use of the words, our judgments and inferences. This is the reason for, and meaning of, Hegel’s claim that „judgment is (part of) the (very) determination of the concept“[84] or that „inference is restitution of the con-

[83] One of the major problems of reading Hegel is his all too idiosyncratic use of certain forms of expression.
[84] "Das Urteil ist die am Begriffe selbst gesetzte Bestimmtheit desselben."

cept by (a certain) judgment“[85]. Any concept already is indeed a whole conceptual system that includes a system of conceptual judgments and inferences. A language game in Wittgenstein’s sense also exists only in the way we play the game. The concept in the sense of a system of conceptual criteria and inferences determines the notions of conceptual possibility and necessity. At the same time it is determined by it:[86] A concept is a whole system of conceptual possibilities and necessities. It also defines the realm of empirical possibilities – as Kant already has seen in his transcendental logic of empirical possibility.

But like Descartes, Kant had underestimated the implicit, cultural, institutional and historical form of existence of reason and concepts. A concept exists in its use, or rather, in a (cooperative) practice of articulated differentiations and identifications, of appropriate conceptual inferences and other conceptual relations. There always are developments of human institutions. Such institutions are practical forms of action that always somehow implicitly refer to some cooperative practice and knowledge, at least to some knowledge how to do things properly according to some standards of propriety, which can be merely technical or already moral, referring to a mere success of the individual action or already to some institutional or collective success. Moreover, there always are diachronic developments of our conceptual system of differentiations, identifications, conceptual inferences and relations.

3.4 CONCEPTUAL CHANGE AND THE RELATION OF WORDS AND CONCEPTS

In the diachronic existence of any system of conceptual distinctions and relations, conceptual norms are in move. As time goes by, the conceptual system can shift in a way such that the relations of words and concepts may change.

If, for example, Plato says that there is no way to divide the number one, he just shows that his concept of number did not contain rational numbers – even if it contained proportions of the form 7:4 and hence, in a sense, all representations of what we call today „rational numbers“ that are ‚greater‘ than 1. If we know this, we see in what sense Plato expresses a conceptual necessity – even if we today certainly would not evaluate the sentence „no number divides 1“ as true in all eternity. According to our concept of numbers, which includes all rational and real numbers, the sentence is wrong.

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[85] "Der Schluss hat sich als die Wiederherstellung der Begriffs im Urteile ... erwiesen". "Der Begriff als solcher hält seine Momente (i.e. die möglichen begrifflichen Inferenzen) in der Einheit (sc. des Begriffs) aufgehoben". "Der Schluß ist ... das Vernünftige" (WdL II, 308). Cf.: "Der Begriff selbst ist unsterblich (sc. 'ewig', zeitlos'), aber durch Teilung aus sich heraustretend." (WdL II 274).

[86] Cf. Phenomenology of Spirit (orig. ed. 1807: 191ff).

The difference between word and concept, sentence and proposition in the sense of a possible judgment is further shown by the fact that we can hold fast to a sentence like „the sun moves around the earth every day“ if we only distinguish between two concept of „the sun“ und of „moving around the earth“: According to the first we talk about appearances, according to the second we talk about heavenly bodies and their real movements in distinction to seeming movements. According to the second reading, the sun does not move around the earth each day but the earth turns around its own axis. The examples show how we develop concepts by developing a whole conceptual system of distinctions, identifications, and conceptual inferences: We do this by developing at the same time a system of scientific knowledge and its articulation in a system of verbal expressions and conceptual inferences. In fact, I take it as Hegel‘s deepest insight that we cannot separate conceptual truth from situation invariant knowledge or scientific truth. We cannot do so because mere verbal definitions or abbreviations only lead to formal analyticity which is not sufficient at all to define any real content of words and sentences, just because it is only verbal and formal.

Hegel replaces Kant’s thesis that there are synthetic statements a priori by the insight that there are conceptual statements expressing conditions and limits of normal sciences and reasonable investigation that are neither analytic in the sense of mere verbal conventions nor just empirical statements in the sense of Hume. It is not reasonable to question normal and basic knowledge, just as Wittgenstein says in *On Certainty*, even though it might be difficult to say what such normal and basic time-invariant generic and hence conceptual knowledge is in detail and which sentences can be accepted as good enough to make it explicit. The point is that with respect to specific empirical information or investigation we are always in need of some normal and basic generic pre-knowledge we can conceptually rely upon. There is no absolute distinction between the development of generic knowledge, made explicit by standing sentences on the basic of general experience, and the development of ‘the concept’ in the sense of some pre-knowledge which supports conceptually proper default inferences on the ground of corresponding differentiations or distinctions. In this light, Quine’s thesis that there is no sharp border between analytic and synthetic standing sentences would be correct. It amazingly even coincides with what Hegel says. The difference lies in Hegel’s distinction between knowledge and sentences of the logical form or generality and those of the form of singularity. Hegel would have never called the first “empirical” – as everybody does today. No time-general and not merely historic sentence is just ‘empirical’. That is, it is no immediate, unmediated, consequence of some or many individual perceptions. Any time-general generic knowledge articulated in standing sentences already rests on some positing it into a conceptual framework that is not only

founded on our present perceptions or experiences but must be understood already as a hopefully reasonable result in our development of conceptual norms, made partially explicit by rules or sentences. As a result, there always is a methodological order between basic generic knowledge that plays the role of a conceptual foundation for the articulation of some more complicated knowing how to do things and knowing that something is generally the case or is the case in some merely empirical, possibly only contingent, way. In the latter case it is of the logical mode of historical singularity. In other words, Kant's distinction between synthetic a priori or conceptual truths and empirical truths turns into a *relative* distinction in a partially stepwise or hierarchically ordered complexity of articulated knowledge.

This explains our problems in interpreting Hegel's philosophy of science and nature. They result from the fact that Hegel tells us a kind of phenomenological story about the real development of basic concepts in the history of science. But he does this in a way that it sounds as if he talked directly about the real objects and real facts. Hegel is, however, well aware that what we judge as real in the concrete, not abstract, sense of the word is defined by the best knowledge of some given time and not by an appeal to some counterfactual or absolute perspective of a real of divine observer to actual events in the past, presence, or future. The problem is that readers tend to forget this. As a result there is quite some confusion about the relevant point of perspective, which is needed for a proper understanding any single statement in Hegel's philosophy of nature. Hegel does not defend, for example, a hopelessly antiquated theory of four elements. He rather wants to show that there were some good phenomenological reasons for the corresponding basic differentiations and that we even find traces of them in today's conceptual categories. The three substances, earth, water, and air correspond to three physical states. The substance of fire was already originally related to combustion. It is now brought into a relation to light, heat and other electro-magnetic and thermodynamic phenomena, or rather turns into all kinds of energy. In fact, the investigation of the possibility of changing the physical states including the relation between bodies and 'fire' or 'energy' is an important part of physics. Hegel is absolutely right when he says that the framework of Newtonian mechanics does not suffice at all to deal with it. Hence we should not reduce physics to a doctrine of mere bodily movements.

3.5 EMPIRICAL KNOWLEDGE, HISTORIA, AND SCIENTIA

For Hegel, mere empirical knowledge is knowledge about singular cases. Merely empirical knowledge can be only contingent and belongs, as such, only to some *historia*, not already to *scientia*, *philosophia*, or *theoria*. Only time-general knowledge belongs to science. If it does, it

already becomes part of a conceptual framework and develops the concept in the sense of a whole system of concepts, which is the same as the system of doctrines that can be learned as systems of sentences.

As we have seen, any generic proposition that is evaluated as true for scientific reasons can play the role of a conceptual precondition for further default inferences. The difference between the scientific and the conceptual thus turns into a difference only of aspects. If we say that a certain sentence is true for conceptual reasons and that we can know this a priori, we do not say that we did not need experience and science in order to come to accept or to know the proposition as true. We just say that we use it from now on as a generically allowed premise or inferential rule expressed by a sentence in our reasoning and drawing inferences. The truth of the sentence does not have to be checked in any singular case of its use. But any sentence that can be regarded as a conceptual truth in a certain conceptual system can also be looked at as a result of a scientific investigation and control.

The difference between scientific and merely empirical investigation is this: Scientific investigation leads to arguments in favor of a general use of sentences or rules or laws in a system of generic knowledge or standing sentences that articulate material but conceptual forms or norms of default inferences. Empirical observation only shows the truth of some possibly merely contingent and situation-bound propositions, which can remains anecdotic even in cases of some contingently stable relative frequencies. A result of scientific investigation consists in a dialectical development of the concrete concept of default inferences, dispositions, expectations and faculties. A result of a mere empirical investigation is situated in a realm of empirical possibility. It can turn into scientific knowledge if the results can be generically reproduced or, when we are concerned with historical truth, if the corresponding sentences or narratives can count as settled and true.

Contradictions between empirical claims and conceptual knowledge, which defines empirical possibility, obviously force us to consider the possibility that there might be something wrong with the empirical claims or the possibility that we need to change our scientific and conceptual framework. In exactly this sense it is not empirical investigation as such but at best empirical investigation which leads to a contradiction to a given concept of conceptual generality, in universal cases even necessity, which is a motor (*movens* and *moment*) of scientific development.[87] This is, according to my reading, the very meaning of Hegel's claims that we cannot

[87] I believe that this is a fairly modern insight of Hegel and not my projection of modern insights on his writings. Others may decide if this is correct, i.e. if they agree.

exclude the possibility of contradiction in our (empirical) judgments and that contradictions help us to develop knowledge and truth as well as the concept, i.e. our system of conditioned dispositions or default inferences. Mere empirical investigation just looks at singular cases and frequencies. As such, it leads to merely historical and statistical knowledge about some or many singular events at present and in the past. It does not lead just as such to non-contingent scientific knowledge. The basic insight into the difference between merely empirical and already generic truth goes back to Hume and the empiricist tradition. Unfortunately, this tradition reads generic sentences as universally quantified claims, not as default forms of conceptual inference which still need good experienced judgment in each of their applications. The new point Hegel adds is an attack against allegedly rational procedures of turning past experience immediately into degrees of subjective probability or certainty or even into a scientific law. There are no such procedures at all. There is no solution of the induction problem, because there is no induction in Hume's sense at all. Nor is there a naturally developing calculating mind, or an immediately given realm of individual intentions that (can) govern our behavior and actions. The problem with empiricist metaphysics is that it is content with a much too simple picture of the space of reason and concepts, intentionality and action, reflection and authentic understanding. For Hegel, any concrete and particular concept stands in many relations to other particular concepts. Hence, it is itself something like a position in a whole system of concepts. And it is reflected in itself. It contains its own history and its own development together with the possibility of further development, like any human institution does.

The concrete identity of a particular concept consists in the concrete practice of making and articulating certain distinctions and identifications and drawing certain conceptual inferences. If we talk about the identity of a concept in an abstract way, we talk about the concept in itself, *per se*. A concept for itself is, in a certain sense, the extension of its possibly actual application. The identity of a concept is no immediate identity. The singular cases are always different in one aspect or another. Moreover, there is no immediate way of identifying my or our special or specific usage of a word and concept here and now with your or their usage then and there.

In the case of a one-place predicate, the concept in itself, or as such, is the given form of a common classification, taken as an intension, or rather, as a cooperative *competence* of using criteria in the sense of jointly controllable forms of distinctions. The concept for itself is, in a sense, the concrete assembly of singular items from which we say that the fall under the concept. Each of these items represents the class in a different way, since any class can be

seen as an equivalence-class with respect to a certain partition of a realm of items. The partition of a one-place predicate leads to exactly two equivalence classes.

The concept in and for itself has a diachronic and a dialectical structure: It contains not only the word and its actual usage, but a joint practice of assessment of this usage as a common usage together with meta-level judgments about the correctness of singular attempts to use the concept. The possibility of failure shows that the concept in and for itself is a kind of ideal goal that can be more or less sufficiently achieved or more or less grossly missed. A concept in and for itself is not just identical with the actual use of a *corresponding word*. It is not what a group of people thinks to be a correct usage. It has a much more complicated structure that includes discussions about appropriate continuations of the use of the concept over time and in certain new areas of applications, perhaps together with some more specific differentiations.

Any theory of meaning that wants to identify concepts with the actual use of words has to face the problems Hegel tried to cope with. The task is to explain how to distinguish the right usage from wrong applications. The task is to say what the identity of meaning, the unity of concept, its right or wrong application and its conceptual inferences consist in. The very concepts of ‘right’ or ‘wrong’ are normative. This reminder may not seem to lead us very far. But when it comes to the conceptual content of, say, an *intention*, it shows, at least, that well-determined intentions presuppose some knowledge about under which conditions they are correctly fulfilled. To say, moreover, that the identity of a concept is *dialectical* means that a concept contains its cultural and, hence, epochal development in it, just as the notion of a species must also be connected to some epoch or bracketed time in natural history, in order to avoid the wrong idea that in all eternity the egg produces a chicken and the chicken an egg. The idea that there are no species is also wrong, even though it is true that any two animals are related via common ancestors; but this does not have any bearing on the notion of a species. In the same vein, concepts and ideas or forms of cooperative practice have their time. A concept in and for itself is a kind of movement of knowledge, as Hegel explicitly says[88]. This means that any concept contains I a sense a meta-level practice of reflection on its use. This includes past evaluations of judgments, inferences and score-keepings in whole discussions about appropriate understanding and open problems related to the use of the concept-word.

In the case of mere homonyms, it is clear that we have different conceptual distinctions, but only one word. If we have a general concept with a corresponding general set of conceptual

[88] Cf. for this the beginning of chap. IV of the 'Phenomenogy of Spirit."

inferences, there might be some need for a distinction of different spheres of application, which may to some distinction of different more specific concepts.

3.6 ANTI-FOUNDATIONAL INFERENTIALISM

An important part of Hegel's criticism of a usual picture of scientific knowledge is directed against certain misunderstandings of the synthetic, constructive, axiomatic-deductive method.[89] Axioms are not the ground for the truth of the theorems. If we assume this, the real order of justification and argumentation is put downside up. The ground for the axioms and the foundation for the validity of the inferences are the right consequences. The axioms do not explain the consequences.[90] We rather use the axioms in order to produce many true sentences. These, in turn, are explicit formulations of hopefully reliable rules or norms of making distinctions, drawing conclisions or considering possibilities and probabilities. Such theories belong to a systematic framework that can easily be memorized by learning the axioms by heart.

There can be no question that Hegel realized in such considerations long before C.S. Peirce and his copyist Karl Popper the importance of abduction, as already mentioned above: Synthetic axioms frequently are linguistic, sometimes mathematical, *inventions* or *constructions. Their generic, and formal truth* is *'*posited' *(gesetzt).* We do not prove them directly. We use and assess or control their use in a complex and joint practice. It is true, Hegel did not reflect on formal details of this method of an inference to some best explanation, nor did he use a label like "joint practice". But he saw that the roles of axioms and principles of formal inference or calculation are totally different than many friends of using such principles believe. It is not the entry in an encyclopedia or the publication in a scientific journal that makes a statement or theory true. The entry may attach the formal "true" to the sentences in question. However, there are consequences which we are conceptually entitled to draw from them, especially the inferences of some possible experience or faculty to do, not just a set of our earlier sense perceptions, that decide about the 'real truth' of the entry. The statement is true with respect to the world insofar its conceptual inferences are reliable. If these inferences are as meager as in the case of a mere report of what I or we have perceived some time ago, then, of course, the appeal to what we really have perceived is enough. The usual case is much more complicated: The ways we come to believe in some sentences in the sense that we use them in argumentations and inferences is not at all an easy matter. It involves much deeper trust in traditional knowledge and in the cooperative development of scientific knowledge-control than any fresh

[89] It is astonishing how Vittorio Hösle can read Hegel as an axiomaticist and foundationalist.

and free defender of empiricist enlightenment in his subjectivist love for thinking for himself ever realizes or admits.

The ideal of truth and a reality totally independent from our knowledge of it does not play any role in the usual and normal cases at all. No appeal to such a transcendent truth or objectivity can function as a measure for real knowledge. The function of our talk about ‘absolute’ or rather ‘ideal’ knowledge, truth and reality is different: It plays a certain part in our reflective (even speculative) talk about *the form* of our practice of articulating knowledge, for example by the sentences of a systematic theory. Amazingly, most of his critics accused Hegel exactly of that what he himself had fiercely opposed, namely to assume that absolute concepts referring to some totality were already well-understood. Far from defending any claim about a transcendent world as such or about ‚the absolute‘, Hegel asks what we do if the use the corresponding ideal modes of speech.

In a sense, (American) Pragmatism has translated Hegel’s insight into English. This fact is not yet sufficiently acknowledged in traditional history of philosophy, neither by Hegel-scholars, nor by explicit or implicit followers of the pragmatist movement. Even Sir Karl Popper, the proponent of a famous misreading of Hegel, does not see how much he himself agrees, unknowingly, with Hegel’s anti-foundationalist, anti-Cartesian, and anti-Humean or anti-sensationalist arguments. He agrees especially with the insight that the axioms are not proven at all but invented. He follow in this Fichte and Novalis. They are as good as the results of their use in a practice of drawing conceptual inference. He thus unknowingly agrees with Hegel that axiomatic systems are fallible, possibly even incoherent, by their very design. The difference is that Popper believes in formal deductions according to some prefixed system of deductive logic, whereas Hegel sees that the system of jointly accepted conceptual inferences changes together with the whole system of knowledge and concepts in the course of cultural history.

In a way, the arguments of W. Sellars and R. Brandom against logical empiricism are similar to those of Hegel against classical empiricism. Of course, logical empiricism takes different forms in the philosophy of Carnap, Quine, and Davidson. To compare Quine’s naturalism with Kant’s latent ‘physicalism’ may be too crude. But it helps us to ask how far we have regained in our

[90] Cf. esp. WdL II, 466 & 474.

modern, hopefully much better articulated, discussion the insights of the old debate in German Idealism.[91]

3.7 ON THE NEED OF A NEW PHILOSOPHY OF NATURE

For Kant, there are two realms of scientific investigation: the first is the outer world of physical things and their movements and the second is the inner world of psychology.[92] The latter will never be a strict science because it always will be in a large part subjective and inexact. There are no strict psychological laws. On the other hand, Newton's celestial mechanics shows how we can have a strict science of nature as 'the outer world'.[93] Even if chemistry and biology deal with aspects of the outer world, they are no real (i.e. ideal) sciences according it Kant, who obviously uses the paradigm of mathematical physics as an ideal with which he measures the degree of being scientific.

In the meantime, chemistry and the life-sciences (including animal behavior and physiology) certainly have developed far beyond the imagination of the days of Kant and Hegel. But it is still true that they are not in the same way mathematical sciences as geometry and physical dynamics is – and perhaps they never will.[94] In a certain degree they still have the status of mere technical know-how, and of a mere empirical *historia*.[95] Nevertheless, nobody would claim today that the limited range of exact laws makes these sciences less scientific. On the other hand, there is still the idea and project of reducing every explanation of natural phenomena to a physical explanation. The problem is how we have to read such an idea. As an idea for unifying scientific explanations in one way or another and making different approaches to nature in some specific way coherent, there is no problem at all, as Hegel himself explicitly concedes in view of the great unification of physical mechanics, as it was achieved by Newton. The claim that such a

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[91] At least according to my opinion the most interesting question is not how to regain the insights of Kant – this is rather a question of translation into the modern English of philosophical terminology – but those of Hegel. Here we need more than translation, namely interpretative reconstruction.

[92] See I. Kant, Metaphysical Foundations of Natural Sciences.

[93] Because of the limits of exactitude of their 'laws', they are no sciences in the full, ideal, sense of *scientia*. In this, Kant follows the great Pythagorean, Eleatic and Platonic idea of *episteme.* According to this idea, 'real knowledge' is 'eternal knowledge'. The paradigm is mathematical knowledge. Hence, real science is mathematical.

[94] It is not the place to give sufficient arguments for the claim in which the "perhaps" is cancelled.

[95] Kant, Metaphysische Anfangsgründe der Naturwissenschaft: „Wenn das Wort Natur bloß in formaler Bedeutung genommen wird ... so kann es so vielerlei Naturwissenschaften geben, als es spezifisch verschiedene Dinge gibt ... Sonst wird aber auch Natur in materieller Bedeutung genommen ... als der Inbegriff aller Dinge ... also das Ganze aller Erscheinungen." Gemäß der Aufteilung der Gegenstände in de den äußeren Sinnen zugänglichen und den Gegenständen der inneren Sinne gebe es, so Kant weiter, eine Körperlehre und Seelenlehre. „Eine Lehre, wenn sie ein System, d.i. ein nach Prinzipien geordnetes Ganzes der Erkenntnis sein soll, heißt Wissenschaft." Kant unterschiedet dann weiter zwischen einer historischen Naturlehre, in der einzelne Fakten geordnete aufgelistet werden, und echter Naturwissenschaft. "Eigentliche Wissenschaft kann nur diejenige genannt werden,deren Gewißheit apodiktisch ist; Erkenntnis, die bloß empirische Gewißheit enthalten kann, ist nur uneigentlich so genanntes Wissen." "Chymie sollte daher eher systematische Kunst, als Wissenschaft heissen." "Ich behaupte aber, dass in jeder besonderen Naturlehre nur soviel *eigentliche* Wissenschaft angetroffen werden könne, als darin *Mathematik* anzutreffen ist."

reduction ‘must’ be possible ‘in principle’ is, however, not well founded at all. There is no argument for such reducibility in sight. We even do not know how such an argument could look like. Hence, we better keep to real knowledge and argue from the perspective of today’s system of conceptual inferences. It is this knowledge and this system that defines our very notion of conceptual and empirical possibilities. The realm of conceptual and empirical possibilities is not given by an appeal to some mere abstract, in details mysterious, realm of possible worlds and some abstract, in is concrete form mysterious, world in itself. It is defined on the ground of today's situation of our conceptual field (of ‘the concept’). And this is defined on the ground of today’s real generic or scientific knowledge.[96]

If we make claims about possibilities we do that on the ground of what we really know today. The situation is just like if I claim that I can do something, say to perform a nice dance. In such a case, I should be able at least sometimes to show my competence here and now and not merely talk about a distant island like *Rhodos* or some *far future*. The problem is to distinguish between empty speculation about possibilities and really speculative analysis of conceptual possibilities and necessities. This leads to an argument against Kant’s hidden reducibility thesis. For Kant, nature is the epitome (*Inbegriff*) of (natural) laws, the overall object of law-like natural science. Schelling, and with him Hegel, protested against this identification of nature with the object of science, especially because Kant’s concept of law is too much influenced by the example of the laws of classical mechanics.

It is certainly nice to have sufficiently precise knowledge about the world and nature articulated in an exact language like mathematical language is. This exactitude is reached in a formal system of axioms and logical rules or schematic deductions that ‘define'' the concept of valid inference. But there is no good reason to use the wish to have such a theory and the delight about some real success together with the indefinite possibility of extending this success as an argument in favor of a counterfactual claim that says that ‘in principle’ our wishes could be fulfilled totally. In short, physicalism as reductionism is, for Hegel, mere wishful thinking, without any fact of the matter.

When Hegel criticizes Kant's ‘love for things’, he also attacks his love for mechanical explanations and mathematical physics. In any case, such a love is no sufficient reason to claim that real natural science is mathematical physics. Moreover, Kant does not give us convincing reasons for his claim that in principle all nature could be explained in the framework of

[96] Real knowledge is to be understood as knowledge by *some, the best, of us*, for example of experts that we might appeal to when we would have to decide about the correctness of certain 'conceptual' inferences. The hierarchical

mathematical physics. He does not even tell us that there is a kind of 'technical' reason for our love of mathematical theories, namely the following: Mathematical geometry provides us with a valuable framework for producing a sufficiently easy and, at the same time, sufficiently complex structure – by which we can model movements and dynamic accelerations of bodies with sufficient external precision and internal exactitude spatial relations.[97] But mathematical theories represent some real knowledge only in a context of a program of saving the phenomena, which already was the great insight of Plato and Aristotle.[98] For Hegel, this program must be developed by a theory of measurement. Measures are the projection rules for entering and leaving mathematical calculations and deductions. There is, however, no a priori argument for the claim that all nature and all objective experience or knowledge claim can be expressed in a clear and distinct way in the framework of mathematical physics. It is a good idea to express as much knowledge as possible in this form. From a mere internal perspective of physics, the possibility of enlarging physical knowledge certainly is indefinite. But this indefiniteness cannot be used as an argument for the assumption that possibly everything, every event and process of objective outer experience, can be expressed and explained in this framework. Moreover, Hegel sees that it is just a metaphorical analogy if we use movements of particles or the concept of waves in our explanation of the phenomena of light or electricity. We may use these pictures for describing some aspects of the phenomena in question. But it does not make any sense to say that these phenomena are in reality nothing but particle-movement.

In a similar way, there certainly is some truth in the statement that life is a chemical process, namely of metabolism, as Hegel explicitly agrees.[99] But the difference between a living body („*Leib*") and a corpse („*Leichnam*") is not a difference in the overall physical and chemical organization of the mere body („*Körper*"). There is a specific phenomenon of life, which is not reducible to the scope of things which physics and chemistry can explain totally. Of course, these sciences can tell us much about necessary preconditions of life and about interventions by which we can change the form of life. But it is far from clear even today what it would mean to say that in modern genetics the mystery of life is solved because life is explained. A basic phenomenon like life (and death) is (at least for the time being) no topic for causal explanation in the narrow sense of *causa efficiens*. Unfortunately, we talk of a (possible) causal explanation

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order of concepts mirrors the hierarchical order of (articulated) knowledge, as it can be seen in all technical contexts.

[97] To the role of mathematics in Hegel's philosophy of nature cf. Hösle, p. 287.

[98] If Hegel says that Aristotle's analysis of space, time, and movement are "truly speculative" (cf. WdL I, 192f), I take this to mean that in his writings we find a reflection on the method of science and the concept of forms and concepts that avoids at least in a large degree the dangers of Platonism on one side, of a naive identification of mathematical properties (like infinite divisibility) and empirical properties on the other.

[99] Cf. Enz. § 334. In § 335 we find: "Der chemische Prozess ist ... im allgemeinen das *Leben*".

of life (or to name another example: of mental life) already in cases where many things *in and about* (mental) life are explained.

Kant seems to suggest that the limits of our scientific explanations of future events is only due to a lack of our knowledge. Hegel is much more radical. He does not accept that this is a mere epistemological question at all. It is an ontological one if we call “ontology” that part of a material logic that analyzes categorical differences between different realms of objects of knowledge, of phenomena and of objects of reflection on forms of human practices.

Schelling and Hegel might not have presented their arguments and their ideas of a philosophy of nature and of natural science in a convincing way – especially not for modern readers who do not know enough about the state of the discussion 200 years ago. But this is no sufficient reason to dismiss the critical impact of their attempts without further argument, e.g. by calling their philosophy “romantic” and by presupposing an allegedly “realist” standpoint of (natural) science.

Moreover, it is an anachronistic story of the development of natural sciences if we forget how difficult and how important it had been to liberate scientific investigations of natural phenomena like those of magnetism, electricity, optics, chemistry, physiology and biology from the preconception of physical mechanics. According to this preconception, which had been shared by Kant, every natural event ‘really’ is ‘law-governed’ particle movement and every ‘real’ explanation is a ‘causal’ explanation by forces like gravitation and the tangential (‘centrifugal’) force or disposition to continue a local state movement in an ‘inertial’ way, without ‘acceleration’ in speed or direction, i.e. in geometrical terms: on the tangent of a curve in a momentary point.

CHAPTER 4: INTUITION AND RATIONALITY AS PROPERLY FOLLOWING NORMS AND RULES

4.1 RATIONALITY AS THE COMPETENCE TO FOLLOW RULES

Hegel and Kant distinguish, as already mentioned, the faculty of rationality (*Verstand* or "understanding") from the competence of taking part in a free practice of reason (*Vernunft* or "reasonable judgment"). According to their terminological stipulations, rationality or understanding is the faculty of following pre-established rules or *schemes* of inferences correctly, i.e. to orient our actions more or less schematically at pre-given norms, which define proprieties especially for speech acts, verbal inferences and explicit judgments. Of course, this faculty of following rules is usually accompanied by some free *reflective judgments* about the question if the actions are properly performed or have to be repeated or revised – which already belongs to the faculty or *Reason*, especially when the focus turns to whole practice and the question if or how it has to be re-*formed,* as we shall see more clearly below. In a sense, rationality as rule-following and Reason as controlling the rules or schemes of following rules are usually two moments in one process. This is the reason why our usual understanding does not distinguish Reason and reasoning from the competence of rationality and understanding.

In the following, I develop a distinction that goes back to Brandom (and, for that matter, to Wittgenstein, not to Kant) when I use the word "rule" only for a (schematic) *norm* that *already is made explicit* by some *expression of* the rule. Think, for example, how we learn to use a rule of the form 'A⇨ B' or, perhaps, an *arrow* on a street sign correctly. The form of usage of the sign is, then, the norm expressed by the rule. Such norms tell us what it means to do something in a proper or correct way. We follow a rule of the form 'A⇨ B' properly when we go from A to B, but not when we go from B to A. When we do something which does not have anything to do with A, it makes, at first, no sense to say that we follow or that we do not follow the rule. If A is of no avail, we can do whatever we like without violating the rule. This is, by the way, the reason behind the extremely wide stipulation used in formal logics by which we evaluate a 'material implication' of the form 'p→q' already as 'valid' or 'true' when p is false. Therefore, p can never be used as a true premise. In the case of a street sign, we must have also already learned to distinguish the two directions of the arrow and that the arrow shows a distinguished direction into which we (can or should) go if we want to 'follow' the *sign* – as Wittgenstein had also pointed out at some places.

The implicit presupposition in the very notion of a rule is that we already know how to use an expression of the rule, which may be of the form "A⇨ B". The *norm* of *how to use* this rule A⇨ B

correctly is called *modus ponens* for such rules. This norm is not really a rule according to our terminological proposal. Lewis Carroll has shown this in his nice debate between Achilles and Tortoise. Wittgenstein took it up later. The insight is this: If we write down *modus ponens* as a rule, for example in a form like this: (A&(A⇨ B)) ⇨ B, we still have to know how to apply this rule – which happens to be of the same form as the original rule A⇨ B. Nevertheless, we can view the expression (A&(A⇨ B)) ⇨ B as an expression that turns the norm of *modus ponens* into a kind of rule, even though the norm of its correct use is essentially the same as of the rule A⇨ B.

I have used a conjunction sign "&" above for connecting rules. But we better distinguish now more clearly between rules and subjunctive conditionals. Conditionals are *sentences* of the form 'if p then q', in short: 'p→q'. Such sentences are usually used, of course, to express corresponding rules 'p⇨ q'; but they do so only if they are free-standing and do not occur nested in logically more complex sentences as for example in ¬(p→q). It is unclear if, or how far, *rules* can be nested in this way, as sentences certainly do. The rule-arrow "⇨ " can stand between all kinds of symbols. The 'implication-' or better subjunction-arrow "→" stands between sentences (and sentence-forms with 'free variables').

As we have seen already, we can make at least some *conditioned norms* explicit, either just by rules *or* already by subjunctive conditionals. When we 'conclude' conclusions by following such rules or conditionals, we *apply* them according to the (meta-)norm of *modus ponens*. [100]

The *rules* considered here depend on a *proper use of symbols*. These symbols are presented in a common sphere of joint intuition. We use to say that the symbols *represent* the rules, as if the rules as such (*an sich* in Hegel's sense) could be *present* without the presence of the symbol. But this is not so. The relation between a symbol representing a rule and the relation between a

[100] Especially when we already know something about Gentzen-style proof- or rather rule-theoretical accounts of formal sentential and predicate logic, it is not hard to see why we need some differentiations between commitments and entitlements, just as Brandom's work shows, in order to describe how we use conditionals or subjunctives: If you tell me (or I tell you) that p→q, I am (or you are) entitled to use the conditional as rule, but you are (or I am) committed to show that this is a reliable rule. For this we hawe to show that q holds (or is reliable) under the condition of p (i.e. if p is the case). If I claim that ¬(p→q), I better be able to know cases in which p is true but not q. (This shows, by the way, why conditionals *in general* should not be interpreted as 'material implications' in the sense of the *special* case of two-valued truth-evaluations.) Purely formal logic is probably best understood as a rule- or proof-theoretical system of formal (or, if we deal, as in elementary arithmetics, with infinite many premises, half-formal) rules or schematic norms that define the use of (nested) logical signs like the arrows in subjunctive sentences of the form p→q, of (nested) negations ¬p (by which we make explicit that some sentences p are not valid such that they cannot be used in inferences) and (nested) universal quantifications (x).A(x). (by which we express general forms of

name like “eiffeltower” *re-presenting* a thing are in important ways different. The eiffeltower can be present; and it can be re-presented by pictures or words. But the relation between an expression of a rule and the rule in itself is analogous to a number-term representing a number. Numbers, like rules, can only be *represented,* namely by symbols or expressions; they cannot be *presented* as such or *in themselves.* But their expressions can be *used* (properly or incorrectly). Each use can be seen as a kind of (attempted or successful) ‘presentation’ of the rule, namely in or by its application (or, for that matter, as an attempt to apply it, which expresses an intention to apply it). However, such a particular use presents the rule only in the form which Hegel calls ‘being *for* itself’.[101] As a result, we get the following differentiation: A rule *as such* or in itself is the *form* of how we (*properly*) use the *symbols* or *expression*s of the rule like “A⇨ B” which represents the rule.

Kant says that rationality consists in the mastery of rules (in his wider sense). It is a ‘competence to follow rules’ (“*Vermögen der Regeln*”). But he also says that ‘the world’ follows rules, which is, as such, nothing but an anthropomorphism; for following rule is a form of a practice, which determines a form of free individual actions. Persons can follow a rule (correctly) and they can, at the same ‘time’, decide not to follow it (properly) – which shows that and why rule-following is a rational faculty or competence. However, we can also follow ‘implicit’ norms in a practice without making them explicit as rules. When we make implicit norms explicit by turning them into rules or sentences, we might stabilize the implicit practice. Making its form and the forms of the corresponding actions explicit at least develops our knowledge about ourselves, our self-consciousness.

A typical case for this form of rationality and understanding made explicit can be seen in our applications of mathematics: Whereas the development of mathematics *needs Reason* in producing *new schemes* of calculations, the *use of these schemes* needs only understanding. Logicism and axiomaticism in modern ‘foundations’ of mathematics somehow unfortunately made it seem as if mathematical thinking and proofs just consisted in applications of schematic

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inferences.) For some more details see my article “Regellogik” in J. Ritter et al. *Historisches Wörterbuch der Philosophie*.

[101] We better should leave Hegel’s terminological expressions “an sich”, “für sich” and “an-und-für-sich” untranslated. The phrases “thing in itself” or “thing for itself” could mislead us, since, as such, they are detached from Hegel’s peculiar stipulations, developed for the context of his particular form of logical analysis. In radical contradistinction to Kant, we always know best what a thing *an sich* is. For knowing this we only have know what we *have learnt to say about it*, it is, so to speak an abstract meaning. In other words, what something is *an sich*, it is *for us*, as Hegel says again and again. In view of our example of the eiffeltower, we may now say that each presentation of it in observation or real *Anschauung* belongs to its *Fürsichsein* in Hegel’s sense. This seemingly strange new term in philosophical analysis just means the same as the Latin expression “*pro se esse*”: all ‘appearances’ of one and the same thing, like all application of one and the same rule, stand ‘in a relation to itself’.

(deductive) rules. As Wittgenstein has clearly seen, this conflates mathematical techniques in the sense of mere applications of already given schemes in calculation and deduction with free mathematical thinking.

Rational understanding is made possible by *learning.* Kant and Wittgenstein speak of training (Quine even of responses to stimuli), though this and the German word "*Abrichtung*" only fit to rats and dogs, not to human children, at least not after few months of living in which a corresponding level of development is reached. Of course, as an individual, I have to acquire the competence to deal with all kinds of norms of proper action. I learn to use linguistic or symbolic rules e.g. of the form A⇨ B properly, but also to follow all kinds of instructions in action.

Linguistic and other symbolic acts are, of course, only special, even though very important, cases of performing generic action schemes properly. But, again, any application of rules or normative schemes *is a free action*, not just an *occurrence*.

In rule-following, we freely apply what Kant calls 'determining judgment' (*bestimmende Urteils-kraft*). If we want to be successful in such applications, we rely on 'experienced competence'. But, notice, that it is not me who has the last word in deciding if what I have done is done correctly and if this happened by chance or is done with competence. The attribution of competence is a generic judgment about a person; Plato would have said: about her soul or *psyche*. The evaluations is done not just be 'me' but by 'us', which, in turn, is a generic 'us' or 'we'. This is so because there might be many individuals who disagree and nevertheless do not count, as the example of the many persons who do not grasp the mastery of modern artists like Picasso can show nicely. On the other hand, norms and rules do not exist outside the generic practices and the individual actions governed by them. In other words, there is no norm or rule or scheme of action beyond the way *we act*. This generic use of the word "*we"* is, again, not easily comprehended. In any case, it is not only the expression of the rule, as a kind of symbolic instruction *as such*, that guides our way in applying them, but also a competence to work with examples and paradigms. I.e. any application of a norm or rule in real action, 'the being-for itself' (*Fürsichsein*) of the norm, already contains reflective judgment (*reflektierende Urteilskraft*) insofar as the norm or rule *in-and-for itself*, its real and actual generic content, is determined by how *we* use it in concrete cases. If this *we* is not a *generic we*, but an actual *we-group*, we certainly must add: 'hopefully correctly'. When we acknowledge this fact, which Wittgenstein seems to be eager to teach us, we see even more clearly than above that it is naïve or even false to assume that we always first have 'to know' the rule explicitly and then 'attempt to follow it'. We know the norms of correct action '*empractically*', i.e. by knowing *how to follow 'it'*. And we know

how to do things quite often long before we can make the norm, form, or rule of our action verbally explicit in some way or other. Heidegger and their common teacher Husserl had developed some deep insights into this basic role of non- or pre-propositional competence, long before Gilbert Ryle who has introduced these considerations of German *philosophical phenol-menology* into British *linguistic phenomenology*.

In a certain sense 'we make up the rules as we go along', as Wittgenstein famously says. We can see this in practices that are sufficiently similar to British and American case law. This lesson of Wittgenstein's can be easily exaggerated, however. We therefore better go back to Hegel, because this time it is he, not Wittgenstein and his followers, who want to teach us the *difference* between the applications of sufficiently pre-established schemes or of already articu-lated rules of Rationality on the one side, and the use of free Reason and experienced judgment on the other.

In fact, Hegel explicitly takes care of what Mark Wilson's fine book *Wandering Significance* shows also, namely that *concepts* that refer to the real and actual world usually are *not just* schematic classifications of things that license us to certain *schematic* inferences, as the formal predicates in pure mathematics do. Therefore, mathematical or formal deductions are rather unhappy paradigms for world-related concepts. As a result, a Fregean philosophy of language might be too much impressed by the 'success' of Frege's formal logic in the particular field of philosophy of mathematics. [102] Concepts have traditions of use. These traditions determine what Wilson calls the "personalities" of the concepts – which obviously limit the realm in which we *can develop* the concepts (*reasonably*, as I would like to add).[103] Accordingly, Hegel distinguishes (in his 'logic of the concept') 'the' infinite Concept in the sense of an overall *system* (or rather: *practice*) of conceptual orientations *that already includes diachronic cultural developments* and *reasonable judgments* about such developments on the one side, 'finite concepts' and their relation to merely synchronic (present, often schematic) understanding on the other. This difference obviously depends heavily on the distinction between Reason and Rationality: Rules and normative schemes of correctness or propriety that govern rationality 'determine' or 'limit' the realm of correct actions and belong to the realm of 'finite concepts', whereas 'speculative' principles, i.e. sentences articulated on a very general and high level of speech, make ideas in the sense of forms of human practices and our human life explicit and are 'unlimited' insofar as we always still need good judgment and free reason when we want to 'apply' them.

[102] Mark Wilson shows this at the paradigm of the development of Applied Mathematics and its use in engineering, which is by the way, something totally different than just applying mathematical schemes of calculation.

4.2 SPONTANEITY OF THINKING AND APPERCEPTION

A basic form of *free* judgment and action is addressed in Kant's talk about *spontaneity* of thinking, accompanying *apperception*. A first difficulty lies in a notoriously ambivalent understanding of the word "spontaneous". For we think that something happens 'spontaneously' if it happens 'by chance'. In fact, there is a moment of chance in spontaneous action, for example if it occurs to me that I might have some chocolate (perhaps because while seeing an advertisement for chocolates) and I decide (in view of other possible options) that I really want to get it. The more important aspect of spontaneity is, however, this: If I wish to do so, I am able to do many things spontaneously, i.e. *at will*, for example produce speech acts or, if I have paper and pencil, a blackboard or a sandy beach available, geometrical diagrams.

Spoken language has a very nice and important feature. It is the feature that we can produce its signs or symbols, i.e. words and sentences, without further means spontaneously, after we have learned to speak. This feature, of course, does not come without some 'costs', as we can see when we compare spoken language with writings: Spoken language remains always somehow dependent of present actualizations. Its *form of intuition* consists, like counting, *essentially in its sequential time-structure*, as Kant has seen also. This holds true, of course, for any present recognition of the implicit syntacto-semantic forms attributed to the uttered sequences of linguistic elements like words or sentences. The *form of Intuition of writing*, like that of diagrams, is, on the other hand, always spatial. Writing and diagrams prevail as such at least over some time. This is one of the reasons why writings and diagrams seem to be more objective than oral speech, since by their help we can control independently of the time of utterance and our notoriously bad memory, what was 'said' (or rather: *written*) *literally*.[104]

Even though it does not seem to fit directly to what Kant writes literally, I claim that the *spontaneity of thinking* he talks about should be understood as the fact that we can produce speech acts and (re-)present in them *generic forms* of oral language (and, later, of written diagrams) *at will*. For this, I do not have to care about the question if what I say makes good sense or not, even though it immediately will come up. To make sense of Kant's talk about apperception is more difficult. For *apperception*, as Leibniz had used the term, is conscious, i.e.

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[103] Mark Wilson certainly does not know how Hegelian his approach is. I at least would take his book as a nice explanation of what it means when Hegel says that *the concept is free*.

[104] Our whole concept or system of knowledge changes considerably when oral traditions are replaced by written texts, from the Sumerian, Egyptian or, for that matter, Mayan or Chinese uses of diagrammatic writings via the Phoenician alphabet and the Greek 'elements' (not only of geometry) down to modern encyclopedic textbooks or libraries. Writing down national myths as in the case of Hesiod or the Bible is only a first step. Already Homer does much more. In fact, he already marks the end of the era of holy books and sacrosanct, i.e. purely schematic,

conceptually and inferentially informed (classified and oriented) perception.[105] I.e. generic content is already added to ('ad') the perception. We can bring this 'addition' of consciousness to perception into a connection with spontaneity, if we only remain aware of its double sense. Any full and conscious human perception comes already with some implicitly or *empractically* connected content, even when the individual perceiver is not actually or explicitly aware of it. But we can make the relevant content explicit, for example by sentences. If we do so (successfully), the content of the sentence is the same as the content of the perception.[106]

Kant now confuses things considerably by reading apperception as self-conciousness: „*Consciousness of oneself (apperception) is simple (re)presentation of the I*".[107] Amazingly, since the late 19th century philosophical authors beat the messenger for the message when they dismiss Fichte's, Schelling's, and Hegel's attempts to make sense of these problematic passages in Kant's 'theory' of apperception as self-consciousness.[108] In fact, it is precisely this identifying move that was undone by Hegel in his *Phenomenology of Spirit*: In a first step, Hegel replaces Kant's and Fichte's 'I' by a (generic) 'We'. Then he replaces this 'We' by 'the Concept', i.e. by the competence of taking part in conceptual thinking, reasonable judgment, action and practice. In fact, Hegel's replacement of the *I* and the *We* as the ('real', 'transcendental') subject of thinking by his ominous *Concept* with capital letters is fairly parallel to what Wittgenstein later will say in the *Tractatus*: "Not I say that p, but 'p' says that p."

Be this as it may, if we stick to Leibniz rather than Kant in our use of the word "apperception", we can say that apperception already comes with two levels of inferences. On a first level, we have implicit, empractical, inferences like the following: I hear a wolf. Hence, I take care that I do not get bitten. Or I see a spring. Hence I go there in order to drink. In a sense, these 'inferences' consist in *present* attitudes and actions. On a second level, we already use formally learned

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traditions – as the first really free spirit, Heraclitus, seems to have noticed already, even though the world does not know this yet today.

[105] "Leibniz brachte uns (...)die Unterscheidung der sinnlichen »Perzeption« (bei Descartes ist »perceptio« die Wahrnehmung der Seele) von der »Apperzeption«, welche die bewußte Erfassung des Gegenstandes durch die Seele ist; wiederum eine Unterscheidung, die mit dem »inneren« und »äußeren« Sinn in der Tradition verschmolzen wurde, wiewohl Leibniz sich um die Lehre vom inneren Sinne dabei gar nicht kümmert." [F.A. Lange: Geschichte des Materialismus, S. 1842. (vgl. Lange-Mat., S. 884)]

[106] This means, by the way, that we have to distinguish (latent, transpersonal) *consciousness* from (actual and activated) *awareness*, but this is not the place to continue this line of thought here.

[107] „Das Bewußtsein seiner selbst (Apperzeption) ist die einfache Vorstellung des Ich". [Kant: Kritik der reinen Vernunft, S. 108. (vgl. Kant-W Bd. 3, S. 93)].

[108] "Es ist hier nicht unsre Sache, zu entwickeln, wie es kam, daß Fichte aus Kants Philosophie gerade einen der dunkelsten Punkte - die Lehre von der ursprünglichsten synthetischen Einheit der Apperzeption herausgriff, um sein schöpferisches Ich daraus abzuleiten, wie Schelling aus dem A=A - gleichsam aus einer hohlen Nuß - das Weltall hervorzauberte; wie Hegel Sein und Nichtsein für identisch erklären durfte unter dem jubelnden Zujauchzen der wißbegierigen Jugend unsrer Universitäten." [F.A. Lange: Geschichte des Materialismus, S. 760. Lange-Mat., S. 514-515)]

inferences between *symbolic representations* e.g. of the form A⇨ B (i.e. if something is an A, it is a B). In order to shorten things here, I represent the form of such an inference by a generic conditional like the following: “If, what I hear is a wolf it could come and bite” or: “if what I see is an oasis, I can go there and get something to drink”. We learn many such verbal inference rules by heart. And we can consider formal logic as a system of condensing infinite many of such sentences or rules into few axioms. Logic thus is a part of some verbal technique of memory. As a result of this view, the schemes of formal logical deduction of sentences from sets of logically complex sentences appear as a means of expanding some kind of or mnemotechnic shorthand into more concrete sentences. Deductions as such never can prove the truth of the consequences, since, as many philosophers already had seen, the ‘axioms’ are more ‘problematic’ than the theorems: The former get their truth from the latter, instead of guaranteeing it.[109] This approach to logic does not contradict Brandom’s idea that logically complex sentences help us to make implicit norms of inference explicit. It rather is an important step in a satisfying explanation why this may be so.[110]

Viewed in our way, apperception already presupposes the possibility of a spontaneous explication of the (perhaps still implicit) content of perception (which can contain errors, to be sure). This, in turn, presupposes recognition of words and sentences that possibly articulate what it is that is perceived. Hence, if we look at the way we use the term “apperception”, it is a mere analytical statement to say: we (or I) (ap)perceive an X or that something is the case, say p, if and only if we (or I) *can or could think of* X or p. On the other hand, the possibility to accompany any of my present (ap)perceptions and imaginations (*Vorstellungen*) of X by an act of “I think(of X)” is a *transcendental* principle of apperception expressing the presuppositions sketched above.

For my purposes here, the following observation should suffice now: In cases of mere perception and reaction, there can only be practical error and dissatisfaction (for example, there was no water to drink). In cases of apperception, on the ground of its two-level structure, there can be conceptual error (there was no real wolf around, and what I saw was nor real oasis but a *fata morgana*).

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[109] The feature that valid logical rules are ‘truth-preserving’ is, in fact, to be seen as a relation between arbitrary formal sentence-*schemes* having different truth-evaluative ‘models’. I am talking her about relation between already ‘interpreted’ *sentences* (referring to already specified ‘models’, if we may say so).

[110] Notice that I do not say anything here about the logic of identity and the name-predicate-structure of sentences, as we would need them in any more detailed analysis of what it is to refer explicitly to real objects in the world. This would need a kind of transcendental logic, as Kant develops it. I just take these issues out of my focus here.

Now I take it, that Hegel's famous formula of the I, which is a We, and the We, which is an I, adds to this the following insight: Apperception already presupposes some *joint practice* and *competent judgment* with respect to *what my (ap)perception really refers* to. And this means that full human perception is *no immediate* perception of anything at all. In this point, it seems to me that I agree fully with the diagnosis of John McDowell: Full human perception and cognition is always already much more complex than mere animal perception and animal cognition. But I try to make this insight in some other way explicit as McDowell does. Moreover, I use a kind of mixture of terminology going back to Leibniz, Kant, and Hegel in order to say, first, that full human perception is *apperception* and then that *apperception* already presupposes the *competence of intuition* or *Anschauung*. We shall see immediately, what this means. (We have to remain aware, however, of the fact that the usual, merely subjective, understanding of the English word "intuition", which indeed coincides with a certain use of the German word "*Anschauung*", is not very helpful here. Hegel uses the German word almost everywhere merely in this *psychological* way, referring to mere opinions, inner feelings or merely *subjective ideas*. But it might be a better idea to sort this psychological reading of *Anschauung* or intuition out and try to develop a charitable reading of Kant's ideas, with him against him, so to speak.)

4.3 INTUITION AS JOINTLY CONTROLLED REFERENCE TO PRESENT THINGS

Fichte and Hegel tried to understand human sapience as a unity of theoretical intelligence and practical competence of performing (free, but in many respect joint and cooperative) action in proper or reasonable way. In order to comprehend the form and possibility of rationality and reason, it is not sufficient, they think, to reflect on individual faculties that are presupposed when we take part in practice like that of joint objective experience or moral judgment, just to name the two main examples of Kant's First and Second Critique, but on the very possibility of these faculties. This is the deep reason why Hegel protests against Kant's way of talking about the A priori:

„Kant's talk of the A priori is altogether utterly vague. For any determined feeling, like, for example, instinct (which includes: *drive, desire, urge, appetite*) or sense (which includes: *orientation, meaning*) etc. contains as well a moment of a prioricity, as space and time, being existent only in chronological and spatial relations (*sc. between person and objects: thus I read temporality and spatiality*) are determined a posteriori."[111]

[111] Translation and comments in brackets by me, PSW. The original text reads: "Das a priori ist überhaupt etwas nur Vages; die Gefühlsbestimmung hat als Trieb, Sinn usf. ebensosehr das Moment der A priorität in ihr, als Raum und Zeit als existierend, Zeitliches und Räumliches, a posteriori bestimmt ist." [Hegel: Wissenschaft der Logik, S. 351, Theorie-Werkausgabe Bd. 5, S. 238)]

Moreover, Hegel sees that Kant falls often back into subjective reflections, just because he wants to talk only about a generic subject and hence avoids talking about more than one person. – My claim now is that the 'success-' or 'truth-'conditions of '(ap)perceptive' cognition-claims already include practical 'success-' and only later theoretical 'truth-'conditions of some *joint reference* to an object or the world in *joint Intuition* or *Anschauung*. *Intuition* or *Anschauung*, in the 'good sense' defended here, is already conscious – and this means, incidentally, possibly jointly controlled – and in the end practical relation to a *determinate object here and now*. It is not at all reduced to optic or acoustic perception. Intuition in this sense is close to (factive) *observation* in contradistinction to *imagination*. In fact, if I observe something, what I observe, exists. If I have some 'inner intuition' in the sense of some psychological imagination, what I imagine may not exist. In order to mark the distinction to other, more subjectivist or psychological uses of the word intuition, I sometimes will use capital letters.

Whereas 'animal perception' is a merely individual faculty of seeing or hearing something and dealing immediately, behaviorally, with the perceived objects, Intuition is already a *social* competence in the following sense: It involves the faculty for a certain *change of perspective* from *my* standpoint to *your* or another person's point of view. To be more precise, it normatively presupposes that we can successfully perform such a change of perspective, such that you can refer to the same object of Intuition as I can.

In order to show how such a change of perspective is made possible and how it makes 'co-variant' references to 'the same' object in a space of joint reference possible, I start with a well known example for how *we jointly* act: When a mother shows something to her child, she controls the reaction of the child and vice versa. They both refer to something present, which Martin Heidegger had called "*Zuhandenes*", which means that success of reference is determined by what they *do with it.* It is, in a sense, the form of the *We* resulting in such an interaction that Heidegger calls "*Mitsein*". But our first point is that the structure of this space of relations between objects, or rather between us and the objects, is *social* in a very deep sense. The reason is that joint reference always presupposes social control. In other words, when a child deals with an object of Intuition, let us say a toy pet, the object already plays a role in a play, with a kind of unwritten script for what other can or should do, how they can or should enter the play. – Not before long, the child controls the mother, too. At the end, both can check whether the other refers to the objects properly or not, namely by checking, for example, whether the other consistently looks in the right direction or touches the right part or brings the right object or plays the right game with it. It is the game, i.e. the joint action and practice, not

really the child or the mother, that decides about roles and proprieties. And children are very quick to learn this fact, including the fact that the norms or rules of the game must be *shared*.

In present situations of joint Intuition and corresponding games we also learn to distinguish and to produce phonematic forms correctly, if it is allowed, as I propose here, to use the visual word "Intuition" for sounds and even haptic relations to bodies too. We do not just learn, like parrots, to *imitate* words. We '*emulate*' in playing social games. I.e. we learn to play roles, which usually add up quite early to quite complex *joint actions*. We do so already when we distinguish and produce words *properly*. And this means that we learn to control the correctness (propriety, appropriateness) of utterances and speech acts, with respect to their syntactic forms as well as their semantic meaning (use and reference): Parents and children control jointly if they pronounce the words in the right way, use the words properly, answer to questions in an adequate way and so on.

The child begins, in a sense, by controlling the approval or disapproval of the mother. But soon the child controls if the parent is interested enough in the object in focus. A practice of mutual control of this sort is basic for any sort of deictic reference to things and for language learning. It is therefore basic for any linguistic competence deserving its name. Consciousness now results from applications of this form of control to oneself, as the traditional concept of *con-scientia* shows. If we take this into proper account, we might understand why Kant 'confuses' apperception or conscious perception with self-consciousness.

Having a perspective and being able to change it – or rather, keeping track of such changes – are moments in *cooperative acts*. The form of the cooperative act, the joint action scheme, 'precedes' in a sense its correct actualizations. This is so in cases we learn a game from peers, but also when we later make up new games by some variation of known ones. The competence to perform such games or joint action schemes already by far surpasses mere animal cognition. It involves some form of *re*cognition – in a fairly wide and "thick" sense of recognizing the different roles we play in cooperative actions, the person playing these roles and the relations to the things in the real world that are involved. [112]

[112] As it is well know, the distinction between *thick* and *thin* concepts was made prominent by Bernard Williams, but the idea (not the word) goes back to Elizabeth Anscombe: A concept like 'selling X' or 'promising Y' is 'thick' if its use entails 'ethical' evaluations, commitments and entitlements, which are no entailed by 'thin' concepts (like 'passing X to a person' or 'uttering a sound'). When we use 'thinner' concepts we try to speak on a level of 'bruter' facts'. The question if there are brute facts in an absolute sense is interesting, but not the issue here. Cf. Bernard Williams, *Ethics and the Limits of Philosophy* Cambridge, Mass. 1985, pp. 129, 143-145 et passim. Cf. Elizabeth Anscombe, "On Brute Facts", in: *Analysis 18*, 1958, pp. 69-72.

The – perhaps astonishing – claim I want to defend now is that in our *joint orientation in space* certain *cooperative features* and, hence, some rudimentary forms of 'ethical togetherness' already are involved. In fact, whereas sensation and perception in the sense of ('helpful') distinctive reactions on what is sensed is part of our *animal* nature, it is not at all trivial to learn to take part in a joint practice of (pre-linguistic or already conceptualized) Intuition. As far as we know, only human children can learn to do so. This is a kind of brute fact. In fact, what we may experience with a well-trained dog only appears to be joint Intuition. We certainly can *show* to the dog e.g. that there is ball over there to play with. But it is totally unclear how far our 'joint' reference goes. Or rather, whereas a child can show something to the mother and controls if she refers to it in the right way, a dog can do this in a very limited sense, if at all. What a dog certainly cannot do is to control together with us the correctness and jointness of such demonstrative references.[113]

Davidson and others talk in the context of *deixis* about *triangulation.* This is a nice way to express an important feature of jointly controlled reference to a present object. The idea is that reference to an object is, *at the same time*, a relation between real or possible persons. Thus the metaphor representing the perceptual and, at the same time, social, process of *Intuition* or *deixis* has to be read like this: The three corners of the triangle represent two persons and one object. However, Davidson does not seem to differentiate between a mere coordination of perception and behavior, as animals do (think for example of wild dogs hunting), and cooperative joint action, which is already needed for referring to an object and showing it to someone else.

Unfortunately, Kant never says explicitly that *Anschauung* presupposes the competence of relating *my* perspective on an object here and now to *your* perspective on the same object then and there. He does not do so, because his whole analysis takes the form of a transcendental reflection of a *generic I on the generic I*. Kant thinks that this is the right form of analysis anyway, because he does not want to talk about empirical subjects like me and you and us or them.[114] Precisely this leads into some deep problems, because transcendental analysis turns

[113] We might want to harden this knowledge into a generic, conceptual, truth. It the articulates a basic difference between us humans and the beasts. I take it that Hegel's concept of conceptual truth is wide enough to embrace materially conceptual truths or inferences of this sort. By this move, the distinction between conceptual and empirical truths totally changes: Many things that count as 'empirical' in the tradition of empiricism and Kantianism now count as conceptual, not only verbal (formal analytical) rules and sentences and not only Kant's obscure 'a priori but synthetic' sentences. Empirical sentences now are only sentences about singular cases, which of course can come in quantified form as sentences about 'all' individual cases. Sentences of science have a different status. They are generic and as such form at the same time a system of stable knowledge and of materially conceptual inference that can be used as 'default' rules for practical conclusions and judgments.

[114] Kant seems to assume her that thinking always is correct, meaningful, thinking. But the (implicitly terminological) rule that we grasp a thought only if what we grasp is already meaningful (which Frege shares with Kant) misleads us

blind with respect to important structural features of being a competent subject: Neither the concept of Intuition nor the concept of *thinking* can be analyzed correctly if we lack the language for expressing changes of perspectives between different persons.

What we want, and need, is to comprehend thinking and knowing not only in the abstract (*an sich*). We want, and need, to know what thinking and knowing really is (*an und für sich*). For this we have to know how *we* judge which of *my* (or *your*) acts (*für sich*) are correct acts of thinking and represent true knowledge.

We have seen that even the simplest change of perspective needs joint control, for example by considering how a child learns to look into the same direction as the mother. The *object* to look at defines here what sameness of direction is, and not, as in geometry, parallelism of lines. Therefore, the child cannot just 'do the same' as the mother does, or do something 'parallel' to what she is doing. Instead, a certain *change of perspective* from mother to child and back is required. And this change of perspective consists, at bottom, in some normally implicit, practical, only in rare cases explicit 'knowledge' about how to change roles in a joint, cooperative, action. The correctness of playing the roles as well as of controlling or changing them are, in the end, socially controlled by all real participants of the practice. I.e. our 'scorekeeping' (David Lewis, Robert Brandom) takes itself the form of a joint action with it division of labor and roles.

When I say her that Intuition presupposes the mastery of a *transformation of perspective on the object of Intuition* in present *space*, I obviously reconstruct *Anschauung*, as I have said, with Kant against Kant. *With* him, I can say now that space is the 'outer form' of Intuition, just because all spatial relations are controlled in our practice of joint observation of *present* objects and phenomena, even when we use present phenomena as indications for how the thing that cause them are spatially ordered. Intuition presupposes also the mastery of the logical form of *tempus*, at least in all cases, in which *we* refer to processes and movements, not just to unmoved things or "*gestalts*". When I see that Peter runs, I can say later that Peter ran.[115] Kant tries, however, again to avoid any reference to 'empirical' processes. Therefore, he wants to give a foundation of 'time' as a form of 'inner' Intuition in an allegedly a priori, but in reality purely

here: „Daß das Ich der Apperzeption, folglich in jedem Denken, ein Singular sei, der nicht in eine Vielheit der Subjekte aufgelöset werden kann, mithin ein logisch einfaches Subjekt bezeichne, liegt schon im Begriffe des Denkens, ist folglich ein analytischer Satz; aber das bedeutet nicht, daß das denkende Ich eine einfache Substanz sei, welches ein synthetischer Satz sein würde. Der Begriff der Substanz bezieht sich immer auf Anschauungen, die bei mir nicht anders als sinnlich sein können, mithin ganz außer dem Felde des Verstandes und seinem Denken liegen, von welchem doch eigentlich hier nur geredet wird, wenn gesagt wird, daß das Ich im Denken einfach sei." [Kant: Kritik der reinen Vernunft, S. 465. (vgl. Kant-W Bd. 4, S. 346-347)].

empiricist way, starting with sequences of inner sensations. According to Hegel, we really would not have any knowledge neither of the forms of spatial and chronological intuition or observation if we could not apply them empirically to really moved bodies or changing things *in the real world*.

In any case, *Intuition* differs from animal sensation and corresponding reactions because it is part of a culture and practice, in which we *jointly* refer to the world present to us here and now. This competence of *Intuition* is pivotal for *understanding* any *reference* of words to the world. Empiricism, from Locke and Hume to Quine and his followers, can be characterized by the wrong belief, that mere coordination of behavior guided by sensation were enough for learning to use symbols and project them onto the real world. Instead, this much remains true of Kant's approach: We cannot investigate *Intuition* by purely empirical or scientific methods. The reason is not that science does not allow for transcendental introspection. Introspection is not only no scientific method, it is no good for anything. Therefore, already Hegel dismisses any talk about private 'qualia' as utterly uninteresting. We cannot investigate *Intuition* by purely empirical methods because it is a *social practice.* But should it then not be the topic of an empirical social science like psychology? Well, yes. But philosophy *reflects* on the *constitutive forms of such social practices* – whereas the empirical social sciences by doing statistical research already *presuppose* all the relevant methods of their own practice and do not focus on the forms and norms applied. (Obviously, I do not talk about persons here but about typical roles in a division of labor.) In order to focus on basic forms, we have to use 'philosophical' or 'speculative' methods of making the implicit norms or forms of empirical investigation explicit. The same consideration applies to the investigations of perception in neuro-physiology or the cognitive sciences. Their focus also is restricted to *necessary* conditions of successful perception and *Intuition*, just as a doctor has to take for granted what it is to be healthy: she can only help to heal diseases, not 'explain' what it is to be sound.

The task of non-metaphysical philosophy, therefore, is to develop non-subjective versions of *transcendental* or *presuppositional* analysis, namely as forms of *conceptual reflection* on basic forms of joint human understanding, experience, knowledge, and science. This is, I take it, the core methodological insight of Hegel's 'new' reading of Kant's philosophy.

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[115] In his important work *Kategorien des Zeitlichen. Eine Untersuchung der Formen des endliches Verstandes*, Frankfurt a.M. 2005, Sebastian Rödl has shown why, and how, time can be understood as an inner form of Intuition. Cf. also my explanation of Kant's concept of spatial Intuition in *Sinn-Kriterien*, Paderborn 1995, pp 163 – 177.

4.4 PURE FORMS OF SPATIAL AND CHRONOLOGICAL INTUITION

When we want to know what the *pure forms of Intuition* are, about which Kant famously talks, we first learn that the geometry is the science of the forms of 'outer' Intuition, i.e. of spatial orderings of what is possible intuited (i.e. observed as being here or there). And we learn that these forms must be a priori because there are generic proofs about them in geometry that do not seem to rest on particular empirical knowledge a posteriori. Unfortunately, we do not find a satisfying argument for the alleged non-analytical status of mathematical truths in Kant's writings altogether, as already Hegel complains, long before modern analytical philosophy.[116] But at least in one important point we can defend Kant's approach: We always can *visualize spontaneously* the geometrical forms we talk about in elementary plane geometry by sufficiently well drawn diagrams on sufficiently plane surfaces of bodies. I.e. we can construct these diagrams more or less at will and improve them in cases some of them are not good enough to *show* us generic truths about spatial forms. Therefore, the judgments that result from the 'observation' (*Intuition*) of such diagrams are *not empirical*. In them, we talk about (ideal) geometrical *forms*, not about *reports* about what we have passively experienced more or less by chance. In other words, elementary geometrical knowledge is not founded on 'empirical induction'. It is knowledge about what *we can* do. As such, however, it is somehow confined to present Intuition of *local* spatial relation *on bodies* or *between bodily parts*. We need some projection of these forms to universal space at large, as we shall see more clearly below.

Time is, according to Kant, the form of 'inner' Intuition, because it is the 'pure form' of chronological orderings 'here and now', starting, according to Kant, with the order of the sequence of 'present' processes of inner sensations (*Empfindungen*). However problematic this starting point may be, it has the important feature that in our comparisons of times we use

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[116] Hegel famously says: „Die Arithmetik ist analytische Wissenschaft (*sic!*), weil alle Verknüpfungen und Unterschiede, die an ihrem Gegenstande vorkommen, nicht in ihm selbst liegen, sondern ihm völlig äußerlich angetan sind" (namely by a general method of attaching one of two truth-values to any meaningful arithmetical sentence p, such that we can ask if we have attached the value "true" to a given p or not). [Hegel: Wissenschaft der Logik, S. 360. (vgl. Hegel-W Bd. 5, S. 244)]. Hegel's remarks on geometry are quite obscure, however, for he says, „daß Kants Behauptung von der synthetischen Beschaffenheit der Grundsätze der reinen Geometrie ebensowenig **(sic!)** etwas Gründliches enthält. Indem er angibt, daß mehrere wirklich analytisch seien, so ist allein der Grundsatz, daß die gerade Linie zwischen zwei Punkten die kürzeste ist, für jene Vorstellung angeführt. »Mein Begriff vom Geraden enthält nichts von Größe, sondern nur eine Qualität. Der Begriff des Kürzesten kommt also gänzlich hinzu und kann durch keine Zergliederung aus dem Begriffe der geraden Linie gezogen werden. Anschauung muß also hier zu Hilfe genommen werden, vermittels derer allein die Synthesis möglich ist.« - Es handelt sich aber auch hier nicht von einem Begriffe des Geraden überhaupt, sondern von gerader Linie, und dieselbe ist bereits ein Räumliches, Angeschautes. Die Bestimmung (oder, wenn man will, der Begriff) der geraden Linie ist doch wohl keine andere, als daß sie die schlechthin einfache Linie ist, d. i. in dem Außersichkommen (der sogenannten Bewegung des Punktes) schlechthin sich auf sich bezieht, in deren Ausdehnung keine Art von Verschiedenheit der Bestimmung, keine Beziehung auf einen anderen Punkt oder Linie außerhalb ihrer gesetzt ist, - die schlechthin in sich einfache Richtung. Diese Einfachheit ist allerdings ihre Qualität, und wenn die gerade Linie schwer analytisch zu definieren scheinen

present processes – such that the notion of 'presence' must be already understood as relative to the corresponding processes that are extended in time.

By his remarks on the inner and outer forms of our human *sensibility* or *Sinnlichkeit*, Kant wants to convince us, however, that the spatial relations between objects of experience and the chronological relations between events refer only to a world of (possible) phenomena, *as the things appear to us*, not to the objects as they may be in themselves ('*an sich*', in Kant's use of the expression). This results in the well-known psychological and subjectivist ('idealist') readings of Kant's analysis. Hegel, instead, *re-interprets* the phrase "*an sich*" in a totally new, anti-Kantian, way. For Hegel, a thing '*an sich*' or 'noumenon' in the realm of merely 'intelligible things' (*mundus intelligibilis*) is nothing else than an *abstract meaning of name-like expressions*. In fact, we can talk about all kinds of 'abstract entities', about numbers and ghosts, the soul and free will, the personality of Socrates or Sherlock Holmes '*an sich*', without saying anything about their real existence '*an und für sich*'. If we want to attribute a 'Fürsichsein' to Sherlock Holmes, it consists only in the writings of Arthur Conan Doyle. And when we want to know, what the *soul* or *free will* is or could be *an und für sich*, we do have to look *what we do with these talks in the real world*. I.e. Hegel dismisses any talk about a possible 'transcendent(al)' world of things '*an sich*' in Kant's sense, with or without 'transcendental' or presuppositional 'proofs of existence'. About such transcendent(al) things and worlds *an sich* we may talk as long as we wish, we do not *know* anything about them, if we cut off the relation of these talks to the real world of real experience. This idea is, of course, deeply Kantian, despite all the criticisms it contains.

When it comes to real space, Kant agrees with Leibniz, that there is no absolute space in which all things are contained as in a big bucket and move around. From a merely geometrical point of view, the choice of a point of 'rest' with respect to which all other things are possibly moved is just an arbitrary choice. In other words, the space, 'in which' the things move relatively to each other must be understood as an abstraction with respect to an equivalence relation defined by or corresponding coordinate transformations, by which we make the change of perspective, i.e. the choice of a resting point, mathematically explicit. Leibniz certainly thinks of the so-called Galilei-transformations here, which I am not going to explain further. The only point Kant adds to what we already know from Leibniz about the Galilei-relativity of space is this: To Kant's taste, Leibniz does not make clear enough that we are not allowed to use mirrorings as coordinate transformations. In other words, Kant insists that we have to distinguish between coordinate transformations that represent or correspond to a 'movement' form one body to another, and a

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sollte, so wäre es nur um der Bestimmung der Einfachheit oder Beziehung auf sich selbst willen (...)" [Hegel:

coordinate transformation that represent or corresponds to a mirroring which would transform, for example, a right hand into a left hand. But a right hand glove does not fit on a left hand. In plane geometry we can, and do, count triangles and their mirrors as similar. In three dimension we have to distinguish between shapes and forms and their mirrors. This shows, as Kant stresses, that we cannot abstract from the *orientation* of our spatial orderings of things, whichever observation point we choose. I.e. the *perspective* always must be bound already to a *body* in order to specify, so to speak 'from within' the body, the orientations 'up' and 'down', 'left' and 'right', 'behind' and 'in front'.

The *ideal* forms of mathematical geometry are *pure* because we abstract from all *empirical* problems like having sufficiently large rigid bodies, plane surfaces and straight lines available (and so on). Today we know that for the purpose of macro-physical movements of stellar bodies in comparison to the propagation of light this abstraction is, in a sense, utopian. This is the reason why we replace Euclidean or rather Galilean Geometry for representing spatial relation by a Riemannian or rather Einsteinian framework. But, and this is often overlooked by empiricist critics of Kant, this new geometry functions also as a (relative) a priori framework for coordinate transformations expressing changes of perspectives on 'the same' objects and events.

The time-line represents in a geometrical way the inner form of how a chronometer produces time-numbers, for example, by the movements of the hand on a clock. Therefore, the abstract form of time is indeed, as Kant says in effect, represented by the series of real numbers. But Kant does not present some further analysis of the concept of *simultaneity of events at different places far apart.* In fact, Intuition refers only to what is *here and now*. Kant also does not reflect (intensively enough) on the question what could be *equal durations at different times*. He does not even address the difference between geometrical or spatial relations at presence (like on earth) and applying geometry for describing relative places of moved bodies 'in outer space'. Therefore, the analysis of Kant does not go deep enough as to enable us to decide if he 'would have' defended Euclidean or rather a Galilei-Leibniz-concept of space as 'the' a priori form of all possible spatial ordering of our objects of experiences or not. He just took for granted that geometry provides us with the means of representing spatial relations mathematically. Any attribution of the claim that space is Euclidean to Kant is therefore fairly anachronistic: Kant's considerations just do not, and cannot, count at all with the possibility, not to talk about the necessity, of Einstein's conceptually deep *re-formation* of the very notion of space-time.

Wissenschaft der Logik, S. 352. (vgl. Hegel-W Bd. 5, S. 238-239)].

4.5 THE PROBLEM OF INTELLECTUAL INTUITION RESUMED

As we have already seen, Kant bluntly rejects that there could be any such thing as *intellectual intuition.* This is so because the notion of intuition or *Intuition* is factive: it guarantees the existence of its present object in space. If we have an (apperceptive, conscious) Intuition of the pencil over there, the pencil exists. Of course, we could be in error that the pencil is a pencil in the sense that we can use it still for writing. But when we jointly refer to present things, say to a chair I sit upon, it does not make sense to doubt that the chair exists. This is an important difference between the notion of conscious intuition and a much more 'subjectivist' concept of perception or even mere sensation[117]: From the mere fact that I have some sense-perceptions and judge that they are sense perceptions that might be produced by a pencil or a chair, it does not follow at all that there really is a pencil or a chair over there. Like mere sensation, the intellect as the power of representing non-present things by symbols is definitively *not* factive.

Only an analysis of jointly controlled success conditions and hence of *social cooperation* can sufficiently clarify the *factive notion* of *conscious* (i.e. controlled) intuition in contradistinction to an empiricist notion of perception as we find it in Berkeley's and Hume's philosophy. This is how this account works: If *I* claim that there is an X over there because *I* observe it, i.e. because it is the object of '*my*' Intuition, the claim can be fallible, of course. It is possible that I have to revise it. But if we interpret consciousness as *joint control*, it is indeed true that if *we* consciously and *jointly refer* in *present Intuition* (which is, as we remember, by no means only optical perception), say, to a chair or a barn over there, the existence of the chair or barn, their *An-und-für-sich-Sein*, is out of question. Hence, *we* can *know* that there is barn over there, namely on the basis of controlled present *Intuition* of it, i.e. after we have controlled if the intentional relations to the same, objective, barn survives the relevant changes of perspective. Hence, a *factive sentence* like 'I see a barn over there' and its use for justifying a claim like '*there is a barn over there*' has to be understood in the context of a joint practice, not in a still empiricist context of more or less 'reliable' verbal responses to local sense-perceptions. I say with this sentence *that we happily can agree that there is barn*.[118]

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[117] According to my reading, John McDowell's notion of *human* perception coincides more or less with this concept of conscious or *ap*perceptive, i.e. conceptually informed and determined Intuition as it is developed here.

[118] Notice that it is never absolutely fixed what counts as 'here' or 'there' or as 'now', i.e. as 'presence', and who has to be included into the relevant "*we*". Moreover, what counts as 'the' success condition of an observation and 'the' fulfillment or truth condition of the corresponding assertion is always open to some *relevant* choices in a realm of general (or generic) default inferences attached to the assertion. When *we* say, for example, that this shirt here is green, and we only refer to how it appears here in the room, we *do not have to* count as refuted if *you* show us that the shirt turns blue in the open sky. It depends on what we were talking about. The same openness for truth and revision holds for a case like this: *I* say that there is milk in the fridge, *we* get it, drink it and feel allright; but we learn later from *you* that it was made of soya or even of some poisonous stuff. It is not easy to see how finite our usual

Now, Kant understand the intellect as our capacity to think. And this means that it is the capacity to produce symbols spontaneously. Therefore, for Kant to have the capacity of *Intellectual Intuition* would mean to have the capacity of *spontaneously creating* real things for *possible observation* (*Intuition*) *just by thinking* at them. This capacity is certainly no faculty we humans have. It would be a capacity of a god, of a creator of the universe *ex nihilo*, if such a capacity or god would exist. In other words, in the real world, the concept of *Intellectual Intuition* is (almost by definition) *empty*. The reason for this is exactly that thinking is spontaneous in the way I have described it above. In thinking, we can produce *symbolic representation of mere possibilities* at will, spontaneously. But this does not turn any possibility into a reality.

As I have said, Fichte, Schelling, and Hegel understand the concept of intellectual intuition in another way as Kant did. In order to see this more clearly, we have to go back to the transcendental principle of apperception. There, Kant says, as I read him, that in any possible idea in the sense of a present perception, imagination or representation of something, there already is an 'I think' implicitly involved, which *can* be made explicit. In fact, full human perception always already presupposes apperception in this sense. Kant identifies it with a kind of self-knowledge, namely that *I* exist as the possible performer of a spontaneous act of thinking or judging. Moreover, I can make the implicit conceptual guidance of my perception (or rather: Intuition) explicit. But, in the end, Kant does not really say much more about this *I* than what Wittgenstein later expresses in the well know simile of the *Tractatus*: There, the *I* is only the vanishing point behind – the *eye*. – Fichte and Schelling now claim that the very principle of transcendental apperception shows in what sense there is Intellectual Intuition, namely in the form of Descartes' proof of my existence as a thinking being from the very fact of my thinking. Thinking implies existing, even though the old saw does not seem to die out, according to which it allegedly could be possible that 'it' thinks (in me?) or that I myself could be just imagined by some demon (?). According to Kant's explicit comments, any further knowledge about myself presupposes empirical self-observations. But at least as it stands, this remark sounds strange. It is even self-defeating. For Kant's own procedure of transcendental reflection does not want to be empirical self-observation and nevertheless seem to result in synthetic a priori knowledge about the form of being such an *I*. No wonder, therefore, that Fichte and Schelling do not buy from Kant that this form of thinking of myself does not provide me with any more information about myself as the pure existence of my *I* or 'Self'. On the other hand, it still remains unclear what this Self or *I* is.

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claims for truth are, and that they are satisfied, if they are satisfied, as finite claims. Cf. also Andrea Kern, Quellen des Wissens. Zum Begriff vernünftiger Erkenntnisfähigkeit, Frankfurt/M. 2006.

Hegel's *Phenomenology of Spirit* is from its very beginning concerned with this problem. But Schelling and Hegel also worry about the unity of the world. I.e. they want to avoid the dualism or the rest of Cartesianism as it looms in Kant's and Fichte's philosophy. So when they defend that there is something, which deserves the title of Intellectual Intuition, their aim is just the opposite of what one might expect after Kant's dismissal of any such thing.

Fichte's (in)famous formula "*I = I*" ("*Ich = Ich*") now can be read in this context as shorthand for the following interpretation of Kant's understanding of apperception: In any act that involves conceptual content or thinking, I as an empirical and real person identify myself with a transcendental I, i.e. with a generic role I play. I do this when I claim something or when I believe something or when I think of something. Therefore, when I talk or think about myself, I play in my performance a general role. At the same time, I refer to myself not only as an empirical person, existing and living here and now. But I also refer to me as a person *an sich*. – Kant is right, of course, that the thinking *I as such* cannot be the object of inner intuition in the sense of being aware of a stream of inner sensations or imaginations. But what is it then?

Let us first note that we have to distinguish not only the object of thought from the performing subject, but the individual and empirical subject, me, from the general I, the role I play, when I perform this or that act, be it a speech act or another actions.

Hegel is neither content with the way Descartes and Kant 'prove' the presupposed existence of a thinking *I*, nor with Fichte's formula *I=I*. He sees that transcendental reflection on full-fledged experience is not enough, if I want to know who I really am in the real world with my body and how I acquire my competences of rationality, free judgment and reason in a social surrounding. Only if we add these things into the picture, we can succeed in our project of de-mystification of thinking and reasoning. This is the lesson Hegel develops in his *Phenomenology of Spirit*, for example under the title '*Observating Reason*' ("*Beobachtende Vernunft*"). Heidegger started more or less at the same point of departure from Kant as Hegel and his predecessors: They all have seen that Kant's theory of time and his talk of inner Intuition leads at least to some dead ends.

4.6 MAKING DISTANT AND POSSIBLE THINGS ACCESSIBLE

Philosophical metaphysics today is deeply entangled in talks about possible worlds. Allegedly, a modal revolution in formal logic has taught us important things about all kinds of modal and, for that matter, probabilistic judgments and formally valid or invalid modal inferences, about causality and what not. But it is totally unclear how the insights of modal logic, which might be

important for mathematics and linguistics, really are relevant for non-metaphysical philosophy. Moreover, what could a possible *world* be? How should it be *accessible* as such, i.e. for us? And how can we make sense of quantifying sentences by which we apparently want to talk about whole classes of such worlds? I.e. how are such classes or domains of quantification *determined*?

In philosophy, we are not so much interested in absolutely formal schemes of deductions or merely formal (im)possibilities *as such*, if I may use Hegel's term again, but in the question how we can *really refer to possibilities*. And how can we distinguish real possibilities (*an und für sich*), which should play a role in our judgments and actions, from merely verbal or abstract possibilities, which should not?

The first question was, *how can we have access to possibilities?* The answer is: We have such access not by some mystical imagination or metaphysical theory, but by real, symbolic, linguistic, representations of possibilities. In other words, real imagination (*Einbildungskraft*) is a competence that rests on some competence of *using signs and symbols in a spontaneous way*, as sketched above. – Kant's analysis of the 'categories' and 'principles' of objectively true or possible statements can be read now as a kind of analysis of the connection between the fulfillment conditions of statements about distant things and events or future things and event or possible things and events with real or possible observations or Intuitions. Their content is, as Kant sees, essentially the same as what can be expressed by corresponding (already object-related, not merely subjective) observation-sentences (or '*Wahrnehmungsurteile*', which, in fact should already be taken as *Anschauungsurteile*). Hence, it is the inferential net of our sentences, and its 'footing' in jointly controlled observations, which makes knowledge about the past, the future, about possibilities, and events at distant places in the world possible. This inferential net heavily rests on knowledge about causal laws of many different forms and kinds, as Kant and Hegel already had seen.

If we wish, we can view the laws of causality with John Mackie as 'the cement of the universe'. But we should not separate our world and our causal laws from possible experience and knowledge – which would turn them into transcendent objects of merely dogmatic metaphysical belief. In fact, the laws form the inferential cement in our systematic construction of theoretical and, as such, symbolically represented, propositionally articulated, knowledge about the real world and about real possibilities. But it is not the place here to continue on this line of thought. The only point which remains to be made is this: All causal or scientific laws exist *for us* only via their representations. This is, I take it, Hegel's main point. It does not mean that it were wrong to

say that the laws held independently of our knowledge of them. They surely do, and we should say so. But we should also always remember the triviality that we cannot argue with laws, or possibilities, we do not know anything about.

In the end, there is the following ‘Baconian’ heritage in Kant’s analysis that deserves to be saved against misreadings in empiricism and rationalism: What we understand by our competence of rationality are only *forms*. And we understand them, at first, as ‘implicit’ forms or schemes of action. I.e. forms exist in what *we* can (re)produce as forms, what we *can do* or *construct*, so to speak. It is this insight into the primacy of practice and action, which Fichte and Hegel take from Kant. But Hegel turns Kant’s somewhat heavy-handed distinction between knowledge a priori and knowledge a posteriori into a distinction between a general mastery of forms and norms, jointly controlled in communities of cooperating human beings or persons, and applying them on individual empirical material.

As a further result, we can distinguish between *science* as enlarging knowledge about general forms, as we find it for example in Kepler’s laws or Newton’s mechanics, and singular *empirical knowledge* of the form that our neighbor died last night or that the piece of metal in front of me is pure copper. In the resulting picture, science is the measure of all things only in the sense that science tells us *what* the things are, or rather, what normally follows if they are what we say or assume that they are. Science is *not* the measure of all things in the sense Wilfrid Sellars reads the principle of *scientia mensura*: According to his reading, natural science or physics is the last arbiter about *what there is*, i.e. *that* certain things exist or not. Hegel defends, instead, a phenomenological thesis: No science can disprotve our real experiences. Moreover, according to Hegel we should distinguish long before the Neo-Kantians Rickert and Windelband better between *systematic scientific theory* about forms and merely *empirical history*. The first is always generic and general, the last has always take care for particular and singular cases.

The misery of empiricism in all its versions lies in the fact that it does not comprehend how generic knowledge is presupposed in empirical knowledge. Theory revision and construction never relies only on empirical, as such parochial, experience as animal cognition does, the wrong paradigm of knowledge in Hume and his followers. The misery of rationalism, including Kant’s transcendental idealism, lies in the fact that it overlooks the historical development of concepts as reasonable inferential forms expressed by generic knowledge or theories. Moreover, the subjective idealism of Kant’s apriorism tends to misconceive already Intuition and the ‘social’ status of its constitutive forms, and much more so conceptual thinking and its implicit

generic knowledge about the world as it surpasses by far merely mathematical concepts and knowledge and formal logic.

CHAPTER 5: LOGIC AS A META-LEVEL THEORY OF MEANING

5.1 STARTING WITH DIFFERENTIONS

The main difficulty in understanding Hegel's logic consists in some prejudice that keep philosophy in its grips. The main prejudice is the idea to start with the question of truth and proof, of certainty and necessity. This already shows a methodologically wrong order of critical thinking. This is so because the quest for proofs and arguments supporting claims presupposes the conditions of sufficient fulfilment or 'truth' for the claim as a speech act. However, we cannot even start with the truth of assertions of sentences. Much more basic than the sentences and their use in expressions of belief or proposals to join one's contentions are the acts of distinguishing things and events enactive, by doing, and jointly, in a common practice. Differentiations and producing distinguished (speech) acts is much more basic than asserting or claiming, even inferring and evaluating inferences. It is even more important to see that talking about distinctions comes after the practice of distinguishing, namely on the level of reflection on this very practice. Therefore, differentiation is the topic of the logic of being. The differences made, or rather, the different things in the world, are already the theme of a logic of reflection, Hegel's logic of essence, which methodologically comes later.

In other words, an analysis of propositions and sentences presupposes an analysis of distinguishing. Making distinctions is determining some 'inner' part of a domain in contrast to some 'outer' part. In this sense, Spinoza's principle is true: *determinatio est negatio*. Determination is contrasting. However, there are two forms of negation. The first and normal for is determinate negation, contrasting something inside a well-defined domain. Such a determinate negation finds its expressions in examples like the following "6 is no prime number", "Caesar was not lazy" or "Tables are no chairs". Indeterminate negations are traditionally called "infinite". Examples are "Caesar is no prime number" (Carnap) or "a table is no elephant" (Hegel). Such negations transgress the relevant categories or domains. Hence, they are frequently called "category mistakes". Just as in the case of definite description that do not refer to exactly one object in a pre-given domain, the usual logical rules of inference do not hold for infinite propositions, i.e. categorically wrong sentences or indeterminate negations. This fact was heavily underestimated by Frege and Russell in their proposals of how to deal with non-referring definite descriptions, but also with different domains for the variables. In his famous piece *On denoting*, Russell explains definite descriptions away. But in a dogmatic defense of this

approach against Peter Strawson's notion of presupposition, Russell underrates our interest in schematic rules of substitution – such that we need a classification of well-defined definite descriptions and ill-defined, as Frege already saw it. Moreover, Frege and Russell assume a fixed domain of things that exist, even though Frege distinguishes between objective, i.e. sortal, entities like bodily things and numbers and non-objective, but real, 'things' like ideas, sensations, qualia and so on without well-defined identities and inequalities. Moreover, Frege classifies abstract entities like numbers as objective, but not 'real', whereas tables are objective and real. In Frege's tradition, Russell disagrees with Alexius Meinong who already had seen that formally there is no reason not to quantify over sets of fictional objects or literary persons if we only keep the domain of discourse in mind. In a sense, it is true that there exists a person who is the friend of Achilles, namely Patroklos, or the friend of Sherlock Holmes, namely Dr. Watson, even though in the 'real world' no Patroklos ever existed, just as the rest of the *dramatis personae* of fictions and novels. Frege's assumption that there is a fixed sortal domain for the variables, a universe of discourse, is just his biggest mistake. It is a wrong, utterly misleading, presupposition.

For us, however, the problem turns into the much more general question, namely, in which domain we can start to make distinctions. The very difficult consideration at the very beginning of the systematic text of Hegel's 'logic of being' after long introductory explanations of the issue show that we have to start with qualitative distinctions in *Dasein* or present Intuition. Hegel continues, then, with a constitutional analysis of all sorts of quantities, sets, numbers, geometrical forms, and magnitudes. In the logic of measure, the most interesting question concerns a 'natural' measure of time. The 'logic of essence' continues the search for measures that are less subjective because of implicit relations to us and our interests and more concerned with the being for itself of nature, i.e. of the things and processes independent from an all too instrumentalist approach from us humans. However, any claim about the essence of a things or nature for itself, i.e. in relation not to us but to itself, is always in the danger of being a mere assurance, declaration or ascription. More often than not the use of words "real" and "essential", "cause" and "ground" emphatically endorse some attack of 'old' or 'traditional' knowledge or 'appearance' and 'defend' new, allegedly more scientific, conceptual frameworks and generic knowledge, which should replace old canons. Today, one hears, for example, such attacks against 'folk psychology' as 'superficial' and the demand of canonizing 'new' theories that allegedly explain better how things 'really' are. According to Hegel's logic of concept, not only knowledge is relative to the present situation of cultural development.

Hegel's logic thus is a 'speculative', i.e. high-level, theory of meaning. As such, it is neither constructive nor formal or axiomatic. It rather addresses and distinguishes important aspects, moments, and levels, of semantic analysis and conceptual reflection. The logic of being analyzes semantic concepts that presuppose a relatively immediate relation between names and objects, predicates and (sensible) qualities. Its topic is what Kant calls "transcendental analytic" or "constitution" of our talk about things, of thing-sets, geometrical forms and numbers (quantities). The logic of essence analyzes concepts that are situated in a reflection on theory-change: Certain statements and descriptions in older conceptual frameworks are replaced or proposed to be replaced. The logic of concept shows how the formal truth conditions that define the fulfilment conditions of object- and world-related knowledge claims depend on an accepted semantic and theoretical framework, which in turn, presupposes an immense amount of canonized generic pre-knowledge. Only a small part of it will ever turn out as mere prejudice.

If I am right, there cannot be a greater misjudgment than to see Hegel as a dogmatic meta-physician believing in some kind of absolute god or other speculative and transcendent things. Instead, we should learn how Hegel tried to give traditional ways of philosophical and theological talk a new, critical, meaning. He might have failed in this. But we should take notice of his attempt as such.

5.2 CHARITY AS A METHODOLOGICAL PREREQUISITE FOR INTERPRETATIONS

Without charity we do not understand anything, neither spoken words nor written texts. It certainly was the basic principle of forensic rhetoric in ancient Greece. Then and there, the most important task was to convince the jurors of the credibility and the good character of the witnesses. But charity is more than that. It is a basic principle of semantics itself, at least if the topic of semantics is meaning and understanding in general, not just formal meaning in mathematical systems in the very specialized senses of Frege or even of Tarski. To show this, I can only give some short hints here.

Charity in its most general understanding is the acknowledgement that the speaker or writer is one of us. This seems to be a triviality, at least in this broad formulation. In concrete cases, however, it gets its concrete significance. It means that we assume of our partners that they have experiences more or less like we have. Their ways of seeing things and saying things, their problems or questions are in many respects more or less like ours. It means that we assume similar needs, similar schemes of behavior and similar inclinations to answer the problems. Only when we see overt differences we are allowed to make a change in this assumption. The burden of argument lies on the side of those who assume differences.

The principle of charity prevents us from the all too fast prejudice that what others do or say is incomprehensible, erroneous, bad or outright foolish. This holds for verbal and nonverbal behavior, speech acts and actions of individuals as well as of groups or even of whole nations. Of course, one can also misuse the principle of charity by assuming too many similarities and equalities between people and by taking our own ('Western') experiences and criteria as an absolute standard for 'good' understanding and 'rationality'. It is, on the other hand, a defining property of a principle in distinction to a formal scheme that abuse is possible and that good judgment and appropriate experience is needed for the right use of the principle. One does not need much experience or much bon sense to follow a schematic rule.

The following example is relevant for our further considerations. Bertrand Russell assumed that Hegel identified the copula "is" with the identity sign "is equal". On the base of this reading (in: "Our Knowledge of the External World, 1914, London 1969, p. 49.) Russell came to the following conclusion: "This is an example of how, for want of care at the start, vast and imposing systems of philosophy are built upon stupid and trivial confusions". Russell did not notice here (nor in many other contexts where he speaks about fellow philosophers) that a fairly similar kind of criticism can be turned against him, at least if we consider his interpretations of philosophy and when we ask if his readings of the texts are careful and charitable enough. In fact, I think that Russell's reading of Hegel can be shown as cursory and superficial. It misses any point. However, there certainly are reasons for the widespread misunderstandings of Hegel's philosophy. One is the limit of his ability to make himself understood, especially when he talks about logic. One should not forget, however, that it was even more difficult to deal with the following question without the help of modern logics than it is still today: How are realms of abstract objects constituted? How are the ideal, formal, proof and truth conditions of abstract theories connected with real experience? Trendelenburg's criticism of Hegel's logic does not see that there is more to logic than formal deductions. Bolzano does not notice the analogies to some of the questions and answers he develops. He only sees the difficult, seemingly contradictory, language of Hegel's logic – and he reacts on McTaggart's idiosyncratic reading of Hegel and on British Idealism altogether.

Hegel himself reflects on the importance of the semantic principle of charity. He does this at the end of his Logic of Essence under the somewhat bombastic title "love". There, he does not give clear explanations of the role this principle plays. Indeed, Hegel very often gives us pathetic words instead of more sober explanations. When he speaks, for example, about the Holy Spirit, he obviously wants to say that a written text gets meaning only by the help of wise inter-

pretations. Such interpretations always are translations into languages that are actually spoken and understood. Something is comprehensible of it is clearly enough connected with our actual and possible experience. In the corresponding reading, the traditional term "holy spirit" refers from now on to the fact that we always have to actualize good interpretations, translations and understandings.

However, Hegel himself uses the principle of charity as a criticism against those who systematically misunderstood and still misunderstand his writings. As an example let us consider the famous statement in his philosophy of law according to which the real is reasonable and the reasonable is real. In retrospect from the latest edition of his *Encyclopedia,* Hegel declares (in the foreword) that a writer who analyzed in a book on logic the concepts of reality and reason extensively could hope that his readers and critics would take his explications of these terms into consideration. Hegel's explanation in the logic of essence goes like this: When we say that something is real, we normally do not mean that it is just an actual phenomenon, that it just can be perceived. We rather want to say emphatically that some appearance is reasonably explained by this or that theory. Thus, "Reality" or the German "Wirklichkeit" is the title for a category, a mode of speech. One has to remember for this that the Greek word "*kategorein*" does not mean: "to make a basic classification" but: "to say something". "Reality" is a title for the mode of reflective and emphatic judgments saying that certain theoretical explanations are better or 'more true' than other, more superficial ones. There are different (implicit, presupposed) measures to evaluate this "better". An explanation can be (more) true to obvious facts, it can be more comprehensive than another one or more useful. In almost the same way we use the emphatic category "Reason" as the following example shows. Instead of saying: "In reality, the earth moves around the sun", we may say as well something like: "It is reasonable, to explain the phenomenon of day and night in a Copernican framework". There is, however, a difference: The word "real" refers to the abstract structure that is explained and is said to lie below the phenomena as their ground, whereas the word "reasonable" refers to the explanation itself. Both words are used to express a positive emphasis on the given explanations or explication in contrast to certain other accounts.

A further terminological remark may be in order here: When Hegel talks about "Realität" I would recommend to think of "actuality", whereas "Wirklichkeit" could or should be translated by "(real) Reality". The reason for this crosswise correspondence results from the fact that in English there is no better correspondent to the German word with its important connotation that what is called "wirklich" is said to produce the phenomenon, just as one thinks (like Locke did) that the

entities described in classical physics and physiology produced the sensible qualities we perceive. Something is "real" ("wirklich") if it is not only the object of a (possibly) actual sense-perception, but if we give an explanation of these perceptions by the "real cause" or "real ground" of them. Thus, we declare perceptions or other phenomena as being more or less superficial if they are not explained by an already accepted ('reasonable') theory (re)presenting real reality.

Objectivity is a subcategory of real reality. It is a title-word by which we refer to explanations of the genesis and motion of natural objects or physical entities. Entities like gestalts, figures, forms, meanings, thoughts or intentions are no objective entities, no physical objects. Corresponding words and sentences do not belong to the category of objectivity as a special mode of speech and explanation. Nevertheless, we explain things like human actions and behavior by reference to meanings and thoughts. And we do this with considerable success and precision.

Explanations that refer to meanings and intentions are not objective in Hegel's sense. They belong to the category of reality. It is often reasonable to say that the real ground for an action was a (certain) belief or an intention; and it is frequently far from clear if it could make sense to assume that the beliefs or intentions corresponded to objective events or objective dispositions. There is no reason, at least no empirical reason, for the belief that any real explanation is, should be or could be an objective, physical, explanation in the natural sciences.

The identity conditions of (generic) meanings and intentions are different from the identity conditions of (generic) physical or physiological states and events. We presuppose such identity conditions in our explanations. Any explanation is generic – in some way or other. Hence, it might be true (I would claim: it is true, and, I think, Hegel would say so, too) that human actions (in contrast to mere behavior, mere events or mere states of affaires) find their real explanation in mental terms like intentions and beliefs. Actions have (as a whole) no sufficient objective (natural) explanations in terms of physical or physiological events, states and processes. The confusion of categorically different explanations that fit to different realms of phenomena, namely of objectivity and non-objective reality, is the reason for the never-ending dispute about the mind-body-problem and about the possibility of free will and freedom.

5.3 PHILOSOPHICAL RECONSTRUCTIONS OF SEMANTIC FORMS

The basic problems of semantics traditionally deal with the following topics: language and thought, form and content, reality and actuality and with the relations between them. After the

conceptual change due to Carnap and Tarski semantics narrows down to model-theoretical interpretations of deductive systems S1 in formal systems S2 that contain a definition of truth(-values) and of truth-(value-)functions resp. satisfaction-conditions for sentences and formulas of the system S1. Such a formal theory of meaning does not deal with the full concept of meaning, significance and truth. It is no sufficient theory of meaning any more, not even of the meaning and significance of mathematical terms, sentences and utterances. There was, however, a comprehensible motive for this formalist change in the concept of semantics. It was the fear of (Platonist) metaphysics including all sorts of mentalism. This fear lead to the evacuation of the basic semantic questions into a residual class called "pragmatics". Pragmatics now covers the immense realm of questions that deal with all sorts of application of language and theories, including those problems that traditionally belonged to semantics proper.

A mere formalist theory of meaning supports the idealistic metaphysics of materialism and naturalism. This is the reason why logic, as Hegel understands it, cannot be merely formal logic. The main task of a logic is *not* to construct a formal theory of *ideal* meaning for ideal sortal domains of objects and entities as we have them only inside mathematics. It is rather to show that any reasonable statement or speech act presupposes some constitution of *real* meaning that we can reconstruct and that we should reconstruct at least in case of misunderstandings or disagreements. The topic of general semantics or general logic is the general constitution of conceptual schemes and categorical forms and the role these schemes and forms play in real applications, in real communication and in real argumentation.

Hegel's turn to logical semantics resulted from a reflection on the method of Kant's philosophy. The basic insight of Kant was that our way of thinking or talking about the world and about physical objects is not just a natural behavior. It has a certain form, an implicit constitution. Philosophy is the enterprise to reconstruct this hidden constitution, to make it explicit, to analyze implicit forms of action and human behavior, especially the forms that make communication, rational orientation and science possible. There are presuppositions connected with these forms. The acknowledgement of them is prerequisite if the alleged thought, statement or act should be meaningful, or even true. The same holds for our moral or legal judgments and even for judgments in the realm of aesthetics: they all have a certain constitution and rest on certain presuppositions. We cannot deny those presuppositions without changing or destroying the meaning or very concept of validity or truth, including the fulfilment conditions of corresponding (speech) acts. There are, for example, certain necessary conditions in order to use a word or a complex expression as a name. If these are not fulfilled, we cannot name anything with the

word, neither an objective nor an abstract entity. The same holds for words purporting to be names in particular realms of discourse, like for example, in a realm of numbers or of physical things, and for sentences that want to be meaningful and refer to such a realm.

We have to distinguish such logical, conceptual questions of meaning and validity from empirical questions of genesis: Nobody says that there always existed the practices of promise, borrowing and selling, or even of talking about physical objects. When we want to take part in such a practice and keep the corresponding institution intact, we better should acknowledge their constitutive rules and principles. They are transcendental conditions of the institution. With respect to such an institution, there are a priori truths or validities that surpass the realm of mere analytical truths. The latter are defined by mere conventional terminological rules.

Unfortunately, the famous Copernican turn of the philosophical perspective by which Kant discovers the distinction between conceptual presuppositions of meaning and the use of a concept or of a whole conceptual framework was and still is often seen as a mere claim. One does not see, then, that the synthetic a priori judgments are meant as articulations of transcendental, i.e. presuppositional conditions that must be fulfilled if certain sentences or theories want to express invariant knowledge. By a mere claim, however, one cannot refute Hume's thesis that a judgment being neither analytical nor empirical must be meaningless. So, how can Kant convince us that the picture he draws is the true one? Hegel's considerations start with this problem. He wants to show why and in what sense we are forced to accept a Kantian viewpoint. One goal of Hegel’s logic is to present an argument in favor of Kant’s philosophy. This is why the later Hegel counts his logic, not his phenomenology of self-consciousness as the basic part of his system of philosophy.

We know that Kant thought that we could arrive at absolute knowledge in the realm of philosophy or of transcendental logic because the constitutive framework of the practice to articulate objective experience is, as our practice, in its forms our own ‘construction’. Hegel noticed that this claim is problematic. Kant’s constructivism misses the crucial point of semantic or philosophical analysis in a similar way as modern logical empiricism. The problem is how to judge whether a proposed *reconstruction* of implicitly given forms is correct, sufficient, or wrong, unsatisfactory. It is this problem Hegel wanted to attack systematically.

5.4 WORLD-RELATED SEMANTICS

Even if what I said until now were true it would not even cover the ground for an understanding of how Hegel proceeds in his logic. We still do not know, for example, what it could mean that

Becoming is the Result of some kind of Contradiction between Being and Nothing (Nothingness, or rather: Not-Being), especially after Hegel even says that Being and Nothing are the same. And how could we get from Becoming to Presence ("Being There": *Dasein*), from Quality to Quantity and back? Is this not all higher nonsense? There is no help to learn Hegelese. Instead, it turns out that the crucial first step on our way to a less superficial understanding is to acknowledge that on first sight we do not know at all what Hegel is talking about and what he is trying to do in his logic. Only then we may notice that we should not presuppose that there is something called "Being", "Nothing", "Presence", "Quality" or "Quantity". And we may realize that these words just are titles for categories, for forms and modes of speech, corresponding to the Latin words "esse", "non esse", "praesentia" and so on. Hegel himself declares that he wants to translate the Latin and Greek terminology of philosophy into German. One can ridicule this, as prominently Will Durant does. But this is just prejudice, not an argument.

Esse or Being and *Non-Esse* or Not-Being refer to all kinds of assertions and denials (respectively), not only to existence and non-existence. They refer to the whole classes of asserted or assumed truths or falsehoods. The truth of an existence-claim is only a special case. "Being" is a title for any claim of validity we can imagine. It is, however, not easy to see that this is how Hegel understands the traditional usage of these terms. I can only maintain here that this is so.

If we think about such claims it is rather obvious that at first we only know that the speaker defends a formal truth. He makes a choice in favor of a sentence and against the negated sentence or against certain other sentences. Without further knowledge of why he makes that choice and why it should be a good or true choice we do not know what he says or means. Without this knowledge, assertion and denial still would be all the same. We could not see what it means to choose a statement or its negation. Such a choice would be arbitrary, it would not express a comprehensible difference.

It is certainly true that approval and denial contradict each other. They cancel each other out, they neutralize and sublate each other. But if we think about the formal possibilities of contradictions, they lift us to a higher level of better understanding. They show that we have to ask the following question: How should we understand the (importance of the) difference between being (approval) and not being (denial). Hence, the first result of our critical analysis in the realm of the logic of being is the level called "Becoming".

Hegels "results" are always to be understood with respect to the classical method of analysis as it is exemplified in elementary geometry. After describing the problem, e.g. to construct a

geometrical figure with certain means, a result is a step that leads to further questions in a systematic search for a whole solution of the problem. In such a search, we start with a description of a solution we hope for, i.e. of the situations in which the problem are solved. In other words, we start with a representation of satisfaction conditions. We do this in elementary geometry, for example, by drawing a sketch of a figure we look for. We mark the ‘things’ given and we discuss what we can or could construct in which order. A result is a step in such a discussion. It has the following form: If we would have arrived at this point, then we could arrive at that point. The search itself is not so much a procedure or a schematic method than a systematic way of asking questions. It is called "analysis". The construction itself, the final solution, is often called "synthesis". Of course, such a synthesis can itself be just a result in a more complex set of problems. A result in Hegel’s reflection is, accordingly, a step in a series of steps that can be described in the following form: If we may assume that we can (or could) do this (...) and that we (would) understand this (...) properly, then we can see that we can (could) understand or do that (...). It is crucial to understand the whole enterprise of Hegel's logic as following this ancient method of analysis applied for analysis of meaning. Any result is only a step that leads to further questions. This method is not just a mere search-procedure for axiomatic deductive proofs, as it is maintained, for example, in the book of Hintikka and Remes. For Hegel, philosophy is analysis, an ongoing process of asking questions and giving answers. For Kant, it is (re)construction. For Hegel, any construction is just a result in the process of analysis. If theories just somehow fit some data, they do not give any answers and hence are no explanations. Only with reference to questions and problems and in distinction to other answers we can judge the value and truth of our theories and systems, of philosophical theories as well as of scientific theories.

The practice any analysis of meaning starts with is a practice of assertion and denial, agreement and disagreement. But what does it mean to call the result of this formal contradiction "Becoming"? I propose to read it as a title for the following: The difference between yes and no, affirming and denying, existence and non-existence must already be pre-defined with respect to the realm of possible and real change, in the end with respect to the realm of sensible phenomena. The criteria by which we make general differences must somehow refer to this realm. Only the general form of difference remains stable, situation-independent, whereas the truth or falsehood of particular claims may change. Moreover, there must be a possible change of the truth of a sentence or a thought, as Hume observed before Hegel (and Wittgenstein after him). No claim could mean anything if we would not refer by it to a world in which truth and falsehood can or could change and in which a claim articulates a difference with respect to a

possible presence. In the end, Becoming is the possibility of change in truth values. And Presence is the possibility to agree in truth values of certain observation sentences in concrete situations of sense perception.

If we want to know in what sense the categories Becoming (Change, Werden) and Presence (Being There, praesentia) are the results of this analysis, just think of the importance of situations where we agree in judgments like: look, there is a dog, not a cat, this is a cornet, not a trumpet. The claim is: The possibility to make a comprehensible claim that something is, that it exists or is true, rests in some way or other on the fact that the claim articulates some difference in a possible situation in which we can agree in saying: there is an x, there is a situation fulfilling criterion y, there is an example of z. By this reading, "Becoming" and "Presence" are just titles for the predications we explain in the presence of sensible objects, of changeable situations, of recognizable figures and gestalts. Such a presence always presupposes possible absence, i.e. change. And both, Becoming and Presence must be accepted as the basis of any meaningful claim.

This way of looking at Esse and Non-Esse now appears to be a rather skeptical one. It is critical against the usual presupposition that truth conditions and meanings already are well known. They may count as known in well constituted realms of discourse. But it is a mistake to take this constitution for granted. A systematic philosophical and logical analysis has to ask for an explanation or rather an explication of the implicit form or constitution of the human practice in question, e.g. of the institutional practice of speaking and thinking, claiming and arguing. And before that, it has to show that such a constitution always is presupposed.

5.5 SUPERSEDING EMPIRICIMS BY CONCEPTUAL ANALYSIS

What Hegel develops here is a most general outline of a logical argument in favor of Hume's skeptical and empiricist method in philosophical analysis of meaning and truth. But note the difference to Hume: Hume just chooses to be skeptical. Hegel wants to show how the skeptical position can and must be understood as a step, as a result, in a larger context of logical analysis. In this reading, Hegel does not contradict Hume or Kant at all. In some sense he even directly follows Hume and Kant. But he reflects on the 'necessity' of Hume's questions and especially on the 'relativity' of the skeptical position. By this analytical proceeding Hegel can distinguish between levels of more or less superficial or conventional understanding. And he can identify dogmatic positions that do not grasp their own relativity, that do not move further, that do not understand themselves as a mere result in an ongoing process of analysis.

At first, Hegel distinguishes and identifies levels by their labels, titles. He chooses them not without taking the tradition of philosophy and her terminology into account. These levels of understanding or, for that matter, of analysis, are defined by the constitutional presuppositions that are explicitly questioned or implicitly assumed as clear: If we only assume that we understand the difference between being and not being in the realm of present situations and present sensations, we still do not understand our talk about things that are not present. What does it mean, for example, to claim that Lord Nelson won the battle at Trafalgar or that the Eiffel tower is a steel construction? To say or to deny things like this would be more or less arbitrary if we would not know how to relate the content of these claims with possible experience. Moreover, we do not understand immediately what it means to say that an object is the cause of my sensations or impression. In the realm of immediate presence we can only refer to present sensations, to sensible qualities perhaps, but not to causes and not even to physical things (as such), as Hume, Kant and Hegel knew quite well. The semantic analysis of the concept of objects and causes is an analysis of a much higher level. It belongs to the level of a logic of essence. The reason is that in the light of a concept of reality and objectivity the mere actuality of presence is often judged as superficial or as mere subjective. Even Hume's semantic analysis of objects as clusters of impressions appears as superficial in comparison to Kant's reconstruction of the generic and trans-subjective form of our talk about physical objects in a space-time-ordering and about objective experience.

It is not easy to see now, that and why the category we call "Being for itself" is the category of statements that express identities and equalities. In this mode of speech we refer to the real presentations and representations of the entities and objects we talk and think about. The background is the insight that there is no talk about an entity without presupposing identities between corresponding representations in the real world. We need representations that are defined by qualitative differences in the realm of actual and possible perceptions. These representations can be of different level and forms, of course. They can be verbal expressions or empirical gestalts or both.

Our talk about identity always is abstract. It belongs to the level of Being-as-such. It presupposes that the entity we talk about is well constituted. And this presupposes that an equality - or rather a kind of equivalence relation - is defined for possible representations or possible names of the entity. In other words, it is just an unphilosophical, superficial, opinion that we only have to name pre-given objects or entities. Whoever assumes this starts on a very high, very abstract, formalist level of analysis. If, for example, a formal semanticist assumes a realm of entities like

"situations" or "worlds" as basic he usually forgets to ask semantic questions that may be - and are - more important than all his logical schemes of truth conditions and deductions in the abstract realm of Being-as-such. For a philosopher it might be more important to analyze how a realm of forms, platonic ideas or formal mathematical entities, and how the concepts of a real and actual world are constituted by language use than to know how we can deal with logically complex, quantified, sentences about such a realm. In the latter case the realm of abstract discourse and the corresponding formal objects and properties are already taken for granted. By this we presuppose that we know what sets and mathematical structures are, or what worlds and situation are and how they can be referred to. This means that the analysis stops short before the important question how this formal discourse is constituted and what role it plays. This is the reason why the 'belief' in any kind of set theory is not sufficient for a satisfactory philosophical analysis of mathematics.

The title "*An- und Für-sich-sein*" is used by Hegel for something I would name "concrete being". The title reminds us of the Latin "*concrescere*" (to grow together) and the Greek "*symphytos*" as it is used already by Plato in the dialogue *Philebos* in order to express the fact that in a our talk about concrete things we always refer at the same time to a generic entity and to a particular representation of this entity. If we take this into account we see why in philosophical and semantic analysis we cannot separate object-levels and meta-levels absolutely. Hegel attacked the myth that there could be an absolutely clear distinction between meaning and use or between a practice and an implicit or explicit reflection on the form of this practice. Any attempt to follow a rule forces us to reflect in some way or other on the 'right way' to follow the rule. The 'rule itself' ('as such') is given either by paradigm cases or, better, by paradigms together with titles or names for the rule. Such a rule 'as such' is only given 'in the abstract'. The concrete rule cannot be thought of without the real ways we are used to follow the rule. Once again Hegel provides the verbal means to distinguish between real ('correct') rule following and mere actual attempts to follow the rule.

The problem of a mere formal, mere abstract and ideal distinction between meta-level and object-level can be made fairly clear if we notice the ambivalence of the semantics of equations. Equations do not only say that different names refer to the same object. The say what the generic object is that can be represented by different representations: We talk about the generic object in contexts where it does not matter by which of the equivalent representations the object is given. Any concrete thing is, therefore, in and by itself already a generic, abstract thing. Every thing we can talk about is generic, abstract. Even answers to the question what is shown are

already generic, abstract. This holds for concrete things (objects) as well as for concrete gestalts or figures or perceptions or what not.

CHAPTER 6: PHILOSOPHY OF MATHEMATICS

6.1 CONSTITUTION OF (PURE) MAGNITUDES IN A LOGIC OF ABSTRACTION

It might astonish most readers to learn that Hegel's analysis of the infinitesimal calculus shows that he knew much more about the foundational problems of mathematics than probably any contemporary mathematician. On the ground of the proposals of Lagrange to get rid of all infinitesimals, Hegel's arguments against the Newtonian and Leibnizian presentation of differentiation and integration are totally right. He sees that the so called infinitesimals named by expressions like "dx" or "dx·dy" are no entities at all, no magnitutes, no proportions. The reason is that such expressions are no *names*. They do not fulfill the basic presuppositions or conditions of a name. There is no identity defined between them. They are mere parts of a complex notation. The expression "dx/dy" refers to no quotient at all. Integration is not defined as an infinite sum of infinitesimal products as the Leibnizian notation suggests. Hegel sees, moreover, that we understand differentiation and integration best if we develop the one-place function $F_x(h) = f(x)-f(x+h)$ by a polynomial or a power series of the form $\Sigma a_n h^n$. The derivation (in x) is just the first coefficient. The usual definition of the derivation as a limit of quotients is of secondary importance. It helps us to identify the derivation rather than to explain what it is and what it is good for.

These insights might appear almost trivial, at least if we look at the standard case of derivations of polynomials. Therefore, Hegel says that we can learn the basics of Calculus in about 10 minutes, if it is presented in the right way and order. This insight is often blurred by an overestimation of particular interests. It is, for example, a particular interest to give most general definitions of differentiation and integration for all kinds of (differentiable) functions in all kinds of realms. We should not begin our explanations with such a general definition. It is another particular interest to try to reconstruct a logical framework in which abstract entities with properties similar to the traditional infinitesimals really can be constituted as it is shown in Abraham Robinson's Nonstandard Analysis.

If we really understand how Hegel deals with the problem of infinitesimals, we should be able to translate some of his idiom in other contexts, too. The main problem for understanding Hegel seems to me the lack of understanding the logic of abstraction and idealization. It is, in the end, not Hegel's fault, that even after Frege most logicians do not really grasp what we should have learned. And if they do, they do not believe it possible that there are forerunners like Hegel, who

has already understood the technique and therefore sees the ontological naiveté in any form of Platonism.

What we have to learn is the real way in which domains of abstract discourse are constituted via the realm of possible names or representations, equalities, appropriate predicates and sentences. Hegel appears in the end as a much more radical 'empiricist' with respect to the constitution of abstract domains and theoretical entities than any so called logical empiricist who – on the ground of his love for formal logics – most often forgets to apply the principles of empiricisms on his own notions of meaning and truth, of objects and properties. In mathematics, for example, we should look at the real way we use symbolic and 'natural' languages 'to talk about' abstract and ideal objects like sets and numbers.

In fact, Hegel's philosophy of mathematics, as developed in the first part of his *Science of Logic,* the *Logic of Being*, is, according to my reading, a logically fairly deep reaching demystification of our way of talking about infinities. At first, I try to show how Hegel criticizes the idea of infinitesimal and infinite magnitudes. They do not exist at all, not even as abstract objects in mathematics. The reason for this lies in the fact that they do not fulfill the criteria which are necessary for the constitution of a well defined domain of abstract objects or 'entities'. Therefore, talking about infinitesimals already is misleading. This holds even more for any talk about infinitesimal distances, time-intervals or forces. Any proper understanding of differential calculus has to avoid infinitesimals, or rather, has to reflect on a correct logical constitution of pure magnitudes, proportions and real numbers as objects of mathematical discourse.[119]

Hegel's more general criticism is directed against other thoughtless ways of talking about infinities. One such way can be called the 'and-so-on-theory' of infinite sequences. The argument against it is well known from modern debates of rule following after Wittgenstein. We cannot define an infinite sequence by finitely many examples, followed by three dots "…" or the remark "and so on". We can 'define' a determinate infinite sequence in arithmetic only by its law or rule. This laws or rule in its identity is defined basically by three things or 'moments': We need an *expression* of the rule f or law f or 'function' f(x). And we need an explanation of how to *apply f* or f(x). Only then we can say that f or f(x) is a 'name' of a rule or a function. Such explanations usually accompany paradigmatic teaching of examples. In the end, we want to arrive and often can arrive at a fairly safe and certain competence of taking part in a joint practice of rule following. This involves the competence of a (virtually always public) control of correct

[119] It would be an anachronism to use Abraham Robinson's *Nonstandard Analysis* (1966) as a counter-argument. Hegel sees the impossibility of infinitesimals in a 'standard' system of objects and properties.

applications 'of the rule' or 'of the function' f, i.e. of its name or expression to particular cases f(t), perhaps in equations of the form f(t)=t*. In the end, the real or *true infinity* of any rule f consists in this competence of following explicit rules and of controlling the correspondent rule following. In arithmetic, at least the truth conditions of any sentence of the form f(t)=t* must be fixed if f(x) is defined as a function.

Hegel distinguishes between *true* (wahr) and *bad* (*schlecht*) infinity. True infinity is always determined by rules in the sense explained above. Using this concept of true infinity, Hegel criticizes all naïve concepts of infinity as bad infinities.

All in all, Hegel develops here an insight that goes back to Aristotle and Kant. According to it, the only 'real' or 'good' or 'true' infinity' is arithmetical infinity, i.e. the infinity of the numbers. This insight seems to be challenged by modern mathematical set theory, especially after Georg Cantor. But this challenge almost disappears when we realize that set theory must be understood as higher arithmetic and when we learn the proper lesson from the collapse of Frege's logicism. Frege had wanted to refute the Kantian claim that the a priori truths of elementary arithmetic were not analytic, but synthetic, namely by defining pure numbers as sets of things and sets as extensions of predicates. But such a definition is logically not well founded. If we consider what this means for the very concept of logical definition and analyticity, the Kantian view on the truths of arithmetic becomes much more reasonable. I shall give a short sketch for the idea: We should not start with sets of things but with possible representations or terms t, t' for pure numbers in systems of expressions like the decimals which we can use in counting. For this, we need corresponding rules for fixing the truth conditions for equalities like t=t', t=t'+1 and further inequalities t<t'. We certainly may start as well with a system of purely finite sets, i.e. with the so-called hereditary finite sets (in short: 'hfs'). But in both cases, the infinity of numbers or purely finite sets lies in the mathematical practice of dealing with *finite expressions* and *recursive rules* or *operations*. The basic hfs-expressions, for example, are built up by the following recursive rules: The expression "∅" is an hfs-expression. We say that "∅" names the empty set. If a and b are hfs-expressions, then {a} and {a,b} are also hfs-expressions. A typical name of a purely finite set would be, therefore, an expression like "{∅,{{∅},∅}}". It is well known and easily to be seen how the (decidable) truth conditions for basic equalities a=b and the element relation a∈b between basic hfs-expressions can be defined – without any recourse to propositional or quantificational logic or any scheme of set-abstraction!

There are, as we know, different ways of 'identifying' names of natural numbers with hfs-names. One possibility is this 1:={∅}, 2:={{∅}}, 3:={{{∅}}} etc. In a sense, we even can identify without any loss of generality the basic elements of elementary arithmetic with the whole system of purely finite sets.

When Kant says that the arithmetical truths are synthetic a priori, he just says that the truth conditions for the arithmetical sentences of the form t=t´ and t<t´ can be controlled only when mediated by *Intuition*, i.e. we have to 'count' the symbols in the decimals or we have to count at least the brackets "{" and "}" in hfs-terms. For this counting we can use *any* system of re-presentation of numbers, for example, the decimals or our fingers or Roman numbers or configurations on an abacus. In any case, counting is no 'empirical' investigation. Its result is determined in an a priori way. Moreover, the truth of basic arithmetical statements is, as our short sketch already shows, not determined by terminological and logical rules and definitions, neither in the framework of Aristotelian syllogistics nor in the framework of Fregean predicate logic, set-abstraction and the corresponding theory of formal definitions.[120] Hence, Kant was right to call the concept of basic arithmetical truth "synthetic", i.e. not analytic.[121]

In a sense, the peculiar form of Kant's systematic nominalism and anti-Platonism in the constitution of numbers still has to be properly understood. The same holds, I would claim, for Hegel's more general criticism of all mathematical and non-mathematical, metaphysical, infinities. The very idea of an infinite space or time, for example, belongs for Hegel, as for Kant, to a thoughtless version of metaphysical Platonism if it does not refer to mathematical models.

This leads us to a general insight. If we do not understand the constitution of mathematical infinity, we cannot avoid misunderstandings of its external applications.

> "Mathematics, not knowing the nature of its instruments, ... cannot determine the realm of its reasonable application, and cannot safeguard it from abuse."[122]

[120] See Stekeler-Weithofer, 1987, pp. 215-238.

[121] It is not the place here to show in more detail why any form of logicism and axiomaticism fails as a sufficient foundation of arithmetic, and why Frege, as well as Hilbert or Carnap and their followers, was wrong in attacking the claim that basic arithmetical truth are not analytic in Kant's sense. But one thing is certain: We do not gain much if we just widen the use of the word "analytic" and *call* Kant's synthetic a priori truths "analytic".

[122] GW 21, p. 237: "... die Mathematik, indem sie die Natur dieses ihres Instruments nicht kennt, ...(konnte) den Umfang seiner Anwendung nicht bestimmen und vor Mißbräuchen desselben sich nicht sichern ...". Translations by me, P. S.-W.

6.2 QUANTITY, IDENTITY, AND QUANTUM

Hegel's analysis of mathematics is in the end concerned with a criticism of wrong interpretations of mathematical theory in 'nature' or 'experience':

> "It is taken for a triumph of science to find by a mere calculus some laws and sentences of existence beyond experience even though what they claim to exist does not exist." [123]

> "But mathematics cannot prove any determination of a physical magnitude at all, since these determinations are laws grounded in the qualitative nature of the moments (of nature); for the simple reason that (...) the whole sphere of qualitative distinctions (...) is outside the sphere of mathematics. The maintenance of the honor of mathematics, that all sentences in its realm should be proven with rigor, has often led to a neglect of its limits; so it has seemed to contradict this honor to accept experience as the source and only proof for sentences about experience." [124]

Mathematical propositions do not refer in an immediate way to the actual world of possible experience. They do not refer to a transcendent world behind the scene of phenomena either. They are part of a calculus seen as a schematic form of using signs and language. They refer to the world of experience only via appropriate projections. Hegel addresses such projections under the title "*measure"*. This holds for talking about geometrical forms as well as about numbers. In the first case we need a measure in order to judge if concrete figures or *gestalts* represent a form well enough. In the later case we have to identify the relevant units. Such a unit is also a measure in Hegel's most general sense of the word. It determines what is counted. Measuring connects abstract and quantitative forms of language with empirical and qualitative forms. We know best from arithmetic, including set theory, what a quantity is. But it is crucial to distinguish, in arithmetic and set theory between pure and non-pure quantities. Pure numbers and pure sets do not contain in their expressions any empirical term. Whereas 5 is a pure number and ½ a pure ratio, 5 cats or ½ Dollar are non-pure 'figures'. For the latter, we presuppose some 'qualitative' distinctions. One of the problems in Frege's analysis of numbers is that for him the number of (the set of the) Roman emperors is treated as a pure number on a par with the number of numbers smaller than 9 – with the result that a sentence like "Julius Caesar is not equal to 9**"** is just false, not meaningless.

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[123] "Es wird für einen Triumph der Wissenschaft ausgegeben, durch den bloßen Calcul über die Erfahrung hinaus Gesetze, d.i. Sätze der Existenz, die keine Existenz haben, zu finden" (GW 21, p. 271).

[124] "Aber die Mathematik vermag überhaupt nicht Größenbestimmungen der Physik zu beweisen, insofern sie Gesetze sind, welche die qualitative Natur der Momente zum Grunde haben; aus dem einfachen Grunde, weil ... das Qualitative ... außer ihrer Sphäre liegt. Die Behauptung der Ehre der Mathematik, dass alle in ihr vorkommenden Sätze streng bewiesen sein sollen, ließ sie ihre Grenzen oft vergessen; so schien es gegen ihre Ehre, für Erfahrungssätze einfach die Erfahrung als Quelle und als einzigen Beweis anzuerkennen." (GW 21, p. 272).

In geometry, we have to distinguish also between pure proportions in pure geometrical forms like between the diagonal and a side in a square from non-pure measurements with respect to real figures.

Obviously, there are different categorical forms of speech in which we talk about of (pure) numbers, (pure) geometrical forms and (pure) sets of (pure) things. Hegel analyzes their respective constitution under the title "quantity".

But before we can continue here, we have to safeguard our reading of Hegel against possible misunderstandings. The reason is this. Hegel uses the word "quantity" in a much more general sense than we use it today. In general it does not refer only to pure or non-pure numbers like 9 or 9 planets. It refers much more general to the *quantificational form* of noun phrases when they occur as subjects in *predication*. In fact, expressions like "9", "9 planets", "many planets", "every planet" and even "one planet" or "the planet Jupiter" can all be seen as quantificational or quantified expressions. If we look on these noun phrases from another, more traditional, perspective, we can say that they express the 'subject' of a sentence. As such, a noun phrase can be used as a *singular term* or as a *quantified expression*. In a sentence like "the lion hunts deer", the noun phrase "the lion" can name a singular object. But it can as well refer to the species of lions. Or it can refer to all lions. In the first case, the sentence says that a certain singular lion hunts deer. In the last case it would say that every lion hunts deer (even though not always). In the generic case it says something like this: it is a feature of the species that lions hunt deer. But sometimes, for example in a zoo, lions survive just by eating dead meat.

A sentence like the following has also two (or three or more) readings: "The circle has a center". As a generic proposition it says something about the form of a circle. As a universal proposition it says something about all circles – taken as ideal forms or as concrete figures. As a proposition about a particular object it may say that *this* circle that you have drawn has a center (like all other circles).

Proper names are usually (but not always) used as singular terms, expression like "some lions" or "many lions" are used as quantifiers.

We now can try to use some schematizing device in order to bring sentences under the following logical form:

(*) N has the property P

or

(**) N ε P,

Then, *P* replaces a simple or complex (one-place) predicate and *N* replaces the subject or noun phrase. Nominalizations help us to turn different parts of a sentence into the topic or theme of a new sentence. We use this device already in natural languages. We can, for example bring a sentence of the form "The lion hunts zebras" into the form "Lions have the property to hunt zebras" or into the form "Zebras have the property of being hunted by lions". Here, the main function of the word "property" in connection with a change between the active and passive voice is this: It allows us to make the change between *thema* and *rhema*, the *topic* of a sentence and the *comment* of the speech act sufficiently explicit.

We usually think that in (elementary) predication *N* should replace a *singular term*. But for Hegel, like for Kant, the subject or noun phrase *N* can have different quantificational forms. Being a singular term, or rather, naming something singular in a proposition, is only *one* of these possible quantificational forms, as the examples of the lion and the circle already have shown. Therefore we could even say that any noun phrase *N* as a subject of a predicative sentence of this form is a *generalized quantifier* – fairly much in the way followers of *Richard Montague* use the term.[125] *If* and *only if* N corresponds to a singular term t_N, and *if* the predication can be analyzed as a function according to Frege's proposal, *then* N(P) says essentially the same as $P(t_N)$.

If we look at noun phrases *N* as subjects in sentences or propositions of the form N ε P – or better: N(P) – in this traditional, surface related, and at the same time cautious way, we can see that we usually first have to figure out the quantificational form of *N*. For doing so, we have do determine the realm of 'things' (objects, entities) we talk about. This realm determines the form of quantification of the noun phrase, for example if it is a universal quantification or a singular term. It is not the term or word as such that determines alone if its use is of the category "singular term" with respect to a given realm of discourse, but the relation to this presupposed realm. The expression "2/7", for example, can be used as a name of a rational number, of a ratio, or of a type of expressions. Depending on the presupposed realm of discourse it can as well 'name' a set of ratios, a set of expression, or a set of tokens of the same expression.

[125] Cf. Montague 1974, (Introduction p.59) with the entries "Quantifikation" and "Quantor" in *Historisches Wörterbuch der Philosophie* (Ed. J. Ritter und K. Gründer) vol. 7, Basel (Schwabe) 1989.

Judgments of "identity", "equality " or "equivalence" are constitutive for determining the objects in any realm of objects. A relation that would count only as an equivalence relation between number-terms or ratios counts as an *identity,* if we talk about natural or rational numbers. It is the presupposed concept of identity (equivalence) fitting to a proper set of elementary predicates by which it is determined if and how we can talk about types and tokens of representations (symbols), or about pairs of numbers, ratios or rational numbers. They all form different realms of discourse. What it is to be a type or figure or form or being a number or ratio cannot be explained but by telling us how words or symbols or terms or other representations are used in contexts of certain statements, especially statements of identity.

It is, therefore, absolutely correct, even though necessarily metaphorical, when Hegel says that any identity already '*contains*' some difference. It 'contains' the differences of different representations of the same, just as the number 3 or 10 'contains' all different possibilities of representing it, by decimals or as purely finite sets or by any other device. The metaphor expresses the fact that identities are always *relative* to the *relevant realm of discourse*, more precisely, to the relevant predicates or distinctions that define the realm *together* with the concept of an 'object' in the realm. Such objects in realm of 'entities' or a domain of discourse are *identified* by *not allowing* 'finer' differences or, rather, by not *counting* finer differences as *relevant* differences, even though we know that we always can establish a realm of discourse in which a finer distinction is possible and needed.[126]

The category "quantum" now refers to particular realms of objects and to the corresponding special logical forms of speech. To put it shortly, Hegel explains the form of a quantum as a *well-determined extensive magnitude*.

In a realm G of purely extensive magnitudes at least an operation of *addition with itself* x+x must be defined for any of its 'elements' x – together with a linear (and, as we shall see, even an Archimedean) ordering x<y. This holds, for example, for magnitudes of lines or lengths, angles or volumina in geometry, but for weights and masses, too. Obviously, for such realms of pure quanta multiplication with natural numbers n·x is defined as well. The Archimedian property says that for any pair of elements x,y in G there must be a natural number n such that n·x >y.

One cannot say that something is *twice* as warm or *twice* as loud as something else, at least if we are not allowed to use merely ordinal scales that are totally conventional. This is the reason

[126] This shows why a further reflection on the very concept of identity will lead us into the direction of a 'dialectical' *logic of essence and relevance*.

why we say that heat and noise are *merely intensive magnitudes*. For *extensive magnitudes* it should be possible at least *in principle*, *formally*, as we have seen, to multiply them by arbitrary natural numbers and nevertheless remain in the realm of the magnitudes or 'quanta' in question. This does not hold, in Hegel's view, for merely intensive magnitudes as heat or noise or the strength of an earthquake.

If we think of a limited line or an area on a plane surface or of a volume, perhaps represented by a body, we see that a *singular* extensive magnitude is individuated by its 'qualitative limits'. But already as such it refers to *a whole realm of extensive magnitudes*. In such a realm, the said multiplication and, perhaps division, is defined, at least to a certain degree. Hegel's expression for this is, as always, much too dense or stenographic:

> "A quantum, together with its limit, which is a multitude of itself, is an extensive magnitude".[127]

Natural or rational numbers or pure proportions like 9 or 2/3 are *pure* quanta. As such, they are quanta of a very special kind. The term "pure" means that their expressions represent abstract forms of quantificational relations and no empirical quantities like 9 planets or 1/2 pound. Pure numbers in general must allow not only for addition but for *multiplication with themselves*, too, as we shall see.

We can represent a *natural* number n by a finite addition of the unit-number 1 with itself, i.e. by n=1+…+1 (n-times). But a more general definition of a number is helpful, because it is at the same time more precise. We say that a number is a place in a sequential (i.e. linear and Archimedian) ordering of representations of numbers. These representations can be finite sets or number-terms in a properly ordered sequence of such terms. This is enough for using these sets or terms as representations for numbers and for counting.

> "A number (term) as such has meaning only in the sequence of number (terms)"[128]

> A number "is in its immediate existence an *extensive* quantum – a *simple determination*, which is essentially a *cardinality,* but a cardinality of one and the same *unit*"; the corresponding quantum is "distinct from the number only by explicitly referring to a multitude in its determination."[129]

[127] "Das Quantum so mit seiner Grenze, die ein Vielfaches an ihr selbst ist, ist extensive Größe" (GW 21, p. 208).
[128] GW 21, p. 215: "Die Zahl überhaupt (hat) ihren Sinn nur … in der Zahlenreihe".
[129] GW 21, p. 209: Eine Zahl "ist unmittelbar *extensives* Quantum – die *einfache* Bestimmtheit, die wesentlich als *Anzahl,* jedoch als Anzahl einer und derselben *Einheit* ist"; das Quantum ist "von der Zahl nur dadurch unterschieden, dass ausdrücklich die Bestimmtheit als Vielheit in dieser gesetzt ist."

The latter sentence is difficult. But it says that a natural number is represented by a quantum if we can get the quantum by adding up a unit n-times. The elements of a finite set are units that 'add' up to the set, namely by a disjoint union of singleton sets. We can, therefore, define the natural numbers on the ground of finite and discrete sets of (concrete or abstract) objects. These sets are ordered in view of size. But for this, a sufficiently stable identity or 'attraction' and a sufficiently stable relation of inequality or 'repulsion'[130] must define their elements. Only then we can speak of a *set* at all. That means that the objects must be differentiated in a sufficiently stable way. A set of chairs in a room might do for some purpose. But a 'set' of thing-glimpses would not do, nor a 'set' of sense data or a 'set' of 'all' parts of bodies.

Since Plato's time, *pure* numbers are taken to be *proportions*. Proportions are, at first, certain *relations* between magnitudes. But a proportion turns into a quantum by a definition of equality between proportions, by a definition of addition for proportions and by a definition of an Archimedian ordering for all possible proportions. Indeed, if we want a quantum g to be a possible element in a proportion, g must already be an element in an Archimedian linear ordering G of (extensive) magnitudes, as explained by *Euclid* in the beginning of *Book 5* of his *Elements*.[131] If a and b as well as A and B are pairs of such magnitudes in possibly different realms of quanta G and G', the pure proportions are represented by a:b or A:B and they are defined as 'objects' via the following ingenious definition:

If and only if there are natural numbers n, m such $m{\cdot}a>n{\cdot}b$ and $n{\cdot}B>m{\cdot}A$, then a:b>A:B holds, and, for that matter, a:b>n:m>A:B holds also.

If and only if neither a:b>A:B nor A:B>a:b holds, then a:b=A:B holds.[132]

Proportions are *pure*, because they are independent from any *peculiar* realm of extensive magnitudes (like angles or volumes or liters). Descartes has made algebraic geometry possible by deliberately *neglecting* this fact. Despite his urge for clarity and distinctness, he attacked all too 'scholastic' distinctions. His (implicit) 'trick' was, somehow ironically, to 'confuse' things.

In fact, Descartes neglected the fact that geometrical forms as such are *independent of size*. He did this in a highly effective way, namely by choosing an *arbitrary but fixed unit length e*. As a result, we can *multiply* any length in a pure geometrical way 'with itself', by transforming the cor-

[130] The word "repulsion" and the word "attraction" refer in its general use not to physical forces, but to the inequality and equality of objects as two sides of one categorical form of being an element or an object in a set of objects. Any real reference to an object in experience must fulfill the corresponding form. See GW 21, p. 166 ff.
[131] As I have said, for any pair of elements a and b in G there must be a natural number n such that $n{\cdot}a>b$.
[132] I think it is clear that Hegel knows about these definitions, even though he does not explicitly refer to them.

responding *square* a^2 into a rectangle b·e with the unit length e on one side. Now we can 'identify' this rectangle with the side b and write $a^2=b$.

We must know about the importance of this procedure if we want to understand what it means when Hegel says: In the operation of the *square*, the *number comes to itself*. This remark refers to the following mathematical 'identification' between 'entities' in pure geometry and in pure arithmetic:

(1) e·e=e=1.

By the same token, lengths are identified with abstract proportions, namely by the following rule:

(2) a:e=a.

These identifications lie at the ground of the Cartesian idea to use the line as a representation for (proportional, i.e. real) numbers. After we introduce negative lengths (as directed lines or vectors), the realm of geometrical lengths or, what is now the same, the realm of geometrical proportions turns into a perfect *field* in the mathematical sense of the word: with its addition, multiplication, division and subtraction. It is a sub-field of the real numbers. Which sub-field it is depends on the geometrical constructions in which we define points as intersections of lines. Usually, in elementary geometry of the plane we allow ruler and circle.

Hegel tells this story in a disguised form as a 'development' of the concept of a quantum. It leads to a concept of a real number as the purest quantum possible. The major additions *after* Hegel's time were the definition of *purely arithmetical* representations for *all possible proportions*, namely via convergent sequences of rational numbers by Karl Weierstrass or via 'Dedekind's cuts'. These definitions were followed by the proposal in Cantor's set theory to clarify the meaning of the expression "all possible sequences" or "all possible subsets" of rational numbers.

6.3 CRITIQUE OF INFINITESIMAL ENTITIES

Now we have the means to sum up Hegel's analysis of the concept of infinitesimals in two short points, a negative and a positive one.

The negative point is this: The usual (Leibnizian) notation dx/dy used in infinitesimal calculus expresses *no real quotient or proportion*. dx is only a "moment" in a complex mnemonic notation. There are no infinitesimal numbers. They cannot be defined as proportions. The reason is that neither the general presupposition for talking about dx as an abstract object nor

the more particular precondition for being a well-defined quantum is fulfilled. dx and dy are no magnitudes since no linear (Archimedean) ordering is defined for them – as we say even while referring to the expressions "dx" and "dy". If dx should be an entity, we would need a well-established rule that defines identities and differences for these expressions in a whole class of possible representations of infinitesimal magnitudes. This condition is not fulfilled.[133] Hence, the so-called infinitesimal magnitude dx is no entity at all since the expression "dx" is no name at all. Since the expressions "dx" and "dy" do not name quanta, "dx/dy" does not name a proportion or any other 'entity'.

Hegel acknowledges that Newton had taken an infinitesimal 'length' dx not as a well-determined line 'around' x but as a special kind of variable, called a *fluxion.*[134] Therefore, the relation or proportion dy/dx[135] between the increase dy of the value of the function and the infinitesimal increase of the argument dx is not really a ratio, no real proportion. It is said that it names the relation or proportion in which the quotients in (y(x)-y(t))/(x-t) disappear ('*quacum evanescunt*'). But what does this 'explanation' of the Newtonians mean if a proportion must be defined in a way as shown above?

In principle, Hegel acknowledges that Newton (or rather: his followers) had at least tried to explain the meaning of the expression "dy/dx" *syncategorematically*, i..e. the Newtonians knew that they could not use the classical definition of a proportion. In distinction to a real name of a magnitude in a real quotient a/b, the expression "dy" and "dx" do not have self-standing meaning. They only 'qualify' the meaning of the whole expression "dy/dx" as indices or 'moments', as Hegel says in such cases.

We find here an important key for a relatively easy access to Hegel's idiosyncratic language of logical analysis and reflection on categories, because Hegel expresses what I have just said thus:

> "In the proportional relation (i.e. in dy/dx) as a mere moment (i.e. with mere syncategorematical meaning) it (i.e. dy or dx) is not something that stands in an equivalence relation to itself (there are no equivalence relations and no identity defined; expressions like "dx = dy" are not wrong, but nonsense); it is only for something (i.e. it is a

[133] Robinson, 1966, has succeeded in such a definition of non-standard natural numbers on the ground of set theoretical ultra-filters that allows for a consistent definition of identities and differences of infinitesimal magnitudes in a nonstandard Archimedian ordering. But this reconstruction does not change anything with respect to the criticism of infinitesimal magnitudes in Hegel's time.
[134] See GW 21, p. 253.
[135] For convenience, I use like Hegel the Leibnizian form of writing, even though Newton does not use it himself.

> special kind of variable, referring to something specific in a complex expression) in the infinity as a being for itself by being at the same time a quantitative determination."[136]

The last phrase is dark and difficult. It says this. The expressions dy and dx as mere moments in dy/dx only represent a 'quantitative determination' in the meaning of the whole expression. The "y" in the expression "dy" hints to the function y(t) that is to be differentiated. The "x" in "dx" refers to the place where this function should be differentiated. The expression "dy/dx" refers to the value of the differentiation of y(t) at the place x.

The most difficult expression in Hegel's phrase is "Unendlichkeit als Fürsichsein", i.e. "infinity as being for itself". It says, I take it, that the dy and dx are *special variables*. The y in dy represents *infinitely many functions* y(t) and therefore replaces infinitely many functions in their being for themselves ('*Fürsichsein*'). Any of these functions is determined by its very identity as a function, its course of values. In a concrete case, however, the expression is *not* used as a variable but stands for a *particular function*, only 'für Eines', for *one* function y(t)=f(t), which is implicitly presupposed as well-determined. The same holds for x and dx: the x represents *one* well-determined point of differentiation. Moreover, the dy represents the *variable form* of the differences f(x)-f(t), the dx represents the difference x-t and the expression dy/dx represents at the same time the variable differential quotient (f(x)-f(t))/(x-t) *and* its limit for t running to x.[137]

The limits, says Hegel, are determined 'according to Newton' by the fact that

> "the proportional relations of the limitless decreasing magnitudes are nearer than any given finite difference".[138]

This is a kind of vague description of the 'classical' approach to calculus. Hegel prefers the approach of Lagrange, as we shall see immediately.

Hegel's positive reconstruction runs as follows: Differentiation of a function y=y(t)=f(t) in a point x is best understood as a search for a representation of the function f(x+h) in the polynomial form $f(x)+a_1h+a_2h^2+...+a_nh^n+\ldots$ This power series should converge locally, for sufficiently small h.

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[136] "In dem Verhältnisse als nur Moment ist es nicht ein für sich gleichgültiges; es ist in der Unendlichkeit als Fürsichsein, indem es zugleich eine quantitative Bestimmtheit ist, nur als ein Für-Eines." (GW 21, p. 241).

[137] At GW 21 p. 269, Hegel comments on the presupposition of using dx in the expression "dy/dx": "the approximation stands already in the back of dx".

[138] GW 21, p. 254:"Die Verhältnisse der ohne Grenze abnehmenden Größen näher sind als jeder gegebene, d.h. endliche Unterschied".

We now can use the notation df/dx or dy/dx as a mere *mnemonic* device in order to name the first coefficient a_1 in this series, developed for the function f(x+h). a_1=df/dx=dy/dx=$\lim_{h\to 0}$(f(x+h)-f(x))/h is the derivation of the function f(x) or y(x) at x.[139]

Polynomials $y=f(x)=a_nx^n+a_{n-1}x^{n-1}+...+a_1x+a_0$ can be differentiated via the rule $(ax^n)' = nax^{n-1}$ (a consequence of the differentiation of products[140]) on the ground of the additivity of derivation.[141] We arrive at a very short demystification of the infinitesimal calculus.[142] This holds especially if we look at integration. If F(x) is a function with F'(x)=f(x)), for any h=(b-a)/n we get: F(b)-F(a)=F(b)-F(b-h)+F(b-h)-F(b-2h)+...+ F(a+h)-F(a). If we compare the sums with f(b)h+f(b-h)h+...+f(a)h, we see almost immediately that for arbitrary large n we get better and better approximations of the magnitude F(b)-F(a) as well as of the area. Hence F(b)-F(a) *is* the integral of f in the limits a and b. (We assume f to be positive.)

Hegel explicitly refers to Lagrange's "*Theorie des fonctions analytiques*" (Paris 1797):[143]

> "If y = fx, then fx should, when y is turned into y+k, turn into $fx+ph+qh^2+rh^3$ etc. Thereby is $k = ph+qh^2$ etc. and $k/h = p+qh+rh^2$ etc. If now k and h disappear, the second coefficient disappears also but not p. This p now is said to be the limit of the proportional relation of the two increments (i.e. k and h)."[144]

The task of differentiation of a given polynomial f(t)=y(t) in x is, as we have said, to find coefficients p, q, r and so on such that for the (positive or negative) magnitudes (lengths, real numbers) h the differences of the values of the function k = f(x+h) – f(x) are exactly (i.e. not approximately) represented by a infinite series of the form $k=ph+qh^2+rh^3+...$ Hegel criticizes those who say that we just put h=0 in order to determine dy/dx. It would follow also that k=0.

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[139] See GW 21, p. 251: "dx und dy sind keine Quanta mehr ... sondern haben allein in ihrer Beziehung [i.e. in expressions of the form "dy/dx"] eine Bedeutung, einen Sinn bloß als Momente. Sie sind nicht ... etwas, das Etwas als Quantum genommen, nicht endliche Differenzen; aber auch nicht nichts, nicht die bestimmungslose Null". And GW 21, p. 265: "...die Formen ... dx und dy sollen schlechthin nur als Momente von dy/dx genommen und dx/dy [he certainly means dy/dx] selbst als ein einziges unteilbares Zeichen angesehen werden."

[140] See Hegel's (correct) criticism of Newton's 'proof' of the product-rule for differentiation at GW 21, p. 261: "Das Produkt, wenn x,y jedes um die Hälfte seiner unendlichen Differenz kleiner genommen wird, geht über in xy - xdy/2 – ydx/2 + dxdy/4; aber wenn man x und y um ebensoviel zunehmen läßt, in xy + xdy/2 + ydx/2 + dxdy/4." "Man sieht, in diesem Verfahren fällt das Glied, welches die Hauptschwierigkeit ausmacht, das Produkt der beiden unendlichen Differenzen dxdy, durch sich selbst hinweg. Aber des Newtonischen Namens unerachtet muß es gesagt werden dürfen, daß solche, obgleich sehr elementarische Operation, unrichtig ist; es ist unrichtig, daß (x+dx/2)(y+dy/2)-(x-dx/2)(y-dy/2) = (x+dx)(y+dy)-xy." On the left hand side the "dxdy" is mising and the question is, indeed, why we may cancel it.

[141] Hegel does not count the constant functions y=f(x)=c=const, nor even the linear functions y=cx or y/x=c as real functions. The reason is that the derivation, defined via the equality $f(x+h)= f(x)+a_1h+a_2h^2+...+a_nh^n+...$, is reduced to the trivial equality c(x+h)=cx+ch and the limit of (c(x+h)-cx)/h is trivially the constant c.

[142] Hegel says: "...in a short time, ... perhaps in half an hour,... one can grasp the whole theory"(see GW 21, pp. 273 f).

[143] See GW 21, p. 266; see also GW 21, pp. 262 f. and his criticism of Wolffs 'popular' interpretation of calculus on p. 256.

The easiest answer to the question what df/dx "should be as a well-determined quantitative value"[145] is the one we have given, following Hegel and Lagrange: df/dx is the first coefficient p defined by the polynomial form given to the function k(h) – and nothing else. By proceeding on this way, all metaphysical and infinitesimal talk is put away in one stroke.

But further questions appear. Hegel tries to answer them in a row. The first is the question of the uniqueness of the coefficients, the second, how they are to be found, and the third, what the definition means, why it is significant and what are its applications. I do not go into these details here. I just want to fix the following result: For understanding the technique of differentiation and integration, the metaphor of infinitesimal magnitudes is unhelpful. To a somewhat lesser extent, the talk of an infinite approximation of the real number dx/dy is neither necessary nor sufficient. The problem is not so much the notation and the calculus but the commentaries of the mathematicians by which they accompany or 'explain' our own techniques of using symbols, which makes things difficult and mystify mathematics more than is good and necessary.

6.4 GOOD AND BAD INFINITY

Kant already had claimed that mathematics is the only science that deals with infinity proper. Hegel agrees. Outside mathematics there is no infinity at all.

> "In a philosophical respect mathematical infinitude is important because it is grounded indeed on the concept of a true infinite and because it is standing much higher than what is usually called the metaphysical infinite."[146]

But Hegel's analysis is even more radical. He dismisses *any form* of (belief in) 'actual infinities'.[147] Even mathematics does not provide any special knowledge about infinities. It only develops methods of calculation, approximation, and of explicit rule following. The analysis of the infinitesimal numbers was a first part in this attack. The second part has to do with all so-called infinite sequences and series.

In any case in which we talk about some true infinity or truly about some infinitude we always talk about a *pure form*. Most oft, the form is given by a law, rule, function, or by a *general procedure*. Hegel uses the example of a sequence like 0,285714... ("and so forth") in order to

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[144] "Wenn y = fx, soll fx, wenn y in y+k übergeht, sich in $fx+ph+qh^2+rh^3$ usf. verändern, hiemit ist $k = ph+qh^2$ usf. und $k/h = p+qh+rh^2$ usf. Wenn nun k und h verschwinden, so verschwindet das zweite Glied außer p, welches p nun die Grenze des Verhältnisses der beiden Zusätze sei." (GW 21, p. 266).

[145] GW 21, p. 267.

[146] "In philosophischer Rücksicht aber ist das mathematische Unendliche darum wichtig, weil ihm in der Tat der Begriff des wahrhaften Unendlichen zu Grunde liegt und es viel höher steht, als das gewöhnlich sogenannte metaphysische Unendliche" (GW 21, p. 237).

[147] We have to keep in mind, though, that Cantor's way of talking about infinite sets and infinite cardinalities as objects of set theoretic discourse had not been developed yet.

show what this means. He sees that this finite sequence does not name an infinite sequence at all. Nobody can 'know' how it continues. What we know, because of the three dots, is only that we *should* continue *somehow*. This idea of infinity, expressed by three dots or the expression "and so on", is, I claim, Hegel's standard example for a conceptually *bad* (understanding of) *infinity*. The 'and-so-on-theory' of infinite 'rule following' is naïve and misleading. A merely negative characterization of a sequence or series as non-finite is simply not enough:

> "…what the series should express remains a mere 'should' (...). In contradistinction to this, the finite expression or what is called the sum of such a series is not lacking anything; it contains the complete value, which is only searched by the series."[148] "The proportion or ratio 2/7 can be expressed as 0,285714... (...) If we compare the expressions, the infinite series represents the value not as a proportional relation but as quantum…"[149]

It should be not too amazing now that Wittgenstein uses almost the same sequence 0,1428571… and 1/7 in order to make exactly the same point. For Hegel, too, no expression of a finite sequence followed by three dots or an "and so on" is a 'good' expression of a mathematical sequence – if it is not just used for *exemplifying* the application of an *explicit* rule or law.

But we know of cases when we are just too lazy to write down the law. In the case of $1+a+a^2+a^3...$, for example, we express a full law, despite the three dots. The reasons is that 'the law' how to determine the sequence is all too clear. We know very well how to make the formula explicit by describing the law for the n^{th} term in the sequence.

The 'true substantial infinity' of a sequence is to be found in the finitely expressed *law* or *explicit rule*. These rules or laws or schemata are by *presupposition* such that we all can *use* them properly, i.e. the possibility of a *joint control* of the proper use of such an explicit rule is *presupposed* and does not have to be 'shown' or 'proved' in any way.

Of course, we have to learn techniques of using number terms. And in the teaching process we may use the word "and *so* on." But this "and *so* on" is of another type than the three dots in a finite sequence. It only accompanies practical teaching. It does not '*explain*' what is taught.

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[148] GW 21, p. 245: "weil das, was die Reihe ausdrücken soll, ein Sollen bleibt (...). Dagegen ist aber das, was der endliche Ausdruck oder die Summe solcher Reihe genannt wird, ohne Mangel; er enthält den Wert, den die Reihe nur sucht, vollständig".

[149] GW 21, p. 243 f.: "Der Bruch 2/7 kann ausgedrückt werden als 0,285714...,(1/1-a als $1+a+a^2+a^3$ usf. ...) Vergleichen wir die beiden Ausdrücke, so stellt der eine, die unendliche Reihe, ihn nicht mehr als Verhältnis, sondern nach der Seite dar, dass er ein Quantum ist."

Another famous case (nicely presented by Lewis Carroll in his story of Achilles and the tortoise[150]) shows what is going on here. A merely *verbal explanation* of the Modus Ponens does not tell us how the rule is to be applied. We tend to explain it by saying: "if A and if A⇒B, then B". But this 'explanation' only accompanies some 'implicit' teaching of the use of a rule like A⇒B or, in another form of expression, of the sentence "if A, then B". Whoever is not able to use the rule properly will not 'understand' the 'explanation' either. Knowing what A⇒B means is having the corresponding *know-how*.[151]

The real or good or true understanding of the infinity of any sequence is expressed by the corresponding *law* (the *formula*) and can be understood only by understanding *the form of its use*. This means that whoever cannot use the corresponding laws or rules does just not have enough mathematical understanding (yet). Hence, if someone does not agree with us how to continue a *bad* infinite sequence as 2,4,6,8…, this does not mean anything about his mathematical skills. Such an expression of bad infinity *does not count* as a mathematical law. But if someone would not agree with us what it means to add 2 to any given number x, it would matter, at least with respect to his mastery of the decimal number system. Therefore there is a fairly deep problem in Kripke's famous interpretation of Wittgenstein's remarks on rule following – and perhaps even in Wittgenstein's argumentation itself. Kripke claims that the mastery of schematic rules that already have explicit names (as "x+2") in a calculus (like that of the decimal number system) allegedly presupposes a similar 'and so on' as it was used in the case of a sequence. Wittgenstein himself suggests that the case of applying the function x+2 to new terms is analogous to the "and so on" after a presentation of a finite sequence 'of examples'. Kripke and Wittgenstein are certainly right insofar as things *look* similar. But they *are* not similar.

We see this already when we only realize that the analogy blurs the difference between bad and good infinity in mathematical notation. The difference can be made clear, however, only when we see that 'good' or 'true' infinity presupposes a whole system of competence, whereas bad infinity appears when we talk about an "and-so-on" only locally. In a sense, Hegel remains fast on the ground of *reasonable judgment* and *empractical competence*:[152] We understand recursive schemes like x+2, for example, only in the context of a practice of counting (at least up to 2) and together with an understanding of x+1. The latter always comes together with an understanding of what counts as the next number-term, say, in the decimal system. If we do not

[150] Cf. Lewis Carroll, »What the Tortoise said to Achilles«, in: The Complete Works, London 1966, p. 1104-1108. with Wittgenstein's Tractatus § 6.1264, which already says that we cannot express the *Modus Ponens* by a sentence.
[151] Long before Gilbert Ryle distinguished explicit knowledge or *knowing-that* from implicit *knowing-how*, Karl Bühler had already coined the helpful, though unusual, expression "empractical knowledge" for the latter.
[152] Cf. last footnote.

know this, we do not know how *decimal expressions* express *numbers* and how number terms t can be used for *counting*, for example in counting *any smaller sequence* of number terms – and what it means that they are already *ordered*.

Kripke and Wittgenstein are right in this: It is of course possible that many people, children for example, cannot count in the decimal system, or that they can count, but not over 1000. Let us assume that you can count. Then, if you cannot *calculate* the value of x+2 with an *arbitrary* 'decimal number' as an argument, you cannot use the 'decimal numbers' for counting yet – which is indeed something else than just knowing the order. I think that Hegel had commented on this very fact where he reflected on the operation of addition as a defining feature of being a number(-term) or, if we prefer it epistemologically, of being understood as a number(-term).

Finally I turn to the argument against infinities outside mathematics. Hegel sees that it only *seems* to make sense to write down *arbitrary large* numbers in front of a *real measure* for lengths like kilometers or years. If we do so, we are lead to think that we already have an argument in favor of the 'infinity of the universe'. The problem of the argument is this. In mathematical geometry it is true that we formally can add and multiply lengths arbitrarily. But this is only a feature of mathematical (Euclidean) geometry. It is a result of a recursive definition of the concept of geometrical construction. Such a construction is, as such, in a sense 'space-less'. We say that it can be realized in all possible sizes, if we count it as a construction of which we say that it 'can' be realized at all. In fact, mathematical geometry introduces a peculiar notion of 'can', of geometrical possibility. With respect to the recursive definition of complex geometrical constructions, the infinite set of geometrical forms (in planimetry) is defined just in the same way as the definition of an arbitrary number or of an arbitrary hereditary finite set in arithmetic shows. But notice that there are many possibilities to define equalities between two descriptions of geometrical constructions, or what amounts to the same, to define sameness of form. One possibility is to look only at the constructed points in 'the plane'. This plane is itself a form – which can be seen when we choose different unit lengths in realizing geometrical constructions, e.g. on different pieces of papers and blackboards.

When we replace the form of a unit length by a *real measure* like km, we cannot just say that it makes sense to talk about x km for any natural number x. We certainly can choose *arbitrary small* or *arbitrary large units* like cm, mm and so on, or seconds, milliseconds and so on. But Hegel does not accept the '*thoughtless idea*' that any expression of the form "x km" or "x hours" makes *a priori empirical sense*. Some of these expressions do, some do not – and we do not know yet in a very precise sense, which do, which do not.

As a result, there is a fairly easy solution to the question if the cosmos is infinite in space and time or not. The answer is this: The question does not make sense since the mathematical concept of infinity *as such* does not apply directly to space- and time-measurement, only to its *form*. This is a variation and, at the same time, a clarification of Kant's answer to the problem of infinity of space and time in his *Transcendental Dialectic*.

CHAPTER 7: SPECULATIVE THINKING ABOUT THE ROLE OF THE CONCEPTUAL

7.1 HOLISM AND ATOMISM

There is no immediate knowledge. There is no foundation of human knowledge in subjective sensations. Therefore, there is no construction of knowledge from bottom up, starting merely with individual perceptions, as animals must do. The reason is that human knowledge must be understood as a joint development of cooperative and individual techniques and faculties, including its verbalizations, rather than a merely ontogenetic development of individual skills on the ground of phylogenetic evolution. This is no 'claim' or 'belief' to start with. Rather, we implicitly and practically all know it as a basic truth of our mode of being in the world: We learn many things by words and we learn to understand what we perceive by the concepts that come with these words.

Hegel's *Phenomenology of Spirit* already shows the corresponding errors in traditional empiricism with its assimilation of human knowledge to animal perception and skills. Its clearest expression until today we find in Hume. At the same time, Hegel criticizes rationalism as it is traditionally identified with Descartes' mystification of a self-conscious thinking self. In fact, Hegel's *Phenomenology* develops its insights into the social constitution of human intelligence, understanding, consciousness and self-consciousness by a method of deconstruction, which he calls "dialectics". This method is, at the same time, destructive and re-constructive. It proceeds by stepwise criticism of all too naïve or all too easy real and possible answers to the question what the human spirit is. Methodologically identical but thematically different is the procedure of Hegel's *Science of Logic.* This book also deconstructs all too naïve positions. But now the topic is being, i.e. what exists and what is true. The goal of the *Logic* is, however, much the same as of the Phenomenology. The goal is to cover the methodological grounds for any self-conscious, i.e. self-controlled, concept of knowledge, truth, and reality. The deep problem is, somewhat ironical, that in order to succeed we have to proceed, so to speak, from top down, not from bottom up. This is the reason why the corresponding analysis of these concepts is rightly called "dialectical". It is much the same as a method of 'deconstruction', properly understood.

The rationale for starting at the top is that analysis comes before synthesis: Our reflection on the relation between our knowledge and the world, or rather, on the very concept of knowledge and the very concept of the world, begins, and must begin, from inside a whole tradition of knowledge and experience. This is an undeniable fact. And it is a methodological rule. We must acknowledge it and deal with it. I propose to refer to it as the *truth of holism in any self-conscious philosophy of knowledge and science.*

Today's analytical philosophy prefers, instead, to build all the things in the world and all our knowledge of them up from allegedly immediately given atoms. In doing so, analytic philosophy is not analytical. Despite all verbal attacks on 'synthetic' philosophy, as we can find it nicely represented in Bertrand Russell's polemics, analytical philosophy believes without any further grounds and sufficient arguments in some kind of *logical atomism*. But logical atomism presents no *analysis* of the *presupposed elements* in language and science. It rather presents a *synthetical construction* of a more or less simple formal *eidolon* in the sense of Plato. Such an *eidolon* is a logical toy model, a formal picture, through which the analytical philosopher, as he calls himself, wants to understand and explain the relation between language, science, and the world. Unfortunately, there is a great danger that the corresponding *eidolon* of language and propositions on the one side, the 'world' of 'things' to which our names sentences refer on the other side, produces belief-philosophy or *ideology.* It results from the all too narrow perspective of the guiding *eidolon* or, as Wittgenstein has put it, from a one-sided diet when thinking of language, knowledge, and the world.

Of what we can say that it really exists must show itself somehow in our human experience. On the other hand, claims about real existence always involve some partly generic and, as such, situation-invariant, partly empirical and as such situation-variant form and content.

Now we can also see that, and how, real languages are different from the merely formal languages of mathematical theories. The language of science is not just mathematics, because it refers to a world of real experience. Mathematics is merely a formal backbone of mathematical physics. In short, our real practice of science and knowledge cannot be understood or made explicit if we view it only through the lens of formal theories. Rather, this way to look at it produces the belief-philosophy of scientism.

Hegelian 'categories' develop into a whole system of differentiations and inferences. Our leading question now is what it means to start, as Hegel does, with such general words or 'categories' as "being" and "nothing" and what it means to 'develop' or 'deduce' such words or 'categories' as "becoming" and "being there" and via them other 'categories' like "quality" and "quantity", "measure" and "essence". A first answer to this question is this: These words or categories just name most general forms by which we reflect on the relation of thinking or speaking and the world. We all use them every now and then in our practice of reflecting on general forms of speech. But in this use, we are usually not aware of their meaning. And, what is worse, we tend to forget the presuppositions involved in their use. Therefore, there is some need of developing a more self-conscious use of such 'categorials'.

Hegel's enterprise is, indeed, guided by this goal. The steps he proposes to go in his analysis lead us, so to speak, 'down' from the more general to the more particular categories. The reason is this: Self-conscious analysis makes the scales of methodologically ordered presuppositions explicit. In doing so, it develops our self-conscious knowledge about the peculiarity of human knowledge. As such, it is the 'metaphysical' knowledge of Aristotle's *noesis noeseos*, which turns out to be the same enterprise as Kant's transcendental analysis, if it is correctly understood.

We therefore should by no means confuse Hegel's steps of developing categories with deductions in our modern sense. In such a deduction, we start with axioms and derive theorems according to some already accepted rules of deduction. According to Hegel's idea of a logical development, we rather proceed in showing what is already presupposed when we explicitly use, or implicitly (practically) refer to, the categories in question.

Being is truth, content is form. But *how* does Hegel work his way down from the most general and abstract to the more concrete and particular 'categories'? Hegel begins with the category of *being*. There are many things to say about this category. I take it, for short, that "being" is the most general label for anything that (allegedly) exists in some sense or other. That is, it is a super-label for existence, reality, truth, objectivity and other sub-labels like this. In a sense, "being" stands, at least at first, for the *formal idea of existence* of the world at large and of determined objects in the world, of states of affairs or of processes and events. In other words, Hegel does not distinguish yet between the whole world and limited realms of objects, real properties and true propositions, at least not at the beginning. Nor does he distinguish yet between the level of reference and the level of expression. Like *Parmenides*, one of his self-elected predecessors, he just names a *topic* or rather, a *problem* by mentioning and using the word "being". And he proceeds by asking what we mean when we use this word.

In the end there should be no question that this category of being corresponds to the category of formal truth – only that in the latter case we talk about expressions of formal knowledge, not about what it is knowledge of.

The immediate problem now is that being or truth would be empty if we had no criteria for distinguishing truth from untruth, being from not being. Therefore, there is no concept of truth without *negation*, i.e. without *making a difference* to *non-being* and *falsehood*. The *category* of being therefore *contains*, in this sense, already non-being as its opposite. This means the

following: Being is defined only in relation to non-being. Truth is defined only in relations to falsehood.

But how should we understand the criteria or rules for these differentiations? The road of Hegel's analytical reflection leads now to further categories like *becoming* or *change* and *presence* or *Dasein*. This means that we have to accept the fact that any *possible* distinction between truth and falsehood can only be made *actual* in a present world of empirical changes, as *Heraclitus* has seen already. It will turn out that in this real, empirical, world not only 'things' change, but the 'meanings' of words, too. I.e. there is also a development of our systems of distinctions and inferences, expressed by our words. We therefore have to account for the fact that any actualization of meaningful speech, any speech-act, and its proper understanding, is, in one way or other, *bound to the present situation* of discourse, even though it *also* transcends the situation and perspective of the speaker, or else it could not be understood by others, who, by default, are in *different situations and occupy different points of perspectives*.

In other words, we can never *totally* undo the *performative*, i.e. *subjective*, and the *dialogical*, i.e. *co-operative*, aspects of meaningful speech, even in its written form, as *Plato*, the third in the row of Hegel's philosophical heroes, already knows. As a result, transcendence of our subjectivism (and corresponding finitudes) remains always somehow 'relative'. Therefore, we have to distinguish between *relevant* or *essential* and irrelevant and inessential features of the particular situations of speaker and hearer. By doing so, we 'relativize' generic invariance.

In other words, when we 'abstract' from actual situations, as we do especially in our reflections on semantic forms, we do not arrive at absolutely invariant sentence meaning. We arrive at best at *generic forms of dialogical understanding*.

The resulting problem of this insight is to *reconcile* the very *idea* of *situation invariant meaning and truth* with the limitations of our *actual use* (of schemes) *of conceptual differentiations, identifications and inferences*. Only on the ground of such reconciliation we can understand the concept of non-subjective knowledge and science. The problem is analogous to Plato's problem of *methexis* or projection of forms unto the real word of possibly actual human experience, as it is discussed in the dialogue "Parmenides", which was praised by Hegel emphatically as the first 'speculative', i.e. highest-level, reflection on meaning and truth.

The main and leading question now is: *How do actual things share properties with generic forms*?

7.2 FORMAL AND REAL BEING

Being in itself is formal being as such. There is a traditional distinction between *being in itself* and *being for itself. Being in itself* or *as such (an sich, kath'auto)* is, as Hegel was the first to notice, merely abstract existence, produced by our ways of talking and thinking. Everything which exists only *an sich* does not really exist yet. For example, Sherlock Holmes exists as such, or Zeus or the archangel Michael, just as the number 7 or the strings of string theory. Of some of these things we know that they do not exist actually. But of other things, for example, of the zoo of subatomic particles in modern particle physics, we do know that they somehow really exist even though we sometimes do not understand the precise way in which they do. Therefore, it is much easier to know what these particles are '*an sich*', in themselves, than to know what they really are, '*an und für sich*' i.e. 'in-and-for-themselves'. We know what they are as such because books tell us. What things are '*an sich*' is not at all unknown. It is by no means hidden behind the veil of our subjectivism, as Kant has made us believe. It is, rather, the best known part in our knowledge because things in themselves are, as such, the objects of our spontaneous thoughts. The only limitation for their 'existence' in the modal mode of possibility is logical or conceptual consistency. This is one of Hegel's basic insights. It denies much more radically than Kant any reference to a world totally behind the scene of experience. Such transcendent reference is logically impossible. It is not well defined. Whoever thinks otherwise mistakes the mere claim of transcendent reference for an accomplished reference.[153] But when we nevertheless sometimes talk about things in themselves, we focus, in fact, on *conceptual form* and *abstract reference*.

If we say, for example, that numbers in themselves (or as such) cannot be perceived, we comment on the fact that it is no *essential feature of the numbers as such* that we can see or hear or touch number-*terms*, even though we need *some* such representations. A blind person can do arithmetic or geometry on the ground of acoustical or 'haptic' or 'tactile' perception (of touching things), a deaf person certainly needs additional help of 'optical' or 'tactile' signs.

Numbers as such do exist as forms, but only as forms. As forms they are grounded in a practice in which we make use of a whole system of possible representations of numbers, for example by number terms in orderings of sequences of things and in counting sets of things. When we talk about numbers *as such*, we talk about (sub)forms of a whole practice of calculation, and therefore also about forms of possible (speech) acts.

[153] A whole tradition of classical analytical philosophy does not see that Hegel is even more radical in this critical insight than logical empiricism. The latter shows a highly ambivalent attitude to dogmatic physicalism ever could have been. In fact, the refutation of Kant's tinkering with noumena or things in themselves had been one of Hegel's core concerns.

For what philosophers have addressed since the times of Plato by using phrases like "(being) in itself" are, in fact, sub-forms of a complex form as objects of thought. This is shown by the example of numbers and the forms of mathematical geometry. The expresssion "being for itself" or "Fürsichsein" refers, in contrast, to a set of possible *actualizations* of such forms by individual tokens, diagrams or figures.

Being for itself refers to identifications in empirical appearances. Hegel uses the distinction between being as such and being for itself in order to articulate the correspoding double aspect of any act of referring to concrete 'objects' in the real world, namely the generic and abstract type or form of the object, and the real way it presents itself or is actually represented.

The phrase "(*being*) *in itself*" or "(*being*) *as such*" or "*An-sich-Sein*" is used in cases in which we refer to a merely *possible thing* or rather to a merely 'intelligible' object of thinking. Such are reference always comes in an abstract and situation-independent, generic way. When we are asked to focus in our reflection on this aspect, we are asked to think about the thing as such or *an sich*.[154] We all know from some practice that, and how, we talk about the lion as such, art in itself or the German *an sich*, and what we mean when we say that something fulfils a condition only '*an sich*', but not really. The phrase "(*being*) *for itself*" or "*Für-sich-Sein*" is, however, not used in a similar well-established way. Hegel seems to use it when he wants us to focus on the individuality of the case he refers to anaphorically in a present situation of discourse. In such a case, the identity of the thing we refer to always appears as a relation between different possible presentations of it.

Notice that the Latin expression "*pro se esse*" indeed means '*to stand in a relation to itself*'. In a sense, the identity of any thing always comes together with an equivalence-relation between different 'appearances', 'presentations' and (symbolic) 'representations' of the thing; and there is no way of talking about any such identity or equivalence outside our practice of identifying and differentiating things.

Now we see why being for itself is a fairly difficult 'category'. It is the category in which we talk about an object as if our conceptual grasp of it were not relevant for what it is for itself. But this is just an error because the thing we refer to is also a kind of amalgam of its generically and conceptually determined being-in-itself and our judgments about 'its' actualizations or actual presentations and representations, by which we identify the concrete thing '*an und für sich*'.

[154] Hegel makes it clear that he refers to Parmenides, Heraclitus and Plato. Nevertheless, it is usually underestimated how important his authentic reading of these authors and of Aristotle is for Hegel's ideas in his science of logic, down to the appropriate use of the term 'as such' or 'in itself' as the translation of the Greek "kath'auto".

By the way, in a sense we cannot talk about numbers as objects 'for themselves'. This is so because numbers are no individual objects of experience, but only general objects of thought. On the other hand, it is perfectly fine to talk about the *Fürsichsein* of individual *representations* of numbers. This refers to the practical identification of sign-types, i.e. to the practice of 'reading' a token as a token of a type, or, what amounts to the same, to the distinction between ciphers and number terms like "1" and "2" or "11" and "12".

Being in and for itself is the concrete thing. Any *sufficiently invariant object* of *concrete* understanding exists *in-and-for-itself*.[155] This means that it is already understood as an *actualization of a determinate generic form*. In fact, Hegel interprets Plato's *idea (in itself)* as such a generic form.

The Latin word "*con-crescere*" means "*to grow together*", "*to amalgamate*". In any reference to a concrete object, a generic form and its actual embodiment are already, in this sense, 'grown together'. Since it is presupposed that the object is an actualization of *this* … (and not *that*…) form or Hegelian idea, a certain pre-knowledge about the Platonic idea is presupposed. We see now that there is a task to explicate the relevant Platonic or Hegelian idea or generic form of something, which usually is presupposed implicitly. This is the task of ('transcendental') philosophical analysis, properly understood.

Explicit judgments about relevance bring, so to speak, ideal propositions about ideal forms self-consciously back to the real world. We know this from applying the propositions of mathematical geometry to the real world. For this, we use measurements, for example of distances and angles. As we can see now, too, knowledge about (ideal) forms (as such) plays an important role in any *articulated empirical knowledge*, in which objective claims of truths are articulated. Such knowledge about generic forms as such can be learnt by heart or even represented as mathematical, i.e. merely schematically learnable pre-knowledge of what we empirically can perceive. As such, the knowledge about generic form plays a certain *a priori* role in any concrete (hence empirical) knowledge. Knowledge about generic forms is, on the other hand, in the explained sense an a priori presupposition of explicitly articulated empirical knowledge. Knowledge about generic forms is conceptual knowledge. As such, it goes far beyond the so called 'analytical' truths of merely definitional conventions like "a bachelor is a man who never was married" or the like.

[155] Cf. P.S.W. *Hegels Analytische Philosophie*, Paderborn 1992.

Plato was the first to notice the important conceptual fact that eidetic or generic truths, for example about lions or atoms or about chemical substances, are the real goal of any proper science, which, as such does not list huge amounts of singular facts, but develops our concepts. In fact, these eidetic truths play the role of presupposed conceptual knowledge when we use the corresponding words in empirical statements about singular cases. We say, for example, that the lion Jonathan is sick or that a particular chemical reaction took place here and now. Any such concrete reference to an object in the empirical world presupposes some generic knowledge about forms, at least implicitly. Only the form says, to *what* we refer, because any object of reference must be concrete. And this means. That it must be an actualization of a form or concept. We can, for example, refer to birds, and clouds and the sky, but not to a bare “this” or “what I see”.

Animals have *empirical cognition*. But they do not take part in our practice of *objective knowledge*, which is presupposed in any empirical reference to the world. Nor do they have a corresponding *practice* for their own, if we do not attribute human features to them as our forebears treated even trees, rivers and the weather. This is not so much a dogmatic claim as a challenge to make the distinction between human practice and animal social behavior explicit.

Any objective reference presupposes a whole system of *implicit judgments* or rather implicit competence of *proper action*, for example when it comes to recognize that a certain speech act is an actualization of a certain form or that a certain appearance is the appearance of a certain object.

Judgments are free actions. They do no occur to us. And they can be, like other actions, right or wrong. For judgments, as for actions, there is already a normative horizon defined. There is no content, hence no judgment, if, what someone says is not already understood in the horizon of normativity, defined by what counts as conceptually ‘true’ or ‘generically reliable’ forms of material inferences. The norms tell us what we, the hearer, may or should (not) believe, expect, or do, after the speaker has (presumably sincerely and with good reason) said X or did Y. And all this depends on the possibility of giving and asking for reasons in a kind of control game. What it is to give such reasons is already defined in the horizon of a joint practice.

Now, the age-old question of semantics since the time of Plato’s theory of forms is, obviously, this: How do we ‘understand’, and learn to understand, generic meanings of words – starting from individual and particular cases of their use? Hegel’s answer runs like this: Understanding is taking part in a whole culture, a whole system of joint, cooperatively formed, practices. The sub-

stantial form of the practice, its idea, is what is understood. Its essence remains identical in all possible and different ways of representing the form or Hegelian idea. Hence, we better distinguish between the relevant inner form (or content) and the irrelevant outer form, by which the content is represented in particular cases. The term 'concept' stands for (systems of) inner forms or contents.

Comprehending contents or concepts consists in making appropriate distinctions and inferences in speech acts and non-verbal actions. It is a certain competence of acting properly, according to the defining norms of the practice in question. This is indeed a main *result* of Hegel's development of an argument in his *Science of Logic*: There is no other understanding of truth and meaning possible, at least if we do not allow for mystifying and dogmatic answers.[156]

7.3 LOGIC OF BEING

Objective logic analyzes what normal speakers take for granted. Hegel's presuppositional analysis of the system of categories and the corresponding domains of objects of reflection and speech includes an analysis of truth conditions. For modern readers, this is not easily seen.

The first point to mention is this: When we *explicitly reflect* on propositions and states of affairs, they are always already addressed as *objects* of reflection. But in their actual use, propositions are *active performances*, namely utterances of sentences. 'Existing' states of affairs are given in actual and practical experience, not only as objects of thought or as mere sensations. This is a very deep insight, which goes back to Fichte. Martin Heidegger develops it into what he calls 'ontological difference' between the mode of being as we know them from *performances* and of *actualized facts* on one side, the objects of reflective or scientific *thought* on the other.

Being an object of thought presupposes some generic topicalization. Logically, this is nicely made perspicuous by Frege. For, if we read his Begriffsschrift properly, Frege makes the difference explicit, firstly, between the performation-sign and the copula, i.e. the performation of a speech act and functional application. Secondly, and even more importantly, he explicates the difference between a predicate in its use, a property as an intensional object of reflection, and a set as an extensional object of talk. Only Wittgenstein, not Russell or Carnap, has seen the utter

[156] It should be clear to the reader that the general form in which I express this 'semantics of distinctions and inferences' implicitly refers to Robert Brandom's idea of a normative and inferential constitution of forms of actions and meaning. Cf. especially Robert B. Brandom's *Making it Explicit.* (Harvard Univ. Pr.) 1994 and his *Articulating Reasons. An Introduction to Inferentialism*. Cambrigde/Mass. (Harvard Univ. Pr.) 2000. The main difference is that I read Hegel's logic as a transcendental analysis of presupposed forms in human practice. I do not believe that any genetical explanation of how norms and forms may have developed is more than a post hoc story to soothe some anxieties of monistic naturalists. There are other ways to get rid of an allegedly transcendent dualism of forms as such and their concrete actualizations.

importance of these distinctions. He admonishes us, for example, to replace any mystifying talk about abstract meanings by talking about forms of use, practice and life. Even though he uses examples, Wittgenstein develops these fairly abstract insights in his critical philosophical analysis. Hegel's way of listing a row of *categories* like presence, quality, quantity, identity and so on, is no less general and abstract. But its intention is clear. The task is to transform the presuppositions of any talk about truth into an analysis of propositional attitudes and speech acts like claims, beliefs, intentions or promises.

In the following, I want to give an outline of the major connections between Hegel's doctrine of being, doctrine of essence and doctrine of concept. The leading question is how abstract or ideal forms relate to real experience. I begin with a short explanation of central place of measurement as a paradigm for the need of a projective 'mediation' of abstract forms and empirical contents. Then I turn to the question how to determine the quantificational form of a noun phrase used in a proposition and how the problem of substance leads Hegel to a special *doctrine of essence*. Its topics are the *dialogical* form of *individual* judgments about the 'real' reference of words and the *dialectical* or *historical* form of objectivity and reason. Finally I try to make sense of Hegel's difficult claims about different forms of 'judgment' (*Urteil*) and 'inference' (*Schluss*) in his *doctrine of concept*.

Measurement is a projection of forms. The core idea of Hegel's procedure in his logic can be seen in the third part of his *doctrine of being*, which deals with category of *measure.* Hegel shows why we need an analysis of how we project abstract forms of speech onto experience by some sort of measurement. This is clear for any merely formal talk about geometrical forms and pure numbers or proportions. Purely mathematical propositions do not refer as such to the actual world of possible experience. They do not refer to a transcendent world behind the scene of phenomena either. They are part of a calculus, a formal form of using signs and language. They refer to the world of experience only via appropriate projections. Hegel calls these projection, *parte pro toto*, "*measures*." When we use sentences about geometrical forms in a talk about empirical objects, we need a 'measure' in order to judge if concrete figures or gestalts represent the forms *well enough*. When we use arithmetic in calculations we have to *identify the relevant units and sets*. Such a unit is also determined by a 'measure' in Hegel's most general sense. The measure determines what is counted. In fact, measures in Hegel's very general sense are the criteria that connect abstract quantitative forms of language (as we use them in pure arithmetics and geometry) with qualitative distinctions.

Quantity presupposes quantitative identity. In order to understand the general problem of reference we now must go back to the chapter B in the doctrine of being and the category of “quantity.” This category refers to the *quantificational forms* in which noun phrases are used as subjects in *predication*. The background problem is this. It is often not the expression as such that tells us if it is used as a *singular term* or as a quantified expression. Expressions like “some lions” or “many lions” are only used as quantifiers. Proper names are often, but by far not always, used as singular terms. In a sentence like "the lion hunts mammals”, the noun phrase “the lion” can name a singular object. But it can as well refer to the species of lions. Or it refers to all lions. In the first case, the sentence says that a certain singular lion, in the last case that every lion chases mammals (even though not always). In the generic case it says something like this: it is a feature of the species that lions hunt mammals. But sometimes, for example in zoos, lions survive just by eating carcasses. This leads us to the following general observation. In sentences of the following logical form:

(*) N has the property P

or

(**) N ε P,

P replaces a simple or complex (one-place) predicate. It is not too difficult to bring sentences somehow under the form (*) or (**).[157] By doing so, we put some particular focus on the topicalized subject *N*. We usually think that in (elementary) predication *N* replaces a *singular term*. But for Hegel, like for Kant, the subject or noun phrase *N* in focus can have different quantificational forms. Naming something singular in a proposition is only *one* of the possible quantificational forms of a noun phrase. Therefore we better say that any noun phrase *N* as a subject of a predicative sentence of this form is a *generalized quantifier* – fairly much in the way *Richard Montague* and his followers use the term. This means, in a sense, that the classical or traditional understanding of the logical form of predication

N ε P

is *not yet* the Fregean ‘functional’ form of ‘elementary’ predication

P(N).

[157] We can formally even demand for any sentence that it has the N ε P form and say that *the weather* is rainy or that there is an *event* having the property X – where X might be the property that it is my walking home or the sounding of your trumpet. But if we do so, we presuppose that the realms of objects or entities referred to by the variables (like weathers or states of bodies or events) are already defined. This means in turn that the corresponding categories of 'quantity' for the corresponding variables are already well defined and comprehended. What this means is our topic.

As a form it is rather still very near to a form of surface grammar. Using the idea of Montague we might say in a first approach that it corresponds to a form like

N(P).

That is, the subject or noun phrase is a *functor* that takes the verb phrase as an 'argument'. *If* N corresponds to a singular term t_N, and *if* the predication can be analyzed as a function according to Frege's proposal, *then* N(P) says essentially the same as P(t_N).

If we look at noun phrases *N* as subjects in sentences or propositions of the form N ε P in this traditional, surface related, and at the same time cautious way, we can see that we usually first have to figure out the quantificational form of *N* by looking at *both* expressions, N *and* P. The intended 'unity' expressed by the copula 'is' in 'N is P', must be found out. According to Hegel, we do this by an 'inference' (German: '*Schluss*') that shows *how* the noun phrase N 'coincides with' or 'fits to' the verb phrase P. In other words, we first have to figure out the form of this coincidence, before we can say that we have understood the proposition and before we can make a (reflective) judgment about the truth (value) of the expressed proposition. Hegel's idea seems to be that a 'medium term' or 'medium proposition' makes this unity explicit. It is a conceptual or generic unity. As such it is not just a subjective way of dealing with N *as if it were* P or a mere *attribution* of the expression of P to the subject term N.[158]

Hegel distinguishes between different quantificational statuses of N: the status of universality (*Allgemeinheit*), the status of genericity or particularity (*Besonderheit*) and the status or singularity (*Einzelheit*). Universality refers to all-quantification, singularity to singular terms and singular objects. Generic judgments form a '*medium realm*' of terms and sentences. They talk about a member of a species '*in itself*', in the formal or generic mode of *Ansichsein*. As such they determine the realm we talk about formally. They are presupposed in any definition of a realm for universal quantification. By a certain use of generic judgments we determine what it means to be a singular object in a set of objects.

For example, when talking about persons, it may depend on the predicate, if dead persons also do count or not. They certainly do not count when we talk about the number of persons in a state.

Statements of the mode 'particularity' or 'genericity' have a 'mediating' function when we have to determine the meaning of a noun phrase like "the lion" in its universal or singular use.[159] In order

[158] Cf. Enc. § 179: 'all things are a genus' and § 180: 'the concept is the unity of subject and predicate, expressed by the empty "is"'.
[159] I.e. Hegel's „Besonderheit" does *not* just refer to Aristotelian middle term in syllogisms as we shall see.

to see this we look at a well known and widely discussed example from geometry. A sentence like the following has two or three or more readings: "The circle has exactly one center". As a generic sentence it says something about the form of a circle. As a universal sentence it says something about all circles – as forms or as figures. As a sentence about a particular object it may say that *this* circle that you have drawn or you want to refer to has a center - like all other circles.

Many people seem to have problems in understanding the generic use of the sentence in claims about the ideal form of a circle as Protagoras and Sextus Empiricus and Hume obviously seem to have had. They all claim that *there are no such forms*. Any 'real' circle has indeed properties that contradict the list of ideal properties a mathematical circle is said to have. Nevertheless, Plato is right to claim that the ideal form determines the very meaning of any application of the word "circle" in the realm of appearance in a kind of a priori way. We can put this insight into a more general form and say that generic statements determine the conceptual content of actual empirical claims. But we may admit that they do this in a way which remains 'subjective' in a certain sense. The reason is that generic statements, though a priori in function with respect to singular empirical statements, still depend on a whole system of material knowledge and therefore can be subject to change. In a sense, generic statements replace the so called synthetic a priori statements in Kant's framework.[160]

In any particular case we have to determine the 'quantity' of the noun phrase or subject *N* in the sentence in question. This includes a determination of the *realm* and of the relevant *units* (elements, objects) we (want to) talk about. We understand the logical status of *N* as a subject in a proposition only if we can relate it properly to a *whole realm* G of discourse and to the corresponding realm *of objects g.* This means, firstly, that a name has its determined meaning only in the context of a sentence or rather in the proposition expressed by the sentence. It means, secondly, that it has its determined meaning and reference only in relation to a whole realm of discourse. If we put this into a negative form, it means that names or singular terms do not name anything as such. They do so only in a holistic framework. Their use as names presupposes the formation of a whole realm G as an already established realm of discourse. The units or objects of G can be singular empirical objects. They can be whole classes of objects or abstract objects or generic types or general species. In any case, we must already know what to distinguish and what to identify.

[160] The doctrine of essence is a subjective doctrine of claims about generic statements by which we want to articulate the difference between mere appearances (as things for themselves) and what we say that the things essentially are

The determination of the relevant realm of discourse is mediated by a system of generic 'conceptual' statements. These statements articulate at the same time conceptual preconditions for understanding the sentence or proposition in question and they articulate material inferences that we are entitled to use by the proposition such understood.[161] When Hegel says that any identity already '*contains*' some difference, he expresses the fact that identities are always *relative* to the *relevant realm of discourse*, more precisely, to the relevant predicates or distinctions that define the realm *together* with the concept of an 'object' in the realm. Objects of a realm are identified by *not making* 'finer' differences or, rather, by not *counting* certain differences, though possible, as *relevant* differences. This shows why a further reflection on the very concept of identity will lead us into the direction of a 'dialectical' *logic of essence and relevance*.

The 'results' in Hegel's *doctrine of being* are mainly negative: There is no absolute universe of discourse that comes with 'immediate' or 'eternal' identities. Rather, any objective reference to a world or realm of experience or to a world or realm of abstract entities presupposes a conceptual or logical constitution of the relevant objects of speech or thinking. It presupposes a determination of what counts as a possible name-like expression or a possible act of (deictical or anaphorical) naming. Since things change, it presupposes what it means to name the same or to name a different object in the realm, for example if there are different speakers with different 'perspectives'. It also presupposes that we know what counts as relevant object-related predicates or 'negations' and what counts as a *negation of negation* in the realm. Such a negation of negation 'defines' an appropriate equivalence relation between different ways the objects of the realm of discourse can be given to me and to you, now and then, here and there. Or rather, the strange expression "negation of negation" tries to express the following logical fact: No predicate (i.e. 'negation') in the realm of discourse may be *finer* than the *equivalence relation* that defines the *identity of the objects* we want to talk about or to refer to.

7.4 FROM ESSENCE TO PRESUPPOSED CONCEPTUAL FRAMEWORKS

The organizing principle of Hegel's logic is the differentiation of levels: The seemingly highest level (at the end) is, amazingly, the most concrete level, analyzed in the logic of concepts. Whereas the logic of being had been occupied with merely formal, pure, and therefore still ideal conditions of truth and meanings, propositions or intentions, the logic of being analysis the concrete forms of 'materially generic' or 'conceptual' inferences.

(in themselves). The doctrine of concept is a doctrine of the form of mediation in our talk about things 'in and for themselves'.

The lowest level of Hegel's logic is logic of being. It is the level not of ordinary language or common usage itself but rather the meta-level of a reflection on the pre-given forms of this usage. Hegel's logic starts at this level. All the levels in Hegel's logic are meta-levels.

The subject or topic of the first level, the logic of being, is the ordinary use of language in which we speak as if objects (entities, beings) were just given and named by names. We use language as if the statements expressed truths 'immediately'. That is, we do not notice and do not focus on the implicit mediation of all kinds of conventions and presuppositions that must be taken for granted 'before' the statement can 'express' anything. In a similar way we usually do things with words without reflecting on the general and particular conditions that make the corresponding generic practice possible, understandable.

One of the topics of the second level, the logic of essence, is the way we usually talk about meaning, how we reflect on understanding and knowledge, on presuppositions and forms, and how we use words like "essence", "reality" and "reason" in such reflections. The topic of the third level, the logic of concepts, is, in short, the whole realm of mere formal logics with its speculative talk about (absolute) truth and (absolute) meaning, about situation-independent knowledge and ideal truth conditions. On this level of meta-logical semantics, we ask for the real constitution and the significance of formal semantics. For me, it is an irony of history of philosophy that Hegel is blamed for using the allegedly nonsensical word "absolute": It is formal semantics, not informal reflection, it is the tradition of Russell, not of Hegel, that never leave the level of their formal and absolute talk about truth, meaning, worlds and reality. The pure formal level and the absolute or ideal level on which Hegel reflects in his logic of concept are one and the same.

7.5 THE FORM OF SPEECH ACTS AS THE TOPIC OF SUBJECTIVE LOGIC

Hegel calls the *doctrine of essence* and the *doctrine of concept* “subjective logic”. The reason is this: He takes the fact seriously that any actual speech act has a speaker. Hence, we find here, for the first time in the history of logic, the deep insight that there is no free-floating situation-invariant meaning. Moreover, we cannot attach such a meaning to sentences as syntactic figures that can be used at will. Rather, the use of the sentences is floating.

This claim is directed against a basic prejudice in a logicist or rationalistic tradition that leads from Leibniz to Carnap. If we want to understand the real constitution of meaning and truth, real

[161] In § 166, „Zusätze“, Hegel compares the status of a generic statement with the normality in which the germ of a plant develops into the full plant: of course, this does not happen *always*.

content and actual knowledge, we cannot abstract from the fact that meaning requires speech acts. A view from nowhere on pure sentence-meaning as we define it in pure mathematics by merely verbal or figuratives schemes of inferential operations is not good enough for expressing *any relation to the real world of things and other persons*. Plato addresses this problem already in his dialogue "*Parmenides*" (but in the "*Kratylus*", "*Phaedrus*", "*Theaetetus*" and "*Sophist*", too). It is *the* problem of any formal semantic, not only of Plato's early theory of forms: A 'world' of purely formal or mathematical objects and truths is still *without* '*sense*' in Kant's sense of the word "sense". I.e. it does not have the proper relation to the real world of actual and possible experience yet.

But a merely subjective approach with respect to perception and dispositional attitude does not help, as the problems of empiricism show. Locke, for example, takes an objective stance when he makes his claims about the subjective form of human understanding. He wants to ground it on the foundation of sense-perception and on a set of mental operations. But such a claim about how human understanding allegedly works is in itself dogmatic. Locke forgets to reflect on the epistemological status of his own speech acts. It is much less clear what it means to say that the picture he draws is true than his modern followers in the cognitive sciences seem to believe. Hume, on the other hand, only *seems to be skeptical* in this respect. He also claims to know something about real truth and about the development of actual beliefs. He claims to know something about the leading role of desires in human behavior and that this behavior is 'essentially' of the same form as we can see it in animal behavior. The question is on what grounds we should believe such a claim, especially because it is *not an empirical claim at all* but a *normative* one. It says that an obviously important distinction between animal cognition and human knowledge allegedly is not 'essential'. But this is in itself a value statement. For it is just plain nonsense to claim that such a distinction does not *have* to be made or *cannot* be made.

In comparison to *Socratic* skepticism, i.e. to a reflection on the status of one own's speech acts (including those of skeptical doubts), Hume *is not skeptical enough*. That means, he forgets to focus on the presuppositions of his own doubts and claims, even when he seems to give only 'pragmatical' answers with respect to what is reasonable to say or to believe. This shows in a stenographic form why philosophical reflection cannot begin with an empiricist, Humean, version of so-called Cartesian skepticism.

When we remember that Hegel had called the first part of his logic, the *Doctrine of Being*, "objective" logic, we now can see a deep irony or ambivalence in this title. The reason is that this *doctrine of being* never leaves the realm of merely abstract forms of speech and thinking, in the

end, of pure mathematics. The last chapter on measurement shows that we have to leave this realm of purely formal discourse when we want to talk about the real world. Measurement is the prototype for a projection of abstract forms onto real experience. But this experience is not immediate sense-perception. It is already a joint practice of developing and controlling inter-subjective knowledge. The dialogical and dialectical, i.e. social and historical, form of this development is the topic of Hegel's *doctrine of essence*.

The *doctrine of concept* is a most difficult doctrine. It reflects on what we address when we talk about 'eternal' knowledge, 'infinite' truth and 'objective' concepts or meanings. The answer is that we address *the* human form of life as a frame for any particular forms of life. It is our life as a whole, in which particular developments of human practices take place. I.e. in the *doctrine of concept*, the topic is the most general form of conceptual thinking and content. It is a 'speculative' i.e. highest-level, analysis of the very idea of conceptual understanding and the very form of human knowledge.

Essence is a result of good judgments about relevance. We need an analysis of the form we us when we project our logical forms of speech onto the real world of experience. The question is this: How do we identify empirical objects and properties in real *Intuition*? The objects must be 'substances' that allow not only for some change of their properties in the course of events, but also for different perspectives on the substances themselves in relation to different observers and speakers. This shows why a merely abstract analysis of substantive matter, as we find it in Spinoza, does not suffice. The distinction between *being in itself* (*Ansichsein*) and *being for itself* (*Fürsichsein*), i.e. the distinction between a *mere abstract form* or type (of speech) and an *individual token*, given, for example, by deictical reference, becomes crucial here: Any *sufficiently invariant* object of *concrete* understanding is already of the category *An-und-Für-Sich-Sein*, of being *in-and-for-itself*. Hegel sees that neither rationalism nor empiricism has provided a satisfactory analysis for this. Kant has achieved much on this way, but Hegel is not satisfied with the form Kant presents his ideas, namely just by presupposing the model of Newton's mechanics and projecting it onto our 'normal' talk about things.

At the end of the chapter on measure, Hegel argues *ex negativo* in order to show why a new approach in a *doctrine of essence* is needed. A basic problem is how to determine 'substantive things', about which we can talk in an 'objective' way. Hegel criticizes Spinoza for his *all too abstract answer*:

> "The difference (of the substances PSW) is ... not understood in its qualitative aspect, substance is not determined as that which distinguishes itself, i.e. not as (the) subject (of a proposition PSW)."[162]

A substance is an object of reference of a possible singular term in a predicative proposition. If we use such a naming term we presuppose that it is possible to judge about identity and difference of the object and all the objects in the whole realm or system referred to, namely on the ground of qualitative judgments. Hegel's term for substantial thing-identity is "attraction", for thing-difference it is "repulsion". The word "attraction" refers to a sufficiently stable identity, the word "repulsion" refers to a sufficiently stable relation of inequality[163] that defines the elements of a set of objects.

The word "essence" is a title for the category by which we answer the question "what was it really that you or she or they were talking about"? The essence is, therefore, the '*to ti ēn einai*' of *Aristotle*, the "that-what-it-was-to- be". If we ask, for example, what the 'real reference' of a term *N* is, and when we try to answer the question, we use this logical form. The same holds if I ask if a claim p *really is true* and start to answer the question. The major point is that in any such answer we have to take the different perspectives of the speaker(s) and hearer(s) into account. On the other hand, any answer I give still is *my* answer. I remain the speaker. All objectivity claims are objectivity claims of individual speakers. Any understanding is, first and foremost, subjective understanding. Any judgment about some good or bad, a real or reasonable understanding of a term or a text is a judgment of a subject, e.g. *my* judgment. There is no free floating sentence or proposition that could be true totally independent of a possible speaker. There is no view from nowhere. Truth is always a subjective matter, even when I claim to know its objectivity. In a sense, we may say properly that it is an inter-subjective matter.

Hegel analyzes this subjective form of truth in his *doctrine of essence* which he therefore calls, with the best reason of the world, "*subjective logic*." The following sentence leads from a *doctrine of being* to a *doctrine of essence*:

> "The absolute indifference is the last determination of being before it turns into essence."[164]

The idea seems to be this. As long as we do not understand that the difference of substances must be a qualitative difference with respect to a possible observer in actual or possible

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[162] GW 21, p. 381: "Der Unterschied (der Substanzen) ist ... nicht qualitativ aufgefasst, die Substanz nicht als das sich selbst unterscheidende, nicht als Subjekt bestimmt".

[163] The word "repulsion" and the word "attraction" refer in its general use not to physical forces, but to the inequality and equality of obects as two sides of one categorical form of being an element or an object in a set of objects. Any real reference to an object in experience must fulfil the corresponding form. Cf. GW 21, p. 166 ff.

Intuition, no particular *determination of a substantive thing is available whatsoever*.[165] As a result, the concept of a substance becomes totally empty. If we would say

"pure quantity is indifference in the sense that it is open to any determination“,[166]

we would refer only to the *form* of being a substance or rather to the form of our use of a singular term in a noun phrase. If all determination of the object referred to would be still open, the subject of the sentence or proposition would be no more than a *pure variable*. But if we attach properties only to variables, we do not make judgments.

Some philosophers may want to follow Hume and try to understand objects or things as *bundles* of qualities or properties. But free-floating qualities do not exist. And properties should at least in the end be properties of objects. As such, they should not be confused with pure qualitative distinctions in the realm of sensations. Qualities of sensations are no good foundations for a logical *Aufbau* of an objective world. To show this had been the topic of Hegel‘s *Phenomenology of Spirit.* The concept of essence has therefore to be developed in a way that we can overcome the wrong idea that a substance could be determined immediately.

When we ask for the *essence* of something we ask for relevant presuppositions. The same holds when we ask for the *real* reference of a name and the *real* truth of a propostion. Any answer to such question is subjective: *I* say emphatically what *we should and can* count as essential and real. The same holds for answers to questions concerning a *reasonable* comprehension of the meaning words, the reference of singular terms or the properties of predicates in their relations to the objects named.

This opens the floor for the questions what *we* can know and how *I* can talk *for us*. The *doctrine of essence* is an analysis of the constitution of *joint reference* on the basis of individual judgments. Its main task is to analyze presupposed transformations of *my* perspective to *yours* or *hers* or *theirs*. In these cases we indeed often use emphatic expressions like “really”, “objectively” or “reasonably”. This merely emphatic sense of “really” or “truely” or “in reality” in ‘advertisements’ of *my* judgments always have to be turned into a more urban and objective sense. This can only happen in an appeal to a kind of ‘*we-reason*’.[167]

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[164] GW 21, p. 381: "Die absolute Indifferenz ist die letzte Bestimmung des Seins, ehe dieses zum Wesen wird".
[165] But the assumption leads to nothing. As long as "noch keine Art von Bestimmtheit sein soll" (GW 21, p. 373), we do not know what we refer to.
[166] "Die reine Quantität ist die Indifferenz als aller Bestimmungen fähig" (GW 21, p. 381).
[167] We all know that only in very exceptional cases a singular person can be right in his judgments against the overwhelming consent of almost all others - like Hegel seems to me in some aspects, despite the deep problems of making himself understood.

Narrowly related to this problem is the question what it means to say that some knowledge is 'better' than another or that a certain knowledge claim is superficial. Standard examples are cases when I know that a stick in the water only *looks* bended, but you, perhaps, do not know it; or when you, standing in front of a barn façade, think it is a barn, but I know from my perspective that it is not – or at least that you cannot *know* it. In such cases I (or we) say that my (or our) 'new' judgments determine what there *really* is, whereas your 'old' judgment was wrong, an error. When we talk that way, we distinguish being from seeming, reality and objectivity from mere appearance.

But any such 'new' and 'revisionist' judgment presupposes at least that 'something is true' in the old judgment, as Hegel notices. It is a *relative* judgment by its very logical form. On the other hand, the new explanations or the new knowledge often changes *only some moments or aspects* in the old picture: The stick is not bended, but it is true that it appears to be bended. The façade looks like a barn-façade, but there is no real barn behind (or there is, but 'only by chance'). As we can see here, revisions of old judgments are similar to adjusting my perspective to other perspectives in order to achieve joint reference.

The following are famous examples for conceptual confusions: Hume and Protagoras think that they talk about geometrical forms, but in reality they talk about mere figures or gestalts. A physicist may think that he talks about local and infinitesimal impulses as peculiar dynamical forces, but in reality he only talks about moments in our ways of describing generic movements in a mathematical framework. Another example is provided by the difference between Newton's Mechanics and Einstein's Relativity Theory. The new theory changes many things. But it also leaves many things unchanged. Indeed, no successful real explanation of classical mechanics is changed. The reason is this. The external applications of Newton's mechanics is much less fine-grained than people usually think. The new theory also needs external judgments. We must distinguish between relevant approximations and irrelevant, all too fine, differenttiations that surpass the realm of relevant margins of error of the method of measurement used.

More general, the 'new' explanations or corrections are reasonable only if they solve problems for which a new solution is *necessary*, *needed,* '*not-wendig*'. This is a conceptual principle that defines the concept of a reasonable development of any science and knowledge, of any practice and institution. In fact, if 'revolutions' in the sciences and in human institutions at large should be reasonable, we should understand why they are necessary, i.e. what needs are fulfilled and what problems are solved. If there is no answer to this question, the development is no progress and should not be judged as reasonable. Not every change in language, theory or

method inside or outside of science can count as a progress. Notice that if a development is necessary in this sense this does not mean that things could not have developed otherwise.

7.6 THE LOGICAL DOCTRINE OF THE NOTION

Judgment and inference are always situated in a system of concepts. Another difficult part of Hegel's logic is his teaching about judgment and inference in his *doctrine of concept*. It seems at first as if Hegel thinks of classical syllogisms when he talks about *three figures* of syllogistic reasoning. The following considerations try to show that his understanding of inference is fairly different from any usual reading of Aristotelian logics of syllogistic deduction. My claim is that Hegel is not so much concerned with deductive logic, but with the form of generic predication 'N is P'.

Aristotle distinguishes *three figures of syllogisms* according to the following scheme. For him, the basic syllogism is of the following form:

(*) If A contains B and B contains C, then A contains C – i.e. if all B are A and all C are B then all C are A.

It is the syllogistic mode called 'Barbara'. This is a syllogism of the *first figure*. In it, the middle term B is in one premise the subject, in the other it is the predicate. An example for a syllogism of the *second figure* according to Aristotle would be :

(**) If A contains B and C contains B, then some A are C (and some C are A).

In a syllogism of the second figure, the middle term B is, as we would say, the subject of the sentence in both premises. The *third figure*, in which the middle term is in both premises the predicate, does not contain a valid inference in the standard form of all-quantification. If A is B and C is B then A may be contingently C. But this does not follow with necessity. In the third figure, we arrive at a valid inference only if we make use of a negated copula, as Aristotle indeed does. If, for example, some A are not B and all C are B then some A are not C. Aristotle presupposes that A,B,C refer to non-empty sets and he uses four different copula, as his mediaevel readers have realized, namely AaB, AiB, AoB, AeB. These forms read respectively: all B are A, some B are A, some B are not A, all B are not A. Notice, by the way, that the order of predication is reversed if we think of the normal order of 'is' from left to right. Aristolelian syllogisms are valid deductive rules in terminological trees and Euler-diagrams. As I have shown elsewhere[168], Aristotle presents a complete and consistent set of inference rules with respect to

[168] P. S.-W., Grundprobleme der Logik. Berlin 1986, Part 1.

his intendend semantics of extensional relations between non-empty one-place predicates. As we see, for Aristotle, the letters A, B, C do *not* refer to different categories.

Hegel does not think of his 'syllogisms' in an Aristotelian or deductive way at all. His distinction of three 'syllogistic' figures does not have much more in common with the figures of Aristotle than the name. At least the resulting ambiguities are rightly criticized by Trendelenburg and others. But let us look at Hegel's three figures of 'inference', for which he uses the following symbols: S-P-U, U-S-P, and P-U-S. These figures of inference are defined by the *quantificational status of the 'mediating term'* and not, as in Aristotle, by the syntactic form of the two premises. S stands for 'singular', P for 'particular' and U for 'universal'.

At first glance, there seem to be at least some similarities to Aristotle's procedure. In the first figure S-P-U, the medium term, which is a predicate in the first premise, turns into a subject in the second. The inference form 'Barbara' seems to be of this first figure:

(S-P-U): If (all) S is P and (all) P is U then (all) S is U.

But I think that the form (S-P-U) of 'qualitative' syllogisms in Hegel's approach contains *all* valid syllogistic inferences. The form represent all formal inferences of 'understanding' i.e. all valid schemes of logical deductions. Hegel calls these qualitative inferences also "inferences of presence" (or rather: of existence or *Dasein*).[169] He notices that in such inferences the premises already contain the conclusions, so that the main problem is where to get the premises. I.e. how can to we prove a quantified statement of the form (all) N is P?

One way to arrive at such a quantified statement is the *inference of induction*. Hegel says that P-S-U is the figure of such a syllogism of induction – which would be a fourth figure, if the order of P-S-U and U-S-P would matter. It does not.[170] The inference of induction has the following form:

(P-S-U): If we look through singular cases and find that each singular N in a species P has the property U, then we use to claim that all P has (or have) the property U. If we really can or could test each singular N, this amounts to the 'inductive' introduction rule for all-quantification.

Another way to arrive at general statements is the inference of analogy. This is an inference in which we use individual examples in order to show generic properties in the mode o trope of a

[169] Cf. Enc. §183.
[170] Induction is a syllogism of reflection (Enc. § 190): Here, the middle terms have the status of singularity, they name singular things.

synecdoche. Here, the mediating terms name individual cases. But particular properties of these cases are turned into universal features of a generic concept or species. The corresponding form of 'inference' is the form (U-S-P):

(U-S-P): A singular case S shows a universal feature U, which can be expressed by a generic statement that has the status of particularity and expresses an essential form of a species of things.

At first, this sounds strange. But the situation is well known: We use a singular figure in geometry for proving a general statement about the corresponding geometrical form. Since Plato's time, we call such inferences 'epagogical'. We could call them as well 'analogical'. The term "analogy" means "equality of expressions". It articulates the fact that we use the same expressions for referring to the form (of a circle, for example) and the singular instance (an actual figure representing the form). Plato and Hegel would agree against all empiricists that analogical arguments, by which we show general features, mediated by singular cases, are of a different form than inductions. Induction leads to universally quantified statements. Analogical arguments lead to generic statements. Nevertheless, they both belong to the same figure of inferential reasoning, the *inference of reflection* because the mediating term has the quantificational status of singularity. Hegel's second figure (U-S-P) is formally characterized by the fact that an individual subject S has 'two' properties U and P, which turn out to be one property: It is a property that could be taken as a universal property of any individual subject of a certain class of object (in the mode U) but at the same time as a 'generical' property of a species (in the mode P). The label '*inference of reflection*' alludes to Kant's reflective judgments, which also have the feature that singular cases show general properties.

The peculiar status of generic statements demands careful judgments when we want to apply them to individual cases. They are not *per se* universal statements. A *species* is not merely a *set* of individuals. If we look at an individual case, we first have to check if the normality conditions apply that are prerequisite for any transformation of generic statements about forms into a universal statements about a set of individuals. The paradigm case is (once again since Plato's time) the transformation of statements about geometrical forms into statements about geometrical figures or bodies.

Moreover, since we know that the realm of generic statements was the result of 'epagogic' reasoning or analogical inference, we know that we are allowed to make changes in our system of generic judgments about the species in question, for example when we learn more about the

form of being a member in the species P. Nevertheless, these generic statement have the status of conceptual statements about the species P. They express inferences we may make use of whenever we talk of singular cases of the species P – after we have addressed the case as a case of this generic form. We do this on the ground of a judgment that says that the singular case is a *good enough* example of the generic case.

When I say, for example, that the shape of France is hexagonal, I make a certain claim by which I entitle you to a certain set of inferential consequences. My commitment and your entitlement is, however, not independent of good judgments about a relevant and good enough application of the word “hexagonal” in the case of shapes of countries. If I say, to take another example, that the movement of the earth around the sun is circular, you may be right to say that it is not circular but elliptic. The relations between the generic cases and the singular cases are *very* complicated if we look at them in detail. The important point for us here is that no objective empirical knowledge can be articulated if not by implicit reference to generic cases. Or rather, the concept of invariant truth and knowledge is defined on the generic level, not on the level of immediate individual presence in which we articulate qualitative distinctions like: “this rose is red”.

But what is the meaning and use of Hegel’s third figure (P-U-S)? Here, a singular and a particular subject seem to fall under a common universal predicate. The universal is the mediating level for the singular and the particular. In my opinion, we can explain how Hegel thinks of presuppositional inferences if we look at the following exampels:

(1) 2:7 is the same as 4:14.

(2) The circle has a center.

(3) God is good.

In our understanding of these sentences, we have to reconstruct their ‘inferential contexts’. 2:7 is the same *proportion* as 4:14. In other words, it is presupposed that we talk in (1) about proportions or rational or real numbers, not about ratios. In (2), the expression “the circle” refers to one and only one form if the implicit ‘premise’ in an inferential context is “The circle is a form”. Having a center is a form also. It is a sub-form or ‘moment’ of a form. In (3), the inferential context may be “God is a speculative concept referring to the form of the world” or “being good is a speculative concept referring to the form of judgments”. The sentence then says that these forms are, in a certain respect, the same. This is the only way how I can make sense of Hegel’s

claim in Enc. § 191. There he says that, in an inference or syllogism of necessity, the middle term has the status of universality.[171] My basic claim now is this:

In Hegel's doctrine of concept, the status of being a synthetic a priori sentence as we know it from Kant is dissolved. It is replaced by the status of a generic sentence that articulates a form of a species of things. The system of these sentences contains much more, and different, sentences or propositions than Kant's class of synthetic a priori truths. It contains all the sentences that we develop in the sciences and encyclopedias. We use them in an a priori way when we structure our own individual experience or rather our empirical access to the world.

With respect to empirical propositions, generic judgments are (relatively) a priori.[172] They determine the very content of concepts. They do this in a holistic and systematic way.

Even though generic statements are, in a certain sense, presuppositions of empirical judgments and, therefore, cannot be immediately corroborated or refuted by singular empirical observation, they are not totally eternal, nor are they independent from experience. On the contrary, they are developed in the realm of experience or rather, in the project and progress of experimentally controlled joint knowledge. When we talk of 'eternal' truth and meaning, we talk about *the form* of the standing sentences by which we make inferences explicit that are 'material' and at the same time 'conceptual'. The real 'infinity' or 'eternity' is the form of the project as such, not the actual form in any actual system of knowledge.

If I am right, then Hegel's avoidance of Kant's notion of synthetic a priori judgments is, at the same time analogous and very much different to Quine's dissolution of the analytic-synthetic-distinction in Carnap's Logical Empiricism. Hegel and Quine share a holistic point of view. And they both want to differentiate between the logical status of *individual empirical judgments* of the 'observational' form: "this rose over there is red" or "this tree over there is green" and *standing sentences* of the form "roses can be red, white and yellow, but not green" or "trees in spring are green". But they differ already in their analysis of the status of these standing sentences. Quine understands them as *universal theoretical claims*, Hegel as *generic articulations of material, nevertheless 'conceptual', inferences*. Hegel, not Quine, sees the distinction between universal quantifications of the form 'any individual in a set N has the property P' and the generic reading

[171] A judgment of necessity 'N is P' (in the sense of Enc. § 177) is a result or consequence of such an inference. Such a judgment 'N is P' says that the predicate contains or articulates the nature or essence of the subject N.
[172] Hegel distinguishes empirical or 'qualitative' propositions like "this rose is red" or "Caesar was born then there" or "there is a carriage driving by" (§167, 172) from generic judgments, but also from emphatic judgments of the form: the noise was produced by a carriage that was driving by. Qualitative judgments of the category *Dasein* (or 'presence') say what is *here*. They contain deictic elements or situation-dependent anaphoric references.

of a sentence of the form ‘N is P’. This reading asks from any ‘hearer’ not to use the sentence thoughtlessly, schematically, but to make autonomous judgments about its proper use in any singular occasion.

Hume had correctly seen that no schematic and universal inference rule is sufficiently justified by individual observations. But this fact should not mislead us into a skeptical theory of radical indeterminacy of meaning and conceptual inference. It rather should convince us that we need another understanding of conceptual inferences. They are not universally quantified schemes of deductions. They rather are articulations of *generic knowledge and default rules of inference*.

As far as Robert Brandom reads Hegel in this way, I fully support his reading. As far as he thinks of logical inferences as formal, schematic, inferences that can be represented by a system of formal deductions or formal norms of dialogical commitments, entitlement and ‘consistency’ I do not. In formal systems of inferential rules we only can make ‘universal’ quantification explicit, but not the much more complicated practice of generic reasoning.

Without implicit reference to a whole framework of conceptual forms, there cannot be any reference to an empirical object at all. This fact shows a deep problem with the use of the words “empirical” and “experience”.

Quine’s empiricism still falls prey to a deep rooted dogmaticism in the tradition of Locke and Hume, even though Quine wants to overcome the traditional idea of “rationalism”, which distinguishes formal rules of analytical inferences from material inferences that already ‘have’ empirical content. In order to show this in detail, especially when it comes to the status of generic statements, we would need a more thourough investigation. But the general point is this: We use generic sentences as conceptual truths. They are not merely analytically true sentences in the sense that they are made true by arbitrary definitional stipulations in a deductive language game as we know it from working with axiomatic deductive systems. Rather, the generic sentences articulate *material distinctions and default inferences* that are connected to such distinctions. We may think, for example, of sentences like the following:

(1) Birds have feathers.

(2) Man can speak.

(3) What lives, dies.

(4) Most birds can fly.

(5) Most people can calculate.

None of these sentences expresses singular *empirical facts* as, for example, the fact that little Peter cannot speak yet or that the bird Peewee, being a penguin, cannot fly. Sentences like

(6) Babies under 8 months cannot speak.

(7) Penguins cannot fly.

are also not 'empirical' but conceptual. We arrive at them by a judgment of reflection: We need to find the appropriate subclass that turns the merely singular proposition about Peter or Peewee into a generic statement.[173] These statements alone express some objective 'experience' (*Erfahrung*) in Kant's sense. As such, they are presupposed when we talk about baby boy Peter or our penguin Peewee, just as we presuppose that any living being will die, if we 'mortals' like it or not. The very concept of life includes, as Hegel would say, its opposite, namely death. It does so in exactly the sense that turns (3) into a conceptual statement. But (2) is a conceptual statement also, even though not only our toddler Peter may not speak yet but some adults are, as we know, also incapable of using language. This empirical fact does not refute the generic truth. It rather shows that applications of generic (or conceptual) truths in singular empirical cases still require the filter of particular application to individual cases with good, experienced, judgments about relevance and margins of precision and fallibility. Such judgments answer to the question if normal conditions for applying the conceptual truth are fulfilled. Conceptual truths cannot be applied 'blindly' or 'thoughtlessly'. Their proper use has to be checked in a 'judgment of concept', by which we determine if an empirical subject is 'a good enough' example of a conceptual determination or if it 'truly' falls under the concept.[174] According to this understanding, predication is not just a subjective attribution of a predicate to the subject. The speaker does say that the subject *has* the property expressed by the predicate[175] or, as Hegel says, that subject and predicate are 'identical' (§ 166). This way to read the 'is' as an identity seems to be weird, especially because we would want to take sides with Kant and Frege against Hegel and distinguish predication from identity. A sentence like

(8) Peewee is a penguin

[173] Cf Enc. § 174: In a judgment of reflection the singular is already related to other things in the world. And this is expressed by a predicate that is not defined in its truth conditions by relatively immediate qualities. Hegel's example is the predicated 'curative'. In § 175 he says that particularity is extended to a kind of universality, the generic statements about normal behavior turn into all-quantification about all things that behave normal.

[174] Cf. Enc. § 178: A judgment of concept says if some judgment is good or true enough – with respect to the conceptual or generic inferences in question.

[175] Cf. §§ 166, 167. The problem is, of course, to explain the objective sense of a claim that N is P. The answer is that the object N itself is determined by P and that the speaker as a subject says that this holds objectively, independently of his subjective judgment. I.e. the speaker (at first implicitly, in praxi, then perhaps also explicitly or self-consciously appeals to a realm of standing 'conceptual' truths, to which he is committed as a competent speaker.

would say, in my application of Hegel's idea, that the creature I refer to by the name "Peewee" can be referred to by the name "this penguin" as well. Hegel's 'identity theory' of predication says not much more than this: What we refer to by N can be referred to by P as well and vice versa. Hegel does not care for the fact that we have to change the syntactic form of P when we want to do this and turn it into a 'singular term' denoting 'locally' the same as N. This shows, once again, that Hegel is not at all interested in formal deductive logic. Nevertheless, Hegel's reading of the copula 'is' as a kind of identity can be helpful, especially in an analysis of 'speculative' sentences like

(9) God is the all-mighty, the all-knowing and the all-good.

For Hegel, a sentence like this does not say that there is an individual entity called "God" having the transcendent properties of being at the same time all-mighty, all-knowing and all-good. When we want to understand the sentence, we rather have to figure out how the relation of the noun phrase N and the predicate P in the sentence N(P) has to be read. Hegel's answer is this. We use the word "God" in order to articulate the 'infinite' idea of power of existence or of possibility, of knowing or truth, and of goodness in forms of of life. We do so in a metonymic way. In other words, (9) is a *definition* for a certain use of the word "God". Since we always have to reflect on the subjects who make judgments about existence and possiblity, knowledge and goodnes, it is not a bad idea to attach to God some personal features. But we should not misread speculative sentences of this sort as if they were talking about a 'finite' being and not about an idea or ideal form.

Hegel never cares for details, to the *chagrin* or annoyance of any formal logician, to be sure. On the other hand, we better keep in mind what Hegel addresses and what he thinks to be relevant. Formal deductions and formal definitions as we use them in mathematics or in terminological trees of taxonomical science since the times of Aristotle are not in the focus of his logic. The particular technique of defining the differential and inferential meaning of a verb phrase or predicate P by using recursive schemes of reduction is not the topic of his philosophical logic at all. Indeed, we may use any scheme of definition we feel happy to use. But we should not over-estimate the place of formal definitions: They allow for a system of intra-language inferences that can be learned to be handled schematically. They might help us to make implicit inferences explicit, as Brandom says. But they do not tell us anything about the status of the material inferences that are made explicit by them.

Even though I think that a projection of Brandom's ideas in *Making It Explicit* onto Hegel's Logic is perfectly legitimate and may help us to improve our understanding of his ideas of subjective

and inter-subjective differentiations and inferential commitments, entitlements and ‘contradictions’, there are essential limits in this way of seeing things. The questions of Hegel’s philosophical logic lie far beyond or rather far below any *formal* technique of making differentiations and rules of inferences explicit. More importantly, Hegel does not ‘explain’ how it can come about that we can use ‘joint’ concepts. He rather reflects on what we usually do when we use concepts. I.e. the form of analysis is presuppositional, transcendental. Hegel is not interested in a narrative story of the genesis of the world at large and of man on earth, as we already find it in Herder and later in Darwin. Nor does he want to causally explain the ‘evolution’ of mankind.

What Hegel cares for most seems to be the way we have to determine not only the relation between N and P in sentences of the form ‘N is P’ but the very reading of N and P in such a sentence. His answer is that we have to determine the reading of N in dependence of the reading of P and vice versa. I.e. we do not build up the meaning or truth condition of (‘elementary’) sentences from independent atomic parts, N and P, just by putting the copula “is” between them. The copula is no relation between independently determined things, namely subjects and predicates. Rather, the copula is a sign to look for the ‘identity’ of N and P, i.e. for the realm in which N either names a singular object or refers to a whole class of such objects and in which P defines a subclass – or for a generic or conceptual reading of N. In the first case we say by the sentence that the object named by N has the property P, in the second case we say that all the Ns have the property. We have to figure out the ‘identical’ realm for N and P in the case of empirical propositions. And we have to figure out the relevant species in the case of conceptual propositions. We do this on the ground of some kind of ‘inferences’ or ‘syllogisms’, i.e. by searching for mediating terms or propositions.

The mediating terms or propositions can be of the status particularity, singularity, and universality. In the first case, the mediation between N and P is a system of generic knowledge. In the second case, the mediation is of the form of an analogy or an induction and the resulting proposition is a generic statement. In the third case, the mediation is of the status of universality. The result is a particular judgment.

Any particular form or generic knowledge, as such, is a mere ‘moment’ in our development of the system of concepts. Hegel calls this system “the concept”. Sometimes, he also calls it “the object”: It is the overall object of ‘standing’ knowledge and science. In order to show how Hegel uses such grand and ‘speculative’ modes of speech, we may throw a short look on his ontological arguments in favor of the existence of God.

(10) God is the system of all concepts.

(11) The system of all concepts includes existence, since it is the very realm in which it is determined what exists and what not.

(12) Therefore, God exists

Obviously, Hegel does not think that being the whole system of concepts is a finite predicate as, for example, “having 30 dollar in the pocket”. He rather thinks of God as all of us who take part in a whole practice of making distinctions in the world. This We or Us and the practice which binds us together is presupposed in any finite distinction or empirical claim. Anselm’s or Descartes’s version of the ontological proof of the existence of God dealt, in a sense, with this absolute whole and the corresponding conceptual statements about what we do when we talk about God: We want to talk about the whole system of being, understanding, and truth. This system is the ‘greatest’ object we can think about. It is the very concept of existence and truth, being, essence and concept. As a result, Hegel claims that traditional theology is just an early, and underdeveloped, version of speculative logic (or ‘metaphysics’). It has to be freed from a misleading understanding of the word ”God”. The real and good form of doing theology is – abandoning it and doing conceptual analysis of the human form of life, together with a logical analysis of the various forms to make this form verbally explicit. By doing so, we develop our autonomy and self-consciousness. Brandom is therefore absolutely right to stress the importance of logical analysis for explicit consciousness and self-knowledge. The only point of possible differences concern the question what logical analysis is and what it is good for.

After turning away from mythological theology, we can, if we wish, still use the word “God”. But we must know that if we say that god exists or that God is the truth or that God is good we do not say that there is an entity called “God” that has a property like existing or telling the truth in a bible. Nor is it right to say that God is good ‘to his creatures’. Rather, we use the word “God” in a metonymic way in order to talk about the idea of absolute truth, absolute being or existence or, when it comes to questions of ethics, absolute goodness. When we do so, we refer to the whole project of developing human practice. But what is the ‘truth’ of ‘speculative’ statements on this ‘absolute’ level of reflectionon being, truth and knowledge? This question does not only concern traditional theology. When, for example, the physical sciences claim to have an absolute concept of truth or present the only real knowledge or the real world, Hegel attacks this materialist or physicalist view under the title “mechanism” as wrong metaphyscis. It represents a wrong understanding of the doctrine of absolute truth, knowledge and nature. The ‘real’ truth of

mechanism as a form of explanation of nature is that it is only a province in human intrumental reasoning, which is, in turn, only a province in human ethical life. In other words, materialism and naturalism is an ideology, just because they assume that nature as a mere *object* of thought and experience already contained *the whole world*. They forget that in any act of making something into an *object* of knowledge, we, the subjects, are presupposed. To forget this logical fact, is exactly the same as what martin Heidegger calls "*Seinsvergessenheit*", obliviousness of being and of the ontological difference between being an object and being a subject. Therefore, the absolute whole of the world must be also understood as a generic subject of all actualizations of events and performances of (speech) acts, not only as an object of descriptive and causal investigation or reflection. For Hegel "the absolute" is therefore a title for all these actualizations and performances for themselves, rather than in being merely an object of knowledge claims. Moreover, the existence of us together with our practices of knowledge, including judgments about knowledge claims as true or wrong, as essentially sufficient or insufficient, or as coherent or contradictory, is presupposed in any epistemic act. In the end, we find her 'the truth' of Descartes' attempt to overcome methodological skepticism: To doubt that there is such a practice of knowledge destroys any sense of doubting. This is a kind of logical self-consumation of skepticism.

But empiricism and scientism are also wrong. They are dogmatic because of their unnoticed presuppositions. It is a deep irony, therefore, when Hegel is attacked for talking *about* the absolute. The messenger gets punished here for the message. The message is that atomistic scientism and empiricism are theories of absolute truth and knowledge and propose allegedly 'objective' claims about sense perceptions as the 'real' basis of knowledge and truth. A similar point holds for the parallel 'sentimental' theories of happiness and goodness in the traditions of ethical empiricism.

CHAPTER 8: CLASSIFIED INFERENCES

8.1 SPEECH ACT SEMANTICS

Robert Brandom's inferential semantics has reminded us of the truism that semantic content in linguistic speech acts or in other acts with conceptual meaning – as in the production of images or pictures – always already is connected with some conditioned or classified inferences. As traditional logic has it already, thinking always consists in making distinctions that are conceptually connected to some 'allowed' inferences. Hence, thinking is always already 'normative' insofar as the individual person attempts to take part correctly in a common practice of differential inferences. This fact lies behind the conceptual rule that even though the word "thinking" might stand for any silent verbal planning which can go astray and be as meaningless as nonsensical utterances, thought already presupposes the fulfilment of semantic preconditions. There is no meaningless thought. In other words, thought can be made explicit, either in meaningful judgment (presupposing some forms of negations or exclusions) or in meaningful images or other forms of 'expressing' thought. In other words, thought is what a meaningful speech act expresses or what is made explicit in some other meaningful act. In any such act, the actor 'claims' so to speak that what she says or does can count as formally or materially, logically or conceptually, 'valid' or 'reliable'. And this means in turn, that the singular act (for itself) implicitly or explicitly refers to a generic action as the 'maxim' or action scheme which is (allegedly or hopefully) actualized in the singular act (1) and is, moreover, defended by this attempt to actualize it as 'good', 'true' or 'reliable (2) by the actor – at least for normal orientation in appropriate default cases of application. If, for example, a man kills another man in a certain situation, he commits a crime, as he knows himself, just because he 'claims' by his deed that killing were generically allowed in these cases. At the same time, he usually does not 'allow' for reciprocal killing: He does not allow to be killed. If he does and the others know they really should take heed, as in the case of someone who runs amok or in the case of suicide bombings. In precisely this sense of making a difference between what I allow myself to do and what I allow the others to do the 'normal' murderer 'contradicts' himself, as Kant has pointed out. The relevant generic action or maxim to be judged as allowed is "killing another person (in a typical situation like this)" and not, as the actor might claim, "my killing this other person in this singular case". The problem is, of course, to distinguish between typical exceptions of a generic norm – as, for example, killing in war or killing as an act of justice – and the denial of the norm. There often seems to be all too fine lines between these crucially different cases. A similar problem is well known for the case of lying. Anyway, Kant and Hegel arrive in a couple of steps

at the following default rule: The murderer deserves, prima facie, death. He does so in a similar way as a dangerous wild beast might deserve death, or, to be more precise, in a similar way as a liar leaves (in part) the ground of humanity – with the result that all his complaints that the other do not want to cooperate with him turn back on himself. This does not mean that we need death penalty. It rather means that any law that declares death penalty as unlawful needs good arguments and cannot be justified by appealing to some mysterious 'natural law', 'intuition' or 'moral sentiment'.

Understanding speech acts and other actions consists, all in all, in being able to make the relevant differences and to draw the correct inferences. As such, understanding is normative. This means that speaking and listening already falls under implicitly presupposed background norms of 'correctness'. These 'norms' or 'validities' are, as Hegel does not get tired to say, 'posited', gesetzt. Their correct use must be learned.

The word "norm" is used terminologically here in contrast to "rule" and "sentence" – in order to make the fact explicit that norms are something like 'implicit' or 'empractical' criteria' of correctness.[176] Even though many aspects of such (a fortiori empractical) norms can be made explicit by name-like principles, rules and sentences, the norms that govern the use of principles remain empractical. This can be nicely made clear for the case of conditioned rules of the form P⇨ Q and conditional sentences of the form p→q: The use of Modus Pones in applying such rules and sentences in drawing inferences and controlling entailments presupposes knowing how to do things properly, as the fine logician Lewis Caroll already had seen (in his famous "What the Tortoise said to Achilles), followed later by Gilbert Ryle and Wittgenstein.

By (conditioned) rules and sentences we obviously can make some aspects of conditioned norms or classified inferences explicit. Such sentences and rules are, as such, a fortiori explicit. But they are also, especially in view of the individual circumstances of their actual applications, general resp. generic. Since correct application in particular cases still must be mastered empractically, we should distinguish the generic level of generality from the concrete level of particularity and 'singularity', as Hegel reminds us in many contexts.

In other words, particular applications of concepts ('in and for itself' or 'an und für sich') always presuppose generic or general 'understanding' (*Verstand*) in the sense of mastering the correct use of the formal or schematic side of the concept, its expression be words, for example, an the

[176] Notice that according to our use of norms, by far not all norms are 'ethical' in the modern sense of belonging to a realm of morality and legal law.

schemes of calculating with words. These schemes or formal rules are generic. They govern differentiations as well as differential inferences generically. Altogether, these generic schemes constitute the formal side of the concept, the concept 'in itself' ('*Begriff an sich*'). But with respect to a non-schematic application we also already need the 'power' or faculty of good judgment (*Urteilskraft*) and 'reason' (*Vernunft*) in the sense of 'critical, autonomous and experienced' use of the whole 'implicit' system of practice and action in particular applications. This is so because any use is, as such, subjective: It is a performative act of speakers or hearers as actors. In other words, any concept 'for itself', or '*für sich*' consists in the actual use – which 'wants' to be and 'should' be a correct use of the concept in itself, i.e. of its generic form. But actual use always includes mistakes and incompetent use. Therefore, we must distinguish between merely contingent actual use from good usage, the generic concept in and for itself.

In addition to this, we always also 'develop' the conceptual system. We do so not only by making explicit proposals for changing implicit norms or practices or explicit rules in our joint conceptual understanding, but also by developing in praxi the empractical form of a good usage. In such a good usage, we do not just apply formal schemes or words merely schematically. With Wittgenstein, Brandom and McDowell come very close to these important Hegelian insights which develop Kant's reflection on the conceptual and generic form of any understanding and knowledge and its function in forming a joint practice of referring in our talks and actions to a world of empirical experience.

In speech acts and dialogues, but also in monological reflections we play the triple role of proponents, addressees and controllers of propositions and proposals. Hence, we must distinguish between the commitments resp. undertakings (e.g. of the speaker) and the entitlements or attributions of the speaker (of the hearer) – as they get explicit in a control discourse of giving and asking for reasons. Therefore, any 'subjective attempt' resp. 'intention' or 'objectively' attributed commitment in the context of fulfilling implicit norms of correctness (which include the correct use of explicit criteria or rules) presupposes some practice of 'score-keeping' (David Lewis), in which we control, for example, the commitments that are undertaken and if an actor was, according to our judgment, entitled to say or do what he did. Without such a practice of evaluation – including all kinds of meta-level discourse of given and asking for reasons about such evaluations – there are no well determined proprieties and correctness at all. This is so because there are no norms or rules that could determine them. In consequence, the form of existence of 'the concept' in the sense of Hegel, namely as the system of all possible conceptual understanding, which always contains differential and inferential norms, is a general

(as such holistic and ‘overall’) human practice, which Hegel calls “the idea”. In a sense, idea is just another name for our real human life-form and all its norms an proprieties defining overall success- or satisfaction conditions in the three dimension of generic truth or the true, generic beauty or the beautiful and generic goodness or the good.

We must distinguish not only between those most general dimensions but also between more particular ‘moments’ (Hegel) of normativity. Some such moments are speaker- or actor-related (‘subjective’), for example when we talk about sincerity and accuracy in one’s undertakings, as they were, for example, thematized by the late Bernard Williams. Others are ‘objective’ (i.e. generic) attribution of commitments and entitlements to an actor in some (meta-)evaluations of speech acts, when we say that what another person says is ‘reasonable’ or even ‘true’, or what she does is ‘good’ or ‘beautiful’. Plato distinguishes, accordingly, three dimensions of being normatively right under the titles or names aletheia, agathia, and kallos, and brings them under the overall norm of dikaiosyne, which, in its general meaning, should not be translated as “justice” but rather as ‘being right’ (in the proper dimension). Similar as in the case of the ‘super-norm’ ‘dike’ in the poem of Parmenides, dikaiosyne sums up, so to speak, all evaluative norms of ‘virtue’ or ‘competence’ (arete) according to ‘the idea’ of the good, the beautiful and the true.

It is, however, important to stress with Brandom that any actual evaluation using any of these norms is, as such, always already a subjective speech act. Hence, any reconstruction of the dimensions of (generic) knowledge (‘truth’), a generic ethos (Sittlichkeit including morality as a special moment, namely merely subjective evaluation of ethical goodness), and generic aesthetics must start at the performative level, i.e. at our real judgments about what others say or do. In such judgments, we attribute commitments and entitlements to an actor in a meta-evaluation of his (speech) acts as appropriate or meaningful and as correct or true.

The crucial insight into the ‘performative’ use of the word ‘true’ might be traced back to Richard Rorty and further via Peter F. Strawson to Stevenson’s ‘ethics of appraisal’ as a partial analysis of the use of the word “good”. The insight is this: ‘Objectivity’ of any such evaluation appears, at least at first, only in the form of a ‘de-re-attitude’ of the evaluating person. In other words, the speaker’s acts are evaluated by a third person (who might be identical, however, with the second person, the hearer, or the first person herself). But the speech act of evaluation always remains a speech act. In other words, Hegel’s deepest insight must never be forgotten. It is this: The performative acts of individual persons are the absolute basis of any culture of reason. However, this should not mislead us into the two forms of methodical individualism which comes in two flavours, namely rationalism and empiricism. Cartesian or subjectivist intentionalism lies

at the bottom of both: Since the times of John Locke, empiricism wavers between naturalism, which is, in the end, a kind of crypto-rationalism, and sceptical subjectivism (Hume). Its deepest problem is this: The ‘empirical’ level of singular performance, subjective doxa or joint behavior, necessary as it is, is never sufficient for understanding the normative dimensions of ‘forms’, ‘ideas’ or ‘genericity’ with respect to concepts and contents, knowledge and science, actions and practices – as Plato already has seen in his Socratic dialectics.

It is true however, that any aspiration to ‘objectivity’ in an evaluation of a knowledge claim is, at least in a first instance, subjective and only ‘formal’. It consists in the fact that the ‘scorekeeping evaluator’ himself undertakes some de-re-commitment with respect to what he evaluates – for example by saying that it is true (or good or beautiful). And this means: He undertakes all pre-established generic responsibilities when he endorses what the other says or does. For example, I endorse here what, according to my interpretation and as far as it goes, Plato, Kant, Hegel and Brandom say about these matters.

Evaluative scorekeeping cannot remain only a singular performative speech act which could make things so by saying so. Rather, there are norms that govern the correctness of scorekeeping. This means that it always already refers to (and therefore presupposes) a joint practice of correct evaluation. I.e. we must understand ourselves always already as taking part in a general, better: generic, form when we evaluate the commitments and entitlements of other persons as reasonable or correct and when we say that the corresponding satisfaction conditions are sufficiently fulfilled – or when we deny this and do not acknowledge an act or an argument as reasonable or as well enough justified.

Obviously, there is no highest level for our reflective judgments about judgments and acknowledgments. On the other hand, the ‘hierarchy’ of meta-evaluations ends in some actual judgment and acknowledgement, in some actual consensus or actual cooperation and its actual ‘success’. The same holds for all ‘attributions’ of personal responsibilities for inferential content and corresponding commitments and relative entitlements: As mere attributions, they may still be disputed or wrong. But if they are not only verbally accepted as self-attributions but practically acknowledged in my doings and its maxims or formative principles, they change the character and turn into performative attitudes which are, as Hegel realizes, not relative but absolute. In other words, the performation of an illocutionary act like the following: “I promise that I will come” or: “I think about myself (and about you) right now” is absolute in the sense that it cannot be ‘false’ in contradistinction to any ‘judgment’ about another person or myself or any (self-)attribution of some property or faculty. In other words, such judgments and attributions are

always ‘relative’ and ‘subjective’ in the following sense: They express a claim about a relation between the speaker and the object which can be satisfied or not, true or false. But just as in the Cartesian proposition “I think”, any performation of an illocutionary act is, as such absolute. This does not mean that it involves some ‘absolute knowledge’. On the contrary. As Wittgenstein sees much later again, the performative reading of the absolute just denies that it is a matter of theoretical knowledge but a matter of performative practice or empractical fact. It is, as we see, a deep mistake of some branches in contemporary analytical philosophy ridicule any use of the word “absolute” – on the basis of the wrong prejudice that the notion would presupposed some transcendent truth behind the veil of experience. It does not. On the contrary. The analysis of ‘the absolute’ in the sense of being not only an object of verbal reference or perception, which always depends on the ‘relation’ of verbal or perceptual reference, and being in the absolute sense of performing forms of life actually is one of the most important task of philosophy, as Heidegger has reminded us in the last century, not knowing, however, that he just repeats the insights that lead from Fichte via Schelling to Hegel.

The difference between scorekeeping as an act (in the mode of singularity: as a singular performance) and as its generic form or content is represented rather metaphorically in David Lewis’s talk about a so called scorekeeping function. The function determines if we correctly or incorrectly ‘apply’ the corresponding ‘norms’ or ‘form’ of evaluation. Therefore, we cannot reduce our ‘scorekeeping’ of commitments and entitlements and our control of ‘the right, the good or the true’ to the individual and, as such, absolute level of merely expressing our attitude. This would remain mere doxa, as Socrates and Plato would have said.

It has to be admitted, however, that any actualized scorekeeping and any meta-evaluation is, as such, an individual act of an individual speaker. We cannot, and should not, underestimate this ‘absolute’ sphere of performative ‘expression’ of what we are willing to undertake. Any evaluation is, as such, a singular act, just like any object level actualization of a generic act. But the individual act pre-supposes the generic act or the ‘intended action scheme’. It does so, as Hegel tries to show us forcefully in his Science of Logic, ‘on logical grounds’. As an individual act, any action is an attempt to perform a form correctly, which always means that we are already taking part in a socially more complex practice in which roles are defined that determine the appropriate action. Hence, performing an act, not only a speech act, always already implicitly appeals to some generic ‘knowing-how-to-do-things’. As such, it is normative. It is impossible to overestimate this deepest and farthest reaching insight of Kant, Fichte, and Hegel which is the main bridge connecting Theoretical Philosophy as a conceptual analysis of content,

knowledge and truth and Practical Philosophy as an analysis of normativity, competence, and the good. A special corollary of this insight is this: there is no action that does not fall into the different dimensions of judging its instrumental rationality or goal-orientation (1), its ethical modality as ‘morally’ allowed, forbidden or dutiful (2) and the ‘perfection’ or technical competence of its performation or actualization (3). This explains why there can be a ‘beautiful’ or ‘perfect’ murder. In a sense, we evaluate any action, not only speech acts, in the different dimensions of ‘truth’ or ‘success’ (1), the fulfilment of generic norms of (ethical) goodness and (moral) cooperation (2) and the ‘beauty’ of perfection (3).

The system of norms for evaluating the ‘correctness’ or ‘reasonability’ of speech acts and other acts obviously has a holistic structure that sometimes is important to account for. If we want to have an overall generic title for all such norms, we could use the age old word “ethos” or “ethical life” for it, which amounts to the same as Wittgenstein’s life-form (taken here as a singulare tantum). It is, as such, a super-title for all possible forms of human practice or human life-forms in the plural, surpassing mere ‘morality’ and merely behavioral ‘morals’, ‘conventions’ and ‘habits’ by far. Together with the famous formula of Heraclitus, “ethos anthropo daimon” we such arrive at an identification of human sapience (Geist) with the human life form (Hegel’s “Sittlichkeit”) and at the corresponding insight that any science or knowledge about human spirit (Heraclitus’s daimon) is always already ethical or social science. Therefore, it cannot be reduced to mere psychology or even to merely cognitive physiology.

We can see already now some logical and methodological naïveté in present day cognitive science, so called, if it just copies the procedures of the natural sciences. The problem of this copying lies in the fact that the presupposed forms and norms of all kinds of actions, including the acts of doing research, of talking and writing in the sciences themselves, cannot be made explicit by the limited language and investigation of the natural sciences – with the consequence that a natural science approach to human sapience unavoidably describes man as an animal with some slight modification of his behavioral attitudes. In other words, we collapse into ‘regularism’, as Brandom calls it and sees it as the naïveté of present day naturalism in philosophy, for example in Quine. It is in the end the same naïveté as that of Hume who describes human knowledge as a variant of animal cognition. It is against this empiricist picture Kant and Hegel have developed their philosophical analysis of the peculiar logical form of human cognition and action, of sapience in contrast to mere animal sentience, as Brandom puts it.

If we do not take this turn away from empiricism (Hume) and behavioral naturalism (Quine), we are unable to really understand the essential differences between the mode of being human and the mode of being an animal, as it were. This is, I take it, the joint insight of Kant, Hegel, and Heidegger on one side, McDowell, Brandom and some analytic Kantians and Hegelians on the other – ignoring for now all further differences, for example the question if we can reduce human sapience to some form of calculations as some branches of the project of Artificial Intelligence suggests, which, however, lead in the end to some 'regulist' theories (from Chomsky to Fodor) which mystically assume some calculatory rules as hard-wired in our brains.

8.2 MODALITY IN PERFORMATIVE SPEECH ACTS AND SENTENCES

In any case, however, 'the true, the good and the beautiful' are not transcendent but immanent forms and norms guiding our – hopefully – joint judgments. The appearance of transcendence results, however, from the distinction between the singular performative act of judgment as an undertaking of commitments and a (sufficient) fulfilment of the presupposed norms of correctness. As a singular speaker, no-one ever is the last judge in the process, such that I am never in a position of 'fully knowing what I know'. In precisely this sense, Socrates knows some important things about the limitations of subjective knowledge claims, to which he rightly counts any merely accidental consensus even in larger populations. Consensus is very often no reliable sign for truth, even though in some other cases there is no other criterion for 'truth', for example in case of truth by convention, as in the case of the truth of the sentence "2+1=3", which has to be learned in order to give the sign "3" the meaning it has.

Individual claims are never infallible. Insofar as truth and knowledge surpasses doxa or (joint) belief, it seems to be 'transcendent' from the point of view of the singular subjects, even though it is only a 'transcendental' condition for the game of making generic claims and giving and asking for reasons: Giving reasons is taking part in the control game.

The important point now is this: Just as empirical truth-claims about singular facts presuppose the pre-knowledge or empractical mastery of generic or general norms or 'criteria' of (sufficient) fulfilments, we must view claims about possibilities also under the leading question how to deal with the presupposed norms of what generically may or may not count as a possibility – such that we have to count with it. Kant's basic insight is that not every formally well-formed sentence, not even every formally 'true' sentence, expresses an empirical 'possibility'. "2+1=3" is, for example, no empirical sentence at all. It is rule for calculating with numerals expressed in the form of a sentence. It is a 'necessary', even a universal truth. But it would be misleading to

call it ‘empirically’ necessary. Hence, we should ask anew what we can or should evaluate as ‘empirically possible’ and ‘empirically necessary’.

Again we have to start with the fact that speakers propose to view some states of affairs, expressed by empirical sentences, as possible. By doing so, they ask us to practically ‘count’ with the claimed possibility. But under which condition is it wise or reasonable to ‘believe’ or put some faith in such ‘possibilities’? It was perhaps the deepest insight of Kant that we have to ask this question first. In fact, we should take his main question of Kant’s Critique of Pure Reason absolutely seriously. It asks for the conditions of possibility of objective, i.e. object- and world related experience in the sense of possibly or really true empirical knowledge claims.

The first step in this analysis consists in a logically radical criticism of transcendent metaphysics. Transcendent metaphysics dogmatically starts with some unclear and not well-understood beliefs in transcendent possibilities or realities. It is, as such, mere belief-philosophy, in which philosophers defend their own contentions and attack the teachings of others without leaving the level of mere doxa or arbitrary judgment without sufficient reasons and proofs at all. Examples are all rationalists from Leibniz to David Lewis or contemporary metaphysical ontology with their presupposition of a sortal system of possible worlds – by which one defines causality counterfactually. The hidden clue of Kant’s critical philosophy consists here, so to speak, in going ‚meta’. This means that Kant reads traditional attempts of transcendent belief-meta-physics totally anew, namely as hitherto not fully understood attempts to reflect on the trans-cendental, i.e. presupposed, conditions for *holding* certain object- or world-related assertions or claims with good reason as possibly true.

In other words, what really is possible can only be explained by what we reasonably count as possible. What really is true can only be accounted for by explaining what we reasonably hold as true. It is this identity of reason and reality which Hegel expresses in his least understood bon-mot ‘(only) that is real what is reasonable, and (only) what is (a) real (possibility) should be accepted as reasonable’. This famous – if not notorious – formula „Das Vernünftige ist wirklich und das Wirkliche vernünftig“ does not say, as superficial readers and critics think, that any actual contingency is already reasonable and any reasonable proposal will be, in the end, realized. It rather says that if we want to understand the concept of real possibility in contrast to a) merely verbal, b) utopian and c) forever irreal possibilities, we must analyze the normative conditions that are presupposed when we evaluate meta-level judgments that are articulated in a way as if they talk about (possible or real) objects, situations or worlds.

As a result, we have to ask anew what we talk about when we talk about only ‘possible’ objects, ‘possible’ situations, and ‘possible’ worlds and how many different notions of possibilities must be distinguished when we do not want to get confused by mere homonymy.

The basic lever to get the hidden presuppositions unveiled is the following question: What is it that can reasonably count as possibly true? And which of these possibilities can be even reasonably accepted as realities?

And, again, actual performance is the absolute fix-point of any reflection on content and normativity, meaning and truth. This means that we, obviously, have to start with the performative attitudes of speakers who tell us that we can or should count with this or that possibility or reality. We have to do so in order to be ‘realist’, ‘critical’, and ‘pragmatical’ with respect to our logical (meta)vocabulary, in which we talk about truth and knowledge, about being, reality and objectivity, about grounds, forces and causes, and about possibility, necessity and contingency. This is what Hegel learns from Kant. And this is what he develops further in his Science of Logic. There he shows us what it means, on a reflective meta-level, to evaluate object-level judgments of possibility or reality as reasonable, reliable, or ‘true’. And he shows us that on any such level we actualize already well established possible forms of judgments and, in doing so, undertake the corresponding judgments and claims about content or truth, i.e. about semantic equivalence or a sufficient fulfilment of satisfaction conditions.

If we see things in this light, we obviously need a logical story that leads us from the performative act of holding a certain ‘proposition’ (sentence) p true to a meta-level judgment by which we say that p (or what p says) is possible or true. The performative act is, as a subjective attitude in its actuality, ‘absolute’. This means, in particular, that we cannot really ‘force’ anyone to believe something. Believing is, like judging, always in some respects ‘free’.

Our proposition p might, at first, only ‘formally say’ that something is ‘possible’ or ‘actually true’. In an extreme case, claiming that p might only mean that to say p is somehow correct or at least better than to say non-p. But this formal acknowledgement of the mere sentence is by far not enough when we want to know if its content is true. Just as in the case of thought, in our talk about propositions we usual presuppose already a jointly known system of ‘truth conditions’ – by which we differentiate the cases of reference with respect to which a claim of p would be true or correct form other cases – including a system of other propositions R or Q that stand in such an inferential relation to p that p can be inferred from R and that Q can be inferred from p.

In order to make the general move from a performative act to its content more perspicuous, I refer back to Frege's least appreciated notation, his assertion sign. Its use is the beginning of all reflections on the logical forms of performatives. I 'abuse' it in order to block the wrong idea that it could be replaced by a meta-predicate that says something about a speaker by using the deictical index "I" and write

$\vdash_I$ p for "I as the speaker assert p".

In a sense, the sign $\vdash_I$ corresponds to the 'full stop' at the end of a sentence, which, in turn, corresponds to the prosody of lowering down the melody at the end of sentence in spoken assertions or claims. Frege also refers already to another performative, namely questions, even though he did not use a special notation for it. As in the case of the assertion sign, we could move the question mark in front of the sentence, as one does in the Spanish in a way, too, and write "$?\rightarrow_I$ p" instead of "p?". This means that

"$?\rightarrow_I$ p" should be read as "I the speaker hereby ask if p".

As I have said, for Kant, possibility is, in the first place, such a performative. This means that we should write

$\Diamond\rightarrow_I$ p for "I as the speaker propose to view p as possible."

I omit here the weaker, merely expressive, reading, according to which the speaker only says that he holds that p was possible. In the stronger reading, my commitment is more determinate. If I commit myself to such a possibility judgment, I do not only entitle you to count with some such possibility, but I have to answer the question on which grounds I propose this. Why should it be reasonable to count with p? The result of Kant's analysis of possibly true empirical claims is this: Only if we can argue on the ground of our own knowledge or by taking certain judgments of others for granted that a certain list of (transcendentally presupposed) pre-conditions is fulfilled are we entitled to make such a claim. If someone does not argue for what he claims as possible and only dogmatically states it as possible, he does not really play the game correctly. In other words, we should not even listen to merely arbitrary possibility claims at all.

In a sense, Kant's criticism of any possible belief in transcendent or metaphysical possibilities without checking the status of these alleged possibilities resembles Hume's criticism of rationalism.

The word “necessary” is also, at least in some of its uses, a performative, such we can or should write

$\Box\rightarrow_I p$ for “I as the speaker propose to treat p as necessarily true.”

According to Kant’s view, to say that p is possible/necessary/true is to undertake the commitments that are expressed by $\Diamond\rightarrow_I p$, $\Box\rightarrow_I p$, resp. $\vdash_I p$.

Kant can be viewed as a pragmatist insofar he tries to explain ‘real’ truth, possibility and necessity by the norms for commitments undertaken in performative speech acts of the forms $\vdash_I p$. $\Diamond\rightarrow_I p$, and $\Box\rightarrow_I p$. As Hegel realizes, this might look as walking on the head. The reason is this:

In any object-level discourse, it seems as if there already are conditions of objectivity presupposed such that it is only a matter of cognition, not a matter of correct practice, if we can say that p is true, possible, or necessary. In other words, common sense and popular philosophy expect that we have to start with what is ontologically possible or necessary and ask what we can assert (believe) and know (for certain) about these presupposed possibilities and necessities. But precisely this attitude is logically naïve. It allows for a mere ‘theory of knowledge’ that presupposes some metaphysical, i.e. not well understood, notions of ontic, allegedly ‘ontological’, possibility, necessity and, as a third modal category, reality. It does not stick to the insight that there is no truth and possibility beyond the scope of our immanent, civil, pragmatical and hopefully robust meta-evaluations of claims and judgments of possibility, conceptual necessity and (perhaps merely contingent actuality as reasonably reliable.

The basic pragmatist insight is, indeed, this: We never can abstract away the dialogical situation of speech acts, as we would do of we only focussed on sentences and their allegedly speech-act-independent ‘truth conditions’. As I had shown in my 1986 logic-book, we always need to take care for the performatives in any rigorous analysis of logic, even in the formal domains of mathematical logic.

There obviously is no utterance or speech act without a hidden performative. And it is clear that nested performatives like ‘$\vdash_I \vdash_I p$’ are meaningless ‘stuttering’. Moreover, in a case like or ‘$\Diamond\rightarrow_I \Box\rightarrow_I p$’, it would be queer to say that I declare it possible that I might declare it necessary that p. On the other hand, we formally need some ‘move of the modal operation from the performative to the sentence or proposition’ when we want, for example, express the meta-level and reflective question if p ‘really is’ possible, necessary, or actually true, i.e. if we should accept

it as possible, necessary, or actually true. Notice that in such a case we already abstract from the speaker and his undertakings and take a ‘neutral’ position of a third person, the scorekeeper, so to speak, with respect to the generic and, as such, transsubjective, content of p. The forms are, then:

“$?\rightarrow_I \Diamond p$”, in “$?\rightarrow_I \Box p$”.

If this consideration is correct, the step of introducing modal operators starting with modal perfomators is logically not unproblematic at all. This means that it is easy to be misunderstood. It consists, syntactically, in a replacement of the many performatives by only one, the assertion sign. Then we ‘move’ the ‘modal content’ – at first only syntactically – into the sentence. I.e. we replace

(1) $\Diamond\rightarrow_I p$ by $\vdash_I \Diamond p$,

(2) $\Box\rightarrow_I p$ by $\vdash_I \Box p$,

By stipulation, we can say that both sides ‘should mean the same’, even though at first sight my ‘assertion’ of $\vdash_I \Diamond p$ might seem to say that I claim that p is possible whereas $\Diamond\rightarrow_I p$ says that I propose to hold p possible. But we can attribute the same inferential role or ‘speech act sense’ to both expression, just as we do when we read the sentence “I promise to do p” at the same time as declaring the promise and making a statement about my promise. After I have given a promise by making it, the past sentence counts now as both: as having undertaken the commitment and as a true statement about my giving a promise. Here, saying so makes it so.

But just as in the case of promising, there is some danger to overlook the double function in the grammar of the ‘statement-version’. Children cross their fingers in the back when they promise something and do not intend to comply. Others think that they only had said something wrong about their ‘inner states’ if they say “I promise to do x” but do not intend to do x. In our case, if I say that p is possibly true, I seem to talk already as an objective scorekeeper or evaluator de re. As a result, I myself might underestimate my own undertakings and the fact that my own de re claims are, in the first place, my propositions, taken as proposals.

But can we consider (1) and (2) as first steps into the direction of nested modal operators, as they are investigated in formal modal logical, namely the operators $\Diamond$, $\Box$? For this, we would

have to interpret the assertions of complex sentences like the following one '□□p& □□□q' – which reads as "it is possible that p is a necessary or conceptual truth and it is necessary that it is possible that p expresses a necessary or conceptual truth." Our 'speech act reduction' obviously stops at '□→ᵢ□p & □→ᵢ□□q'. What we need is, therefore, a further reduction, which obviously has to tell us what □p and □□q 'mean' behind performatives like □→ᵢ , □→ᵢ , ├ᵢ and ?→ᵢ. For this, we have to 'define' the (inferential) 'meaning' of nested modal operators. There is no pre-given fact of the matter that 'forces' us to proceed in one way or another. Moreover, a merely formal wish to have nested modal operators in front of sentences cannot be used as an argument against the 'Kantian' reading of modality as a mere performative.

On the other hand, any 'merely epistemic' account of possibility, namely to assume that possibility judgments are 'merely' subjective, opens up the 'possibility' that 'in reality' everything and every event is necessary – only our 'knowledge' of these necessities is too small. An age old fatalist argument runs like this. As a result of such a consideration, from our human point of view of limited knowledge about necessary natural laws, some or many events still seem to be possible or contingent – even though in reality there is no contingency or possibility – but only necessity. Once again, no-one can be 'forced' (e.g. by 'argument') to give up this formal 'attitude' to the world and to his own life. This is so because such attitudes are 'absolute': we are in some way free to stick to them or to decide against them. This fact is regularly abused by scepticism. In fact, the hidden truth of scepticism is, according to Hegel, nothing else than an insight into the absolutness of a performative stance.

But Kant and Hegel stand in strict opposition to any metaphysical 'argument' in favor of any determinism, without countering it by a transcendent or, at least, unanalyzed, 'belief' in some 'reality' of possible worlds that are different from 'the actual world' in which we live – as Leibniz seems to share. We can find similar positions of an all too subtle rationalism again in David Lewis, who writes about some deeply unclear Plurality of Worlds. Neither is there a 'thin red line' (Nuel Belnap) that binds the present world to what actually will be in the future, nor are there 'real' ontological possibilities which just have to be detected. Our linguistic attitude to possibilities is never just 'knowledge' or 'belief', it is rather to be described by Brandom's categories of commitment, entitlement and undertaking as they are applied to dialogical speech acts. The task is, indeed, to explain what we do when we use phrases like "p is really possible" or when we say, as Hegel indeed does, that reality is a certain modality, such that being real or really true is a certain version of being possible or of being necessary.

We are easily misled here by formally very nice reductions – as we know them from model theoretical modal logics. In model theoretical modal logics, one defines the possibility or necessity of p by reducing it to quantification over possible worlds, such that □p just means the same as “there is a possible world in which p is true” and □ p the same as “p is true in all possible world”. This reduction delivers formally nice results. It is, however, systematically misleading just because it is merely formal. This is so because there are no possible worlds at all, or rather, because the task of any decent philosophy of language and its logic should be to show that and how only creatures with a discursive linguistic practice can have ‘access’ to possibilities at all. And even this expression is still a mystifying metaphor for the fact that there are no possibilities beyond our evaluation of sentences and utterances as ‘possibly relevant’ for some good orientation in the world.

In geometry and arithmetics we have a well founded and immensely fruitful, though seldom enough in its practical reasons well understood, practice of calculating schematically with syntactically compound expressions. There is, however, no such well established external use for calculating with nested modal operators. All external interpretations of these calculi outside mathematics are ‘philosophical’, which means here that they are either metaphysical, i.e. not well understood, or merely metaphorical, i.e. utterly unclear. Today, not only philosophers and scientists but a whole public seems to believe much too much in ‘schematic reasoning’ and even identify it with ‘rational thinking’. The result is a lack of understanding that schematic calculations with syntactically ‘compound’ forms make only sense if we have a relevant external application for such calculations. To show rigorously that these applications are reasonable is much harder than any ‘subtle’ and ‘exact’ calculation in a schematic framework. Learning to handle the schemes is a student’s task and the task of applying them. Real science (and philosophy) is occupied with the constructive task of developing reasonable schemes or the critical task of limiting the scope of their use to reasonable, externally reliable, applications.

Necessary sentences and empirical propositions belong to different logical categories. As I read Wittgenstein, he sees this as one of his own most important insights. It more or less automatically leads to category mistakes if we ‘logically combine’ empirical propositions with ‘conceptual’ propositions expressed by ‘standing’ i.e. timeless, sentences.

Empirical propositions always need some anaphorical reference to the time of the speaker, whereas conceptually necessary sentences are time-general or rather, express rules of inferences on the level of standing sentences according to the important principle “sententia et

regula convertuntur", i.e. rules can be expressed by (standing) sentences and (standing) sentences can be read as rules".

If it is correct that the domain of sentences that can be reasonably proposed as necessary is already categorically disjoint to the sentences that express contingent empirical truths, the formal basis of compositional modal logic disappears. What remains are mathematical trees in which we can define some Kripke- and Beth-forcing as models for formal intuitionistic logics and some calculi of formal modal logic like S4. But this does not show us at all if we can use formal modal logics for making our judgments about possibilities, necessities explicit and this in a reasonable way. On the contrary, the very idea of a compositional structure of nested modal operators might be an obstacle for understanding modalities. The prejudice that formal rules are clear and that syntactic nestings 'must' be always defined might mislead our critical semantic judgment.

8.3 POSSIBILITIES AND NECESSITIES

Traditional readings of necessity rightly point out that if p is necessary true it is situation-invariant or 'timeless' resp. 'eternally' true. This means that p holds in 'all situations'. But is does not mean that p is necessary just if it is true 'under all circumstances'. It could be 'contingently' true in all situations. Hence, we might come into position to differentiate between the 'universal' validity of a proposition which might be somehow empirically true in all circumstances and the generic status of a sentence or default rule supporting its timelessness or necessity. In the end, we might even have to differentiate between generic default truths and universal generic truths.

Only when we identify necessity with universality, we can define the necessity of p, as usual, by the condition that p holds 'in all possible worlds'. But already the fact that the modal word "possible" appears in the definition should make us suspicious. It means that we already presuppose what modality is, namely what we might mean be the expression "possible world". In other words, defining necessity by quantifying over possible worlds does not tell us what "possible" means, but presupposes it. The definition leads to the following well known relative 'definitions' of "necessary" and "possible":

(1) p is necessary if and only if p holds in all possible worlds and this should mean that it is not possible that non-p. As a formula, we get:

(1a) □p≡¬□¬p,

which is the same as

(1b) $\exists_w.p(w). \equiv \neg \forall_w. \neg p(w)$.

(2) p is possible if and only if p holds in some possible world and this should mean that it is not necessary that non-p. As a formula, we get:

(2a) $\Box p \equiv \neg \Box \neg p$,

which is the same as

(2b) $\forall_w.p(w). \equiv \neg \exists_w. \neg p(w)$.

Notice that the identifications (1a) with (1b) resp (2a) with (2b) lead us to view propositions p as ‘properties’ of possible worlds or, extensionally, as ‘subclasses’ of possible worlds.

But if we do not jump immediately into these quantificational ‘solution’ of the question how to ‘interpret’ the modal operators such that nesting gets possible and all logical relations can be reduced to the use of (by the way: intuitionistic!) quantifications (namely in branched trees of relatively accessible possible worlds), the mere identifications (1a) and (2a) might lead us to the question ask, which one is the better ‘definition’. I.e. is it better to define possibility by necessity or necessity by possibility?

In fact, the situation is not symmetric, as already Kant seems to have realized, too. We have to start with necessities. Then we can say that p is in one way or another possible, if, what holds with necessity, does not rule out that p, i.e. does not ‘force’ that non-p.

But p is necessary if and only if we can view p (or the corresponding sentence) as expressing a rule (of making an inferential norm explicit) which can be used ‘without further conditions’, i.e. ‘universally’, in (material) inferences. In such a case, p expresses, as it were, a universal generic default rule of unconditioned or universal conceptual inference. Such a ‘necessity’ can be used in any situation in which p might be applied with good reason. This is the reason why p can be necessary only if it does not contain any time-index, just as 2+2=4 does not. In a sense, 2+2=4 holds universally, i.e. ‘without exceptions’. 2+2=4 is, accordingly, a necessary truth. But this means, in effect, that we shift the still possible ‘exceptions’ into the conditions of proper application. When we ‘add’ for example two liquids, we cannot ‘conclude’ that the volumes add up.

If we say that p is necessary, we say that the proposition p expresses a universally valid rule of inference in all further distinctions and inferences. In this sense, it is necessary, not contingent,

that any living being lives only a certain time and then ‘must’ die. And any physical object or body ‘must’ occupy at a certain time a certain limited space, which means that it stands by a priori reasons, namely by the very conditions of its (spatio-temporal) existence, in certain spatio-temporal relations to all other (finite) physical things. These ‘a priori reasons’ belong, as Kant sees, to the regional ‘logic’ of the domain of physical things. This is a ‘material’ logic with principles far beyond the merely formal rules of using singular words like “not”, “and“, and “for all”, including equality and predication.

Hume’s empiricism as well as Wittgenstein’s Tractatus give all too quick answers to the question what is possible and what is necessary. According to them, there is only ‘logical’ necessity and everything, i.e. any p, is possible if only non-p is not logically necessary. As such, this could still be fine if that, what counts as ’logical truth’, is either wide enough or flexible enough. But usually, the concept of logic reduces to some most general formal logic which only lays out some schematic rules for the deductive use of a couple of singular words or expressions like “and” and “there is”, together with the corresponding syntactical forms of sentences. But for such ‘logic’ ‘everything is possible’ (Hegel), which is to say that much too much is (still) considered as possible. There is, for example, no rule of logic that tells us that not only no human but no thing can travel into the past. We have, therefore, to distinguish between what is possible with respect to some merely formal logical necessity and what is possible with respect to many other material, nevertheless conceptual, necessities – as they are, for example, determined by so called natural laws. And we have to distinguish, or so it seems, between what is necessary and what is possible from what we explicitly know or believe about such necessities and possibilities.

Kant calls his material logic of empirically singular physical things ‘transcendental’ just because it makes some most important conceptual necessities as conditions of possibility of being a physical body explicit. These logical presuppositions include the conditions of meaningful talk about the identity of two appearances of the same body from two or more different perspectives (1) and the conditions of referring to the same body in language and thought and by perceiving or showing it in public Intuition (2). That is, we must already master a whole practice when we want to understand what it means to refer to a physical body in its identity and distinctions from other bodies that all move ‘in time’, namely in the ‘space’ of all bodies. The fact that all bodies move is a synthetic a priori fact, no empirical fact. This means: there were no objective, i.e. object-related experience if there were no substantial bodies that can be identified as time goes by, i.e. when they change ‘places’ relative to us and to each other.

Space is the outer form of common, objective, i.e. thing-related, Intuition in joint experience precisely in the sense that any spatial ordering presupposes changes of perspectives form my point of view to yours or from the earth to the sun or the moon or even to some fast flying meson. Time is the inner form of objective 'intuition' (or rather: observation) insofar as some 'inner' series of changes or movement in a body (for example beats of the heart, the swings of a pendulum or the 'beats' of a quartz-clock are counted and the numbers are used as an arithmetic measure for movements: their velocity and acceleration. Of course, we can also produce such time-numbers by intersecting a path of a moved body like the paths the planets take around the sun.

A really important and foundational condition for identity of bodies is that they always move 'continuously' and rather 'slowly', namely much slower than light. There are no sudden 'jumps' – or we would loose track of the bodily thing.

Hegel sees that there are much more domains of 'physical' realities in a wider sense of "physical" to be talked about than middle sized dry goods or physical bodies. Think, for example, of electro-magnetic phenomena, or of colours. Kant thinks that electro-magnetic phenomena can be explained by the postulation of some very small particles that move through solid bodies as if those were membranes. But there are other models of explaining these phenomena, as Hegel already has pointed out.

As we might see already at these examples, in real life and real language, we work with many generic default norms of normal inference or normal expectation that do not apply 'universally', but allow for 'exceptions', as we shall see below more clearly. Generic sentences making such non-universal default inferences explicit are, for example, most of the well known 'natural history judgments' like "cats have, as all mammals, four legs". But it is generically (in a sense: with necessity) possible that some cats survive with less than four legs, which means that it is no unconditioned or universal rule that being a cat means having (actually) four legs. If p replaces "cats have four legs" and q replaces "cats must die", and if we use (1a) as a definition, we can say that □¬p is modally 'true' propositions or, what is still the same, that the condition for fulfillment for a speech act of the form □→(¬p) is satisfied. Since it is satisfied for generic reasons – we know, so to speak, in a fairly general way 'that this can happen' – it is even true that □(□¬p).

If we say that p is possible, we say that we cannot rule out that conditions are such that p is a valid proposition or inference – given our overall 'unconditioned' material conceptual knowledge.

If p is necessary, the possibility of p is an empty consequence; in such a case, it is a fortiori true that we cannot rule out p. If we cannot rule out p without already knowing that p is, perhaps, universally valid, i.e. necessary true, it is sometimes a good advice to test if 'by chance', conditions are such that p holds. If this is the case, we can use p, in the corresponding situation(s), for practical orientation or classified inferences.

This is, for example, the case when we know that x is a bird, but also that it is a penguin. 'It is possible' that birds fly using their wings. But some use the wings (only) for swimming.

We now could read '$\vdash_I \Box q$' as: 'it is true that q is a universally valid conceptual rule'. $\vdash_I \Box p$ then might mean: 'it is false that $\neg p$ is a universally valid conceptual rule'. This reading would allow for nestings. In fact, it leads to the usually accepted reduction rule that $\Box\Box p$ 'means the same as' or 'can be replaced by' $\Box p$, or that $\Box\Box p \equiv \Box p$, and that, accordingly $\Box\Box p \equiv \Box p$.

Nested syntactical expressions like $\Box\Box\Box\Box p$ can be now read as 'it is a conceptual rule that it is not excluded in the system of conceptual rules that it is a conceptual rule that it is not excluded that p'.

8.4 SINGULARITY FOR ITSELF AND GENERICITY IN ITSELF

Let us say now that any 'application' of a generic form, norm, rule, sentence, scheme or principle belongs to Hegel's 'category' of particularity (Besonderheit). Then we can distinguish the form or norm or content as such or 'an sich' that is supposed to be applied. It belongs, 'in itself' or an sich, to the category of generality or, as we might better say, genericity (Allgemeinheit).[177] But the performance taken only for itself, für sich, always belongs to the category of singularity (Einzelheit). In precisely this sense, any act combines the features of being a singular act for itself and being in itself an (intended) actualization of some generic action or form or norm to act properly. In short, any real act exists 'in and for itself'. It is, therefore, a general task to distinguish between 'being in itself' (an sich, on the generic level) and being for itself (für sich, on the individual level of empirical singularity). This distinction appears also already when we analyze the reference of speech acts of naming or the meanings of assertions. Meanings as such (an sich) of words and sentences belong to the generic level, whereas the meanings of

[177] In fact, the markers „in itself", "as such" or „*an sich*" are always used by Hegel in order to make clear that we presently talk on a generic level, the markers "for itself" or "für sich" are used in order to focus on the individual case in its (presupposed or intended) individuality. Many further problems arise from the fact that the 'intention' to talk about some 'absolutely individual' case is utopian and can never be fulfilled. We beat the messenger for the message when we criticize Hegel for his (by the way deeply critical and even ironic) passages about 'the absolute' and 'absolute relations' as they were held possible by Spinoza and Leibniz. Notice, by the way, that Hegel has omitted this whole chapter from the ('large') Science of Logic in his ('small') Encyclopedia logic - as I thin with very good reasons: At this place, it confuses the reader.

singular utterances belong to the level or particularity, with its reference and significance in-and-for-itself. As a result, we must distinguish between generic and particular entities and beings, for example between the generic family of cats taken as different species from the many singular cats (and tigers and lions).

If I apply, for example, the word “lion” to what I see in front of me, perhaps in a shout, I make a singular statement, perhaps ‘about’ a singular lion. I might want to inform or warn you by my shout or statement of some danger, namely of the supposedly dangerous lion.

In successful informative statements, no additional asking for reasons occurs. Only if there are serious doubts about the application of the words you might have reasons to ask me for the reasons I had to shout or say that there is a lion. In such a request, you test the norms of applications which allegedly or really have led me to say that there is a lion. The game of giving and asking for reasons for speech acts of the category of application or particularity therefore is, metaphorically speaking, a ‘move back and up’ in the following sense: it is a move back, as it were, because we do not continue our object level discourse as we would if your reaction just would have been just this: since there are lions here, let us better hit the road. If you ask me for the reason for my ‘claim’, you obviously prefer a step back before or instead of running – and to play some scorekeeping control game first with respect to my assertion that there is a lion there. The example nicely shows why you better have some good reasons for doing so. In real cases in which we use language for giving object-level empirical informations and in cooperative coordinations of our actions it could take much too much time to step back from the object-level game to some meta-level reflection on the (fulfilment of) norms of default classifications and default inferences. These norms are empractically used in object-related speech acts. They are controlled in a particular meta-level ‘game’ of scorekeeping and giving and asking for individual or generic reasons. Of course, sometimes it makes very much sense to control assertions and claims. But the question is not ‘how often’ we step back form object-level and object-focussed discourse in order to enter a meta-level control-discourse. The question is rather how to distinguish generically between ‘object level application’ and ‘meta-level control’ of generic norms for conceptual (i.e. verbalized) distinctions and conceptual inference that can be made explicit either by rules or sentences or by showing the form as an empractical form of applying the norm – like in the case of Modus Ponens.

There is no wonder now that for natural scientists and technicians who focus on object level informations a technical can-dos philosophical reflection takes too much time and even seems superfluous. What is overlooked in such a judgment is the importance of controlling the whole

system of articulating knowledge and experience: its language, verbal teaching and practical education, its correct application in contradistinction to merely schematical (thoughtless) or even transcendent (incompetent) understandings.

8.5 ACTUAL AND POSSIBLE STATES OF AFFAIRS

Utterances belong to the category of particularity. They are applications or instantiations of already pre-existing generic speech acts. Therefore, we better distinguish speech acts in themselves (an sich) from speech acts for themselves (für sich). Speech acts in themselves are generic schemes which we may address on different levels of generality, like promising or expressing an intention or promising to help and intending to come.

The reverse ‘operation’ of applying or ‘instantiating’ a form of practice or action in a singular case is instituting a new form of practice. It obviously is more difficult to institute new forms than to apply already given ones, This is especially so in cases if many other persons have to be convinced to take proper part or if we only have to make sure that there is some ‘objective’ or trans-subjective’ control of the correctness of singular attempts to instantiate the form or to fulfil the corresponding norms or proprieties. Some such institutions can be created by an explicit will or volonté général, if we allow some persons to make formal decisions about instituting norms for joint actions as in a state and its legal system. Others develop rather by implicit and empractical acknowledgement of forms of actions and practices – which more often than not is misunderstood as a mere ‘evolution’ of institutions behind our will and consciousness, as if the form of telling the history of evolution and survival of species could be directly applied to joint human actions. Even though many forms of practices are not the result of explicit proposals and explicit acknowledgment, they are not well described if we only view them through the metaphorical analogy to natural, i.e. action-less and thought-less or mind-less, evolution. Many things even in the human world are consequences of mindless and thoughtless behavior of individuals and masses. But it would be utterly wrong to claim that all things just ‘happen’ in this way in the human domain, even though no singular person can steer the joint practical acknowledgments intentionally as they are necessary for instituting new norms and forms of joint practices, as we can see them already in cases of linguistic and semantic change.

Our distinction between generic forms and individual cases now does not only apply to actions (and behavior), even though it is (or should be) absolutely clear in this case. It also applies to any (linguistic or practical) reference to any object or state of affair in the world at large. We cannot refer to merely individual things or cases or situations independently of the general or rather generic cases that are supposed to be instantiated by the particular case in and for itself

to which we (want to) refer to. Genericity and singularity are always relevant moments of particularity: Genericity without particular cases is as empty as thinking or speaking without applications in possibly joint observations and practical references. On the other hand, singularity without genericity is blind, just as merely individual reference to ‘intuitions’ without conceptual determination of their (possibly joint) object. In such cases, the attempted references remain undetermined.

8.6 ACTUALITY AND REALITY, HISTORIA AND THEORIA

Whoever only talks about ‘particulars’, i.e. singular things and events, including classes of individuals’, even though these individuals must already be understood generically), speaks in the mode of mere ‘historia’ or ‘empiria’, as traditional philosophy had said. His mode of speech is merely ‘narrative’, ‘empirical’, not yet ‘philosophical’ or ‘scientific’. This is so because scientific knowledge is altogether generic. This holds even for scientific historiography. Scientific historiography surpasses by far the mere narrative form of ‘story-telling’ as in (more or less true) historical novels or in ‘annales’ that record some singular (even though perhaps important) events. To the texts in the ‘narrative’ or ‘empirical’ mode belong also all statistical lists. They all talk about one or many singular, better: particular, situations and things, like, for example, about one or all apples in a basked here or about one or all battles of Napoleon. Historia as such can be seen as a set of ‘idiographic’ propositions (assertions) about what has happened.

In a sense, it was a deep insight of Hume and Humean empiricism to realize that from no system of merely ‘empirical’ propositions of the category of singularity (or rather: particular idiography) we could ‘conclude’ with ‘necessity’ any generic (time-and space-general) sentence or rule. But this does not show that we cannot give ‘sufficient reasons’ for generic truths. It rather shows that we must understand in a new way what such reasons are.

Hume is right the there is no logic of induction, pace Carnap and all Baysian probabilism from Ramsey and de Finetti to our times. We cannot and should not ‘justify’ generic sentences just by empirical statistics. This also holds for probability measures and stochastic expectations which always already are generic, even though the subjectivist and empiricist approaches to probability- and decision-theory usually underestimate this fact. They are at least no ‘empirically universal propositions’, neither about singular cases nor about statistical populations and sample measures (i.e. relative frequencies.) Or rather, they are no ‘universally quantified empirical sentences’. They are generic sentences of the category of genericity (Allgemeinheit).

What Hume and the Humeans (empiricists) did not see and do not see until today is this: There are no ‘pure empirical propositions’ about absolutely singular cases at all. This is so because there is no such thing as reference to a singular thing, case, situation, event or state of affair which is not already ‘mediated’ by some generic pre-knowledge. The importance of the philosophy of Wilfrid Sellars lies precisely in this acknowledgment of the basic logical insights of Kant and Hegel which undermines Hume’s position as well as any logical empiricism avant la lettre and after the Vienna Circle. These things are crucial for any sufficient understanding of a non-naïve and nevertheless ‘civil’, i.e. immanent and ‘down to earth’, i.e. ‘pragmatic’ notion of possibility and necessity, disposition and all kinds of ‘forces’, ‘causes’, ‘reasons’ or ‘grounds’ which we appeal to when we ‘explain’ particular events, occurrences, behavior and actions.

But before we can ask what the logical status of propositions of the category of genericity is and how they are justified, we better show first how they are used and why and how they are indeed necessary conditions for empirical knowledge in the narrow sense of knowledge about particulars, as Kant has seen first in his insight into the semantic role of synthetic a priori norms and rules as they are made explicit by corresponding sentences. Hegel deepens this insight by developing a meta-level logical jargon or vocabulary in order to talk about all kinds of generic truths that are presupposed in particular empirical judgments.

In fact, we can reconstruct the basic step away from Hume’s law-sceptical empiricism in Kant’s philosophy thus: Kant sees that we need generic laws, that there is no understanding without generic norms. This is so because in understanding we (have) to draw inferences from what we hear and what we see, so to speak. In fact, Kant is the one to see this inferential normativity in human understanding that cannot be accounted for in a merely behavioral story of what we do as in Humean individualistic and therefore necessarily sceptical empiricism.

But from the fact that we need such laws it does not follow that we have them available. Nevertheless, we can at least distinguish a ‘transcendental deduction’ of the categories as a system of categorical presuppositions for objective claims from a ‘metaphysical exposition’. Such a ‘transcendental deduction’ must not be taken as an alleged proof of some transcendent truth but in the sense of justifying the functional need and application of the norms expressed in the system of categories and the list of principles (or Grundsätze).

When we make these norms explicit, we call them “rules” or, alternatively, synthetic a priori principles or synthetic a priori sentences or judgment. The point why Kant calls them synthetic a priori and not (as already Hegel later) analytical is this: Only those norms that follow formally,

deductively in the sense of ‘apagoge’, from merely conventional terminological definitions are called “analytic”. If a generic norms or rules surpass this realm of analyticity, it is called ‘synthetic a priori’. In other words, Kant wants to distinguish merely local conventional rules for operating with symbols (like, for example, 2+1=3) from not merely ‘analytical’ truths like the ones we arrive at when we use the series of numerals for counting the steps that are needed to get, say, from 7 to 12. Here, we have to do something with a pre-established linear series of numerals in real ‘Intuition’: we might use our fingers or an abacus or the figures on a sheet of papers in order to calculate. But we must calculate in this concrete manner.

As a result we see that most of the true sentences in arithmetics are synthetic a priori norms: they express universally admissible rules for further calculation and they are proven as such generic rules that are admissible. Hence we, already have an example for a system of a priori norms, rules and sentences that are not ‘empirical’, i.e. no true or false universally quantified empirical sentences, contrary to Hume. Hume turns into a sceptical pragmatist just by not seeing the crucial point that generic knowledge always is instituted and plays the role of default inferences or norms for admissible conclusions. As a result any, argument that tells us a case falls under a concept must show us that or how the (a priori) admissible norms, which we learn as ‘posited’, really can be applied without damaging our individual and joint orientation and cooperation. As a result, Nietzsche’s deeply empiricist, Humean and anti-Kantian claim is rather misleading that we just ‘believe’ in universal empirical statements even though we ‘know’ that they are not true (to the facts) because it is pragmatically convenient to do so. Kant see, instead, that the logical status of generic theoretical truths is different from universally or all-quantified empirical statements of the category of singularity or empirical concept-application. Hegel follows Fichte in explicitly acknowledging that the ‘truth’ of generic sentences or laws of default inference is ‘posited’. That means that there is always already some ‘institutional’ moment in our (habitually or explicitly) learned forms and norms of generic inferences. But at the same time they express general experience (allgemeine Erfahrung), which is, as such, by all means to be distinguished from merely subjective or individual ‘experience so called’ – which is nothing but sense perception. Sense perception as such is no knowledge yet at all.

Hegel sees, moreover, that we nevertheless need, and use, some control discourse about generic laws and sentences. In fact, scientific giving and asking for reasons mainly is concerned with the development of our system of ‘the concept’, i.e. of ‘conceptual’ norms or ‘generic truths’, much more so than with the development of histories about particular things and event in the past.

If anyone proposes a new truth in this level or category (mode) he or she has to give arguments why it is good to add them into the system of generic norms. Hence, it is Hegel, rather than Kant, who asks for the cultural and institutional status of synthetic a priori sentences, rules or norms. And he sees, that this status depends on cultural development, in this sense on the history of the concept, i.e. of the system of conceptual norms as they can be made partially explicit by conceptual titles, principles, rules and sentences. In other words, Hegel sees that conceptual norms are instituted in cultural history. This can and must be reconstructed in a structural history of ideas not in the sense of subjective imaginations or 'representations' (Vorstellungen) as the empiricist tradition since Locke has it but in the form of social or cultural institutions. Kant had only said some important things about their function – with the result that the status of all synthetic a priori or conceptual or generic sentences or propositions, rules or norms still remained unclear. Kant is right in his analysis that and why we need them and that we presuppose them in our practice of producing and understanding empirical judgments. Insofar, Kant lies the ground for all thing to come in his reflection on the form of application of our conceptual or rational faculty of thinking, judging and inferring.

But now what is the status of conceptual sentences and rules? If we say that they hold necessarily, which kind of necessity do we talk about? Do we say that they hold with necessity 'in the world'? Or do we say that they are necessarily presupposed as valid (justified) forms or norms of inferences in any claim about the world?

The new question, then, is the relation between empirical (singular) and generic knowledge, and the different forms of proofs and refutations depending on the status of the judgment in question. This status, in turn, defines the way of application, which is different for generic and for empirical sentences.

In other words, Hegel takes side with Kant against the claim that any meaningful sentence or judgment (proposition) is empirical, i.e. empirically true or false, and the all further questions are epistemological in the sense of the question what gives us the right to believe in the (empirical) truth of the sentences or propositions, even after we know that we can never know about the truth of universally quantified empirical judgments that entail some predictions about the future or already about things that are not here.[178] Notice that from now on we always have to

[178] All this said de re, i.e. with the help of my way of focussing on some patterns which might have been overlooked or underestimated by some other readers or might have been discarded as not relevant or even nonexistent).

distinguish between (universal) quantification in sentences and the genericity of standing sentences.

8.7 VARIETIES OF GENERALITY

We now want distinguish application speech acts of the category of singularity and speech acts that topicalize generic forms, i.e. of the category of generality or genericity. It is clear, then, that speech acts controlling the norms of application must reflect on both sides: on the norms of genericity and the norms of how to apply them. Such speech acts belong to the category of particularity: It is the category in which reflect on the forms of applying norms in singular cases. It is as such a meta-level category.

If we understand, that the status of generic sentence is peculiar, we can develop a much more realistic semantics for linguistic understanding as well as the important modal notions of possibility, necessity and contingency.

For only if we see that a generic statement like “cats have four legs” is governed in its ‘empirical’ application to singular cats by very special norms or rules of applications can we distinguish its status and its generic ‘truth’ from an ‘empirical’ sentence of the form “all cats have four legs”, understood in the mode or category of empirical universality. The latter sentence is, indeed, even wrong, whereas the following sentence is true: all (living) cats have a (still functioning) heart and liver (or some functional equivalent).

The statement that cats have heart and livers is, nevertheless, a generic statement. But it is a generic statement that is necessarily true for any living cat, if we ‘only’ read it as including functional equivalents; if not, the status is similar to the generic statement that cats have four legs: In general, or principle, cats have four legs, if they are not mutilated, sick, or monsters. A ‘normal’ cat has four legs, just as a ‘normal’ human can speak and walk and learn to read and write.

As it were, we might distinguish now between universally necessary conditions for being an X (like a cat) as, for example, to be an offspring from cats or to have parts that are functional necessary for living or surviving (if we exclude dying cats as a separate subclass and dead cats as being no cats anymore).

It is fairly safe to infer necessary conditions from the empirical truth that something (y) is a cat. This something, (y) than has with ‘conceptual’ or ‘generic’ necessity livers and hearts. It does

not, with the same universal necessity, have four legs, or, as an adult and healthy she-cat, usually quite many kittens.

Nevertheless, it is a generic truth that female cats have between 4 and 8 kittens, love milk, are very clean, if well bred and well educated and usually detest swimming. If some of these normality conditions are not fulfilled, we might be responsible to say so, to make it explicit, for example when I sell you my cat Kitty. Then I might be committed to say, well Kitty is overall a healthy, cat but she is castrated, so she will not have Kittens. Perhaps I have to say also, that Kitty is all in all well behaved but that she is not clean. Or I might be proud about my training of Kitty and tell you that she is a normal cat but she loves to jump into lakes like a dog.

This logic of the word ‘but’ or ‘although’ or ‘nevertheless’ is much more interesting than formal logics or logicians have hitherto realized. It is so interesting because at first it looks as if the ‘but’ is just a version of the logical operator “and” in logical conjunctions. In this reading, to say that I will come this evening but not before 11 o’clock just means the same as saying: I will come and it will be this evening and it will be after 11 o’clock. The use of the word ‘but’ only warns that there might be some expectation on your side that if I come this evening I might as well come between 6 and 11 PM. This possible case is excluded by the addition “but I come after 11”, as it also would if just would have said ”and it is after 11 when I come”. It might be a law of etiquette to be as precise as possible when announcing my arrival. But there is no ‘logical norm’ to do so.

In the case of our cat, however, the exclusion of normality conditions is different. Her we might be obliged by general reasons or general norms of linguistic charity and cooperativeness to exclude from a salient set of usually relevant normality conditions for being an F those conditions explicitly of which I know that they do not prevail. In order to make this case explicit as such we use the words “but” or “although” or ‘nevertheless’ or the like and say, for example, “even though x is an F it is no G”, when we usually are entitled to infer (in the default cases) that Fs are Gs.

This leads us to the central point, namely the idea that on the level of the concept or genericity with its norms and rules of generic inferences, we might better distinguish two classes, namely universal material implications of generic necessity that articulate necessary conditions for something x being an F or x,y,z ... standing the relation R on one side, merely default conditions on the other.

As a result, if we hear that x is F or that x,y,z ... stand in the relation R we might have to distinguish between two classes of material inferences M already on the generic level: those that

the speaker is committed to support in any case (M1) and those that we are entitled to in a default case (M2). In other words, the speaker entitles us hearers by his claim that x is F or that x,y,z ... stand in the relation R to both forms of drawing consequences, namely M1 and M2, but in different ways: M1 are ‘necessary’ consequences I can rely on if the speaker said the truth. M2 are default consequences I also can assume as reliable as long as they are not explicitly excluded. They are such not just possibilities or frequencies, but default entitlements that ‘follow’, in a sense, from the information given in the speech act. They can be subject of accurate control either by the speaker or by the hearer and, as such, the reasons for the very possibility of non-monotonic inferences, entailments or conclusions.

If this were so, and I belief that it is so, then we would not have non-montonic reasoning and entailment throughout, but only with respect to the weak material inferences M2. In other words, further information about the properties of x beyond the information that it is F or xyz beyond the property that the stand in the relation R can reduce the default inferences M2 but always widens or enlarges the necessary conditions M1 monotonously. Hence, we must distinguish additional knowledge that contradicts the fact that x is F or that xyz stand in relation R which disproves the claim and shows that it was, as an empirical proposition, wrong, from additional knowledge that is still compatible with x being F or xyz standing in the relation R even though some default conditions or entailments are bracketed.

If this is so, or rather, because this is so, we have to distinguish between different versions of adding information. The first is the easy one: it is normal conjunction of information, as can be often made explicit by conjunction of sentences of the form p&q. This is monotonic in the sense that anything which as hearers are entitled to infer from p and q can be also inferred from p&q. Of course, the speaker is committed to all necessary conditions of p and of q, hence of p & q.

But if we are in a situation in which additional information q restricts the default-inferences of the proposition p saying that x is F – for example by saying that x is a rare exceptional case of being an F that shows relevant particular peculiarities, just as a defect machine that still might be repaired or a sick or crazy animal that still can live, then we better do not read it just as p&q.

But how to analyze such an utterance of the form “x is F but q” or “x is F but it is also G, even though normally non-G holds for F’s”? For at first we certainly have the two assertions: “x is F” and “x is G”. Hence, we seem to have “x is F & x is G”, that is the conjunction of information. Nevertheless, the default inference of “x is F & x is G” to which we are entitled does not add up from the default inference of “x is F” and “x is G”. Rather, there is an asymmetry here. The

default inferences of the but-clause q seem to remain intact, but not of the original clause p. If I say that the Kitty is a cat but she has only three legs, that she is blind and that Kitty must be fed by a certain diet, I indeed say that kitty is blind, has only three legs and that we must feed her, which might be a nuisance for us all in comparison to a cat which feeds herself by hunting the mice in the barn. By the but-clause q, I cancel some default inferences of Kitty just being a normal cat. So if I would promise you to bring Kitty as a present and you would ask me who Kitty is, and if I then say, well Kitty is a cat, without informing you about q, you are in fact entitled to expect that Kitty is a normal cat. In other words, you are entitled to the default expectation that Kitty is neither dead nor blind, neither a toy cat nor a three-legged cat. That is you are entitled to believe that Kitty has the normal faculties of a cat and that the normal possibilities to deal with Kitty as a cat prevail.

If a speaker knows that relevant normal conditions of this sort do not prevail, he is committed to inform us about it. That is, he has to add some but-clauses to his information that Kitty is a cat. Or else we can hold him at least partly responsible for our erroneous belief that Kitty is a normal cat – which is a default inference from the information that Kitty is a cat.

This shows in which sense additional information about Kitty can reduce the default inferences or expectations the hearer H is entitled to believe and work with if the speaker S just tells him p, that Kitty is a cat, without giving him the additional information q, that tells us that Kitty is sick. Therefore, default entailment is not monotonic.

In fact, we better use the whole but-clause as a kind of functional which changes the default entailments of the clause it is attached to. As a result, a sentence of the form “Kitty is a cat but she is blind” gets the form “(But blind)(Kitty is a cat”).

But how does such an operator “But blind” work semanticly? It cannot change the necessary conditions for being a cat. But it can change the realm of default inferences we are entitled to believe or rely on under the condition that the uttered proposition is true and the speech act fulfils the normality conditions of good communicative acts. And it does so more or less in the following fashion:

Assume again that M2 are the default inferences we are entitled to assume as possibly or probably prevailing in the normal case of an empirical information-act that just says that p. Then the default inferences M2* of “(But q)p” contain all default inferences of q together with those default inferences of p that do not contradict q.

In other words, an empirical proposition p as an uttered sentence that says that x is F can still ‘contain’ quite some ‘contradictions’, namely that x is G even though ‘nomally’ we would expect that Fs are not Gs. Further information can reduce some of this open realm of default expectations or inferences we are entitled to assume as valid as long as they are not somehow explicitly denied. But as a result we always will have to distinguish between the monotonic logic of the necessary conditions of the propositions p, q, r … that are uttered with positive support by the speaker and the entitlements that are default conditions of the usual utterances of p, q, r … which do not add up monotonic. That is, the logic of default inferences is non-monotonic, the logic of necessary conditions is.

An example: There is a table in the kitchen, but it is Japanese, but, on the other hand, it is higher than Japanese kitchen-tables usually are. Here we might expect that the kitchen table is neither as high as Western kitchen table usually are nor as low as Japanese tables are. The second ‘but-clause’ is a kind of revision of the first but-clause such that we have here a kind of nested ‘buts’ – and this is why I have presented the case.

As a result, we better do not read the ‘but’ as a normal ‘and’, but express the non-symmetry between the original clause p and the additional revising clause “but q” already in the syntax. We do so by the operative form “(But q)(p)” in which we can distinguish the but-operator “But q” and the base p on which it works. As a result, it is no ‘and’ that enters the non-monotonic logic of but-revisions at all. It is misleading to develop such non-monotonic logics for the conjunction. There is no non-monotonic junction or ‘conjunctor’ ‘and’ at all.

A critic might say that this claim is proven by a mere notational trick. This might be so or not. For the notational trick just shows what I want to show, namely that we should be more careful in distinguishing conjunction “&” in sentences ‘p&q’, a mere adding up of utterances without clear logical connections which might be correctly understood as conjunction, but also can contain what I want to call non-monotonic ‘but-information’. Hence, there is an ambiguity in the idea of a mere ‘adding up information’: it can be monotonic conjunction but it can also be or contain non-monotonic restrictions or denials of default inferences which we usually would be able to use or rely upon if in an actual act of informing us p would have been the only proposition by which we get informed about x or xyz.

As a result, we might think about the question if on the level of generic and timeless truth as in mathematics it should not be ‘natural’ that ‘adding up’ propositions should be conjuncttional, i.e. monotonic, such that in the sciences that tell us how things behave ‘an sich’, ‘as such’ in a

merely generic world of ideal and hence theoretical possibility and necessity there would no ‘real’ non-monotonic but. Here, any ‘but’ is only an ‘and’ which is accompanied by some expression of surprise, as Frege had assumed about all uses of the word ‘but’. In fact, this harmless use shows already up when we say that any two numbers p and q can be divided by each other ‘but’ nothing can be divided by 0, such that any number but 0 can be a divisor.

If I am right, there is no non-monotonic logic in merely generic knowledge or on the level of conceptual truth.

In his analysis of reality as a modal notion, Hegel realises that in any act of reference to what we might call the objective world we reach beyond merely present experience and explain appearances by causal powers of more or less ‘substantial’ things that transcend, as such, mere ‘presence’: In contrast to merely subjective, heavily perspectival, appearances, real objects cannot be immediate referents of individual perception but belong, together with their dispositional properties, to a somewhat ‘deeper’ level of discourse or thinking. They have to be analyzed by a peculiar ‘Logic of Essence’. The resulting insight into the idealism of our modal concepts of ‘forces’ and ‘causes’ leads to the further insight that in the cultural history of science we develop (hopefully in a reasonable way) our normative system of distinctions and default inferences that are generically posited as conceptual determinants of the very objects we talk about in ‘empirical’ judgments and informative acts. When talking about ‘real states of affairs’, we always already use some of these transcendentally presupposed conceptual norms.

CHAPTER 9: REALITY AS A MODAL NOTION

9.1 META-LOGICAL REFLECTIONS

What I try to present here is not only a proposal for how to interpret what Hegel says about reality and possibility, but also an attempt to show that the resulting thoughts are appropriate to the topic[179]. This gives them a philosophical actuality far beyond a mere reconstruction of Hegel's philosophy. In precisely this sense it is a de-re-reading of Hegel together with some of his background, for example Aristotle and Leibniz, Kant and Fichte. In order to capture and guide the audience's interest in the topic, I unfortunately cannot just follow Hegel's own 'phenomenological' approach that wants to lead us on a 'natural path' through long and twisted arguments. I rather begin with the end, i.e. with the results of the whole argumentation.[180]

The first and most important point is that Hegel's insights stand in deep contrast to a 'Humean' or, how I would like to call it, 'flat' picture of possible empirical truths. This leading idea of (logical) empiricism was later made ingeniously explicit in Wittgenstein's 'Tractatus': 'Tractarian' possibilities are truth-functionally composed on the basis of logically elementary propositions. The truth of any such basic proposition is, according to the principal model, 'immediately' controlled by perceptions.[181] Only logically complex sentences that are non-trivially true, if they are true, are informative or 'meaningful'.[182] They somehow quantify over space, time and 'colours' (or 'Gestalts').[183] The so-called 'possible worlds' of modal logic in contemporary analytical philosophy are, accordingly, maximal consistent sets of such 'tractarian possibilities' – with the result that they are no worlds of objective things in which there could be forces and causes at all. Since this is so, formal modal logic misses our real practice of talking about real possibilities and objective reality.

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[179] … needless to say that all this holds according to my judgments and commitments.

[180] At the end of the *Logic of Essence*, Hegel regrets himself that it was impossible to begin the investigation with 'the Notion' or 'the Concept'. Cf. *Hegel's Logic* (transl. William Wallace, Oxford 1975), p. 222 = Enc. § 159: "When, as now, the notion is called the truth of Being and Essence, we must expect to be asked, why we do not begin with the notion? The answer is that, where knowledge by thought is our aim … truth, when it forms the beginning, must rest on mere assertion." The overall task was to show that a thorough analysis of *Being* 'leads to' *Essence* and a thorough analysis of *Essence* 'leads to' *the Notion*, *the Concept* and *the Idea*. In these steps, it seems as if Hegel aspired to present a kind of 'proof' of *his doctrine* of "*Absolute Idealism*". But what kind of 'doctrine' is this? And what kind of 'proof' is given for it?

[181] More precisely, we will have to distinguish between a 'tractarian' level of logically complex sentences about possible appearances (or 'singular empirical cases') and an 'essentialist' level of generic forms or norms of conceptual truths and inferences.

[182] Like logically complex sentences about natural numbers, their truth is most often not decidable here and now.

[183] Wittgenstein speaks about „*Raum Zeit und Färbigkeit"* as "*Formen der Gegenstände*".

An additional problem is this: There is no other contact to the 'real objective world' than by declaring that some possibility can be accepted as 'reality'. As a result, there is no 'trans-dialogical' truth which we could appeal to.[184] In contrast to this insight into the 'absolute role' of performative attitudes in speech acts, dogmatic scientism and naturalism defend a free-floating 'idea' of truth as if it were a property of propositions (or even of sentences) in abstraction from any practice of evaluating claims that say that this or that possibility is a reality. The result is an outdated 'ontological' position that still remains captured by some naïve 'correspondence theory of truth'. Richard Rorty has again and again attacked this image of 'true knowledge' as a 'mirror of nature'. It is nothing but transcendent metaphysics and, as such, not intelligible at all, at least if we open our critical eyes to the very concepts that are presupposed in any such version of 'belief-philosophy'.

As a critical reader of Kant and empiricist scepticism (Hume), Hegel realises that in any act of reference to the objective world we explain perceptual appearances by causal forces of things. And he sees that things, when viewed as the causes of our perceiving them, are, as such, no immediate objects of individual perception. If we think this over, we should be able to understand that and why the real objects in the real world are already situated on a 'deeper' logical level than any object of direct or immediate perception. This does not mean, as empiricism holds, that we 'really' perceive only 'sense data'. It means, instead, that the relation between the objects we perceive and our perceiving them is a logical or, to be more precise, a conceptual relation. If we want to read this relation as 'causal' we still have to understand the logical status of this peculiar form of causality – since it presupposes a (hopefully non-transcendent or non-metaphysical) understanding of 'dispositional properties' which we never arrive at in (logical) empiricism.

Hegel's basic insight is here this: When we talk about substantial things as causes of perception we are already talking in an ideal mode of speech. This is so because there are (as Heraclitus already had seen, followed by Parmenides and Plato) no absolutely time-general 'things' in the 'empirical' world at all. Every thing changes in time and has 'its' time of identity and existence. Only abstract forms can be 'eternal'. As a result, the only 'substances' that do not change or disappear at all belong to a system of ideal 'entities' and ideal, mathematical, truth. The 'real' substantive things in the real world are, instead, substances of middle range, so to speak. Their dispositional properties of middle range are expressed by 'generic' truths. The structure of a system of generic truths and their applications is the topic of Hegel's 'Logic of Essence'. Such a

[184] In a sense, this is the core insight of Robert Brandom's philosophy of language and truth.

system contains middle-ranged generic objects as the typical life of a member of a certain species of animals or the typical behavior of volcanos, just to name two examples. The generic objects belong to a level of objects which Hegel marks by the label ‘as such’ or ‘in itself’ (‘an sich’), their appearances to a level of objects labelled ‘for itself’ (‘für sich’) and properly explained experience to a level lablled ‘in and for itself’ (‘an und für sich’).

In order to see that all this really has something to do with Hegel’s texts, there are, however, two main problems to solve. The first concerns his nominalised style in which he seems, at least for an innocent reader, to use “Being” and “Nothing”, “Essence” and “Appearance”, “Possibility” and “Necessity” in a kind of mysterious talk about transcendent powers behind our backs. The impression is that he wants to prove in a kind of ‘dialectical deduction’ that they ‘exist’ and have some ‘speculative properties’. In order to get rid of this misleading reading of Hegel’s (admittedly difficult form of) writing, it may already help to view the labels above, just like the labels “the Absolute”, “the Notion” and “the Idea”, as ‘title-words’ for ‘logical categories’ and read his ominous ‘speculative sentences’ as ‘title sentences’ or headlines that tell us something most general about the ‘category’ named or labelled or overwritten by the categorical title word.

The topic of Hegel’s logic is in fact a system of ‘logical categories’. Such categories must be understood in the wide sense of the Greek word, namely as logical forms or logical modes of speech or thinking.[185] This means, for example, that the title-word “Being” stands for the ‘normal’ mode of speech or rather, for a ‘natural’ attitude’ of simple reference. According to this attitude we think that we can immediately or directly ‘refer’ to objects by names, to properties or qualities by predicates, to propositions or states of affairs by sentences, and to facts by true sentences. In his Logic of Being Hegel tries to dissolve the inner contradiction of this ‘naïve’ attitude, especially with respect to (pure) quantities, i.e. to mathematical concepts like sets and numbers, geometrical forms and infinitesimal or infinite magnitudes.[186]

I cannot develop the arguments Hegel proposes in the Logic of Being in any detail. We must be content with the claim that they are generally concerned with the different logical usages of noun phrases and verb phrases in sentences and speech acts, i.e. with the question how names refer, to which entity (‘object’ or Gegenstand) g a naming act refers and about which domain G of such entities we quantify about when a noun phrase is a quantifier. The last question depends directly on the difference between finite resp. infinite predicate negation P^c resp. P^∞

[185] Of course, in a longer treatise it would be important to give a general answer in some detail to the question what a logical category is and what it logically means to make such categories the ‘object’ of speculative or categorical sentences.

with respect to the relevant domain G and a given verb-phrase P defined in G. Not to be prime is, for example, a finite or determinate negation of a predicate for numbers but not for ‘caesars’. I.e. for kings or other men to be prime is an infinite or non-determinate negation, as Leibniz and Kant had already seen.[187] A domain G of a quantifier can and must in fact be understood as a union of a G-predicate P and its determinate negation or normal complementary P^c. Since this is so, Frege’s quantificational logic is rightly called “predicate logic”: It analyzes nothing but the system of (negated or non-negated) logically complex determinate G-predicates $x\varepsilon P = x\varepsilon\lambda_y A(y)$ which are truth-functionally defined in G on the ground of some system of logically elementary G-predicates or basic distinctions in G. Only on such a ground can we recursively define the use of logically complex sentence-forms like “not-p”, “p and q” (or “if p then q” or “not-p or q”), and “for all x: A(x)”.

When we now turn our focus more to Hegel’s Logic of Essence, it is important to see that the ‘speculative’ sentences of this part of Hegel’s Science of Logic (in all of its versions) belong to a ‘meta-meta-level’ analysis of reflective and evaluative judgments about judgments. The topics of evaluative meta-level judgments of reflection can be, for example, judgments of other persons. The easiest example may be this: I say that what you say is true and, by saying this, I endorse what you say. When I say that this or that really is the case, I also emphatically undertake the corresponding commitments[188] – as Robert Brandom has shown in the tradition of Wilfrid Sellars and Richard Rorty.

The task now is, of course, to understand how some of the most disturbing title-sentences of the Logic of Essence are to be read, as, for example, the following:

“What is possible is also impossible”;

or:

“Reality (Wirklichkeit) is (essentially) a possibility”;

or the most contested of Hegel’s logical oracles:

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[186] When we talk about abstract objects like sets and numbers in mathematics we already presuppose some practical mastery of the constitution of proof- and truth-conditions of corresponding sentences.

[187] It was therefore a really bad idea of Frege to try to define a concept of number as a sortal in a universe of all discourse and to evaluate a sentence like “Caesar is no number” as true.

[188] It is an already much more complicated situation when I say that you or they *know that p*. Wittgenstein had noticed furthermore, as Hegel before him, that it is a hybrid case when I myself want to make an evaluative judgment about my own possible judgments, for example when I say with some kind of emphasis that *I know* that p and think that I am talking in such a ‘Cartesian’ situation somehow mysteriously about ‘myself’.

“What is real is reasonable and what is reasonable is real”.

At first sight, all these sentences sound wrong, even self-contradictory. It seems wrong, for example, to declare that anything possible is also impossible. And, in fact, Hegel is much too sloppy here. For he does not want to say that, if it is possible that p, it is also not possible that p. This would lead to the nonsensical claim that nothing is possible. Nor does Hegel want to say that, if p is possible, non-p is also possible. This would mean that any p is contingent.[189]

But there are deeper problems than mere sloppiness. If we do not want to reject Hegel’s speculative sentences outright – even though most readers are inclined do so and not without some seemingly good reasons – we might compare them with Frege’s explanation of the categorical difference between a 1st-order conceptual property or function F(x) and a 2nd-order object, expressed by a name-like designation:

“The concept ‘horse’ is no concept”.

Frege knows, of course, that this sentence sounds strange. He knows also that his explication of the difference between concepts or functions as ‘unsaturated’ on the one hand and names or definite descriptions as ‘saturated’ on the other is merely metaphorical (or analogical).[190] This is so because they refer to performative forms (Vollzugsformen) that have to be mastered and are, as such, no ‘objects’ at all. In the case of concepts we have to master the correct use of ‘un-saturated’ or ‘open’ sentence-forms A(x) like “x is a horse”. In the case of Fregean senses, we have to master the use of definite descriptions. In the case of talking about senses, functions, properties or concepts, we have to master certain techniques of nominalisation and abstraction and the use these name-like expressions in oblique contexts or in contexts of 2nd-order properties.

In any case, Frege’s metaphorical explanations give us, as he himself says, ‘hints’ for how to read his talk, on a semantic level, as referring to the different functional or categorical roles of corresponding expressions in sentences or judgments. We must learn, it now seems, the proper reading of Frege’s categorical sentences just as, for that matter, of Wittgenstein’s ‘elucidations’ or Hegel’s ‘speculative’ sentences.

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[189] The definition of contingency is, of course: p is contingent if p is possible and non-p is also possible.

[190] In fact, many logical distinctions can be made explicit only by using such ‘syntactical metaphors’. Eric Stenius has helpfully coined the word in his interpretation of Wittgenstein’s ‘speculative’ sentences, as Hans Julius Schneider has shown. Cf. Eric Stenius, *Wittgenstein’s Tractatus. A Critical Exposition of its Main Lines of Thought*. Oxford 1960, and Hans Julius Schneider, *Phantasie und Kalkül* , Frankfurt 1992.

9.2 THE DIFFERENCE BETWEEN BEING AND ESSENCE

However, in order to understand the overall thought of Hegel's logic and his methodical plan and procedure, the reader still needs some more orientation to find his way through this almost outrageous text, in which the author seems to jump without sufficient motivations from logical titles to seemingly metaphysical entities like God, Spirit, and (Self)Consciousness.[191] Even though Hegel himself gives some hints, they certainly are not sufficient for an average reader. And before we even could start to criticise Hegel's aspirations, we first should know something more about the difference between the levels of Being and Essence, between Appearance and its (essential) Ground (or 'eidetic cause') and, as we shall see, between mere Actuality in the sense of just being there and (real, objective) Reality or Existence in the sense of an appropriate explanation of what we empirically perceive as being there.

In his Logic of Being, Hegel begins with a critical destruction or 'dialectical' de-construction of 'the naïve approach to reality'. He must begin in such a way in order to avoid all the 'isms' or 'positions' of mere 'belief philosophy'. 'Belief philosophy' starts with some 'confession' or 'en-rolment' into a 'school', for example into the school of 'naturalists' or 'idealists', 'internalists' or 'externalists', 'Cartesians', 'Lockeans', 'Humeans', 'Kantians', or 'Fichteans'. In fact, Fichte had claimed that it was a matter of what kind of person one is whether one accepts the transcendental primacy of thinking or thought, action or will over the empirically given – or not. Hence, for 'Fichteans', as later for William James and American Pragmatism altogether, it appears as a matter of will to view the world first and foremost under the perspective of an actor rather than a spectator (as Lewis White Beck nicely reconstructs Kant's 'dualism'). Hegel tries, instead, to show that this primacy is not at all a matter of decision or Weltanschauung but a matter of intelligence and logical reasoning. He wants to show that the 'naturalist' stance towards object level talk about things and 'matters' in the world is just self-contradicting. This is so because the naïve stance of 'naturalism' – which may include here the 'materialist' or 'scientist' belief that physics is the measure of all things, that they exist or that they do not exist – presupposes a complex constitution of generic truth (allgemeine Wahrheit) as a condition of explaining singular experience by 'essential' powers of real objects. Though Kant has opened

[191] I cannot deal with all these topics here in detail. In order to understand what Hegel says about Reality (*Wirklichkeit*) as a modal notion in contrast to Actuality (*Dasein* or mere '*Realität*'), we must, however, place his considerations into the context of his general enterprise. The following examples show how difficult this can be: Despite all its merits, J.N. Findlay's book, *Hegel. A Re-examination,* Oxford 1958, sufficiently shows that 'philological' approaches to Hegel's texts regularly lead us astray. This is so because any use of Hegelian jargon in 'verbal translations' or 'paraphrases' is not helpful. We can comprehend Hegelian thought only when we *re*phrase the leading thoughts in our own words. *Charles Taylor's* ground-breaking book on Hegel more or less totally ignores (or misunderstands) the *logical* arguments; the same holds for virtually all the works of French writers on Hegel, not only those heavily influenced by *Alexandre Kojève* and his 'bebop interpretations'.

the door to it, this fact is forgotten or denied in almost all following ‘schools’, ‘systems’, or ‘philosophical doctrines’, including the empiricist belief in immediate perception of how things are.

Hegel’s most crucial insight now is this: If we reduce logic to merely formal logic we cannot analyze the constitution of the basic domains and elementary sentences which enable us to talk about physical bodies and chemical matter, about living bodies or thinking humans, abstract object like numbers and sets, perceptible gestalts and colours, or about non-perceptible forces and possibilities.

As we have already seen, in the definitions of complex predicates by Fregean predicate logic we must already presuppose the domains G and the elementary sentences and truth conditions in G as well-defined. Today, we usually underestimate this problem since we externalise it into a so-called model-theory, without realizing that these models are only mathematical, i.e. set-theoretical structures. Sometimes we label them by fancy names. In formal modal logics, for example, authors like David Lewis talk about ‘sets’ of ‘possible worlds’ and about ‘nearness relations’ and ‘trans-world-lines’. Almost no-one seems to see how unclear the whole picture is: Any such ‘world’ is nothing but a structured set (as one should have learned in the context of Montague-grammar). It can, as such, be used to define formal truths for appropriately interpreted formulas (‘sentences’), as we know from merely mathematical model-theory. But then, any set of possible worlds is nothing but a structured set of structured sets in a system of purely mathematical set theory. The label “possible world” is nothing but a reminder that we want to use such a mathematical structure as a formal analogy or metaphor (formal model) in order to make some logical features of our non-mathematical talk about possibilities and necessities or contingencies explicit.

There certainly is some feeling of success when we arrive at nice schemes of deductions in axiomatic modal logic by interpreting nested modal operators and their inferential content as quantifications over sets of possible worlds (or in so called forcing trees, as they were developed by Beth, Kripke and Cohen as model-theoretical interpretation for intuitionistic quantifications and the modal calculus S4). But all this is by far not enough. Therefore, we better should check if, or how far, we can succeed on this road, by this method.

Hegel asks a similar question. Of course, he could not have referred to a developed mathematical model of possible worlds and he does not even refer openly back to Leibniz. But the principal problem was already clear, namely in the context of the analysis of the term and

concept of (physical) forces. Force obviously is a modal category. As other non-formal modalities, for example, necessity and contingency, reality, cause and ground, it is a topic of a non-formal Logic of Essence.

It is indeed enlightening to compare the situation of possible world semantics with Hegel's criticism of a merely mathematical definition of force in the framework of a mathematical calculus or in systems of differential equations. Such a definition is by far not enough to understand what we do when we talk about forces and 'explain' the movements of bodies with reference to effective forces, thereby using the corresponding mathematical functions. In the same vein, the merely mathematical model of quantified modal logic does not tell us anything about the real constitution of possibilities and necessities.

What could a 'possible world' or 'the' system of 'all' possible worlds be outside mere mathematics? What is it that is represented metaphorically by models of possible worlds? Is it really enough to say that a possible world is a maximal consistent set of 'descriptive', i.e. 'tractarian', sentences? The very notion of maximal consistency already presupposes a purely mathematical domain G; only there can we define the logically complex truth conditions in the schematic or syntactic way as it was developed by Frege.

There are, of course, widespread prejudices connected with the very words "essence" and "essential": As a kind of conditioned reflex, contemporary philosophers want to be 'anti-essentialists' and prefer to cancel not only the words "essence" and "essential", but sometimes also the word "cause" (Russell) or "force" (Cassirer) and replace them by a more formal term like "function". But precisely this avoidance of difficult terms makes critical analysis impossible: The result is a retreat into merely 'exact' but, precisely as such not rigorous philosophy.[192] The only remaining disputes are those between different scholastic positions of belief philosophy – which explains the new revival of formal metaphysics in our days. Beyond this, subjective intuitions are proposed as allegedly immediate justifications of formalist metaphors or mathematical analogies that are misleadingly called 'structural models'. It remains unclear what they are models of.

The task of rigorous philosophy (of science and knowledge) consists, instead, in providing critical explications of the forms and norms of reasonable thinking and the notion of 'participation',

[192] The greatest danger to misread Hegel or Kant, for that matter, is reading their texts as talking about some idealist world behind the scene of experience. Such a reading attributes to these authors precisely what they fight against. This misunderstanding gets especially prominent when a reader sticks to his own, perhaps 'empiricist' prejudices about 'essences' (or, for that matter, about 'the absolute', 'God'). According to these prejudices, we better stop talking about essences at all. They are said to be 'metaphysical' entities behind the scene of experience about which we

of Plato's methexis. The leading question is: in which sense can we understand mathematical and other metaphorical models (for example the diverse models of chemistry) as descriptions of an 'underlying structure' of the 'real world'? How can we 'explain' apparent phenomena by relating them to such an underlying structure? We could call any underlying structure an "essence" and any 'explanation' of an actual phenomenon or appearance that relates it to an underlying structure an 'essential' explanation. Then the analysis of the mode of existence and any access to the underlying structures and to the relation between them and 'corresponding appearances' obviously belong to a 'Logic of Essence'.[193]

The 'dialectical contradiction' which Hegel wants us to take notice of, and account for, in this context is precisely this: what explains our perception causally is, as such, something that is not perceived. It is, as such, i.e. by some logical ground, not even immediately or directly perceivable. This fact shows up in all claims of 'fallibilism' which hold that we can never be sure what we perceive. At the same time, the object that explains perception should be exactly the object which is 'really perceived'; i.e. we should 'know' that it is there on the basis of our 'real' (or rather: 'actual') perception.

Thus we arrive at the following dialectical contradiction: We want to explain our sensations and perceptions (from the time of Locke to modern cognitive science) by something that we allegedly do not (directly) perceive. But if it is not directly perceivable, it must be so on logical grounds. That this is really the case can be quite nicely seen when it comes to the notion of force and mere possibility. For we would need very sharp eyes, as Lewis Carroll would have said, to 'see' a 'force' doing this or that or to 'see' a merely possible thing or event. We cannot 'see' functions or rules or laws either. We cannot even see 'relations' as such. We have access to relations and functions only via corresponding sentences, as Frege has made unmistakably clear in the meantime. But already for Plato it was absolutely clear that the semantic or inferential forms or ideas of our representation of the world cannot be direct objects of perception. By combining these insights of Plato and Aristotle with those of Kant, Hegel shows that the relevant 'forms' are virtually always forms of performances (Vollzugsformen), for

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cannot know anything. The attitude of avoiding these crucial categories is, however, similar to the idea that we could avoid difficulties by not talking about them.

[193] The fact that knowledge about internal properties of pure, perhaps already mathematical, structures belong into a domain of (perhaps somehow essential) possible models is already realised by Aristotle (Meteor. 17, 344a5-7): „Concerning those things that cannot be perceived by the senses, we already did enough with our means of reflective reason when we only dealt with mere possibilities". It should be by now beyond any doubt that we have to distinguish the level of more or less immediately perceivable objects (here and now, in actuality) and what we refer to when we 'explain' them as appearances by what is *really there* (and not just here and now), i.e. by a possibility that is judged *to be real*.

example forms of determining a non-subjective object of perception and explaining the perception by the object.

In other words, the basis of any knowledge about forms is practical knowledge, knowing-how to reproduce and recognise forms. As such, practical knowledge about forms is a ‘rational’ faculty, an ‘ability’, a ‘competence’. Such abilities can and must show up in their actualizations. But what is merely actual often does not show sufficiently that it is a result of a generic faculty. This is obviously so in the case of an action, which, in principle, always could be as well the result of an accidental behavior or occurrence. But also in cases of ‘natural’ processes – without intervening human actions – we need good experienced judgment in order to understand them as consequences or effects of some real generic power or force together with what has really happened earlier. I.e. the attribution of a real generical ‘power’ in a causal explanation of some actual appearance already presupposes at least a differentiation between what is merely contingently actual and what can be explained as an actualization of some concrete dispositional force, power or ‘generic possibility’.

Obviously, we now must distinguish between possibilities on at least two levels. The first is ‘flat’ possibility which remains restricted to the category of Appearances. It is expressed by merely ‘tractarian’ propositions about merely ‘empirical’ states of affairs. The second is the level of things and powers by which we explain what the real grounds or causes for this or that appearance was or is.

In both cases we evaluate possibilities when we say that something is really the case. However, in the case of appearances we remain in the domain of what is actual, what is there – here and now, and what we have access to by more or less direct perception and in present actions. When we talk about causes, we logically separate the ground from the grounded, the ideal and generic cause from the real or rather actual effect. Here, cause and effect obviously cannot be only flat empirical events, as the Humean picture presupposes. Causes as essential grounds are rather situated on a different ‘onto-logical’ level of ‘essences’, whereas the ‘effects’ better belong to the level of actual ‘appearances’. The grounds as real reasons for actions or real causes for appearances ‘show up’, as it were, in their actualizations, in the appearances. Insofar, the causes are ‘proven’ by their effects, even though we say that they produce the effect.

The Leibnizian principle of sufficient reason now appears as a kind of mere tautology. It says that according to our form of representing and explaining apparent and actual events as regular

‘effects’ on the ground of generic causes (or reasons, when it comes to actions) we can in any singular case of an actual event look for a ‘sufficient’ ground in the generic level of talking about essential descriptions of what happened and explanations of why it happened. These grounds or causes are not only preceding events – as the ‘flat’ picture (down to Donald Davidson) wants to have it. According to this Humean or ‘tractarian’ picture, any sequence of (a fortiori: logically independent) events would be contingent anyway – and the only ‘necessities’ which exist according to it are ‘logical tautologies’. These are expressed by sentences like, for example, ‘if p&q then p’, by which we can make logically true inferences explicit. Only therefore Wittgenstein can declare that any belief in a causal nexus (that goes beyond merely formal logical necessities) is (‘the’) superstition. The only thing to do is now ‘pragmatically’ calculating with probabilities by which he might ‘predict’ more or less stable relative frequencies of certain ‘flat events’. But such events are no well defined objects at all. They are at most clusters of possible perceptions.

Obviously, Hegel’s approach to logic and conceptual analysis is much wider than that of the Fregean and tractarian tradition. His notion of the conceptual is much more complex. What he stenographically calls “the concept” is ‘the’ ideal system of generically reliable default inferences, logically situated on the level of ‘essences’ that still have to be applied to appearances on the ground if good experiences but free judgments. In fact, what I would like to call a materially conceptual ‘truth’ (or norm of inference) is not always ‘universally’ true in the sense of merely schematic quantification. Any application of generic truths to a specific singular case needs a kind of filter of good judgment. Just because Kant’s Third Critique had addressed the importance of such judgments, Hegel praises the book in the highest: Here the author really develops speculative thinking, i.e. logical analysis.

A result of this is that we have to distinguish between quantificational universality in an already well-established domain G (in which Fregean predicates are defined) and genericity. It is to the honour of American Pragmatism that John Dewey had already realised the importance of this distinction also.

9.3 FREE ACTS OF ACKNOWLEDGMENT

In judging that p is ‘possibly true’, we presuppose already corresponding truth- or fulfilment-conditions. More precisely, to understand a possible or real statement p is to know under which conditions we would evaluate the claim that p as well-justified from the speaker’s standpoint – and perhaps as true from our standpoint.

Robert Brandom has shown that and why any approach to semantics which only looks at ‘speaker-independent’ truth conditions of sentences (as merely syntactical forms) is much too narrow-minded. It neglects the dialectics of evaluating the subjective reasons of a responsible speaker from our, albeit also fallible, perspective of hearers and evaluators. The fallibility of any of us results from the fact, however, that the inferential impact of what a speaker says usually conceptually surpasses what can be controlled by his subjective, hence perspectival, (perceptive) ‘knowledge’. This is so at least in all cases of world-related information. Wittgenstein is right to stress that any such information is, if it is meaningful, not just ‘conceptually’ true. A contrast to this is, for example, a case in which I show you a thing or event and just remind you that it is called N.N. But Wittgenstein is wrong to assume that empirically informative utterances are just logically complex in the sense that they talk about many or some ‘coloured’ space-time-points, as we could say as short as ironically. Essentially the same holds for all clone-versions of the Tractatus in post-Carnapian philosophy.[194]

Moreover, Bernard Williams Truth and Truthfulness (Oxford 2002) nicely shows that we have to distinguish between the subjective conditions of mere sincerity (which excludes that the speaker lies consciously) and accuracy (which excludes a kind of negligence). Accuracy is the attitude of a responsible speaker. It presupposes a disciplined faculty of giving reasons that can be accepted as sufficient from the standpoint of the speaker S who claims that p. But the ‘generic’ or ‘essential’ conditions of truth (at least most often) surpass accuracy. This is the reason why my evaluation of S’s claim as ‘true’ can go beyond S’s accuracy. Moreover, my undertaking the claim is always a new (speech) act. Of course, my acknowledgment (and, for that matter, any ‘scorekeeping’ in Brandom’s sense) can also be false or erroneous: it can be inaccurate even in cases of subjective sincerity, for example when I do not control my own reasons critically enough. All in all, ‘objective’ truth turns, at least in many cases, into a merely regulative idea which stand in a certain relation to more ‘civil’ normative conditions of sufficient reliability of what we say – which we try to fulfil as speakers, hopefully with sufficient accuracy. Its result is, in turn, evaluated by others.[195]

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[194] It is quite unclear, by the way, what it could mean in an empiricist setting to quantify over space-time-points, if we do not want to stay in a purely mathematical structure. Any reference to a real ‘place’ in the world always already presupposes some (possible) observer, moved bodies and clocks.

[195] There is no access to non-present possibilities (*dunameis*) other than by ‘thinking’. This means that the understanding of possibilities already presupposes conceptual competence, i.e. the competence to produce or understand verbal or pictorial re-presentations of what is not here or does not exist now but could be here or can exist there and then. This observation leads from the *Logic of Essence* to the *Logic of the Notion.* We can understand the argumentative steps in Hegel’s Logic therefore in this way: We do not know what we talk about on the level of *Being* if we do not already use the categories made explicit in the *Logic of Essence*. And we cannot understand these categories if we do not already master the inferential and dialogical structures that define the conceptual or semantic content of our speech acts and sentences.

9.4 REALITY AS EVALUATED POSSIBILITY

Only humans have access to possibilities. To be human even means to have the faculty of thinking, i.e. to have access to non-present possibilities. The title-sentence

“reality is a possibility”

says, accordingly, that we should distinguish between what is merely actually sensed or perceived (here and now) by singular individuals, such that it can be a reliable or a deceptive appearance of what there really is, on the one hand, and what can count as (objectively, hence at least trans-subjectively) real (“wirklich”) on the other. We never perceive what is real without modal, hence conceptual, mediation. That is, we never have access to objective reality by mere sensation (Empfindung) or sense-perception, not even to the realities of our own bodily existence. This does not mean, however, that the actuality of, say, my headaches is questioned. Nor does it mean that we do not perceive with sufficient certainty that there is, for example, a chair in front of us. The only point is this: Talking about an objective thing like a chair already presupposes that we can expect that some possible things can be done with the object, e.g. that we can sit on it – which we cannot do if it is only a painted chair. Access to reality thus always requires a differentiation between mere or ‘seeming’ appearances and how some specific reality shows itself, as we are inclined to say. This very fact gives the considerations of Hegel Logic of Essence its importance and depth.

All this can be nicely shown at concrete cases, as, for example, when we look at a hilarious French mock-documentary on Stanley Kubrick and the race to the moon. In this film, Alexander Haig, Henry Kissinger, Donald Rumsfeld, some real CIA-grands and the widow of Kubrick tell the story that the ‘scenes’ that show Neil Armstrong’s first steps on the moon were filmed by Kubrick in a studio on earth – in order to get some appropriate propaganda material for TV. Obviously, we have to evaluate at least the following three possibilities: what was shown in TV was the real thing (1), what was shown in TV was produced in a studio but the crew was really on the moon (2), or the whole business was a hoax (3). In such an evaluation, we (should) accept something as ‘real’ (‘wirklich’) if, but only if, we have ‘sufficient reasons’ or ‘satisfying grounds’ for declaring that the possibility expressed in a judgment is no mere possibility but, as we say, reality. In fact we say that something is really so and so, when we undertake such a reality claim and deny that it is a mere possibility. Hegel’s most notorious phrase articulates precisely this fact:

“what is real is reasonable and what is reasonable is real”.

The formula does not only mean, as Hegel himself sometimes says, that what is reasonable eventually comes (or, even more defensively: 'should come') into being. It rather says something about the logical status of reality claims. The basic insight is that reality claims are (almost) never immediate, that is, that we (almost) never 'immediately see' or 'sense' or 'perceive' what is real. This is so because what we count as real is (almost) never independent from sentences or propositions with trans-personal inferential impact and truth conditions that are constituted in such a way that they systematically surpass the domain in which we can evaluate truth merely subjectively by 'mere perception' or 'mere intuition'. This logical fact and nothing else is the reason why any non-tautological empirical truth is fallible. In other words, we always have to judge if a possibility-judgment can be viewed as telling us what really exists.

This is the reason why Hegel can also claim that he has 'neutralised' scepticism by incorporating the problems that it articulates.[196] He thus refutes transcendent dogmatism or 'rationalism' as well as transcendent scepticism or the subjectivism in Humean 'empiricism': The traditionally transcendent diagnosis and the traditional solutions are misleading because they do not see that the alleged 'transcendence' of the truth conditions of informative propositions about the world is nothing but a consequence of the fact that there is no subjective perspective of a singular person that could provide her with the possibility of establishing the truth of an informative empirical claim without any possible doubt.

This does not mean that no-one knows anything for sure. It rather means that the quest for subjective certainty is not relevant for 'civil' knowledge in the sense of playing the game of giving responsible information about the world as accurate as possible and of assessing such informative acts in a control games of asking for and giving reasons. Almost no such reason will be 'absolutely' sufficient in the sense that there can be no further doubt. On the other hand, there is a truth in Cartesian self-consciousness. It consists in the 'absolute' fact that any judgment is my or your judgment, the judgment of hopefully responsible persons.[197]

Now we can look back on Hegel's progress: The Logic of Being had been a deconstructive logical analysis of the naïve, naturalistic, point of view. It has shown that there is no 'immediate' talk about things and objects without presupposed norms and rules for what it means to make responsible claims or informative statements about them. Such statements are prima facie only possibly true. Insofar, we can understand the Logic of Being, all in all, as a destruction of any

[196] Hegel uses the phrase "sublation" or *Aufhebung* for such a logical analysis and speaks of a self-refutation or self-consummation of scepticism in this context.
[197] The quest for subjective certainty holds philosophical epistemology still in its grip and results in a wrong alternative between dogmatic belief-philosophy and scepticism which is, in the end, also mere – solipsism.

transcendent Platonism. We find such Platonism not only in theology and transcendent ('rationalistic') psychology, but also in scientism, i.e. in materialism and naturalism. The problem of Platonism is its 'reification' (Verdinglichung) of logical forms or of linguistic representations and explanations (of things and processes). Most prominent are reifications of causality and our talk about forces (1), but also of abstract objects like numbers (2), of abstract truths like mathematical truths (3), of mere possibilities as in any not merely formal theory of possible worlds (4), of theoretical entities like alleged rules wired in the brain as a computing machine in cognitive biology (5), and of institutional forms of actions and practices in economics (6).

9.5 IDENTITIES IN THE CATEGORY OF ESSENCE

The Logic of Essence is the enterprise of not avoiding, but analysing, the question how we explain appearances as appearances of some underlying reality. Therefore, it is clear that the following categories or modes of speech fall under the title of "Essence": Ground (Grund) and Appearance (Erscheinung) on the surface of perception and Anschauung, Reality (Wirklichkeit) and Contingency or accidental Actuality (Kant's 'realitas phaenomenon'), Possibility and Necessity, Cause and Effect. All these categories, or modes of speaking, are used when we distinguish between how something seems to be and how it (allegedly really) is – or when we explain things or events in empirical actuality by their 'real causes'. With respect to the objects we talk about in such explanations the crucial questions concern their Existence and Identity.

A most important thing to notice is that Identity in the logical context of explaining appearances by reality is different from abstract identity and formal existence in the sense of using the 'mathematical' identity sign "=". Moreover, Existence on this level is usually not fully expressible by the 'logical' sign "$\exists$ xA(x)".[198] This is so because the question if something exists includes the question if, what we talk about, is already situated in the proper domain of discourse.

What is the logical form, now, in which we talk about the identity of a thing, or the existence of a bodily object? And how do we explain the different, and changing, properties of an 'empirical' object?

The importance of the category of identity for this question (in the Logic of Essence) gets clear when we realise, first, that the trivial formulas a=a on the meta-level of signs or names and the

[198] Existential quantification of this sort already presupposes the constitution of an (abstract) realm of discourse. Such a domain G can only be given by telling us how to interpret the variables by turning them into (perhaps context- and situation dependent) G-'namings'. Such G-namings are not just names as configurational elements of a syntactically defined system of expressions but performative acts that fulfil conditions that allow us to view the a representations of some G-'entity' (in the proper domain G). The proto-type case it turning a variable for natural resp. real numbers into a numeral resp. some determinate characterization of a real number.

corresponding formula ‘everything is identical with itself’ on the object-level of our talk about ‘entities’ of any sort whatsoever will never help us to understand what the identity of an object, thing or entity is. In order to understand this obvious but most crucial fact, we must realise that any interesting identity statement dialectically starts with different things, different names or different representations that are, for example, judged as ‘referring to the same object’. Hegel has been the first logician in history to see that such a reference presupposes the constitution of a whole domain or ‘realm’ of objects. But he could see this only after Kant had provided the ground for it.

Such a constitution always depends on a whole system of still relevant differentiations or predicates and a corresponding system of domain-specifically irrelevant differences. The irrelevant differences are called identities. Any identity or, on the level of expression, equality, therefore is, strange as it may sound, an irrelevant difference. Any inequality is a domain-specifically relevant difference.

Hegel had developed this insight already in his constitutional analysis of abstract objects like natural numbers and other pure magnitudes in the first part of his Logic, the logic of purely formal being: An expression like 5/6 ‘is’, ‘as a ratio’, different from 10/12, but identical ‘as a rational number’. Of course, today we would use quotation signs more extensively and say that “5/6” is a name-like expression of the same rational number as “10/12”, but the two expressions do not refer to the same ratio. However, contemporary philosophy is a little too proud of this way of reflecting on the difference between sign and referent, use and quotation. This is the very reason why it overlooks the fact that in a constitutional analysis or, what comes up to the same ‘speculative logic’, we are not allowed yet to assume that we understand what the objects or object-level domains, in our example: the ratios and rational numbers, are. Our conceptual practice of making a difference between essential and inessential differences constitutes these ‘entities’ in their ‘realms’ or ‘domains’.[199]

The category of constitution of identities (in any object-level domain) belongs to the Logic of Essence, which is, as we can seen now, also the analysis of how to distinguish between

[199] However, any decent mathematician already has practically known how ‘abstraction’ as a method of constituting new objects and predicates works – after Eudoxos has developed his astounding proportion theory, as it is nicely represented in Euclid’s 5th book. This shows that we do not have to wait for Frege in order to know practically what it means to turn an equivalence relation within an already well-established domain of discourse into an identity. It means that for the ‘new’ domain G of objects g a system S of new ‘object level’ properties or ‘distinctions’ A(x) is defined such that no property in S ‘is finer’ than G-equality. Another verbal expression for the same fact is the ‘relativised’ principle of Leibniz: if g=g’ holds for a well-established object-level domain G and if A(x) is a relevant G-predicate defined for the G-objects g, then we can infer A(g) from A(g’) and g=g’ and A(g’) from A(g) and g=g’. This is no ‘ontic’ claim but a logical principle for any well-constituted domain G of objects and properties.

essential and inessential differentiations or properties, including all kinds of differentiating relations and processes.[200]

As a result, 'Essence' is no 'ontic' or 'ontological', but a logical category. It is narrowly connected with the logical form of expressing the thought that something, some N, really or essentially in and for itself is a P or has, as such, the essential or generic property P – in contradiction to merely apparent properties, to seeming truth and, in the end, to merely contingent or accidental propositions. With respect to identity, we must also distinguish between superficial similarities and essential or relevant equality. Moreover, all judgments about necessities, hence possibilities, belong to the Logic of Essence in virtue of their form. This is so because the Logic of Essence has as its theme reflective judgments. These are judgments of modal evaluation in which we distinguish the status of a judgment as essential, insofar somehow necessary, or as accidental and empirical.

A judgment as such always expresses a mere possibility. A mere possibility, in turn, is, in a first analysis, nothing but the content of an arbitrary judgment which can be true or false, essentially right or essentially unreliable, contingently correct or empirically wrong. In precisely this sense Hegel says, as a kind of mnemotechnic oracle, that any mere possibility is, as such, also impossible. It means that 'mere propositions' p, especially those by which we 'want' to say something about the real world, have, as such, still the following status: it is still open to examine and to decide whether p or non-p is true or whether p or non-p is at least possible, impossible, or necessary.[201]

A result is that we must distinguish between many different meanings of the word "possible". 'Mere' possibility just means that the sentence expressing it is meaningful. And this means that it is worthwhile to consider which performative mode we should adopt with respect to it or what

[200] If we say that a property A(x) applies to g, we already presuppose object-level talk. If g and g' are identical, it sounds strange to say that the property applies to g' 'because it applies to g': Using two signs here suggests that we somehow talk about different things. And in fact we do, as Wittgenstein will later realise in his *Tractatus* as well, namely 'about' *different signs*. If we wanted to avoid the *obvious paradoxes* of such talk about identity as a kind of 'relation', we are forced to use *only one name for one object*. But this is no good idea. It corresponds to pre-Eudoxian proportion theory, where the identity of a certain expression is defined by the identity of its logos, which is a sequence of multiplicities that appear as the result of applying Euclid's algorithm in the search for the greatest common denominator in a 'ratio' A:B. Hegel's dialectical logic or logical dialectics understands these things much better than 'tractarian' logics: There is no entity without the constitution of an appropriate identity and no identity without a differentiation between essential and inessential differentiations or predicative distinctions.

[201] To say that everything is possible means that any semanticly well formed sentence or proposition p must articulate a (generic) possibility. It must be of a form that we already can evaluate the 'possible truth' of p: We must know what *would* be the case if p were true. Or rather, we must know at least something about what could follow from p and what could be an argument for p. When Hegel says that everything is also impossible, he produces a rather unhappy expression for the fact that every world-related informative judgment can also be false. Together the two sentences may also express something similar as Wittgenstein's sense-criterion for meaningful empirical propositions: They should neither be tautologies nor contradictions.

kind of formal truth or untruth it may express. It can express, for example, a conceptual impossibility, a generic necessity or an empirical contingency.[202]

Hegel's next observation is that a proof of formal inner non-contradiction of a sentence or proposition p does not show much about possibility at all. It certainly is formally non-contradictory that no more that 17 angels can take place on a needle pin or that there are entities that can travel into the past. But it is nevertheless absolutely irrational to count in any way on such 'possibilities' or to debate about them.

9.6 GROUND, CAUSE, AND EFFECT AS CATEGORICAL CONCEPTS

What do we do when we talk about generic 'grounds' and 'causes' of what actually happens or seems to happen? What is a ground for an appearance? How does such a ground relate to the practice of giving and asking for reasons? And how do we distinguish between causes and other grounds?

Causes are special grounds. Grounds are reasons to believe or to do something. If we give a ground for a fact, for example for the claim that Peter has murdered Paul, we evaluate the possibility that Peter has murdered Paul by explaining the death of Paul on the ground of what Peter has done to him. The obvious actual 'appearance' of Paul's death is in such a way 'explained' by reference to its 'cause', which is and must be, as such, an actualization of a generic cause and ground. If Paul just dies by sheer accident because Paul touches him (perhaps by a heart attack), Peter has not murdered him. But if we can repeatedly observe and produce a situation S which has always or in a stable frequency of cases S* as its consequence, and if S* is the death of the person involved and S is what Peter does to Paul, then Peter is a murderer.

To be a murderer is, as such, obviously no 'transcendent' fact, even though it is often difficult to know if our generic conditions really are fulfilled. In this sense, the category of 'ground' goes far beyond the category of describing appearances.

The same holds in cases when we explain a certain effect by its causes and invest some generic knowledge about 'forces', for example gravitational forces. We then say that the mass of

[202] On the level of the Logic of Being, Hegel deals only with noun phrases naming quantities and verb phrases expressing qualities or properties. As a result, the modal forms in which we reflect on the status of a proposition as true or false, as empirically true or generically true, as an expression of a mere possibility or as an expression of a scientific necessity are not yet in focus. On the other hand, any meaningful sentence S expresses as such a 'possibility'. For example, the last sentence of Fermat articulates in an a priori way a 'mathematical possibility'. For a long time we did not know if it is true or not. After we, i.e. the mathematical community, learned that the last theorem

the sun and its gravitation is the causal ground for the fact that the planets keep their pace and do not fly off out of the solar system, as they would do if they would move 'inertially', without the gravitational force that we attach to the (mass of the) sun. Hegel realises that the talk about forces as in gravitation is always embedded into a holistic system of default movements and default explanations of more particular, though still general or generic, deviations (like 'accelerations'). The grounds or explanations always depend heavily on the ideal default case which is posited as the case of 'normal' movement. When, for example, Aristotle declares that the default movement of every thing is the striving to get its place of inertial rest, we only have to explain why something like an apple on a tree does not fall to the ground as long as the stem is strong enough to hold it. If the apple falls to the ground, nothing further is to be explained. This is so because the apple has, according to the generic setting of traditional physics, as its natural disposition to fall to the ground. In other words, what seems to be a 'teleological' explanation of the falling of the apple is, in fact, a 'causal' explanation in a certain setting of default movements. In its form, it is not really different from the ballistic explanation why a bullet or ball or planet flies as it flies. The only, even though crucial, difference is the new choice of the 'inertial place of rest', which is, in Newtonian physics, any non-accelerated straight line in space-time.[203] In other words, the 'forces' by which we 'explain causally' the actually observed 'accelerated' movements of balls and bullets, rockets and planets, depend on the posited default movements and additionally added generic dispositions that are somehow imposed on the relevant bodies. It is a kind of 'grand generic fact' that, when we abstract from friction and other forces, the 'quantity' of the force of gravitation in its effect on a sufficiently 'small' body (in terms of mass) is more or less only dependent on the mass of the 'large' body. Therefore, gravitational force can very effectively be mathematically correlated to the mass of 'the' relevant body, the sun for the planets or the earth for flying balls and rockets.

All in all, we arrive at a very powerful explanatory system in which we posit 'causal grounds' by which we can 'causally explain' repeatedly observed and observable movements of planets and in 'sublunar' ballistics. In precisely this sense, giving reasons and explaining events by causes must be seen as a complex practice.

Counterfactual possibilities or modally robust counterfactuals always depend on such grounds. Without keeping such a ground fixed it would not make sense to claim something like the following: if this would happen, then that would happen. The truth of any such claim, its

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of Fermat is really true, the denial is shown as mathematically impossible. Before the proof, we had to count with each of the two possibilities.

[203] At first, this space-time was considered to be Euclidean in its mathematical structure.

reliability, is always determined by the so called ‘Laws of Nature’. But these laws are always posited as laws by us. Only as such they can function as generic grounds for explaining (possible or actual) singular events as caused by (or causal consequences of) other events, which then are addressed as possible or actual ‘causes’ of the caused ‘effects’.

9.7 ACTUAL APPEARANCE AND UNDERLYING REALITY

In modern European languages, we have some difficulties to express some of the most important philosophical distinctions of the Latin and Greek tradition without confusions. The reasons are new inferential connotations attached to “actuality” in contradistinction to “actualitas” and even more so to “energeia”. The German translation is ‘Wirklichkeit’, which has, as such, the correct inferential ring, if we think of an actualised generic ‘work’, ‘ergon’ or ‘act’ and the ‘energetic process’ in which a generic type shows itself in its ‘real’ appearance. However, in today’s use of the word, “reality” is a better translation of ‘energeia’ and ‘Wirklichkeit’ than “actuality”, at least if we want to keep the idea of a mere ‘accidental empirical fact’ out of the scope of what is real. Under the word actuality, we gather contingent and accidental events as well as what seems to you or me as a merely subjective appearance without objective or object-related reality. The word “objectivity” is not helpful, as it were, since it stands in a misleading contrast to subjectivity and has, because of that, ironically a subjecttive connotation as a mere attitude of the subject to what the subject believes to be real. It would, for example, be utter nonsense if Hegel had said

“what is actual is reasonable”

or

“what is reasonable is already actual.”

As a remark about the inferential and evaluative roles of the words “real” and “reasonable”, however, it points at least into the right direction if one says that the words “real” and “reality” belong, like “reasonable” and “reason” to the expressions in which we make reflective and meta-level evaluations of object-level judgments explicit – such that both words belong to the Logic of Essence. Moreover, they play a complementary role just as “identity” and “equality”: We use “identity” when we talk on the object-level for exactly the same ‘facts’ as we use the word “being equal” on the reflective level. In the same vein, we use “real” in evaluations of object-level judgments just as we use “reasonable” in evaluations of corresponding object-level judgments. But equality precedes identity logically and methodologically. In the same sense, reason

precedes reality. This is no transcendent idealistic thesis but a logical truth with respect to the very constitution of any identity or reality. It is a conceptual or a priori truth. Not to accept this fact is not a matter of opinion but a betrayal of ignorance.

9.8 POSSIBILITY AND NECESSITY

There is no really individuated possibility. The only access we have to ‘real’ possibilities is via generic descriptions. That is, we can only ‘describe’ or ‘represent’ possibilities by sets of general statements. This sounds wrong. For, we might assume that a description like “the same world as this one with the only exception that I am over there instead of here” makes clear sense. But such a description obviously does not identify a singular world. There are innumerably many possibilities how I could be over there instead of here; and there are innumerably many things that must be different from this world if I should be over there and not here. In short, it is unclear what philosophical authors talk about when they talk about singular, ‘individual’, possible worlds. The same holds, in the end, when they want to ‘quantify’ about them as we can quantify about numbers or sets.

Talking about possibilities is talking about possible ‘generic moments’ in actuality. Possibilities do not exist outside our reflections on them – just as the Greek Gods exist only as objects of our talk. Like these gods, possibilities are no subjects. They do not ‘do’ anything.

That this is the correct reading can be seen if we compare the oracular sentences explained with the following title sentences in Hegel’s Logic of the Notion:

Everything is notion. Everything is syllogism.

Hegel obviously wants to say that we cannot refer to anything by words or images, deixis or otherwise, if we do not presuppose a corresponding system of generic differentiations and corresponding generic inferences on the level of essences that already count as conceptual even though they are ‘material’ default inferences.

Hegel’s seemingly strange ‘claim’ that the notion is subject, not object, just means now that when we think and argue, speak and understand, we do not talk about concepts or notions but use them in a certain way.

In precisely this sense, ‘the Idea’ of a whole reasonable development of our systems of generic knowledge, which amounts to the same as a development of ‘the Notion’, i.e. the system of

generic distinctions and inferences, is not a mere dunamis or utopian possibility but energeia, a really ongoing process at which we all take part if we care for knowledge and science.

Actual thinking is using ‘the Notion’, i.e. ‘the’ system of generic differentiations and inferences that makes rational or reasonable thinking possible – and ‘defines’ in a normative way what it means that an individual person actualises thought in the right way or not, i.e. thinks correctly or reasonably or not. Here, Hegel distinguishes in an interesting way three main types of syllogisms or inferential moves: qualitative subsumption (1; §183), reflective inference (or judgment) (2; § 190) and the “syllogism of necessity” (3; § 191).

I have tried to show here that and why ‘necessity’ is not just ‘truth in all possible worlds’. Necessity is defined by universally reliable conceptual truths. Necessity defines the domain of what has to be still reasonably accepted as possible, as an empirically meaningful, possibly informative or even true proposition. Generic necessity encodes the system of semantic inferences that we presuppose in any understanding of the content of an assertion. The content is its inferential power defined by conceptual necessity.

In other words, when we develop science, we develop the system of conceptual knowledge, the ‘material’ system of ‘necessary inference’ on the level of essences ‘an sich’. Merely singular, ‘empirical’ statements about, say, this thing here and now or about that thing over there – as they just appear to me or you – do not belong to science or theoria but to mere historia. Insofar, no scientific truth is ‘empirical’ in the Humean sense of being grounded on mere ’sense-experience’. Rather, we posit generic truths and conceptual inferences. We do this with the following leading idea in the background, even in cases when we do not fulfil the condition well enough: We select or develop ‘the best possible’ system of generic differentiations and (hopefully generically reliable) default inferences. And we do this in such a way as to always leave space for ‘empirical’ possibilities and contingencies on the one side, good judgment on the other. Such judgment is always an additional necessary condition for applying the generic laws of science. No such application is schematic. Therefore, it is not just governed by schematic quantificational logic as we can use it only inside purely mathematical domains G.

All this means that it would be wrong to assume that there could be a system of necessary truths such that any singular empirical fact is already a necessary consequence of our system of conceptual or generic knowledge or truth. In other words, we should develop our system of conceptual truths in such a way that we leave, with necessity, space for free, contingent, possibilities, especially because it would be self-contradictory if we deliberately posited a system

of ‘laws’ that deny that there are ‘free’ choices of deliberate actions, especially of speech acts. For, it is clear that our development of conceptual necessities is itself a result of free acts of proposal and acceptance, of making a law explicit and of controlling its ‘generic truth’ or ‘reliability’.

As a result, we can and must be able to distinguish between which of the possibilities left open by our system of conceptual ‘necessity’ are merely contingently true or actualised, which are actualizations of generic grounds and which are not actual. In the domain of non-actualised possibilities we have to distinguish further between those which ‘can really’ happen in the sense that we better count with them when we plan our life and actions, and those which ‘could’ happen in principle and contingently but which we can nevertheless discard, as, for example, the possibility that the whole earth will be destroyed tomorrow. But how to distinguish here in detail goes far beyond the scope of this paper.

We can see now that Hegel defends the reality of the distinction between free actions and merely actual occurrences. Such occurrences can be contingent accidents or causally necessary effects of generically explained natural events. But any ‘belief’ in transcendent determinism or necessity does not correctly understand the modal concepts of possibility, necessity and actuality. It does not grasp the human-made difference between reality and appearance. Hence, any deterministic belief-philosophy of ‘physicalist materialism’ or ‘biologist naturalism’ with their contentions that there was, for any event, a hidden cause that produced the event with necessity according to some ‘natural law’, does not understand the real, free, constitution of any such laws and does not see that the development of our scientific knowledge enlarges, deepens or widens, the possibilities of free action and does not diminish it.

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