

1 A Twofold Method for Ontology: Thinking and Perceiving

1.1 The *Quaestio Facti* and *Quaestio Iuris* of Meta-Ontology

The aim of this project is to arrive at a theoretical framework that is able to determine the ontological nature of what can be called ‘part-whole oscillation’ (PWO). Such a theory would therefore be an ontological theory. For now, I hypothesize without proof that PWO is real and that it can be experienced. An ontology dealing with the realness of PWO thus has to presuppose that reality and experience are combinable instead of exclusive, and it also should make use of an appropriate method to justify this presupposition. Without an elucidation of this presupposition and its consequential method, we cannot proceed. Hence the task of the first chapter is to discover and to critically integrate methodical approaches according to which reality and experience are combinable in order to proceed with the determination of PWO’s ontological nature.

Reality in general and the reality of an entity in particular are studied in the discipline of ontology. Formulated in a nutshell, ontology is the discipline that studies reality or “Being as such” [Harper 1879: 62]. It asks what is real, what it takes for something to be real, and what “the most general sorts of things that the World ‘contains’” [van Inwagen 2009: 277] could be. When we ask for the combinability of reality and experience, we ask for the possibility of using some kind of experience for the acquisition of ontological insights. Initially, this is not an ontological question, but a question about ontology itself, about what ontology is, how it should be carried out and which claims it can make. It is therefore a meta-ontological question. For example, whereas in ontology we may determine ‘what there is’, in meta-ontology we can reflect on the nature of this determination itself: “What are we asking when we ask ‘What is there?’” [van Inwagen 1998: 233] Meta-ontology can also discuss the viability of some philosopher’s “approaches to ontology” [Eklund 2006: 317] and, in general, the importance and independence of ontology as a discipline with a genuine subject matter,¹ especially considering

¹Cf. on this point L. Kolakowski’s compelling essay *Metaphysical Horror*. “Why, indeed, do so many philosophers devote their efforts to refuting the idea of solipsism and to proving that ‘the world exists’, given, firstly, that nobody has ever seen a deeply convinced and consistent solipsist and, secondly, that it seems to make not the slightest practical difference whether the world exists or not? Why should we be dissatisfied with the commonsense distinction between dreams and illusions on the one hand and the normal, that is, the universally shared, perceptions on the other and look instead for a method whereby we could convince ourselves that the universe we perceive is not a figment of imagination after all, but includes a sort of ‘hard’ reality? [...] Retrospectively - and speculatively, of course - we can understand why metaphysical questioning appeared, and even why it would have been strange if it had not. The source of our passionate search for ‘reality’ is our fragility which God or nature could not have prevented us from experiencing once he - or she,

its close relationship to metaphysics² and its traditional role as ‘general metaphysics’.³

Another important meta-ontological question concerns methodology. When ontology makes use of certain methods, it is meta-ontology that questions these methods or that provides an explicit methodology with which the ontological methods in question can be justified. This methodological aspect of meta-ontology is essential for the investigation into the combinability of reality and experience, because whether we may draw on experience to say something about reality implicates the type of method that is appropriate for making ontological claims. An ontological method can draw on experience or not in order to result in an ontological theory. Which kinds of experience (e.g. empirical perception, aesthetic and mystical experiences, emotions and social interactions) an ontological method may draw on does not matter for the moment. It applies for any meta-ontological methodology, ‘experience-friendly’ or not, that it should be able to provide conclusive explanations for two simple criteria. Firstly, it should succeed in explaining how its method can *detect and derive* ontological information (e.g. categories, norms for existence, general structures) from reality. Where, i.e. from which region of reality, does it draw them? How precisely are they attained? Why these and not others?

Secondly, it should be able to explain how this information, once it is spelled out into a theory or model, can be applied to reality for the sake of *verification and justification*. How do the derived categories, norms, or structures match the entities they are about? This last point is important, because an ontological model that is, by definition, about reality is hard to justify when the reality we actually live in does not provide any evidence for the truth of the model’s claims. Why should anybody give credence to the model, if it may be internally consistent, but is inconsistent with what it is actually about? This aspect is closely connected to the orientation an ontological model might provide. How should this model be used? How does it help us in better understanding reality and ourselves therein? For whom is it designed and who is, due to a lack of philosophical, scientific, logical or cultural background, implicitly excluded from the benefits it may bring? Such questions may appear naive, but I think that, at the end of the day, they are (co-)decisive for the longevity and persuasive power of a single ontological model and thus for ontology as a reasonable endeavor in general.

The two methodological criteria an ontology’s meta-ontology should be able to fulfil resemble the juridical distinction between a *quaestio facti* and a *quaestio iuris*. These questions ask for the factual and legal position of a situation or act. The *quaestio facti* is mainly interested in the nature of the situation or act itself. It wants to know which situation or act is the case and why and how it came about. The *quaestio iuris* presupposes familiarity with the object of the *quaestio facti*. Only by drawing on this knowledge, can it ascertain the legitimate way to relate to and judge about the given situation or act. It is important for our methodological criteria that this distinction found its way into Kant’s *Critique of Pure Reason*. In the beginning of the second chapter of ‘The Transcendental Analytic’ (‘On the Deduction of the Pure Concepts of the Understanding’), Kant states that we have a plenitude of categories in our mind with which we can perceive and think about the empirical world around us. For most of these categories,

or they - had endowed us with the power to express in language both the distinction between illusion and non-illusion and the uncertainty of our life.” [Kolakowski 1988: 1

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²Cf. Varzi [2011].

³Cf. Vollrath [1962].

we can always draw on the facts of empirical experience to verify or falsify them. They do not need any further proof for their relatability with the outer world. As they are “acquired through experience and reflection on it” [Kant 1998: A85/B117], the *quaestio facti* of a given situation or act is sufficient for the determination of their existence.

However, there is a group of categories with which we likewise engage in the empirical world. The existence of this group does not depend on what we may or may not perceive with our senses. The twelve categories in this group, such as causality, existence and substance, are factually and logically there. In our obvious possession of them, they provide as positive a response to the *quaestio facti* as the empirical categories do. Instead of being created a posteriori (*after* and *due* to our empirical experience), however, they exist a priori (*before* and *independent* of our empirical experience). Therefore, their appropriateness cannot be justified by our engagement with the world around us. Their “birth certificate” [id.: A87/B119] has to be deduced from elsewhere, namely from the thinking subject himself. Kant calls this the ‘transcendental deduction’. This deduction is less about the fact that these categories exist. We basically know that they exist, because we apply them constantly. This deduction is rather about the justification of their relatability to the empirical objects around us. It is “a deduction of their entitlement” [id.]. Kant has to legitimate how some categories, which are supposedly experience-independent, can connect with the empirical world from which, on the one hand, these categories cannot be derived, but solely with which, on the other hand, they can create knowledge (*Erkenntnis*) for the bearer of these categories, i.e. the thinking and perceiving subject. Otherwise, these categories would be empty and their application unfounded.

How exactly Kant answers the *quaestio iuris* is a complicated matter and does not concern us here. Apart from his concrete answer, however, there is a twofold meta-ontological importance to his use of the terms *quaestio factis* and *quaestio iuris*. Firstly, it is worth noticing that Kant himself makes use of this distinction exactly in line with how I think it can be helpful for the methodological aspect of meta-ontology and thus for the question of how experience and reality can be combined. In a certain sense, by demonstrating and justifying the transcendental categories that are, according to Kant, universally and objectively relatable to reality, Kant engages in a meta-ontological activity in order to establish ontology, i.e. general metaphysics, on ‘scientific’ grounds. This is what the chapter ‘The Transcendental Analytic’ is all about, in which Kant states that the dogmatic claims former ontologists made about reality by using a priori categories could never be proven in reality itself. They could never answer the *quaestio iuris*, because empirical reality – the only reality we have access to – neither confirmed, nor denied the lawfulness of these categories. As, therefore, no *transcendent* deduction, originating from reality itself, is possible for their justification, Kant undertakes a *transcendental* deduction, originating from the thinking subject.

The main result of this latter deduction is that ontology is only possible if we analyze the categories not as belonging to reality as such (about which we will never know anything positively), but as presupposing the objectivity of what we perceive as appearance of reality via our senses. In Kant’s own words: “The Transcendental Analytic accordingly has this important result: that the understanding can never accomplish *a priori* anything more than to anticipate the form of a possible experience in general, and, since that which is not appearance cannot be an object of experience, it can never overstep the limits of sensibility, within which alone objects are given to us. Its principles are merely principles of the exposition of appearances, and the

proud name of an ontology, which presumes to offer synthetic *a priori* cognitions of things in general in a systematic doctrine (e.g., the principle of causality), must give way to the modest one of a mere analytic of the pure understanding.” [id.: A246-7/B303]⁴ So it appears that Kant himself uses the distinction between *quaestio factis* and *quaestio iuris* for the development and justification of a new kind of ontology, methodically conducted not by an analysis of reality itself, but of our internal categories (as well as our forms of intuition: space and time) with which we can understand reality in the most general and objective manner. My suggestion of using this distinction for meta-ontological purposes is therefore, hopefully, not far-fetched.

The second meta-ontological importance for our question of how reality and experience are combinable lies in the influence of Kant’s notion of ontology as primarily involving conceptual analysis. As we cannot have verifiable access to reality itself, it is more profitable to direct our attention to the internal concepts with which we can reflect on what appears to us as reality. Direct empirical experience is only of a minor significance here. What counts are the general concepts that we normally find hidden in natural language and exposed in logical language. In her 2010 article ‘A New Role for Experimental Work in Metaphysics’, L. Paul points out that this notion of ontology was very influential both in the first half of the 20th century for Logical Positivism and Neo-Kantianism, and in the second half of the 20th century for analytic ontology. We can call this approach of tackling ontology through conceptual analysis ‘conceptual ontology’. It is synonymous with what B. Smith calls ‘internal metaphysics’.⁵ One characteristic feature of conceptual ontology is that, very much in the spirit of Kant’s ‘Copernican revolution’, reality has to conform to the concepts with which we think and make judgments about it. As Paul puts it, conceptual analysis consists in “determining what it is necessary for things in a world to be like in order for the metaphysical concept to apply to them. [...] For example, one might hold that when our philosophical and scientific concepts are successful (in some suitably defined sense) they pick out the things they describe in our world.” [Paul 2010: 463] Accordingly, a conceptual ontologist *deduces* what can be accounted for as being the nature of reality. They arrive at this conclusion by taking as a premise the plausibility or logical consistency of the concepts that are held to be appropriate for this purpose.

There are ontological methods for which some kind of experience is constitutive and there are ontological methods for which no kind of experience is constitutive. On the one hand, conceptual ontology, with its method of deducing ontological truths from concepts, is not dependent on any kind of experience. On the other hand there are, according to J. Hessen’s remarkable 1955 book *Die Methode der Metaphysik*, at least two other methods besides the *deductive* method that an ontologist or metaphysician can operate with: an *inductive* method and an *intuitive* method. Although these two methods presuppose a very different understanding of experience, their foci are adjusted to an experienceable form of reality itself instead of inborn concepts of our mind. While the inductive method draws on intersubjectively verifiable or falsifiable

⁴Of course, the literature on Kant’s renewal of general metaphysics is enormous. For a detailed explanation and the historical background of his ontological project in ‘The Transcendental Analytic’ cf. for example Longuenesse [2006], in the prefaces to the *Critique of Pure Reason* cf. Herrmann [2010], and in the *Critique of Pure Reason* in general cf. Ficara [2006].

⁵“According to these thinkers [of internal metaphysics, M.S.] ontology is a meta-level discipline which concerns itself not with the world itself but rather only with theories or languages or systems of beliefs. [...] Traditional ontologists are seeking principles that are true of reality. The practitioners of internal metaphysics, in contrast, are seeking to elicit principles from subjects or theories.” [Smith 2004: 157]

empirical perceptions, the intuitive method approaches the ‘true’ nature of reality by means of an individual’s singular and profound experiences. Such experiences have been referred to as ‘ontological’⁶, ‘metaphysical’⁷ or ‘transcendental’⁸. Despite their transformative and, thus, personal nature, they have in common that without anticipating it, suddenly something in the way you see reality fundamentally changes. Instead of just perceiving things and relations in reality and thinking about them, you become aware of the strange ‘thing’ reality is itself. This does not have to be a mystical or religious experience, although it can point in this direction. It is, rather, a kind of non-empirical experience of reality as being what it is just because it is, and a non-conceptual insight into what reveals itself suddenly as the inner nature of reality. The ontologist L. Lavelle describes this experience as the feeling of Being’s ‘total presence’ and self-revelation to the experiencing subject.⁹ It is as if the experiencer receives some kind of revelation by her ontological intuition, as if she has some gnosis of the essence of all things, what M. Scheler calls *Wesenserkenntnis*, which is valid “above and beyond the Being that affects our senses directly or indirectly.” [Scheler 1995: 251]¹⁰ In so doing, we could say that the subject that draws ontological insights from the intuitive method calls for what Kant refers to as an *intellectus archetypus* rather than what a human being usually embodies: a finite *intellectus ectypus*.¹¹

⁶Cf. Albert [1974], who lists several characteristics of an ontological experience. He holds that it is an experience of the opposition between Being and Nothingness, of the unity of all that is, of pure presence, of a religious nature, and of one’s own consciousness beyond any linguistic expressibility. Fink [1958: 52], on the other hand, emphasizes the importance of language when it comes to the astonishment about why there is something rather than nothing. In Fink [1977], he interprets Hegel’s dialectical philosophy in the context of this aspect of the ontological experience and in his article ‘Zum Problem der ontologischen Erfahrung’ [2004], he interprets Heidegger’s [1955: 21] famous question “Warum ist überhaupt Seiendes und nicht vielmehr Nichts?” in the light of this experience.

⁷Cf. Weischedel [1960], who describes this experience as if one “gets overpowered and deeply moved” [id.: 110] by the sudden insight that Being and the reason behind it (*Seinsgrund*) are themselves questionable. They present their inner nature directly to the experiencer, which makes the experience itself something “first and irreducible” [id.].

⁸Cf. Irlenborn [2004].

⁹This act of the self-revelation of Being in the present moment is beautifully described in passages like the following: “On voit maintenant à quel point la présence de l’être élève celui-ci au-dessus de la pure abstraction. La présence est une expérience du tout, ou plutôt elle est le caractère qui nous donne, dans l’expérience de chaque objet, un contact immédiat avec le tout. Elle fait de la notion de l’être une notion vivante. *Car l’être ne peut pas être distingué de sa propre révélation.* Il est bien, si l’on veut, une donnée, mais qui se donne à elle-même, une totale et mutuelle présentation de soi à soi qui n’est possible que parce que l’être est un acte : il se réalise éternellement par l’infinité des états qui remplissent toutes les consciences particulières ; l’état n’est lui-même qu’un acte imparfait et interrompu dont tout le monde voit que, dans sa réalité actuelle, il est encore éclairé et enveloppé par un acte qui non seulement le soutient et le dépasse, mais encore l’actualise et le fait être.” [Lavelle 1934: 196]

¹⁰My own translation. The original passage reads: “Nur wenn es Wesenserkenntnis gibt, und zwar auch Erkenntnis materialer Gegebenheiten und ihrer Strukturzusammenhänge, kann es auch eine Erkenntnis geben, die unabhängig ist von dem Zufall der sinnlichen Erfahrung und die hinaus und hinüber gilt über das direkt oder indirekt unsere Sinne affizierende Sein. Nur wenn es Wesenserkenntnis gibt, können ferner die Seinsarten und die Ganzheitsstruktur der Welt freigelegt werden.”

¹¹In his *Critique of Judgment*, Kant makes a distinction between *intellectus ectypus* and *intellectus archetypus*. The *intellectus ectypus* denotes the conceptual and finite understanding of every perceiving and thinking subject. In order to gain knowledge (*Erkenntnis*), this understanding depends on empirical sense data that are given as a contingent manifold of unconnected parts. The transcendental categories of our understanding synthesize these empirical data to a unity, thereby representing “the possibility of the whole as depending upon the parts” [Kant 2000: 277]. On the other hand, an *intellectus archetypus*, which is only an ideal and in Kant’s view not attributable to any human being, intuitively perceives reality without the mediation of the categories of

For several reasons, however, I will not apply this ‘method’ to the determination of PWO’s ontological nature. Firstly, Hessen himself classifies the intuitive method as inappropriate for any serious engagement in metaphysics/ontology, since, according to him, metaphysics “wants to be a science. But all science relies on the ratio. Therefore, it is impossible to construct a metaphysics by way of intuition. [...] As a science, metaphysics draws upon universal validity in the sense of provability, logical enforceability. The content of intuition withdraws from any demonstrability. Were intuition to be the actual method of metaphysics, then metaphysics would lose its quality as a science, i.e. its claim of universal validity.” [Hessen 1955: 30]¹² Secondly, even if we free ontology/metaphysics from the expectation that it has to be scientific in order to be a serious discipline, we still can agree with N. Melchert. In his article ‘Mystical Experience and Ontological Claims’ he argues convincingly against any inference from the experienced unity of subject and reality, which is essential for the ontological experience, to the ontological claim that there is an objective identity of thinking and reality. This conclusion may be true, he concedes, but it cannot be arrived at via an inference from an ontological experience alone.¹³ And thirdly, there is a simple reason why excluding the intuitive method from further research into the ontological side of dynamic part-whole structures is unavoidable. Since a fruitful application of the intuitive method presupposes a personal familiarity with ontological experiences, and since I do not want to claim to have had any such familiarity, it is impossible to either benefit from my own or evaluate other’s insights gained by such an approach towards reality.¹⁴

Therefore, what I would like to do in the next two sections is to delineate what the *deductive*

the understanding. It also does not depend on sensuous, i.e. empirical perception for the kind of intuition it is able to avail itself of. Rather, an *intellectus archetypus* is assumed to *see* reality as such and immediately as totality and in one single glance, in “*uno actu intellectus*” [Cassirer 2011: 64].

¹²My own translation of the original: “Metaphysik will doch Wissenschaft sein. Alle Wissenschaft aber beruht auf der ratio. Folglich geht es nicht an, mittels der intuitio eine Metaphysik aufzubauen. [...] Als Wissenschaft erhebt die Metaphysik den Anspruch auf Allgemeingültigkeit im Sinne von Beweisbarkeit, logischer Erzwingbarkeit. Der Inhalt der Intuition entzieht sich aber aller Demonstrierbarkeit. Wäre also die Intuition die eigentliche Methode der Metaphysik, dann würde diese damit ihren Wissenschaftscharakter, d.h. den Anspruch auf Allgemeingültigkeit, einbüßen.”

¹³Melchert’s argument is analogous to Kant’s argument against rational psychology that attempts to infer positive characteristics of the ‘I’ from the formal ‘I think’ that accompanies all sensuous experience. “Just as the rational psychologist tried to infer the substantiality, simplicity, etc., of the soul from the characteristics of the ‘I’, so the mystical psychologist tries to justify the nonindividuality of the self from the absence of the ‘I’ in unitive experience. But that is a move from a logical characteristic of the concepts in terms of which this experience is explicated to a conclusion about the real nature of the experiencer. And that is a mistake. The conclusion *may* be correct. Perhaps we *are all* Brahman [absolute, unchanging reality, M.S.]. But it cannot be a simple inference from the nature of unitive experience.” [Melchert 1977: 453] The mere occurrence of an ontological experience does not allow for the derivation of universal ontological categories, such as identity-claims or, in the case of the present project, PWO, from it.

¹⁴To make this point clearer, I agree with R. Otto, who writes in the beginning of *The Idea of the Holy*: “The reader is invited to direct his mind to a moment of deeply-felt religious experience, as little as possible qualified by other forms of consciousness. Whoever cannot do this, whoever knows no such moments in his experience, is requested to read no further; for it is not easy to discuss questions of religious psychology with one who can recollect the emotions of his adolescence, the discomforts of indigestion, or, say, social feelings, but cannot recall any intrinsically religious feelings.” [Otto 1936: 8] Given the intensity of an ontological experience in all of its aspects, Otto is probably right with his precaution and I see no reason why it should not be valid for experiential ontologies in general. But who can really claim to have had such an experience, and how can one claim and justify this experience? The number of people who could confirm and evaluate the ontological claims of an experiential ontology is probably very restricted. For the justification of its claims, however, such a theory can only rely on this minority.

and the *inductive* but not the *intuitive* methods distinguished by Hessen are about and how they are able to deal with both the *quaestio facti* and the *quaestio iuris* of meta-ontology. My aim is to arrive at a clearer picture of the kinds of experience an ontological theory is able to draw on, including the challenges the different experience-based ontologies encounter thereby. To avoid the equivocality of the umbrella term ‘experience’ and given that the inductive method only deals with empirical perception, I will, from now on, use ‘experience’ and ‘perception’ as synonyms, whereby I will act – for the sake of terminological consistency and within the boundaries of this project’s sub-framework – *as if* experience only covered empirical perception. In other contexts beyond the present project, however, ‘experience’ and its objects are, of course, much more comprehensive than perception and what is perceptible, because experience comprises not only perception, but also, for example, real phenomenological experiences (eidetic reductions), aesthetic intuitions, intercultural encounters, memories, emotions, faith, etc. As is also shown by the intuitive method and the ontological experiences it involves outlined above, there are many types of experiences beyond what is cognizable with our sense organs. But, from now on, when I use the word ‘experience’, it is only to the latter that I refer, unless explicitly specified otherwise.

1.2 The Deductive Method of Conceptual Ontology

The *quaestio facti* of meta-ontology is interested in the act with which an ontologist derives ontological categories. From where are they derived? How are they derived? Which ones are derived and why? According to Hessen,¹⁵ it is one of the characteristics of the deductive method that it locates its initial position, i.e. the domain from which ontological categories are derived, in the conceptual and ideal framework of the thinking subject and not in the facts or impressions of reality itself. At this juncture, it is presupposed that the rationality of the conceptual and ideal framework is in concordance with the laws of the reality this framework is about. Reality has to be as logical as the way we can ideally think about it. In other words, there has to be at least the possibility of an *adaequatio rei et intellectus*. This means that it is sufficient to analyze and logically deduce conclusions from concepts and ideas in order to get insights into the nature of what is real and into the most general structures of being. Direct experience is not necessary for the thus determined *quaestio facti*. How exactly ontological categories are then deduced from the conceptual and ideal framework of the thinking subject may differ from philosopher to philosopher. Hessen points out that whereas Spinoza deduces his metaphysical system in a Euclidean fashion from a set of unchangeable definitions and axioms, the German idealists Fichte, Schelling and Hegel derive their ontological systems from the internal dynamics of highest principles such as the I (Fichte), the identity of I and non-I (Schelling), or the logical idea of being and nothingness (Hegel). Instead of Spinoza’s syllogistic method, they apply a dialectical method of deduction,¹⁶ which, of course, differs again from philosopher to philosopher. However, as Hessen explains, all of these deductive approaches share the presupposition that reality has to be as rational as our concepts and ideas of it can maximally be. Hence in all versions of this method, it is possible to identify the ‘top-down’

¹⁵Cf. Hessen [1955: 15].

¹⁶Cf. id. [15 f.].

approach of deductive reasoning in which every step towards a systematic theory comprising the nature of reality is documented in the respective ontological system itself.

A further version of the deductive method, which is not specified in Hessen, is the above-mentioned tendency of conceptual analysis that was so prominent in the 20th century, in particular when ontological categories were deduced from concepts via the logic of language (supposedly mirroring the logic of the world). A case in point for approaching ontology non-experientially in this way is the contemporary philosopher U. Meixner. I select Meixner as an example, because in his ontological writings, he often reflects on the nature of ontology itself, which is very helpful for getting a clearer picture of the deductive method in conceptual analysis. This also makes it fully sufficient for our delineation of the ways in which ontology can be conducted non-experientially to concentrate on Meixner's meta-ontological comments without risking misinterpreting his actual ontology. First of all, it is the case both for the deductive and the inductive method and their respective refinements that they are alternatives that do not have to exclude, but ideally always complement each other. The method of deduction, for instance, may refer to a kind of experience of reality as a foundation on which concepts came into existence in the first place. Despite his preference for the deductive method, Meixner grants experience exactly this function: In a certain sense, it is a source of ontological knowledge (*Erkenntnisquelle*). "Experiences are indeed relevant for ontological theories, but not experiences of this or that, and also not the experiences, observations, measurements, that are undertaken in the single sciences. Rather, they are experiences of a very general nature (derived both from social practice and from perception) that are quasi fossilized and preserved in linguistic phenomena. They create a secondary phenomenal basis – the *primary* for ontology –, whose interpretation and coherent systematization is all but clearly determined." [Meixner 1994: 376]¹⁷ Thus, although social and perceptual experiences have shaped the concepts with which we think (about) reality,¹⁸ we cannot draw directly on these experiences to form an ontological theory. According to Meixner, we have to tap into the second source of ontological knowledge: the comprehension of our concepts (*Begriffsverständnis*). If we comprehend our concepts in a logically consistent manner and theorize them accordingly, we are able to participate in, and therefore uncover, the ontological rationality of reality itself.

In Meixner's view, we can only comprehend our concepts if we comprehend the language with which we express these concepts. In the same manner in which reality has to conform to the way we think, the way we think has to conform to the language in which thoughts

¹⁷"Erfahrungen sind in der Tat für ontologische Theorien relevant, aber nicht die Erfahrungen von diesem oder jenem, auch nicht die Experimente, Beobachtungen, Messungen, die in den Einzelwissenschaften angestellt werden. Es sind vielmehr die Erfahrungen sehr allgemeiner Natur (die aus gesellschaftlicher Praxis nicht minder als aus der Wahrnehmung stammen), die quasi versteinert in den sprachlichen Phänomenen aufbewahrt sind. Sie bilden eine sekundäre Phänomenbasis - die *primäre* für die Ontologie -, deren Deutung und kohärente Systematisierung aber alles andere als eindeutig vorgezeichnet ist." - All translations from Meixner, except for [1997], are my own.

¹⁸This point I will elaborate in the fourth chapter's take on cognitive linguistics.

are expressed.¹⁹ Consequently, we can conclude that reality has to conform to language²⁰ and that ontology should look at language to arrive at ontological truths about reality. It is not a natural language like English or Chinese or Arabic, however, but the language of symbolic logic, in particular an extended predicate logic²¹ and free logic²², that Meixner prefers for conducting ontological research. Whereas natural language not only unveils, but also obscures the ontological structures expressed in it without providing any criteria for “the decision, when it obscures and when it unveils” [id.: 377], an ideal logical language is semantically unambiguous in being either true or false.²³ Also, every step of deductive reasoning within such a language can be justified and verified thanks to a predefined set of rules and axioms. For the “formally valid inferences” in question, the “correctness” of these predefined rules and axioms does not have to be justified, but depends implicitly on “some logical intuition” [Meixner 1997: 4] that is not further analyzable.

This may imply the minor role experience is allowed to play within this version of deductive reasoning. What is more important, however, is what can be deduced from such unprovable premises, i.e. the capacity of valid formal inferences to create complex formal systems or theories as internally consistent models of reality.²⁴ The formality of such theories is their condition for being ontological theories, as, for Meixner, ontology is synonymous with formal ontology for two reasons: Firstly, we think reality in language and language has to be freed from its ambiguous aspects to arrive at consistent ontological truths. Only a formal, technical language can fulfil this ideal; secondly, because ontological categories are universal to such an extent that they can only be expressed in a formal manner. “The formal in formal ontology is only a consequence of its generality. Formal ontology is as ontology formal.”²⁵ [Meixner 2011: 95] Direct perception of what is given immediately, on the other hand, can never be the starting point from which ontological categories are derived. At most, perception forms the passive background from

¹⁹“Thinking – the effort for conceptual knowledge – takes place linguistically or becomes linguistic at the latest if one intends to really grasp a thought clearly, clearly in such a way that the thought can be conveyed to others. Therefore it seems likely that the nature of language determines the nature of thinking.” [Meixner 1989: 78] - “Denken – das Bemühen um begriffliche Erkenntnis – vollzieht sich sprachlich oder wird spätestens dann sprachlich, wenn man einen Gedanken wirklich klar zu fassen bekommen möchte, so klar eben, daß man ihn auch anderen mitteilen kann. Daher liegt es nahe, daß die Beschaffenheit der Sprache die Beschaffenheit des Denkens bestimmt.”

²⁰“The fundamental facts with respect to the totality of being are those facts which concern the fundamental distinctions and relations in that totality. We may expect that these are mirrored in the core structures of (descriptive) language, the language we use to speak about everything there is. This follows from the following consideration: (1) language [*1] is the main tool of cognition, and (2) a tool, if it is to be useful, must fit what there is; but (3) language, in fact, is useful for the cognition of what there is. [*2] Hence, if we ask what it is in the totality of being that corresponds to this central linguistic distinction (for example, that between sentence and predicate), or to this central linguistic relation (for instance, predication), then we are led to the fundamental distinctions and relations in that totality.” [Meixner 1997: 1].

²¹Cf. Meixner [1994: 376].

²²Cf. id. [381].

²³Cf. Meixner [1989: 78].

²⁴“In formal logic no derivation of the correctness of the basic laws is sought. The correctness of such laws is simply declared, perhaps on the basis of some logical intuition (which is not an ability in any way mysterious, but simply a special case of the ability to understand linguistic utterances). Starting from the simple basic laws, other more complex ones, where logical intuition does not help, can be deductively established.” [Meixner 1997: 4]

²⁵“Das Formale an der Formalen Ontologie ist also einfach eine Folge ihrer Allgemeinheit. Formale Ontologie ist *qua* Ontologie formal.”

which “what is ontologically relevant – the most general determinations of itself and of its contents – have long ago – since time immemorial – become apparent in language.”²⁶ [Meixner 1994: 383]

The strength of this version of the deductive method certainly lies in the way it reacts to what I called the *quaestio facti* of meta-ontology. Where are ontological categories derived from? From our conceptual apparatus. How are they derived? Via the analysis of concept-mirroring language, the development of technical language, and valid inferences made within the axiomatic system of the latter. Which ones are derived and why? This depends on the single philosopher’s preference and forms the transition from his or her subjective meta-ontological convictions and axioms into a concrete ontological model with universal pretension. In Meixner’s 2010 book *Modelling Metaphysics: The Metaphysics of a Model*, for example, a simple description of a model called ‘T’ marks the start of a long series of logical deductions. This model “has two types of positions: *spatial positions* and *temporal positions*. Moreover, Model T is finite regarding positions: it has 100 spatial positions, and 100 temporal positions. Model T is also finite regarding fillings. In fact, with regard to *(possible) fillings of (individual) spatial positions*, it is utterly simple: Model T has just one such filling: Full (as we may simply call it).” [Meixner 2010: 9] Subsequently, from the basic structure of this model, i.e. the concepts of space and time as well as their conceptualization in a grid-pattern, ontological categories such as universals, individuals and states of affairs are deduced. Little by little and with the utmost diligence, a map with ontological (sub)categories and their special nature and relations is thus drawn and proven to be logically coherent, whereby all consequent steps rely on Meixner’s subjective preference for and conceptualization of time and space as premises.

The drawback of this model and of similar deductive models is that they seem to be more concerned with internal consistency than with the legitimization and explanation of how the respective ontological categories can relate to reality as we encounter it.²⁷ How can such models ever be confirmed by external measures? In his reflections on scientific model building, B. Mahr correctly states that the main quality of a model is its double identity of being a model *of* something and its being a model *for* something. Only modeling for the sake of modeling is insufficient for a model to be complete. Instead, a model always transports a “cargo” [2008: 32] from one object (*of* which it is) to another object (*for* which it is).²⁸ Why should it then be

²⁶“Das in der Wahrnehmung ontologisch Relevante - die allgemeinsten Bestimmungen ihrer selbst und ihrer Inhalte - haben sich längst - seit unvordenklichen Zeiten - in der Sprache herauskristallisiert.”

²⁷Cf. for a model with a similar motivation W. Sohst’s *Prozessontologie. Ein systematischer Entwurf der Entstehung von Existenz*. Although Sohst classifies his ontological model as “strukturell-synthetisch” [id.: 31] instead of deductive, he holds the view that an ontological model should be internally consistent and pre-empirical, while it is the task of the reader, not of the philosopher, to relate the model to reality and the experience of it. “Das Verhältnis des hier entwickelten Modells zur Wirklichkeit entsteht also erst in dem Moment, wo irgendein Leser es für wert erachtet, Teile davon tatsächlich auf die Wirklichkeit anzuwenden und Sätze zu formulieren, die auf diesem Modell basieren und Aussagen über die Wirklichkeit sind. In dem Umfange, wie sich hieraus prinzipielle Möglichkeiten einer Anwendung auf oder der Erzeugung von Wirklichkeit ergeben, kann das vorliegende Modell auch reale Geltung beanspruchen.” [Sohst 2009: 41]

²⁸Cf. also Mahr [2012: 287]: “In the model of model-being it is assumed that the identity of an object *as a model* depends on the two basic relationships, between A and M and M and B, which the model object enters into according to its conception as a model. Typical of model-being is that both relationships stem from an action, an action which is either thought of or has actually been performed. In the action leading to the relationship indicating that M is a *model of* A, the model object M is chosen or constructed with reference to A, and in the relationship indicating that M is a *model for* B, B is chosen or constructed with reference to M. Both relationships are therefore of the same kind. They are called *relationships of creation* and relate

sufficient for an ontological model to be a model *of* reality (*quaestio facti*) without justifying how it can be a model *for* reality (*quaestio iuris*)?²⁹ Meixner is well aware of this difficulty. He tells us that “T is very far from *Reality (as we know it)*.” [Meixner 2010: 11]. He even tells us that by “scaling down the extension and complexity of *being*, simulation-metaphysics automatically moves to the point where it adopts a God’s-eye view (no matter whether there is also a place in the simulation for God-in-simulation, or not); simulation-metaphysics looks from *the outside at the-totality-of-being-in-simulation* [...]” [id.: 7] Unfortunately, none of us will ever have the privilege of being able to join Meixner in this position that takes the ‘top-down’-approach of the deductive method literally to extremes.³⁰

Meixner, however, knows that the reason why a model like his should be adopted – despite its struggle to answer the *quaestio iuris* – mainly lies in the appeal of the model itself, i.e. in its “purely aesthetic criteria and criteria merely relating to the economy of cognition.” [Meixner 1997: 16] Whereas he claims that “only in linguistic phenomena, what is specifically ontological can be grasped in isolation clearly, distinctly and intersubjectively comprehensible” [Meixner 1994: 383], it being impossible to prefer ontological models to one another for “general-intersubjective, rationally binding reasons”³¹ [Meixner 2011: 101], I would like to object that although the fact that it justifies how it relates to the experienced world around us and the objects and subjects in it may not be a *rationally binding* reason to be convinced by an ontological model, it is certainly a *rationally comprehensible* reason that such a model cannot be preferred to other models merely due to its aesthetic and cognitive attractiveness. In the end, ontological models are not like well-constructed novels that may be about reality, be inspired by reality, and somehow draw on language to express some truths about reality, but that do not have to explain whether and how they can make serious claims about the non-fictional world. To put it simply, if it is only for aesthetic and cognitive reasons and the inner stability of the model, why should we choose complex ontological models at all and not favor a literary text instead? Why should we not, to anticipate a later section of this project for example,³² prefer S. Delany’s science fiction novel *Dhalgren*, which presents a multistable reality and the experiences that go along with it,³³ as a model over a ‘proper’ theory about multistability, e.g. A. Zimmer’s ‘interactive realism’³⁴? Moreover, why should we buy the presupposition of every deductive method in ontology that the way we think and (should) use language mirrors the way

what is called a *source object* with what is called a *target object*. Due to the two relationships of creation, according to the conception of the judging subject, the model has two roles which together determine its *identity as a model*, and which at the same time justify our viewing of the model object as a model.”

²⁹Cf. also B. Smith’s critical stance towards the construction of models in ‘internal metaphysics’: “Model-theoretic semantics, too, is often implicitly understood in internal-metaphysical terms – the idea being that we cannot understand what a given language or theory is really about, but we can build models with more or less nice properties. What we can never do is compare these models to some reality beyond.” [Smith 2004: 157]

³⁰Cf. Koenderink [2014] for a critical approach to the assumption of a God’s-eye view.

³¹The same issue is pointed out by B. Smith in his critique of conceptual analysis for ontological purposes: “One obvious problem with the concept-centered view of ontology is that it is difficult to understand how ontologies could be evaluated on its basis. Intuitively, a good ontology is one which corresponds to reality as it exists beyond our concepts. If, however, knowledge itself is identified with knowledge of our concepts, and if an ontology is a mere specification of a conceptualization, then the distinction between good and bad ontologies seems to lose its foothold.” [Smith 2004: 76]

³²Cf. section 7.4 below.

³³Cf. Delany [1974].

³⁴Cf. Zimmer [1995; 1997; 2011].

the world really is? What if the world is experienced differently than the conclusions logically arrived at in the model make us believe?³⁵ And finally, how could an ontological model that is distanced from reality to such an abstract and formalized extent possibly offer a framework of reality with an explanatory value and accessibility from which non-ontologists, or in this case non-modelers, also benefit?

1.3 The Inductive Method of Experimental Ontology

Keeping the open questions at the end of the preceding section in mind, we can now introduce the second method, which, unlike the deductive one, draws on experience as a constitutive factor for ontological theory building. In so doing, the inductive method stands in contrast to the deductive method by being ‘bottom-up’ rather than ‘top-down’. This means that instead of stipulating one or highest, often a priori principles (possibly, but not necessarily derived from our conceptual apparatus) and deducing a model of reality from these principles, the inductive method commences, or at least generally pretends to commence, with direct access to the subject matter. In so doing, it takes the evidence of what is immediately experienced to be a primary factor for the development of an ontological theory. Whereas the highest principles of the deductive method, however, are supposed to be universal in scope from the outset, any experiential method can only draw on individual instances of experience, which are then generalized. Therefore, a universal theory that is derived from the singularity of experience

³⁵There are also philosophers who suggest the usage of models and model-based reasoning, but who do not join the camp of conceptual analysis. For example, P. Godfrey-Smith in his article ‘Theories and Models in Metaphysics’ proposes a view of constructing models in ontology/metaphysics as is done in the natural sciences. Such models are supposed to ‘resemble’ reality (which he calls the ‘target system’) itself, not just our concepts about it. “We can look at a model and explicitly assert various hypotheses about which target systems it resembles and in which respects the resemblance holds. [...] These hypotheses can be true or false.” [Godfrey-Smith 2006: 10]. The problem is that in this scenario, like in that of Meixner, we would have to compare the model with reality in order to see to what extent the resemblance of the model holds true. For every comparison, however, a *tertium comparationis* is needed, something that both compared objects have in common and that functions as a measure, applicable to both objects. The ontologist has to know which ontological category both the model and reality have in common in order to compare them with respect to this category. This means that the ontologist has to have some ontological knowledge about reality in the first place or at least at a later stage. Why then, if ontology is about reality by definition, should they not continue to elaborate on this knowledge about the world instead of making hypotheses about a model whose claims may or may not be true? If we do not have any ontological knowledge about reality, on the other hand, then a model can never justify its truth, i.e. its exact resemblance to reality, because the *tertium comparationis* is missing. And how could such a model truly resemble reality, if it is defined as “an imagined or hypothetical structure that we describe and investigate in the hope of using it to understand some more complex, real-world ‘target’ system or domain.”? [id.: 7] Imagination and hypotheses may be sufficient for the *quaestio facti*, but – although it might sound polemical – mere hope is not enough for the *quaestio iuris*. Furthermore, as Chakrabarti et. al [2016: 6] underline, every comparison needs to be made from a position outside of the two things compared. This means that the ontologist in question can neither be in the model, nor in reality, but has to withdraw to a ‘view from nowhere’, to a Meixnerian ‘God’s-eye view’. However, are we really able to distance ourselves this far from reality? Granted that we could, would we not lose sight of the things that ‘really’, i.e. descriptive-ontologically, take place and matter? It is no surprise then that Godfrey-Smith, just like Meixner, suggests focusing more on the inner life of the model instead of on its relatability to the outer world: “Much of the time, we need not obsess about saying things that are literally true. We just work within the model, develop it, show its resources, and assail those who would use other models instead. This is how our general capacity for model-based understanding seems to operate.” [id.: 11]

can only probably or improbably be true, never a priori right or false. It is their plausibility and evidence rather than their logical inevitability that keeps them afloat. This means that any experiential ontology, i.e. any ontology developed solely on empirical grounds, struggles with the *quaestio facti* in that it cannot entirely account for the factual correctness of the ontological categories and statements on the nature of existence it postulates. On the other hand, the advantages of an ontological theory that is developed by means of direct experience are its ideally uncomplicated verifiability and, if necessary, revisability. As an experiential ontology is based on direct contact with its subject matter, the relatability of its theoretical statements with the concrete forms and contents of reality these statements are about can be confirmed, in principle, without artificial effort.

Hessen³⁶ characterizes the inductive method of ontology/metaphysics as being inspired by the positive sciences, both in applying the same methodology as the latter and in drawing on its research results. This implies that the inductive method takes a certain realist as well as an empiricist stance. It was established and enhanced for ontological or metaphysical purposes in the late 19th and early 20th centuries, subsequent to Kant's critique of a purely a priori ontology that was unable to answer the *quaestio iuris*.³⁷ In the course of the 20th century, however, the inductive method had to give way to notions of ontology as relying on either conceptual-linguistic or phenomenological and, in one way or another, intuitive methods. The conceptual-linguistic approaches in ontology became very influential for the analytic ontology of our time thanks to its positive reception in Neo-Kantianism and Logical Positivism. Recent developments in the field of ontology, however, have led to a renewed interest in the inductive method and its reliance on direct experience. One of the main proponents of this trend in modern ontology is L. Paul. Although, according to her, ontology has a different subject matter than the natural sciences, it should make use of the same methodology to arrive at its conclusions.³⁸

Furthermore, the scientific methodology that is appropriate for ontology can be subdivided, i.e. the inductive method of ontology consists of two closely related, but still distinguishable components. The first component draws on "quasi-perceptual judgments used in arguments from common sense and ordinary experience." [id.: 462] No laboratory settings, no empirical measurements, no statistical extrapolations are necessary to construct an ontological theory out of what are taken to be ordinary judgments about the world. The second component, by contrast, either uses such devices itself for ontological research or draws on the results of

³⁶Cf. Hessen [1955: 12–13].

³⁷According to Hessen, the philosophers and scientists G. Fechner, E. von Hartmann and W. Wundt established the inductive method for ontological research. The epistemological conditions for this method were then justified by O. Külpe, A. Messer and E. Becher. Finally, it was H. Driesch who integrated this method into his biological-teleological system. These philosophers and scientists saw their usage of the inductive method confirmed by the success of the empirical sciences and not in the least threatened by Kant's arguments against general metaphysics as being dependent on empirical experience. Rather, they thought that Kant simply did not recognize the possibility of the inductive method, because of "his rationalistic conception of knowledge [*Erkenntnis*] and science, which only held a priori knowledge, i.e. knowledge derived from pure reason, as scientifically valid." [Hessen 1955: 12]

³⁸"Those who argue that metaphysics uses a problematic methodology to make claims about subjects better covered by natural science get the situation exactly the wrong way around: metaphysics has a distinctive subject matter, not a distinctive methodology. The questions metaphysicians address are different from those of scientists, but the methods employed to develop and select theories are often relevantly similar." [Paul 2012b: 2–3]

scientific theories that made use of them, in order to ask questions that extend “past science to engage with the nature of parts of the world that science ignores or presupposes, because it involves speculative theses and assumptions that are either unnoticed, ignored or simply assumed as obviously true in scientific theorizing.” [Paul 2012a: 222] In subsections 1.3.1 and 1.3.2, I would like to adumbrate the characteristics and the applicability of these experiential (sub)methods for ontological theory building.

1.3.1 Ordinary Judgments and Natural Language

Ordinary judgments are made in natural language and usually refer to one particular region of reality: material, moderate-sized (‘mesocosmic’), familiar, both organic and inorganic entities that are perceivable without auxiliary equipment. This is one reason why natural language is ontologically relevant and why it is justified to elaborate on what Moltmann [2017] calls ‘Natural language ontology’, whose “aim is to uncover the ontological categories, notions, and structures that are implicit in the use of natural language, that is, the ontology that a speaker accepts when using a language. [...] Natural language ontology concerns itself with the ontological categories and structures implicit in ‘ordinary’ statements of a non-philosophical discourse, not those that form part of the content of philosophical or quasi-philosophical assertions. It concerns itself with the ontological categories and structures a speaker *accepts when using a language*, not those a speaker accepts when engaging in some form of philosophical reflection.” From judgments and linguistic expressions about, among other things, what appears in our direct empirical experience of entities and events, ontological claims with universal and usually realistic pretensions are derived. In their description of what is actually experienced instead of how reality should be according to logical or physical laws, such claims often go against the kind of rationality presupposed in conceptual analysis.

In his article ‘Against Revisionary Ontology’, Hirsch [2011a: 108] gives a good example of how an ordinary judgment can differ from a fundamental principle of conceptual ontology, namely “the principle that two things cannot wholly occupy the same place at the same time.” Hirsch presents a counter-example against this principle: “If a sculptor sculpts a statue out of a lump of clay, ordinary people say that the statue but not the lump of clay has just come into existence. It follows (by Leibniz’s Law) that the statue and the lump of clay are two things, and they wholly occupy the same place, contrary to the ‘no-two-things-in-the-same-place’ principle.” [id.] Thus, based on the empirical experience of a transition from clay to statue, the ordinary judgement ‘the statue has come into existence where the lump of clay was before’ can follow. From such a common-sense judgment, in particular if it is shared intersubjectively and if it is not (mis)interpreted as being an incorrect usage of the supposedly vague and ambiguous natural language in which the statement is uttered,³⁹ we are able to derive (parts of) an ontological theory with universal scope. In this theory, the principle ‘two

³⁹“I am claiming that the correct interpretation of the English language assigns truth conditions to sentences in a way that makes the ontological sentences typically asserted by ordinary people come out true. My assumption at present (subject, as I said, to further discussion) is that the revisionists will admit that they understand well enough the interpretation I have in mind, but they don’t think that is the correct interpretation.” [Hirsch 2011a: 110] “When we interpret a language we proceed on the presumption that ordinary speakers are making correct judgments about examples. That presumption is not defeated by the difficulty (or impossibility) of giving a clear analysis of how the language functions.” [id.: 119]

things *can* wholly occupy the same place at the same time' is included and this theory can always refer to perceptual, common-sense experience for the justification of this principle.

For another example given by Hirsch, the same act of derivation from perception via ordinary judgment to theory-forming holds true. In this example, Hirsch turns against D. Lewis' thesis "that the ontological assertions of common sense are correct if the quantifiers – such words as 'something' and 'anything' – are restricted roughly to ordinary or familiar things, but the assertions are false when the quantifiers are interpreted as unrestricted." [id.: 106] If a person holds up a brown and a white wooden stick and asks other persons "whether they can see any wooden thing that is first white and then brown", these persons would probably answer in the negative. Lewis can accept this answer, because he assumes that in a common-sense answer, the quantifier \exists only refers to the domain of ordinary things as which the wooden sticks are identifiable. Lewis, however, is a so-called 'four-dimensionalist' universalist, believing in the (rather counter-intuitive) existence of temporal parts. In the concrete example, he believes "that any early part of the white piece together with a later part of the brown piece add up to a wooden thing that is first white and then brown." [id.] If the person holding the sticks now encourages their respondents by telling them that they should not only think about familiar objects in their answer, but about anything whatsoever (thereby unrestricted the domain of the quantifier), would they now see a color-changing stick? Probably they still would not. Lewis continues the example as follows: "But let's take it one step further, with a final attempt at reconciliation: 'Ah, you didn't get the riddle. You see, you kept restricting your attention to just one sort of thing even though you were told not to. The correct answer is that any early part of this one together with any later part of the other one make up a wooden thing that is first white and then brown.' Do they say, 'Oh yes, how stupid of us! Give us another riddle.'? No, they throw you out the window. That there is a stark conflict between common sense beliefs and the universalist's position seems to me undeniable." [id.: 107] Consequently, an ontological theory that is derived from such an exemplary situation would not include the notion of temporal parts defended by Lewis.

There is no doubt that ordinary judgments can be contradictory in that they basically rely on single, contingent experiences. Whereas one person sees a statue, another person only sees a lump of clay; or whereas one person may see two sticks, another person may think that both originally belonged to a longer stick that was only broken in half, but still exists as one (broken) stick. Therefore, Hirsch [id.: 112–3] gives us some criteria according to which we can assign correctness to ordinary judgments. Such a judgment should be, among others, backed up with good reasons, strongly and widely held, hard to explain away by a theory of human error, and perceptually verifiable. The importance of the latter criterion, which will lead us to the next section about empirical experiments in a minute, is also stressed by other philosophers arguing in favor of a common-sense ontology, for example L. Baker and B. Smith. Baker holds the view that the objects addressed in ordinary judgments, such as statues and sticks, are neither reducible to their physical particles, nor should the judgments themselves be reformulated "in unfamiliar terms" [Baker 2007: 4]. Instead, ordinary objects are "irreducibly real" [id.] and sentences "about ordinary things mean what ordinary speakers think they mean, and such sentences are often true." [id.] It is only if we take ordinary objects to be real and statements about these objects to be based on good reasons that we can "straightforwardly explain the reliability of our sensory evidence; descriptions directly based on experience may be

metaphysically (maximally) accurate.” [id.: 7.]⁴⁰ Smith holds a similar view. According to him, an ontology of common sense should result “from the conception of the common-sense world as the objectual correlate of everyday perception and from a conception of perception itself as ‘direct’ in the sense of involving no conceptual or theoretical intermediaries.” [Smith 1995: 301] Smith justifies the universal scope of claims derived from direct perception by arguing that only the ‘conceptual or theoretical intermediaries’ are culturally and linguistically different, whereas the manner in which we directly perceive the everyday world would be “inborn in any organism capable of learning.” [id.: 305] Such universal perceptions consist in the mereological and topological recognition of salient “*boundaries* or *qualitative gradients*” [id.: 301] that can be seen as ‘delineated’ into reality.⁴¹ It is the task of an ontologist who constructs a theory based on common-sense experience to take into account and describe these perceptible delineations such as substances, events, parts and wholes, or identities, differences and similarities between objects and to inductively derive a universally valid theory from them.

Above, I accentuated the task of justification as the main motivation for answering the meta-ontological *quaestio iuris*. We can conclude that a natural language and/or common-sense ontology such as proposed by Moltmann, Paul, Hirsch, Baker and Smith facilitates the justification of its theoretical results as it takes seriously and attempts to ontologically explain sensuous experience from the outset. However, I do not think that a common-sense ontology can accomplish the critical derivation of fundamental categories an ontological theory should ensure for a better understanding of reality, as it can only offer what we and others already implicitly or explicitly know and take to be true. It also cannot confront us with surprising insights that describe reality in a way we have not seen it or we could not have guessed at before. Common-sense ontologies are no eye-openers. Instead of providing unexpected and profound points of view and thereby risking unprovable speculations, their level of innovation is limited to comparisons between differing ordinary judgments about familiar, perceptible objects and persons. This does not mean that such an ontology should better adhere to the often counter-intuitive claims of the positive sciences, above all physics. Instead, an ontology that is based on ordinary judgments truly operates on a different level of reality.⁴² This level could also be called the ‘lifeworld’ or ‘*Lebenswelt*’ (E. Husserl). Although, due to the inductive reasoning involved, ontological theories derived from these judgments can never be absolutely and a priori true, they can count on the empirical perceptibility and evidence of the objects the ordinary judgments are about. They just cannot go any deeper than that and have to remain on the limited and ‘shallow’ level of common sense, and one could even argue that such theories

⁴⁰Elder [2004: ix] takes the same meta-ontological line: “Familiar medium-sized objects not only exist, then, but have essential properties, in the traditional sense, and we often are able to determine which properties are essential to one or another of nature’s kinds.”

⁴¹“A certain capacity to apprehend those basic delineational structures of reality which are relevant to its survival must indeed be inborn in any organism capable of learning. The human capacity to distinguish colors or shapes, for example, or to recognize similarities in the phenomena perceptually experienced, or to find some experiences more rewarding than others, *could not have been learned*, for such capacities are presupposed by any process of learning which would be conceivable for human beings.” [Smith 1995: 305]

⁴²Cf. for example Smith [1995: 302]: “Thus while the common-sense world must be *compatible* with standard physics, it may go *beyond* physics in certain harmless but important ways. Examples of the sorts of features which may be peculiar to common-sense external reality might include: formal-ontological structures and relations of certain sorts, shapes, holes, patterns and other similar structures, as well as colors, tones, etc., conceived as qualities of external things.” Cf. also Paul [2010: 466] and Baker [2007: 9].

are right in doing so.⁴³ Be that as it may, because the everyday world is often confusing and involves many disruptive factors preventing it being possible for ordinary judgments to be given with good reasons, it is important to carry out controlled empirical experiments for the sake of ontological theory-building. This is where the inductive method of ontology draws nearest to natural science, in particular to cognitive science and the psychology of perception.

1.3.2 Empirical Experiments

Ordinary judgments about the nature of reality and everyday perception alone are often insufficient for the construction of an ontological theory. Such judgments and perceptions may serve as hints and guidelines or as arguments and (counter-)examples in the context of an informal discussion, but an ontological theory drawing on empirical experience should depend as little as possible on the contingency and arbitrariness that comes along with direct experience. This is where the significance of controlled empirical experiments emerges. In general, there has been a tendency in contemporary philosophy to make use of empirical experiments in order to disentrail philosophical claims from the ostensibly problematic a priori method of conceptual analysis. The representatives of conceptual analysis are often deprecated as so-called ‘arm-chair’ philosophers who rely on discretionary and highly debatable intuitions instead of provable data. The subjectivity and arbitrariness of these intuitions is often disguised by calling them ‘axioms’ or innate and universal, i.e. a priori ideas, whereby it is sensuous experience that is often classified as subjective and arbitrary. In contrast and in order to account for the implication of sensuous experience, experimental philosophers turn to empirical disciplines, including the cognitive sciences and psychological studies of perception, either to refer to research results or to conduct proper experiments according to the methodological standards of these disciplines.⁴⁴ Empirical experiments in ontology, of which there are only a few to date despite the broader trend in other philosophical areas,⁴⁵ not only allow for a better documented and more credible inference on the probability of ontological claims in looking at reality without conceptual mediation, i.e. in a ‘first-order’ fashion.⁴⁶ They also avoid cultural inconstancies as well as deceptions by illusions everyday perception can fall prey to.⁴⁷ In so doing, empirical experiments in ontology function not only as a refinement, but also as a corrective for conclusions made from ordinary judgments.

⁴³Cf. the discussion of counter-intuitive ‘deep’ and commonsensical ‘shallow’ ontology in Hirsch [2011b].

⁴⁴Cf. Fischer et al. [2015] for an up-to-date overview and Kauppinen [2007] for a compact characterization and criticism of experimental philosophy.

⁴⁵This unfortunately correct observation is made by Thomasson [2012: 185, 190].

⁴⁶Cf. Prinz [2008: 199]: “When experimental philosophy is used to criticize traditional philosophy, it potentially severs the link between conceptual claims and ontological claims. Since Plato, traditional philosophers have often assumed that we can figure out the nature of some first-order thing (love, truth, the good, etc.) by figuring out how people understand the concepts. Concepts are presumed to be a window onto ontology. As remarked already, experimental philosophers do not typically assume that our concepts are accurate. When they show variation in subjects’ conceptual intuitions, they raise questions about whose concepts, if any, are correct. If conceptual intuitions are highly variable, then building a first-order theory of the basis of intuitions may be a mistake. In this way, experimental philosophy can be seen as justifying empirical philosophy. If intuitions are unreliable, then perhaps other methods should be used in developing first-order theories. Experiments that directly measure mental processes, for example, can be used to determine whether our intuitions about those processes are correct.”

⁴⁷Cf. Paul [2010: 469]: “The claim is not that philosophers cannot draw on ordinary judgments when constructing their ontological models; the claim is that we must not do so in a naïve way.”

Paul demonstrates this by showing how the perception of a simple visual model and the usual judgments about this perception can correct ontological views on causality a philosopher may hold to be true. The model used by Paul stems from A. Michotte's experiments on the perception of causality⁴⁸ and displays on a computer screen a motionless green object towards which a red object is moving. When the red object is adjacent to the green object (without overlapping it), the red one stops its movement, while the green object begins to move.⁴⁹ Ordinary perception interprets this sequence of movements as a causation of the green object's movement by the red object's arrival, as if the latter pushed the former. The judgment 'the red object caused the green object to move', however, is unfounded, because the sequence of movements is just a sequence of spatial changes the objects traverse independently of each other. Paul concludes from this that an ontologist cannot uncritically rely on judgments about causality made in common-sense perception, because "we can have the visual impression of causation even when there is no causation involved, and even when we know there is no causation involved." [Paul 2010: 471–2] Therefore, "we need to be clear on different cues and camouflages that might affect our causal judgments." [id.: 474] It is only by taking into consideration empirical experiments such as the one by Michotte⁵⁰ and by observing, collecting, evaluating and, if necessary, correcting ordinary perceptions and judgments that we can inductively generalize experimental findings for the sake of an ontological theory.⁵¹

Other interdisciplinary research between ontology and cognitive studies concentrates on, for example, the experience of object properties such as colors,⁵² the visual presentation of reality,⁵³ and propositional attitudes⁵⁴ in the context of an ontology of the mind, as well as insight into universals and particulars.⁵⁵ In my discussion of the ontological interpretability of Gestalt-thinking in chapters 6 and 7 below, I will connect psychological and cognitive research in this regard with the question of parts, wholes and their oscillations in formal ontology. This is the reason why I am outlining the current tendency of experimental philosophy/ontology right now. I provide an interpretation of Gestaltist research on the empirical experienceability of parts and wholes in order to interpret Gestalt theory as a source for experimental ontology. Furthermore, this subsection serves the purpose of a precaution of which not only my intended interpretation but every inductive-empirical method in ontology must be aware. The precaution is the following: Empirical perception and experiments may be necessary constituents of an ontological theory that aims to respond positively to the meta-ontological *quaestio facti* and the *quaestio iuris*, but they can never be sufficient constituents in this matter. Not only philosophers

⁴⁸Cf. Michotte [1946].

⁴⁹A simple demonstration of the object's movements can be found on the website <http://cogweb.ucla.edu/Discourse/Narrative/michotte-demo.swf> (last visited on 7 December 2019).

⁵⁰Cf. on Michotte's just sketched experiment also Smith [1988a: 32].

⁵¹Cf. on this topic also S. Siegel's [2009] article 'The Visual Experience of Causation'. In a similar vein, Casati [2003] shows that common-sense statements about 'representational advantages' of certain types of objects (complete material objects) over other types of objects (scattered material objects) are not affirmed by experiments in cognitive science. Therefore, any descriptive approach in metaphysics/ontology should be cautious in accepting such representational advantages that would make one type of object ontologically privileged compared to other types of objects only due to our pre-reflective, perceptual preference of complete material objects.

⁵²Cf. Kennedy [2007].

⁵³Cf. Albertazzi [2010].

⁵⁴Cf. Garfield [1988].

⁵⁵Cf. Smith [2004]

who take a critical stance towards experimental ontology, as A. Thomasson does in her article ‘Experimental Philosophy and the Methods of Ontology’,⁵⁶ but also adherents of this method such as Paul make it clear that direct experience and empirical measurements alone are never sufficient for ontological theory forming. While the starting point of inductive reasoning can be located in experience, the resulting claims that are induced from experience always require at least a minimal amount of a priori reasoning in addition. A theory does not just consist of a listing of single experiences that have been had, but it also necessitates what Paul calls “theoretical desiderata such as simplicity, elegance, parsimony and overall theoretical fit.” [Paul 2010: 465] Moreover, the empirical data have to be ordered, evaluated, generalized, interpreted, compared and perhaps statistically extrapolated. This would be impossible without a certain conceptual input from the ontologist developing the theory. Furthermore, a priori reasoning is needed to compare and analyze competing theories⁵⁷ and to make sure that empirical experience can be distinguished from imagination, dreams, memories or other non-empirical acts and contents of the mind.⁵⁸ Apart from this, any experimental ontologist needs to have at least a vague, a priori idea or ‘intuition’ of the empirical data that it is worth researching in the first place. Without an intuitive hypothesis, without an idea about what ontology is and requires, and without the a priori decision about the region of reality (material objects? fictional objects? social structures? art?) and the categories towards which the experiment is directed (time? causality? existence? holes? part-whole relations?), it would be a hopeless effort to collect empirical data or make notes of people’s ordinary judgments at random. As long ago as 1955, similar concerns about the exclusivity of the inductive method led Hessen to the rather radical conclusion that “the demand of inductive metaphysics is either not realized at all, or it is realized in such a way that de facto there is no inductive metaphysics, or an inductive metaphysics (in the actual sense) is neither demanded nor offered.” [Hessen 1955: 27].⁵⁹

What this criticism of the inductive method boils down to is that without deductive reasoning and the application of concepts, the *quaestio facti* of meta-ontology has to remain unaccounted for. Indeed, we have to decide a priori where the ontological categories of our theory should be derived from (the ontological region ordinary statements and experiments are about), how they should be generalized and which categories are of importance and, indeed, are about the world itself. We can learn from this that in the same way that the deductive method

⁵⁶Cf. Thomasson [2012].

⁵⁷“Assuming that the competing scientific theories are approximately empirically equivalent, or at least empirically acceptable, selection of a theory over its competitors is determined by a mix of desiderata, including its overall explanatory value, which is evaluated in part by its simplicity, elegance, and fit with already accepted theories, intuitions and assumptions. This is one place where a priori reasoning and inference to the best explanation play an important role. After a theory is selected from the mix as providing the best explanation, if one is a scientific realist, its class of models is supposed to give us the truth about the nature and structure of certain features of the world: i.e., we accept the theory as a representation of these features of the world.” [Paul 2012b: 11-12]

⁵⁸J. Nagel makes us aware of the latter point in her discussion of the empiricist positions of J. Locke and B. van Fraassen: “To make the kind of epistemic use of experience that empiricism demands, we need at least the capacity to sort out its deliverances from other products of the mind – imagination, dreaming, and so forth – and this sorting task is, I will argue, both a rational enterprise and one that demands substantive a priori knowledge for its execution.” [Nagel 2000: 346]

⁵⁹“Die Forderung einer induktiven Metaphysik wird entweder überhaupt nicht realisiert, oder sie wird so realisiert, dass de facto keine induktive Metaphysik vorliegt, oder aber es wird eine induktive Metaphysik (im eigentlichen Sinne) weder gefordert noch geboten.”

of conceptual ontology alone cannot justify how its claims can be related to reality (*quaestio iuris*), the inductive method of ordinary judgments and experimental ontology alone cannot account for the factual and universal appropriation of an ontological theory's claims (*quaestio facti*). Therefore, a complete ontological theory should respect both kinds of methods. We will have to keep this conclusion in mind if we want to arrive at an ontology of PWO in which both a posteriori experience and a priori concepts are embedded.

1.4 Recapitulation of the Methodology

The task of chapter 1 was to locate and describe methodological approaches according to which reality and experience are combinable in order to begin the determination of the ontological nature of PWO. For the most part, this question is not an ontological one, but rather a meta-ontological question *about* ontology, more precisely about the methods with which ontology can be carried out. I argued in section 1.1 that if meta-ontology methodologically reflects on the methods that are useful to construct an ontological model, then it should fulfill two simple criteria. The first criterion consists in demonstrating where the method takes the ontological categories of the theory from, how precisely it attains them, and why it derives these and not others. We could imagine this criterion as an arrow pointing from the data to be investigated (reality or our most general concepts about reality) to an ontological model of this data. The second demand concerns the justification of the ontological claims made in the theory. Here, the arrow points from the theory back to reality, as it were. Is the theory able to justify how its claims can relate to reality? Is it not only a hypothesized model *of* reality, but also a justified model *for* reality, or whatever the model claims to be about (Being, causality, time, etc.)? My suggestion was that in order to refer back to reality, a theory's method should seek empirical confirmation. Without confirmation, it is impossible to verify or falsify the claims made in an ontological model. By drawing on Kant and his reflections on ontological cognition (*Erkenntnis*), I labeled the first criterion the meta-ontological *quaestio facti* and the second criterion the meta-ontological *quaestio iuris*. The next step was to identify different ontological methods and to see how these methods can fulfil the two criteria. With the help of Hessen's book *Die Methode der Metaphysik*, I introduced three ontological methods and delineated examples from 20th century ontology for each of them. Furthermore, I pointed out which kind of experience, if any, is constitutive for the respective method and I showed why the third method, i.e. the 'intuitive' one that draws on ontological experiences, is not suitable for the further determination of PWO's ontological nature.

For the deductive method (1.2), any kind of perception or experience is, in principle, dispensable, because it gets all the information it needs to respond to the *quaestio facti* from the a priori conceptual apparatus and/or from one or more absolute principles. The former case was more prominent in recent years. Via the postulation of some of the most general concepts as axioms, the ontological nature of these concepts is deduced in a 'top-down' fashion and clarified by the analysis of natural languages and the construction of technical languages. This results in models that are intended to resemble reality, because reality is supposed to be as rational as we can logically think of and express it. However, it seems to me that such models struggle to justify their relation to reality due to their inability or lack of interest in being confirmed by

experience. In many cases, ontological models are more concerned with their internal consistency than with their external verifiability. This, together with their usually formalistic nature, makes them weak candidates for the self-legitimization we may expect from a theory that either pretends to explain reality as it is supposed to be or that pretends to revise the manners in which we usually see it.

Unlike the deductive method, the inductive method (1.3) takes its data for the *quaestio facti* from experience. The kind of experience it takes it from is empirical in nature and expressible or retrievable in ordinary language. For the most part, this method concentrates on familiar, material, mid-sized, organic and inorganic entities and how they are perceptible. Either via the consideration of ordinary judgments (1.3.1) or via empirical experiments (1.3.2), an ontological model is thus derived in a ‘bottom-up’ direction. On the one hand, the inductive method is very strong in the confirmative aspect of the *quaestio iuris*, because the claims of its models can be easily verified and falsified in the everyday world and by direct perception. On the other hand, it relies on a priori reasoning of a deductive kind for the construction of an ontological theory, which is why it cannot fully satisfy the criterion of the *quaestio facti* alone. Also, ontological theories drawing on perception and ordinary judgments are rarely original or even controversial, because in not being counter-intuitive, they either confirm what we already know from the everyday world, or they just statistically extrapolate which ontological truth claims the average subject (with a certain language, culture, age, etc.) makes with regard to perceptible entities. The ontological regionalization, i.e. the restriction to perceptible and material entities, is a further reason why the inductive method alone cannot provide general propositions about reality as a whole or fundamental categories of it (unless, of course, it explicitly reduces the inventory of reality to such entities).

To conclude, there are indeed methodical approaches in ontology according to which reality and experience are combinable, both in an empirical-perceptual and what I defined as an experiential sense. These methods are no more perfect, however, than the deductive method, for which perception and experience are not constitutive. Therefore, and with regard to my aspiration of looking for an ontological theory in which the ontological nature and status of PWO can be thoroughly determined, it would be unreasonable to side with just one of the two methods alone. Although it seems unusual and because it is undogmatic, I prefer to take and apply them instead as a pair, in a flexible way in which the disadvantages of one method are counterbalanced by the advantages of the other. It is due to their mutual dependence in accounting for the two *quaestiones* of meta-ontology that the discrepancies of these methods appear as constructive complements rather than constrictive contradictions. From now on, this pair of ontological methods shall guide us further through the process of interrelating the four parameters *reality*, *experience*, *part-whole* and *meaning* in order to determine the ontological nature of PWO. As a first step towards this aim, we have to answer to the meta-ontological *quaestio facti*.