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SPECIAL ISSUE OF BALKAN JOURNAL OF PHILOSOPHY 2013

21st-CENTURY METAPHYSICS

Since at least the time of Plato and Aristotle up to the 20th century, in every historical epoch metaphysics has been the most important part of mainstream philosophy.

This is true especially of classical Continental philosophy. Problems of “being as such”, “the first causes of things” and “things that do not change” have characterized metaphysics since the ancient Greeks and the medieval philosophers and are still being discussed today. In addition problems such as “the categories of being”, “universals”, and “the ontological structure of objects” have been accepted as topics of the “new” or “post-Medieval” metaphysics, and can be considered as bridging the old and the new metaphysics. Finally, the metaphysical problems of modality, space and time, the mental and the physical, and the constitution of material objects, for example, have arisen with the epoch of Modernity. The Modern period is not an autonomous epoch but is simply the last phase of classical Western metaphysics, a metaphysics that is today still dominant throughout the world in its final form: scientific and technical rationality. Can this be true? Following Kant, wouldn’t it be more correct to say that scientific and technical rationality has replaced metaphysical thinking?

Since the time of Hume and Kant there has appeared a tendency to present arguments for the impossibility of metaphysics. In the 20th century this has become much more a full-blown effort than a tendency. The post-metaphysical approach, which starts with rejecting metaphysical objectivism, rests on Kant’s transcendentalism. Further, a tendency has also appeared in the postmodern epoch to “deconstruct” metaphysics. Deconstructive postmodernism expresses its expectation for a break with metaphysics, which, it argues, has reached a definitive end. Finally, one of the dominant philosophical trends of the 20th century is that Heideggerian rejection of classical metaphysics, while early analytic philoso-

phy also rejected metaphysics, as do current supporters of “metaphysical anti-realism” which advocates a strong form of the claim that metaphysics is impossible.

However, out of the postmodern critique of metaphysics has arrived an opposite tendency, a tendency to re-think the place of metaphysics in philosophical inquiry. A counter-trend of constructive postmodernism appeared in the 20th century in which metaphysics occupies an important place. The representatives of this trend proclaim that only the old form of metaphysics should be deconstructed while a new form should be elaborated and developed. Attempts at such a reformulation of metaphysics are present in philosophers like C. S. Peirce, William James, A. N. Whitehead, N. Hartmann, G. Deleuze and many others. Even analytic philosophy in the second half of the twentieth century has revived metaphysical theorizing contrary to the tendency in the early analytic philosophy. With this, a number of contemporary philosophers claim that metaphysics has an important role in philosophy, but is in need of radical rethinking.

The current intellectual landscape and its history gives rise to the crucial question: what direction(s) should 21st-century metaphysics take? From this, a number of further questions arise:

- Is metaphysics simply a compendium of philosophical problems that cannot be assigned to epistemology or logic or ethics or aesthetics or to any of the parts of philosophy that have relatively clear definitions?
- Is metaphysics really in need of radical rethinking?
- What are the relationships between contemporary metaphysics and ontology? Is it correct to consider metaphysics as a theo-

ry of Being and ontology as a theory of beings?

- Will the 21st-century metaphysics be able (at least partly) to bridge the analytic-continental divide?
- What should be the relationships between the 21st- century metaphysics and the other

branches of philosophy and humanities: humanism, ethics, aesthetics, logic, epistemology, etc.?

These and similar problems will be the focus of this issue of *Balkan Journal of Philosophy*.

From the Editorial Board
of *Balkan Journal of Philosophy*

Articles

Invited paper

METAPHYSICS BETWEEN SCYLLA AND CHARYBDIS AN ANALYTICAL PERSPECTIVE

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Abstract:

Seemingly, metaphysics is trapped between the *Scylla* of being superfluous, on the one hand, and the *Charybdis* of being esoteric, on the other. Is there a way out? In discussing two large-scale metaphysical projects that are very different in character, the article analyses one of the roots of this impasse – the *ontological paradigm*. The author tries, further, to argue for another stance towards the theoretical task metaphysics has to submit itself to: the *paradigm of transcendentals*. The *structural-systematic philosophy* will be a point in case.

Key words: weak metaphysics, liberal naturalism, ontological paradigm, paradigm of transcendentals, structural-systematic philosophy.

Prologue

I can't wait for the first metaphysician to come out and defend that everything is water. Not to be confused with aquaism: the view that everything is water. That is clearly false. Rather, its priority aquaism: everything is ultimately water. Water is the most fundamental of all things. Of course, water is H₂O, and so made up from other stuff, but that is the wrong sense of priority. Water is metaphysically more basic than both H and O, though physically H and O might well be more basic. Our ontology contains only water. It nicely goes with a process metaphysics. It supports our intuitive judgement that water is an

especially important liquid. It is perfectly understandable: I mean it in Tales' sense! Maybe it even gives rise to the final explanation why time flows. And the next one will defend priority aeroism: the view that everything is ultimately air. (The final explanation of why time flies!) A new golden era, or the dark ages all over again.

So far, Thomas Hofweber in his contribution "Ambitious, Yet Modest, Metaphysics" to the book *Metametaphysics* (Chalmers (2009), pp. 273). It is a harsh and polemical critique of a way to do metaphysics. The polemic is a provocation, not least because similarities with real pieces of philosophy that are called "metaphysics" are rather visible. If this should be true, "What's wrong with Contemporary Philosophy?", to cite the title of a 2006 paper of K. Mulligan, P. Simons and B. Smith, who took contemporary metaphysics and ontology as a basis for their analysis of the state of the art (Mulligan/Simons/Smith (2006)). They summarize the attitude of contemporary philosophers/ metaphysicians – as they came to see it – as follows:

[First], it [philosophy, metaphysics, ontology, C.S.] is cultivated with every appearance of theoretical rigour. [Second], its participants do not, by and large, believe that philosophy is or can be a science, i.e., they do not believe that it can add to the stock of positive human knowledge.

The second clause expresses what the authors call *horror mundi*. By this, metaphysics degenerates

to an esoteric endeavour, somehow backed up by some formal tools and some sophistication in arguing, most obviously in “thought experiments” - the notorious Mary and the notorious zombies are a point in case. It degenerates to playing with words, transparent to insiders only, irrelevant for scientific as well as practical purposes. Further, it is a game that is, even under the perspective from within, not devoid of triviality. Hofweber's polemic may be seen in the same way.

Concerning the *horror mundi*, it may be asked, whether, after all, this is not the right attitude? Isn't it the case that metaphysics, once the most important part of philosophy, has lost its scope and been made superfluous by “scientific progress”? Is it not the case that the empirical sciences are much better off in saying “what there is”, how it is and how all the various “things” fit?

If this should be the case, is there anything left for metaphysics beyond constructing parallel-universes, endowed with “metaphysical water”? Are there “substitutes” that deserve - one way or another - the name “metaphysics”? Or should it be buried altogether at the beginning of the 21st century? Is metaphysics trapped between the *Scylla* of being superfluous and the *Charybdis* of being esoteric? May there be a way out?

“The death of metaphysics” has been a constant topos in meta-philosophical reflections, at least since Hume and Kant. On the one hand, it cumulated in the first half of the last century by the suspicions of the members of the *Vienna Circle*, leading to the anti-metaphysical heritage of (early) analytic philosophy. On the other hand, the rejection of classical metaphysics is associated with Husserl and Heidegger. But, even during this time, there have been great philosophical works that deserve the name “metaphysics”. A. N. Whitehead's *Process and Reality* may be a point in case. Be that as it may, at least within the so called “analytic tradition”, metaphysics has been revived.

Polemics aside, if one takes the above mentioned stances towards contemporary metaphysics - exaggerated as they may be - seriously, one may ask, among other things, whether there is a common reason for the theoretical impasse - being trapped between *Scylla* and *Charybdis* - and, if there is, whether there is an escape. This will be done in the contribution to follow. Due to restrictions of space, much of what follows will be thetical in character. It is hoped, however, that the overall stance expressed

in this contribution will become clear. First, however, some clarifications seem appropriate as to how the word “metaphysics” is understood in this article.

1. Metaphysics - Some Clarifications

At the beginning of *Process and Reality*, Whitehead characterizes his *speculative philosophy*. It is a fine characterization of what is understood by “metaphysics” in this contribution:

Speculative Philosophy is the endeavour to frame a coherent, logical, necessary system of general ideas in terms of which every element of our experience can be interpreted. By this notion of ‘interpretation’ I mean that everything of which we are conscious, as enjoyed, perceived, willed, or thought, shall have the character of a particular instance of the general scheme. (Whitehead (1978), p. 3):

With this, “metaphysics” is characterized 1) as a theoretical endeavor (viz: “coherent, logical, necessary system of general ideas”). It is, 2) a theoretical endeavor that has to respect data (“everything of which we are conscious, as enjoyed, perceived, willed, or thought”). Its theoretical task is 3) unifying these data, albeit in a general way (“general ideas”, “particular instance of the general scheme”). And, 4) metaphysics, as a unifying system of general ideas, is unrestricted in scope. This characterization will serve as a working platform in what follows. It is an ambitious characterization, not least because it characterizes metaphysics as being unrestricted in scope. There are, obviously, other, more specific, philosophical topics that are called “metaphysical”. Due to the restriction of length an article has to obey, these are not dealt with in this article.

1.1. Coherence and Adequacy

As a theoretical endeavor, metaphysics has to obey formal (in a wide sense of the word) and methodological criteria as well as external ones; it has an internal as well as external aspect. Whitehead calls these aspects the rational side and the empirical side, respectively.

The most important internal criterion is “coherence”. It means for Whitehead that “everything of which we are conscious, as enjoyed, perceived, willed, or thought”, the data, must not only be embedded in one theory, but the theory must

also exhibit the interplay of these data. Moreover, it is this interplay expressed by the theory that gives the respective ideas or notions their meaning:

‘Coherence’, as here employed, means that the fundamental ideas, in terms of which the scheme is developed, presuppose each other so that in isolation they are meaningless. This requirement does not mean that they are definable in terms of each other; it means that what is indefinable in one such notion cannot be abstracted from its relevance to the other notions. It is the ideal of speculative philosophy that its fundamental notions shall not seem capable of abstraction from each other. In other words, it is presupposed that no entity can be conceived in complete abstraction from the system of the universe, and it is the business of speculative philosophy to exhibit this truth. This character is its coherence. (Whitehead (1978), S. 3)

In this, a metaphysical theory is a “theory of everything” and “coherence” expresses its being a unifying theory, unrestricted in scope. In this contribution, the word “coherence” is used in the sense indicated by the citation above and is an internal criterion whose importance cannot be esteemed high enough.

A metaphysical theory, moreover, has to respect data. This is the most important extrinsic criterion: adequacy. These data are not exclusively “empirical” in a narrow sense. They play their role in “theory building” at the beginning of the theoretical metaphysical endeavor as well as at the “end” of this endeavor, to serve as “instances for testing” the theory. A citation of Whitehead's nicely illustrates this interplay:

The true method of discovery is like the flight of an aeroplane. It starts from the ground of particular observations; it makes its flight in the thin air of imaginative generalizations, and it again lands for renewed observations rendered acute by rational interpretation. (Whitehead (1978), p. 5)

This shields metaphysical theorizing from triviality.

A metaphysical theory should respond to all these criteria: no restriction in scope, respecting the data - the huge supply of them -, being coherent and

adequate. All these criteria host important problems, and it may well be doubted that these problems may be solved or overcome.

The characterizing citation, however, gives a first hint how to avoid the trap between *Scylla* and *Charybdis*: it speaks of general ideas - and not of “building blocks” or “constituents”. To exhibit the methodological importance of this difference is the task of a great part of the rest of this contribution.

1.2. *Metaphysics and Paradigms of Theories*

Presupposing that metaphysics is a theoretical endeavor, the question arises as to what sort of theory it is. It is not the place here to give a “theory of theories”, rather it is assumed that there are undertakings that are theories and they mainly come in two paradigms: physics, or natural sciences in general, but also, e.g., sociology or psychology - for short: *empirical theories*, on the one hand and logic and mathematics, *formal theories*, on the other hand. The last ones are with respect to methodological constraints rather unproblematic. In short: formal theories have their “proofs” and meta-theories, while empirical theories have their data that are - of course - not independent from the relevant theory. Further, empirical sciences developed and refined their methodologies during their respective histories and within their respective frameworks of scientific culture. This, the data embedded in theories according to methodological constraints, may be the reason why, as Mulligan, Simons and Smith (2006) say, “the real world will soon put them [the scientists, C.S.] to rights if they diverge too far from reality.” For metaphysics, things are not so easy and simple, again Mulligan, Simons and Smith: “Philosophers, on the other hand, cannot confront their ideas with reality in the same direct way.”

Metaphysical theories are not formal theories, as are logic or mathematics. There is, however, some similarity between metaphysical theories and formal theories. This similarity has to do with the criterion of coherence. If one conceives of the dimension of formal theories, including logic and mathematics, their interplay, the meta-theories, and so on, one sees that one never gets outside the “formal dimension”. The formal theoretical framework exhibits a semantic self-sufficiency of sorts and any sub-dimension has its connections to “the rest” and it must fit - according to standards, formulated within the formal framework. This is coherence at its best. But, meta-

physics is not a formal theory, albeit it may avail itself of formal tools.

If, however, metaphysical theories claim, as they should in abandoning the *horror mundi*, to say something about the “world”, they are in need of an empirical aspect. But they are not empirical theories in the usual sense of the word: metaphysical theories have and should have their data - that is the criterion of adequacy - but the data are somehow second hand: there is no metaphysical experiment to be invented, nor are there specific metaphysical and metaphysically regimented observations to test metaphysical findings. In this respect, metaphysics must, among other things, rely on other sciences. It is, somehow, passive, with respect to the data it should respect. Finally, metaphysics neither fits the empirical paradigm nor the formal paradigm.

2. The Trap

This section presents two metaphysical theories: one caught by the *Scylla* of being superfluous: Ladyman (2007), and the other by the *Charybdis* of being esoteric: Rosenberg (2004). The main purpose, however, is not to supply evidence that this impasse is present in contemporary metaphysics; this may also be seen elsewhere. The main purpose is to demonstrate that both problems, different as they are, are rooted - albeit with a different strength of emphasis - in the same tacit assumption of what a metaphysical theory should (also) supply. The two examples are, further, exploited here because they are both general theories - at least conceived of that way by the authors - and formulated with high standards of rigor. Both are structurally metaphysical theories - not pieces of theories - akin to the characterization of Whitehead's. Let's start with the *Charybdis* of being esoteric.

2.1. The *Charybdis* of Being Esoteric – Rosenberg's Theory

In his book *A Place for Consciousness - Probing the Deep Structure of the Natural World* (Rosenberg (2004)), Gregg Rosenberg wants to find a place for the phenomenon, or the datum, of consciousness within an otherwise “physical” environment. This place should be coherently connected to those aspects of the “world” that are usually within the scope of natural sciences (“physics”, for short). Because he explicitly aims at a theory coherently

connecting consciousness to an otherwise “physical environment”, he calls his position *Liberal Naturalism*, to distinguish it from other brands of “physicalism”.

His book presents “great metaphysics”, especially concerning its unrestricted scope, his careful motivations for his theoretical assumptions and consequences, and his respect for other theories, especially those found in history. In making his insights explicit, Rosenberg avails himself also of formal models, mostly taken from the discipline of computer sciences.

The “phenomenon of consciousness” is both a fact in need of explication and a datum of most importance. He argues the last point at great length (Rosenberg (2004), pp. 18), so that his claim that it does not fit the usual scientific standards of objectivity that are to be obeyed within the empirical sciences is well corroborated.

For Rosenberg, the most important difference concerning the facts that are expressed by empirical scientific or physical theories and the facts about consciousness is the following: “Physical” theories are only “relational” in character, each “fact” expressed by such a theory is explained by the others and vice versa; the facts mutually explain and somehow determine each other. Therefore Rosenberg calls theories of this sort “circular”. According to Whitehead's criterion of coherence, that is just what metaphysical theories should be. Rosenberg's stance, however, is quite different: Due to circularity, these theories do not deal with “contents”. To be ontologically or metaphysically meaningful a theory must not only express “relational facts” or “properties”, but also “intrinsic properties” or qualitative content. These intrinsic or qualitative “properties” or facts stand somehow in themselves. “Relational facts”, in contrast, are in need of an external carrier that somehow shows self-sufficiency. Moreover: “Facts about bare differences (“relational facts”, C.S.) cannot entail facts about qualitative content.” So, facts about qualitative content are not provided for by scientific theories. It is, according to Rosenberg, the task of a metaphysical theory to express facts of qualitative content and to express the interplay of facts of qualitative content with the relational facts. Within such a theory certain facts of qualitative content provide the external carrier for relational theories. Phenomenally conscious properties, facts of (phenomenal consciousness) phenomenal qualities, as Rosenberg calls them, are the paradigm for prop-

erties or facts of content a theory should exhibit (cf. (Rosenberg (2004), p. 22).

Moreover, the facts of (phenomenal) consciousness and “physical” facts should be different aspects of an all including or “founding” metaphysical basic structure. In this, the search for, the formulation of, and the theoretical elaboration of these fundamental structures or facts has the character of formulating a *prima philosophia* (*deep structure* is Rosenberg's expression).

The theory is formulated with the help of two categories: natural individuals and properties. Properties come in two sorts: effective and receptive properties. Natural individuals are either primitive effective or receptive properties, or a web thereof.

The architectonic of his metaphysical scheme comes in layers: the individuals of each layer are built by individuals of the lower level (by the receptive properties of these individuals, see, Rosenberg (2004), p. 219).

The theory is also algorithmic in character, starting with a first layer and building up successively, “step by step”, higher level layers. Somewhere, at a very high level, individuals, humans, e.g., should show up. There is, due to this architecture and presupposition, an ultimate layer/level that carries the “whole building”.

Given that Rosenberg's theory is coherent, what is there to say about its adequacy? What about the items and structures at the ultimate level that are, also for Rosenberg, not accessible to “physical” or “empirical” theories? They function as ultimate carriers for the whole universe. Rosenberg (Rosenberg (2004), p. 237) asks what these ultimate carriers are. After a lengthy reflection, he proposes “phenomenal qualities” of consciousness: “The phenomenal qualities of phenomenal consciousness are perfect candidates” (Rosenberg (2004), p. 238). But they are not “phenomenal qualities” of which we humans have experience. Conscious phenomenal qualities, as they are experienced by humans, are only paradigms that model these “ultimate” phenomenal qualities that serve as carriers. Only very abstract and general features of conscious phenomenal qualities as they are experienced by humans should be attributed to the “ultimate” phenomenal qualities. Here he (Rosenberg (2004), p. 240) should be cited in full length:

The abstract sense that the alien qualities would be like the qualities of our consciousness would come to precisely this:

They would be intrinsic tout court; they would be determinables and belong to families of determinables (terms of art, C. S.); [...].

The ways they would be different from the qualities of our consciousness would be these: Their specific characters presumably would be entirely different from those of our own qualia; [...]; and they presumably would not be appropriate vehicles for representation and thought.

What could indicate the adequacy of this theory? Implicitly, Rosenberg gives an answer to this question by admitting that his considerations do not prove that his fundamental laws have some important feature they should, according to him, have. For him, the acceptability of his approach “rests on convictions concerning the simplicity, clarity, objectivity, and elegance of fundamental laws. They are convincing only to the extent that one shares these convictions about nature” (Rosenberg (2004), p. 113).

This means, criteria for a metaphysical theory are internal, at best aesthetic in nature. The bedrock of the universe are “entities” that are not expressible by empirical sciences, they are not consciously experienceable by humans, nor may they ever be experienced by humans. That is esoteric as its best.

2.2. *Ontological Structural Realism – the Scylla of Being Superfluous*

In their book *Every Thing Must Go* (Ladyman (2007)), Ladyman, Ross and Spurrirt present a theory which they call *weak metaphysics*. They call their theory “weak” to express that they reject empirically inert speculations and to set it apart from what they call neo-scholastic metaphysics. The root of avoiding these speculations consists in their extremely strong and verbatim respect of scientific theories as these are formulated within the respective sciences.

The task of weak metaphysics is the unification of (special) scientific theories or hypotheses, based on what they call *fundamental physics*. The methodological constraints this task faces are laid down by the institutionally accepted norms of the *scientific community* of either the special sciences or of fundamental physics. More explicitly, Ladyman, Ross and Spurrirt as well as their co-authors understand the task of metaphysics as *unifying* scientific theo-

ries or hypotheses: The sciences submitted to unification are all those sciences that may be called “empirical,” sciences that have to do in a wider or narrower sense with measuring data. So, not only natural sciences are to be respected, but also sociology, psychology, economy or history, for example.

The task of unifying is meaningful, so the authors' hypothesis, since the universe is one and not a mere “sum” of somehow independent parts. They argue this hypothesis by an insightful interpretation of the history of the sciences. Further, the authors are well aware of the fact that other sciences themselves tackle (and solve) problems of unification. Concerning the special metaphysical task of unifying they avail themselves of what they call fundamental physics.

To make the special status of a metaphysical unification explicit, the authors dwell on the difference of, on the one hand, special sciences which tackle unifying tasks that are not metaphysical, and, on the other hand, fundamental physics. This last mentioned science is a sub-field of “institutionalized physics” and deals with, e.g. cosmological theories, quantum field theories, string theories or M-theories. Using theories or hypotheses that belong to *fundamental physics* for the unifying task distinguishes *metaphysical* theories from others.

Moreover, fundamental physics provides those structures that a metaphysical unification must respect, positively as well as negatively. This means, among other things, that a metaphysical theory of unification should be neutral with respect to theoretical gaps not yet closed by fundamental physics.

Within fundamental physics, the task of unification is solely up to the scientists working in that physical field. Fundamental physics is for Ladyman, Ross, Spurr and co-authors their *prima philosophia*.

Their own theorizing is based on two principles. The first principle – *Principle of Naturalistic Closure* (PNC) – is as follows:

Any new metaphysical claim that is to be taken seriously at time *t* should be motivated by, and only by, the service it would perform, if true, in showing how two or more specific scientific hypotheses, at least one of which is drawn from fundamental physics, jointly explain more than the sum of what is explained by the two hypotheses taken separately, [...]. (Ladyman (2007), p.37)

Concerning the phrase “to be taken seriously”, the authors take a pragmatic and institutional stance: It is the relevant scientific community, which – based on its contemporary state of the art – decides whether a metaphysical position is “to be taken seriously”: “[...] science is, according to us, demarcated from non-science solely by institutional norms: [...] With respect to anything that is a putative fact about the world, scientific institutional processes are absolutely and exclusively authoritative (Ladyman (2007), p. 28).

The second principle – *Primacy of Physics Constraint* (PPC) – is as follows:

Special science hypotheses that conflict with fundamental physics, or such consensus as there is in fundamental physics, should be rejected for that reason alone. Fundamental physical hypotheses are not symmetrically hostage to the conclusions of the special sciences. (Ladyman (2007), p.44)

Both principles reveal *fundamental physics* as *prima philosophia*. This means: Fundamental physics detects, formulates and approves with respect to its scientific standard the most general structures that pervade the whole universe. All other structures, supplied by special sciences or formulated in doing its unifying task by weak metaphysics, must respect these structures and at least one of these structures must play a role in each unification to be acceptable at all. Moreover, the structures used for unifying by weak metaphysics are not “inventions” of *weak metaphysics*, they are supplied by formal theories (viz. *information theory*).

Concerning an independent status of metaphysical theorizing, they claim that *weak metaphysics* is a theoretical undertaking that has neither a genuine scope nor a genuine methodology. To regard it as a special theory is due to an institutional division of labor: “Why should radical methodological naturalists suppose that there is any ‘responsible and significant’ job for metaphysics to do? [...] However, evaluating the global consilience network is not a task assigned to any particular science, partly because important efficiency considerations recommend specialization” (Ladyman (2007), pp. 27).

Weak metaphysics is a philosophical position that has a certain task that in principle other sciences could do, but, according to a pragmatic stance, it is a hopefully fruitful division of labor that there are

specialists who tackle the task of unifying the sciences. The methodology as well as the basic unifications and structures that are to be respected and preserved are found and formulated by fundamental physics. The “tool kit” is provided by formal sciences. Material fundamental questions and answers concerning the unifying tasks are not the obligation of *weak metaphysics*. *Weak metaphysics* has found its *prima philosophia*, i.e. fundamental physics, as it is formulated and as far as it is approved by the respective scientific community. By this, *weak metaphysics* is caught by the *Scylla* of being, beyond pragmatics, superfluous.

2.3. The Ontological Paradigm – a Common Stance

The *ontological paradigm* may be characterized by Campbell's *Axiom of Uniformity* – a methodological principle (Campbell (1990), p. 1):

Fundamental to the ontological impulse is what we might call the *Axiom of Uniformity*, the conviction that some one basic pattern pervades the universe; the proper ontological assay of any one region or subpart of the whole will mirror the assay elsewhere. There are pervasive basic constituents and pervasive basic structures in which they play always the same roles. At the ultimate level, the universe has a common structure throughout. The pervasive elements, the constantly recurring items in ontological assays, are the categories.

The ontological impulse leads to two sorts of metaphysical theories: One sort may be called “top down”. This means that the theory proceeds by carving out the basic constituents and their relevant interplay to make the uniform character of its unrestricted scope explicit. Hereby it conceives of the unrestricted scope of the metaphysical endeavor as somehow pre-theoretically given. It faces the task of showing that it’s “carving out” meets the scope at the right joints.

The other sort may be called “bottom up”. The task here is to explicate the unrestricted scope of the metaphysical endeavor by “rebuilding” it. To this end, the theory may “invent” categories and their interplay not found at the outset and has therefore the task of showing whether these “inventions” do lead to an adequate architectonic. For both versions, the unrestricted scope of the metaphysical endeavor,

as it is theoretically revealed by the respective theories, will not be left as it was found.

In any case, the ontological impulse leads to what may be called the “ontological paradigm”: It is the main task of a metaphysical theory to make explicit what the “pervasive basic (or most general) constituents and pervasive basic (or most general) structures in which they play always the same roles” are and how they relate to each other. Moreover, if a metaphysical theory fails in this respect, it fails altogether. In short: Doing metaphysics within the “ontological paradigm” leads to formulating a metaphysical – in contrast to a local – *ontology*.

Rosenberg's theory is certainly of the second kind – he explicitly presents a constitutional theory and a hierarchical architectonic. The “natural individuals”, especially those at the basic layer, may well be called “inventions”.

Weak metaphysics is also in search for an “ontological model”: “We seek an ontological model according to which science is unifiable, and which explains the basis for such unity as it can produce. This, we claim, is the point of naturalistic metaphysics” (Ladyman (2007), p. 53).

This model is based on the methodological restrictions formulated by the “Principle of Naturalistic Closure” and the “Principle of Physics Constraint”. These restrictions, however, have consequences for the “ontology”, the “categories”, *weak metaphysics* provides. It leads to the ontological model that is called *ontic structural realism*. *Ontic Structural Realism* may be characterized, *in nuce*, by the claim that structures – paradigmatic are mathematical structures, as they play an important role in theoretical physics – are ontological, which means they are 1) “real” and 2) there is nothing else but structures. This position is rooted in the observation that fundamental physics avails itself of mathematical models or structures, and successfully so:

Objective modalities (lawful connections – cum grano salis, C.S.) in the material mode are represented by logical and mathematical modalities in the formal mode. All legitimate metaphysical hypotheses are, according to us, claims of this kind. A metaphysical hypothesis is to be motivated in every case by empirical hypotheses that one or more particular empirical substructures are embedded in (homomorphic to) particular theoretical structures in the formal mode that represent particular inten-

sional/modal relations among measurements of real patterns (Ladyman (2007), p. 119).

The methodological constraints weak metaphysics submits itself to are in service of an ontology to be formulated. And the relevant ontological theory is “top down”: The fundamental structures are found within fundamental physics and the structures explicating the interplay of the structures of special sciences and fundamental physics are “found” also within formal sciences. This, however, means that “ontology” is left to other sciences and *weak metaphysics* is up to coordinate these different ontological frameworks so found. One may interpret the overall stance of *weak metaphysics* as saying that the sciences are better off in doing ontology and that fundamental physics formulates the most fundamental ontology – exhibits “the pervasive basic structures”.

2.4. Some General Analysis

In sum, one may say that the problem of an *esoteric metaphysics* is a methodological one whereas the problem of *weak metaphysics* is an ideological one. Both, however, have in common that they conceive of a metaphysical ontology as being an important integral part of metaphysical theorizing. Moreover, both search for unification. But the scope of what is to be submitted to unification is different: *weak metaphysics* is restricted in scope, only empirical scientific theories are at stake.

The ideology of *weak metaphysics* may be summarized as follows:

1. Special empirical sciences – in the wider sense of the word – have their own ontologies. They say within their respective domains “what there is”.
2. Along their histories, empirical sciences have developed their methodologies for testing or exhibiting the adequacy of their ontological hypotheses concerning “what there is”. This testing is empirical in character.
3. Last and not least, due to their methodologies, empirical sciences are the only theoretical endeavors that say anything respectable about “what there is”.
4. As a consequence the “pervasive structures” are to be found within at least one empirical science. Structures and items of empirical theories that are not “pervasive” must relate to the “pervasive structures”.

If, further, the task of metaphysics is *unifying*, then the task will be – more precise – unifying empirical sciences. There may be, of course, different ways of unifying empirical theories; the way presented in the example above is only one of various possible ones. If a metaphysical theory – in the spirit of *weak metaphysics* – conceives of itself as having the task of “justifying” its way of unification, i.e., exhibiting its adequacy, then this justification is neither empirical in character nor to be found in empirical sciences. So, even for *weak metaphysics*, there is a notion of adequacy at work that is not empirical in character.

Anyhow, there seems something to be learned from the ideology of *weak metaphysics*, even if one does not endorse its over-all stance: Just omit point 3 of the enumeration above. Then, the consequence (point 4) is blocked.

Is it therefore possible to assign a more ambitious task to metaphysics: Saying “what there is”, formulating an ontology, without taking it over from one or another empirical science and without being trapped by the *Charybdis* of being esoteric? Some considerations concerning adequacy may be helpful.

2.5. Adequacy and the Ontological Paradigm

A glance at the task for “testing adequacy” – Whitehead’s landing – may reveal that it is the “ontological paradigm” that is the “culprit” for being trapped between *Scylla* and *Charybdis*: Other theories, especially empirical theories, may serve for judging the adequacy of a metaphysical ontology. Here, one faces the problem that other theories, especially empirical theories, have their own ontology (explicitly accepted by *weak metaphysics*). And so – as the two extreme examples above reveal – the metaphysical ontologies are either inherited or “invented”. Comparing an “invented” ontology with another ontology – formulated explicitly or implicitly by some other nonphilosophical theory – results, exaggeratedly formulated, in the impasse to follow: If there is another (scientific or empirical) theory that corroborates within its own scope and due to its own methodology a metaphysical ontology, then this shows that the metaphysical ontology is – besides, perhaps, a fruitful division of labor – superfluous. If there is no corroborating “external” theory, then a metaphysical theory may be genuine but for sure esoteric in character.

Of course, “testing” a metaphysical theory with respect to all other relevant theories is pragmatically

overambitious. But the “testing” should work at least for some *important* (scientific or empirical) theories, those which play an important and crucial role within the concert of sciences or theories. “Fundamental physics” may be a point in case. If a metaphysical theory that fares bad with respect to such a theory should be abandoned. It may be the case that “testing” presupposes some conceptual adaptations or “translation” to be “testable” at all. Here, seemingly, a certain dialectic shows up: the better the “translation” – the fit – the more superfluous the theory turns out to be.

One methodological consequence thereof could be (in the spirit of an esoteric metaphysics): Conceiving of other (empirical or scientific) theories as only very weakly relevant for adequacy: there should be no contradiction – what ever that may be. This is too weak for exhibiting coherence: metaphysical theories and “external theories” somehow would live side-by-side. It could further result in a meta-metaphysical characterization of adequacy that is “non-empirical” in character. The esoteric character remains.

The other consequence of the impasse would be (in the spirit of *weak metaphysics*): Look at the sciences to find a most general, metaphysical, ontology and show how that ontology so found is most general and how it relates to the other sciences.

If it is the “ontological paradigm” that leads to an esoteric metaphysics, by trivializing adequacy, on the one hand, and to loosing a genuine field for metaphysics by taking adequacy with respect to other (empirical or scientific) theories seriously, on the other hand, an advice would be: give up the “ontological paradigm”. But, what else could be a task for metaphysics?

3. Beyond the Trap

Being trapped between *Scylla* and *Charybdis* is not an unavoidable feature of a metaphysical theory. Whitehead's remark, cited above, gives a hint: He characterizes his speculative philosophy – metaphysics – as the “endeavour to frame a coherent, logical, necessary *system of general ideas*”. By this, he points to a methodological paradigm different from the ontological paradigm.

3.1 The Paradigm of Transcendentals

Again, Whitehead's characterization of the metaphysical task:

Speculative Philosophy is the endeavour to frame a coherent, logical, necessary system of general ideas in terms of which every element of our experience can be interpreted. By this notion of ‘interpretation’ I mean that everything of which we are conscious, as enjoyed, perceived, willed, or thought, shall have the character of a particular instance of the general scheme (Whitehead (1978), p. 3).

He does not speak of “building blocks”, basic “constituents” or “fundamental structures” that serve as constituents of all the rest. Nor is he in search of a “basic glue” that makes all these basic constituents holding tight. He speaks of “general ideas in terms of which every element of our experience can be interpreted”. “General ideas” are not “building-blocks”.

The citation above may be paraphrased and slightly altered as follows:

Metaphysics is the endeavor to embed all those most general “ideas”, “concepts”, “notions” or “propositions”, etc. into *one theoretical framework* that is *presupposed* by anything that is found within the *unrestricted universe of discourse* and whose working “concepts”, “notions” and “propositions” can “truly” be attributed to anything that is found within the unrestricted universe of discourse.

These most general “ideas”, “notions”, “concepts” or “propositions” and the role they should play in formulating a theory may be called – for better or worse – *transcendentals* and the metaphysical working-paradigm the “*paradigm of transcendentals*”. The expression “*transcendentals*” should hint at both features: generality and the character of being universally presupposed.

Beyond “generality”, there are two key-words in the characterization above: “truly” and “presupposed”. Concerning the second word: Admittedly, other theories have their theoretical frameworks, some of them are very general. They may play a fundamental and “leading” role with respect to other theories. Some theories have their associated meta-theories that exhibit what is presupposed by the respective theory. But none of these is about the presupposition of any (scientific or empirical) theory, not to speak of formal theories or other things “of which we are conscious as enjoyed, perceived, [...]”. This shields metaphysics from being superfluous.

This characterization of a metaphysical theory, however, is not without problems. The first has to do with both the high generality of the “transcendentals”, on the one hand, and the unrestrictedness of the scope of their application, on the other. “Generality” hosts the danger of triviality. Must it not be the case that an ensuing theory “speaks” of everything but says nothing? And, due to the unrestrictedness of scope, must it not be the case that there is nothing left to serve as a non-trivial and not yet presupposed instance for testing adequacy?

The second problem is indicated by the word “true”. How is “true” to be understood? This however is more of a task than a problem: A metaphysical theory that works within the *paradigm of transcendentals* has to co-formulate its theory of truth. Or, it has to presuppose a theory of truth. But, the metaphysical theory will not leave the theory of truth as it was found. There are, consequently, always at least two transcendentals to be coordinated by a theory: “Truth” and one (or more) X(es).

That triviality is not a necessary consequence may best be shown by a non-trivial theory working within the paradigm of transcendentals. This will be done in the next section. It is the “Structural-Systematic Philosophy” of von L. B. Puntel as it is formulated in *Structure and Being* (Puntel (2008)) (in German: *Struktur und Sein* (Puntel (2006))). This example shows, among other things, how “truth” may play a role within such a theory, gives a hint at how to “build” such a theory and how it relates to other theoretical endeavors. The question concerning adequacy will be addressed in the subsequent section.

3.2. Structural-Systematic Philosophy

It is important to note that L.B. Puntel's theory was not formulated to exploit the vices and virtues of working within the *paradigm of transcendentals*. He does not even use the word. The theory is not intended to be a meta-metaphysical theory at all.

Before analyzing why this systematic metaphysics may be conceived of as working within the *paradigm of transcendentals* and why it escapes the impasse, the theoretical framework must – as far as it is necessary for the present purpose – be presented. This presentation focusses on exhibiting the most important “transcendental” that is at work in formulating Puntel's structural-systematic philosophy. For an elaborate exposition, cf. A. White (White (2014), forthcoming).

3.2.1 The Theory

Puntel characterizes – in a first step – his *structural-systematic philosophy* as a “theory of the most general and universal structures of the unrestricted universe of discourse” (Puntel (2008), p. 10, p. 26). As it stands, it has strong similarities with Whitehead's characterization of his *speculative philosophy*, as Puntel himself recognizes (Puntel (2008), p.10). Making this preliminary characterization explicit – Puntel calls it “quasi-definition” – is the theme of his book *Structure and Being. A Theoretical framework for a Systematic Philosophy* (Puntel (2008), henceforth: SaB).

The explication has to address several interwoven sub-tasks: [1] explicating “explicating” and “theories”, [2] explicating the interplay of “theories” and the “*unrestricted universe of discourse*”, [3] explicating “structures” – universal and particular or specific ones –, and [4] explicating, based on the first three explications, the interplay of “theories”, “structures” and the *unrestricted universe of discourse*. That there is the fourth task and that this task is not trivial, is indicated by the word “systematic” in the phrase “structural-systematic philosophy”. The first two points may be seen as being meta-philosophical in character – at least at the outset.

Ad [1] For Puntel “making explicit” means giving a theoretical framework or theory within which the problematic phrase or sentence is situated. With this, an important meta-metaphysical stance is formulated: Theories, especially philosophical theories, are framework dependent. To put it otherwise: Only within a theoretical framework, within a theory, do expressions, phrases or sentences have a semantic value. This insight is an extrapolation of his initially presupposed theory of truth – a theory of truth that is based on the context-principle.

Different philosophical theories usually have different theoretical frameworks, to exhibit their systematic connection a further theoretical framework is needed, one with respect to which different philosophical theories, different theoretical frameworks, figure as particular frameworks. The philosophical theoretical framework that expresses the *universe of discourse* as *unrestricted in scope* in an explicit and complete manner is the complete systematic theoretical framework:

Any philosophical theoretical framework is highly complex; taken as a whole, each consists of numerous particular frame-

works that are to be understood as stages in the process of the development of the complete systematic theoretical framework (SaB, pp. 9).

Here, a word of caution is appropriate: Theories or theoretical frameworks are not conceived of as being the up-shot of “subjects”; they are not the product of members of a scientific or philosophical community. Of course, as a matter of the *conditio humana*, theories do not come without scientists or philosophers. But these only play the role of a medium, they are not “message-makers” of sorts. If theories “are there”, only truth, adequacy and intelligibility matters. Theories express “how it is” (“what is the case”) and not “how the philosopher or scientist XY believes that it is”. This is explicated in 5.1 of SaB, (pp. 267). Further, there may be, and usually are, different theoretical frameworks with respect to the unrestricted universe of discourse. To judge which one is the “best” is the question of adequacy (see SaB, pp. 481). Anyhow, without problematizing this issue, the theory is not intended to be the final word, as is convincingly argued.

Ad [2] At the “beginning” of the theoretical endeavor, the expression “*unrestricted universe of discourse*” simply indicates the unrestricted datum that a philosophical theory should explicate. In this, it is situated within a rather coarse grained theoretical framework, a framework that has to be refined, to some extent altered, without being lost completely (Puntel alludes to the Hegelian word “*aufheben*”) in any more concrete framework that shows up during the process of concretization and systematic explication of the complete framework. The process of theory-building is at once the process of self-explication and self-expression of the unrestricted universe of discourse.

Theories are expressed by a philosophical or scientific language – a theoretical language. It is not a natural language. Its sentences have the general theoretical form “it is the case that ...”. That there is an expressing tool, a theoretical language, that meets what it expresses, is rooted in the important thesis (SaB, p.371):

Thesis 3: Expressibility is a factor fundamental to the structurality of Beings and Being.

In this, expressibility is an ontological feature of Beings and Being. For Puntel, leaning on a dictum of Wittgenstein's, the world is the totality of the expressible (primary) structures. This is formulated by the thesis above. A theoretical language is the

semiotic and semantic correlate thereof. Puntel conceives of it as a language with uncountably infinite expressions (SaB, pp. 374).

It is more than a correlate. This is due to the theory of truth that Puntel presupposes and explicates in chapter 3, pp. 297. The theoretical language, of course, contains declarative sentences. These are not only syntactic unities, but they have a semantic value, Puntel calls it proposition. The theoretical language, further, contains sentences, *S*, prefixed with the phrase “it is the case that”: “it is the case that *S*” (“it is the case that *it rains*”). “It is the case that...” is regarded as an operator – the *theoretical operator*. The sentence “it is the case that *S*” is called a theoretical sentence. Prefixing a theoretical sentence with the further operator “it is true that” indicates that the sentence is a self-expression of the relevant area of the *universe of discourse*. This, *in nuce* is the core of the “identity thesis of truth”, argued for and exploited in chapter 3 of SaB (especially pp. 231). It is, moreover, a theoretical embedding of his theory of truth (as it was formulated in Puntel (1990)), initially presupposed, by making the identity-thesis of his theory of truth explicit within the theoretical framework of the *structural-systematic philosophy*.

Ad [3] In a first step, “structure” is a name of anything a theory makes explicit: “Conceptualizing and explaining are characterized most concisely as the discovery and presentation, respectively, of the structure(s) of what is conceptualized or explained (i.e. the data)” (SaB, p. 11). For Puntel, there are three kinds of structures: formal structures, semantic structures and ontological structures. The last ones are the most important for his theory. In the end, they turn out to be the most general self-expressions of anything “there is”. Further, due to the above mentioned thesis, whatever there is, is expressible. Moreover, “whatever there is” is truly expressible and by this self-expressing. This, again, is an embedding of his theory of truth in the framework of *expressing, expressibility and being expressed*. The name for these self-expressions is “structures”. Or, structures are the self-expressions of whatever there is.

Ad [4] There is, according to the structural-systematic philosophy, a plurality of different theoretical frameworks. They are different manifestations of the self-expressibility of the world. They are different in particularity and universality, they are different in granularity (coarse grained vs. fine

grained), and all these differences come “continuously” in degrees. As different self-expressions of different degrees, they manifest structures belonging to different structural “layers” of the world. There are surface structures and deep structures. The first ones are those that articulate portions of the world from a “particular” perspective, as are structures expressed by a theoretical framework “about the lifeworld”. “Deep structures” are those that manifest themselves within increasingly universal theoretical frameworks (SaB pp. 405).

If, however, different theoretical frameworks manifest different layers of structures, the task ensues to determine how they “belong” to one world. Due to coherence, they cannot simply live side by side without any connection whatsoever. It is the final theoretical task to formulate this interplay and it leads to a universal theory (German: Gesamttheorie) of the unrestricted universe of discourse. This universal theory, as the final step of the theoretical philosophical endeavor, is a *Theory of Being as Such and as a Whole*, as Puntel calls it. This final theory – theoretical framework – is the final stage that the process of self-explication results in. According to Puntel, it may be called metaphysics, more precise “metaphysica generalis” (SaB, p. 477); Puntel’s expression is *primordial metaphysics*.

3.2.2. Structural-Systematic Philosophy and the Paradigm of Transcendentals

Conceived of as a coherent whole, Puntel’s theoretical framework exhibits itself as the interplay of different particular theoretical frameworks, each being the self-expression of an aspect of the unrestricted universe of discourse, contributing to and superseded by the most universal, most definite and most complete theoretical framework: the most general structures, i.e. the self-expression of Being as such and as a whole. In this, albeit it is not Puntel’s term, his theory may be called metaphysics in the Whiteheadian sense presupposed in this contribution.

Is it working within the *paradigm of transcendentals*? What are or is the relevant transcendental(s)? Obviously, “expressibility” with its variants “expressing” and “self-expression” is the most central transcendental. “Expressibility” is presupposed by any theoretical endeavor, even by those weak ones as theories that express the structures of the “lifeworld”. “Structure” is a name for certain aspects thereof and “co-concepts” are made explicit as the

theory proceeds. The theory presupposes, initially, a theory of truth that is made more explicit as the unfolding of the theory ensues.

The unfolding of the theory proceeds by initially starting with a weaker framework leading to more and more refined frameworks, each superseding the predecessors without abandoning them altogether. It is in chapter 4, when the framework reaches a certain stage of completeness, where by “applying” the theory developed so far to other philosophical fields, themes, disciplines and problems – contemporary as well as historical. The same may be said of section 5.3 with respect to the “final” theory of *Being as Such and as a Whole*. This reveals that the theory elaborated so far leads to new and important insights with respect to these philosophical theories that would not be available or at least not as coherent as they are beyond the theory developed so far. This demonstrates two things: albeit working within the *paradigm of transcendentals*, the theory is not trivial and the “testing” for adequacy is with respect to other philosophical disciplines and takes place during theory-building.

This may give some insight concerning “adequacy” with respect to the *paradigm of transcendentals*.

3.3. Adequacy and the Paradigm of Transcendentals

At the beginning of this article, two important criteria for evaluating metaphysical theories have been mentioned: coherence and adequacy. Working within the *paradigm of transcendentals*, the problem concerning adequacy presents itself in a way different from the problem raised by the *ontological paradigm*. The problem is rooted in the tacit assumption that adequacy is an external criterion and respectable “test-cases” are to be found in areas “outside” of philosophy or metaphysics. This assumption, however, is appropriate only for metaphysical theories working within the *ontological paradigm* – not least because “external theories” have their own ontologies.

“Transcendentals” are those “most general ideas” or presuppositions that should be at work in any theoretical undertaking, whether they are explicitly dealt with or only implicitly – as it is, perhaps, in most cases. Due to this, any theory could serve as a test-case. But, if one should succeed in testing, one has not gained anything important: due to the high

generality of transcendentals, any positive result with respect to any test-case is rather trivial.

On the other hand, should it turn out that a metaphysical theory works with a “transcendental” that does not pass the test of adequacy in a special case, the theory must not necessarily be abandoned. The following example should illustrate this: Concerning the transcendental of “expressibility”, it is obvious that any theoretical endeavor, any endeavor that pretends to be saying “something true” about any domain, presupposes the “expressibility” of that domain. But, so it seems, the transcendental “expressibility” does not fit in with other things “of which we are conscious, as enjoyed, perceived, willed, ...”: e.g., experiences “actually had” by one specific human, “what-it-is-like-ness”, “feelings”, performances of art. All these are not theoretical in character and not prone to “expressibility” in the sense exploited above. Things of that sort belong to the unrestricted universe of discourse, and so, a theory working within the *paradigm of transcendentals* must take care of them. But, this does not diminish the generality and its being presupposed by theorizing “expressibility”. Findings of that sort, rather, indicate that the theory formulated so far is not trivial. They may indicate also how to expand the “initial” theory, maybe with the help of a further transcendental: both together, then, exhausting the unrestricted universe of discourse. This, in turn would lead to modifying or adapting one's theory of truth so far exploited, while the interplay of the “old” and the “new” transcendental must be made explicit – not leaving the “old” as it was found. This sketchy example is to show that metaphysical theories are not “final” words. It may further be seen that being expandable is a criterion of adequacy.

A most important criterion of adequacy, relevant for the *paradigm of transcendentals*, may be given the name “intelligibility”. “Intelligibility” for this purpose is associated with the question of whether the theory may be refined, whether the theory expresses something new, whether the theory is able to integrate other relevant theories or findings, whether it is apt for revisions, whether it may contribute to solve or resolve longstanding problems. These are criteria that address mainly other philosophical theories, concurring theories as well as more special theories. To find problematic philosophical discussions and positions, to situate – and to some extent re-express them – within a new metaphysical framework and to show a possibility to resolve those

problems belongs to what it means to test for adequacy.

Due to its being unrestricted in scope, a metaphysical theory working within the *paradigm of transcendentals* should be able to incorporate, on a very general level, other more special philosophical theories as well as other branches of the philosophical discourse, such as ethics, aesthetics, philosophy of mind or philosophy of mathematics, to cite only some of them. It should have, general as it may and must be, a definite stance towards other philosophical fields. Concerning the exposition of these inner-philosophical relations, L.B. Puntel's book *Structure and Being* is a point in case. Exploiting these relations is a test for adequacy.

A metaphysical theory should be, on the one hand, revisionary to a certain extent and, on the other hand, able to revise and modify itself. This shows that a metaphysical theory is not intended to express a final state of affairs. Claiming to be the final and revisable state of the art, it would set itself apart from any theoretical discourse and it would degenerate to ideology. How it fares with revisions, of course, will be visible only during the course of history.

The criteria formulated above are not meant to present a complete and undisputable catalogue; there may well be other criteria. It is, however, a methodological task to look for criteria, to make them explicit and to exploit them once a piece of metaphysical theory is formulated. This task ensues not before a theory has reached some elaborated state. Further, if a metaphysical theory is about the unrestricted universe of discourse, then methodological questions of any sort are within its scope – at least at a level of high generality. This, however, indicates new tasks and problems to be rethought and should be left for another day.

4. Finally

The reflections above do not claim that the *paradigm of transcendentals* is a new metaphysical stance. The theories of Whitehead or Hegel may be seen, at least to a certain degree, in this way – but, to judge this issue may be left to interpreters with more expertise in these matters. The *structural-systematic philosophy* of Puntel is certainly a point in case. It is hoped that the argument presented here for abandoning a common stance concerning what is conceived of as the main task of metaphysics during the 20th

century – the *ontological paradigm* – may yield an escape from the trap set between the *Scylla and Charybdis* of metaphysical speculation. It is further hoped that this has successfully argued that working within the *paradigm of transcendentals* leads beyond the trap. Working within this paradigm of metaphysical theorizing may be regarded as being over-ambitious. But grand scale metaphysics is either over-ambitious or not worth its salt – *tertium non datur*.

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Invited paper

MINDING NATURE

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Abstract:

This paper interprets and extends Maurice Merleau-Ponty's unfinished ontology of flesh in order finally to settle accounts with the Cartesian legacy that has hung over Western metaphysics for the last three centuries. The essay does this by advancing Merleau-Ponty's discussion of two closely intertwined topics—the relationship of consciousness and Nature and the meaningfulness of Nature itself. Among other things, the essay seeks to explain the emergence of consciousness from Nature and defends a view of consciousness as the mobilization of the powers of corporeity—including intercorporeity—to investigate, articulate, and creatively adumbrate Nature and Being as such. It does so by responding to natural resonances and rhythms, through intensities of feeling and the perception of possibilities.

Key words: animality, body, consciousness, flesh, resonance, rhythm.

One prominent metaphysical theme over the last three centuries has consisted of multiple attempts to overthrow the legacy of Cartesianism. No one, except perhaps for F.W.J. Schelling, who substantially influenced him, devoted more effort to that task than did Maurice Merleau-Ponty. While appreciating Descartes's descriptions of the close unity of body and spirit in Meditation VI and certain other texts, Merleau-Ponty nevertheless attacked all of the principal components of Cartesianism.

These included, among other things, its dualism of mind and body, the body conceived exclusively as material object, the mechanistic account of nature (including the body) devoid of freedom, value, and purpose; a representational account of perception, experience as the passive reception of discrete sense data, and the belief that consciousness stands outside

nature, which it sees as an object arrayed before it. Merleau-Ponty terms this belief the “ontology of the object,”¹ to which corresponds a surveying thought—a “*pensée de survol*.”² It is what Alfred North Whitehead said ruined modern philosophy: “the theory of a materialistic, mechanistic nature, surveyed by cogitating minds.”³

In *Nature and Logos, A Whiteheadian Key to Merleau-Ponty's Fundamental Thought* (Albany, NY: State University Press, 2011), Jan van der Veken and I followed Merleau-Ponty's philosophical trajectory from his early phenomenology to a “new ontology”⁴ based on Nature,⁵ which was his

¹ Maurice Merleau-Ponty, *Nature: Course Notes from the Collège de France*, trans. Robert Vallier (Evanston: Northwestern University Press, 2003), p. 125. Published originally as *La Nature, Notes, Cours du Collège de France*, ed. Dominique Séglaire (Paris: Éditions de Seuil, 1994), p. 169 (referenced hereafter as “N”).

² Maurice Merleau-Ponty, *Eye and Mind*, trans. Michael B. Smith in Galen A. Johnson, ed. *The Merleau-Ponty Aesthetics Reader* (Evanston: Northwestern University Press, 1993), p. 122. Published originally as *L'Œil et l'esprit* (Paris: Gallimard, 1964), p. 12. Hereafter, all citations from Merleau-Ponty's works will reference the English and then the original pagination (referenced hereafter as “OE”).

³ Alfred North Whitehead, *Science and the Modern World* (New York: The Free Press, 1967 [1925]), p. 145 (referenced hereafter as “SMW”).

⁴ Maurice Merleau-Ponty, *Themes from the Lectures at the Collège de France 1952-1960*, trans. John O'Neill (Evanston: Northwestern University Press, 1970), p. 91. Published originally as *Résumés de cours, Collège de France 1952-1960* (Paris: Gallimard, 1968), p. 128 (referenced hereafter as “RC”). See also *The Visible and the Invisible, Followed by Working Notes*, trans. Alphonso Lingis (Evanston: Northwestern University Press, 1968),

last attempt to throw off the legacy of Cartesianism. He sought an “ontological rehabilitation of the sensible”⁶ to which Nature is indispensable because our being somehow emerges from it (RC 64/94).⁷

Since Merleau-Ponty’s premature death unfortunately prevented him from completing this journey, the purpose of this paper is to begin where *Nature and Logos* left off by advancing his discussion of two closely intertwined topics—the relationship of consciousness and Nature and the meaningfulness of Nature itself—in order finally to settle accounts with the Cartesian legacy. Finally, I will speak to the importance of a metaphysics of Nature in our time and some main implications for urgent political and economic decisions.

“Consciousness” is a very broad term, and I will be concerned with its most basic level—what Whitehead called “prehension,” namely, “*uncognitive apprehension*” (SMW 69; italics in the original)—or sentience. I will also discuss more advanced levels of consciousness that feature more complex mentality that culminates in self-consciousness.

I

Merleau-Ponty’s final ontology partly consisted of a critical reaction to his own early phenomenology of perception and behavior positioned against Descartes’s (and others’) accounts of the body as a scientific object—as a perceptual and behavioral mechanism governed by deterministic causality. These early writings are so well known that it is only necessary here to provide a brief sketch of the main themes that will be important for the later ontology. The first one is the difference between the body as a scientific object and my own body as I live it—the “lived body” (*le corps propre*). Merleau-Ponty held that the scientific perspective, though certainly legit-

imate, is derivative from the more primordial reality of the non-objective lived body. Thus, my body both is and is not an object, and it is an object only in a perspective deliberately taken up and abstracted from the lived body.

In that derivative perspective, my body occupies space in the way that any material object does. Merleau-Ponty expresses this sense as *être dans le monde*. Primordially, however, the ways in which my body is not like a material object make its spatiality (and temporality) as *être au monde*, which can be translated roughly as “being at the world.” It is meant to convey an active, dynamic existence in ways unachievable for this coffee cup or this keyboard. Being “on top of the world” or “on the town” capture this non-objective mode of being. This is why Merleau-Ponty and Heidegger, among others, distinguished spatiality and temporality from space and time and why the title of the central chapter of *Phenomenology of Perception* is “The Spatiality of One’s Own Body and Motility.”

Merleau-Ponty’s early writings showed that the lived body causes the mind-body dualism to collapse in two ways. It shows that mentality is a bodily phenomenon and, conversely, that bodily phenomena have their own intelligibility anterior to the imposition of meaning by a reflective consciousness. For Descartes, the body itself cannot generate meaning because mechanical laws of cause and effect exclusively govern it. The mind, therefore, imposes intelligibility on what is outside it. In different terms, object and meaning, sign and signified, symbol and its referent, are separate and distinct from each other. Yet, experiential and experimental evidence derived from Gestalt psychology shows that perception and behavior are organizational, sense-constituting activities rather than passive responses to pre-existing stimuli. Rather, they overlap “stimuli” and constitute them as such. As discussed at great length in *Phenomenology of Perception*⁸ and elsewhere, the body’s motor intentionality displays an anticipative, pre-reflective spontaneity through which it structures a perceptual, behavioral “field” in order to achieve an equilibrium with it. This happens, for example, when new parents are attuned to nighttime cries of

p. 166. Published originally as *Le Visible et l’invisible, suivi de notes de travail*, ed. Claude Lefort (Paris: Gallimard, 1964), p. 222 (referenced hereafter as “VI”).

⁵ “Nature as leaf or layer of total Being—The ontology of Nature as a way towards ontology. . . . the concept of Nature is always expression of an ontology—and privileged expression” (N 204/265).

⁶ Maurice Merleau-Ponty, *Signs*, trans. Richard C. McCleary (Evanston: Northwestern University Press), pp. 166-167. Published originally as *Signes* (Paris: Gallimard, 1960), p. 210 (referenced hereafter as “S”).

⁷ We also showed how Merleau-Ponty found support for his ontology of Nature in the few works of Alfred North Whitehead’s process thought that he knew, and how the latter’s texts that he did not know could have provided much conceptual specificity for his emerging ontology.

⁸ Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. Colin Smith (London: Routledge & Kegan Paul and New York: Humanities Press, 1962); revised translation by Donald A. Landes (Routledge: London and New York, 2012). Published originally as *Phénoménologie de la perception* (Paris: Gallimard, 1945) (referenced hereafter as “PhP”).

their infants but are not wakened by even louder street noises.

Motor intentionality cannot be reduced to the spatial and temporal displacement of a quantum of matter: “As a system of motor powers or perceptual powers, our body is not an object for an ‘I think’: it is a totality of lived significations that moves toward its equilibrium” (PhP 154/179). My body is, as Edmund Husserl pointed out, the “zero-point of orientation”⁹ and spatial coordinates. It is “an open system of an infinity of equivalent positions in different orientations” and Merleau-Ponty terms this “system of equivalences” the “body-schema” (*Ibid.*, 142/165).

The intentionality presents itself as an “I can” (PhP 139/160) and undertakes projects and establishes relationships with things and other people, and provides us with the capacity to stay committed to such projects. That ability is a function of “the habitual body” (PhP 145/169), and its main epistemological importance is that it is a type of knowledge that “resides neither in thought nor in the objective body, but in the body as mediator of a world” (*Ibid.*, 146/169).

For example, instrumentalists, such as organists or typists do not intellectually calculate the positions of keys. Rather, they have knowledge in their hands (PhP 145/169)—something for which Descartes’s mechanical body cannot provide.¹⁰ Thus, I can play a certain piece of music without being able to recall the notes to mind or be able to reconstitute the score. Rather, my hands direct me across the keyboard. As a result, both halves of the Cartesian dualism collapse: mentality cannot be reserved for an inner mental theatre distinct from the body, and the body cannot be an unintelligent machine directed by and

responding to a mind.

In our perceptual and behavioral life, we structure a perceptual field according to certain norms and expectations. Rather than impose meaning on the world, consciousness enters into a dialogue with it to articulate the meaning of what is already there “sketched in outline” (*en pointillé*, as Merleau-Ponty often says). This implies, among other things, that sign and signified are internally related—like the rain within the storm clouds, or the disease immanent in the symptoms, that announce it. The sign is “inhabited” by its signification (PhP 164/188).

Signs and their meanings are embedded in the second central theme of Merleau-Ponty’s early phenomenology important for this paper. It is, to use a chapter title from *Phenomenology of Perception*, “The Body as Expression and Speech.”¹¹ The expressive and speaking body manifests a certain mode of being that Merleau-Ponty terms its *style*. Through it, the lived body itself incarnates a unity of sign and signified—not as an external re-presentation of an inner mental reality, but as an expressive creation of individual meaning as it inhabits its world.

There are styles of expression displayed in gestures, seeing, walking, writing—in terms of both content and handwriting—dancing, painting, playing a musical instrument, sexuality, and so forth. Cities also have their styles, as when cafés, people, trees, and topography “confirm a certain style or a certain sense of Paris” (PhP 294/325). In short, styles mark out the individuality of someone or something (*Ibid.*, 342/378).

Styles also characterize language as a form of expression that is continuous, and exists in a closely woven unity, with these other forms of expression. Because the lived body is mind-in-act, spoken words are not the external “clothing” (PhP 408/445) of ideas. Rather than an idea being a re-presentation of an inner meaning, it is “necessarily linked to an act of expression [and] owes its appearance of autonomy to this act” (*Ibid.*, 410/447). Words have a “sonorous and articulatory style” which expresses their essence “as one of the modulations or one of the possible uses of my body” (*Ibid.*, 186/210). They have an “existential signification that is not simply translated by them, but that inhabits them and is inseparable from them” (*Ibid.*, 188/212). Speech and

⁹ Edmund Husserl, *Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy, Second Book, Studies in the Phenomenology of Constitution*, translated with an Introduction by Richard Rojcewicz and André Schuwer (Dordrecht: Kluwer Academic Publishers, 1989), p. 61. Originally published in 1952 as *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Zweites Buch: Phänomenologische Untersuchungen zur Konstitution*, Husserliana IV. The Hague: Martinus Nijhoff.

¹⁰ It is all the more astonishing, therefore, that Descartes states in a letter to Mersenne, dated 1 April 1640, that because the pineal gland is “not at all suitable” for storing old memories, a portion of those of the lute player are “in his hands”. See his *Philosophical Letters*, trans. and ed. Anthony Kenny (Oxford: The Clarendon Press, 1970), p. 71. It is quite odd that Merleau-Ponty does not refer to this letter, which is not difficult to locate.

¹¹ See also the newly published and expanded *Le Monde sensible et le monde de l’expression, Cours au Collège de France Notes, 1953*, Texte établi et annoté par Emmanuel de Saint Aubert et Stefan Kristensen (Genève: Mētis Presses, 2011).

thought are therefore related internally: “they are enveloped in each other; sense is caught in speech, and speech is the external existence of sense” (*Ibid.*, 187/212).¹² Creative expression leads to the sedimentation of new meanings as new life is breathed into an existing linguistic apparatus (S 89ff./111ff.).

Both at the most basic level of bodily expression and gesture, as well as in intellectual endeavor, language is the vehicle and expression of what Merleau-Ponty’s early writings call “intersubjectivity,” and what the later texts refer to as “intercorporeity.” As regards intellectual life, language is “the field of knowledge properly so-called.”¹³ As such, “Language leads us to a thought which is no longer ours alone, to a thought that is presumptively universal” (*Ibid.*) because we believe that it is available to all. This is not, for Merleau-Ponty, an a priori universality, but rather one that is “lateral” in which we are intertwined with other people’s lives (S 75/94). For this universality, Merleau-Ponty later employs the Husserlian term, *Ineinander*, which denotes “the inherence of the self in the world or of the world in the self, of the self in

the other and the other in the self” (RC 108/152).

II

Merleau-Ponty’s “new ontology” abandoned that part of his solution to Cartesian dualism based on the primacy of a “lived body” and the derivative reality of an objective body. Both continue to be legitimate perspectives, yet he also recognized the untenability of relegating the objective body to a derivative reality status when “a given fact of the ‘objective’ order (a given cerebral lesion) could entail a given disturbance, which seems to prove that the whole ‘consciousness’ is a function of the objective body” (VI 230/253). Far from the objective body having a derivative reality status, bodies as well as things are now “made of the same stuff” (OE 125/21). Nevertheless, he adds, “We *are* the compound of soul and body, and so there must be a way to think it” (*Ibid.*, 138/58).

The first step that Merleau-Ponty took toward this goal consisted in mining scientific research to show how consciousness emerges in animal life and then in us, rather than descending into us (N 214/277). His concern is not (other) animality as such, but rather its implications for understanding the human body. The results are articulated across his three Nature courses at the Collège de France, the most relevant details of which here are as follows.¹⁴ First, Nature is active and dynamic; following Whitehead, he describes it as “process” (RC 87/121).¹⁵ It is an “unmotivated upsurge of brute Being” (VI 211/264), “auto-production” (N 125/169) of meaning (*Ibid.*, 3-4/19-20), which he often describes in Spinozist language as *Natura naturans/Natura naturata*.

Because we belong to Nature and our bodies form part of the auto-productive process (N118/159), they function just as do all other natural events and, given this belongingness, enact an *Ineinander* between us and “animality and Nature,” as there is “an *Ineinander* of life and physicochemistry” (*Ibid.*, 208/269). These multifaceted connections are explored throughout the three Nature courses by analyzing evolution, embryology,

¹² Commenting on early hominids, Jesper Hoffmeyer speculates about the origin of words, something with which Merleau-Ponty is not concerned. He writes, “Mimetic behavior was obviously not mute in the way that today’s mime is. From the very beginning sounds, gestures, and facial expression would have been vital aids. The standardization and ritualization of the underlying elements in mime would encourage the acting out, within the group, of increasingly involved situations. In such a scenario words would gradually emerge from these mimed accounts, crystallizing into standard sound patterns”. *Signs of Meaning in the Universe*, trans. Barbara J. Haveland (Bloomington and Indianapolis: Indiana University Press, 1996), p. 110. Originally published as *En Snegl På Vejen: Betydningens naturhistorie* (Kobenhavn: Rosinante, 1993) (referenced hereafter as SMU). Hoffmeyer then points out that one attractive feature of this account is that it stresses the link between language and corporeity and the centrality of the body in comprehending concept formation (*Ibid.*). He then points to Merleau-Ponty’s writings on the body as expression in support of his hypothesis: “speech and gestures could never express an idea if the body itself was not that idea, rather than its external manifestation (pp. 110-111). I am indebted to Professor Maurita Harney of the University of Melbourne for referring me to Hoffmeyer’s work, of which more below.

¹³ Maurice Merleau-Ponty, “An Unpublished Text”, trans. Arleen B. Dallery, in James M. Edie, ed. *The Primacy of Perception* (Evanston, IL: Northwestern University Press, 1964), p. 8. Originally published as “Un inédit de Maurice Merleau-Ponty,” *Revue de métaphysique et de morale* 34 (1962): 401-409, at p. 406.

¹⁴ For an extended discussion of this topic, see *Nature and Logos*, pp. 167-179, and Ted Toadvine, *Merleau-Ponty’s Philosophy of Nature* (Evanston: Northwestern University Press, 2009), pp. 89-94 (referenced hereafter as “PN”).

¹⁵ See also his lecture, “The Idea of Nature for Whitehead,” N 113-122/153-165.

phylogenesis, and animal behavior. At whatever level, it is necessarily true that, Merleau-Ponty argues, “the Nature in us has some relationship with the Nature outside of us. It is even necessary that the Nature outside of us is unveiled by the Nature that we are” (N 206/267).

For example, Merleau-Ponty appeals to Jakob von Uexküll’s seminal notion of an *Umwelt* of both lower and higher animals.¹⁶ An *Umwelt* is a subjective world, as when (von Uexküll’s example), a cow, a tick, and a human being gaze at the same meadow. The field appears very differently to the cow eating the grass, the tick that lives in the grass before attaching itself to a cow, or to the person who wishes to paint a pastoral scene. For von Uexküll as for Merleau-Ponty after him, this means that percipient and world are internally rather than externally related, that the environment is in the organism just as the organism is in the environment. This fact will have important consequences for the latter’s view of evolution. (Von Uexküll rejected evolution altogether.)

Merleau-Ponty endorsed von Uexküll’s research into the “ways” that animals behave—their “styles,” now applied to non-human life—and agreed that the sense of their behavior is revealed in them. Further, these “ways” of behaving emerge before the advent of reflective consciousness, and include “elementary organization (embryology), and physiological, instinctive organization, or behavior properly called” (N 167/220). Animality, in Merleau-Ponty’s view, is an incarnate “logos of the sensible world” (*Ibid.*, 166/219).

Von Uexküll’s research shows that the *Umwelt* of lower animals, such as urchins or starfish, consist only of an environment responded to by reflexes. These creatures can have no motor-projects because they are not open to the external world as a field of exploration: they are almost automatons. For higher life forms, by contrast, it is quite the opposite. They exist in perceptual and behavioral circuits between their brains and central nervous systems, on the one hand, and their *Umwelt* on the other. Further, the many degrees of complexity of life and organization in lower as well as higher life forms differ by degree rather than kind.¹⁷

The *Umwelt* of higher animals also possess another novel feature, which von Uexküll terms a *Gegenwelt* (N 170/224). Whereas lower life forms can function in a unified manner, they have no way to *reply* to their *Umwelt*, which is what a *Gegenwelt* provides. More primitive life forms, such as sea urchins, are generally closed off from external influence—they “constitute a sort of cohesion with their world, a closed unity” (*Ibid.*, 170-171/224). By contrast, the *Gegenwelt* of more advanced life forms consists of a *Merkwelt* and a *Wirkwelt*: spheres of perception and action, respectively (*Ibid.*, 172/226). In the case of human beings, their bodies have the additional capacity to project a world. As Ted Toadvine points out, while interanimality functions with the visible, “[w]hat distinguishes mind is precisely its orientation toward the invisible dimension of Being” (PN 93). This is why Hoffmeyer holds that the “character of an animal’s *umwelt*¹⁸ is what defines the spectrum of positions that an animal can occupy in the bio-logical sphere, its semiotic niche” (SMU 140).

Connections between the characteristics of an animal’s *Umwelt* and evolution lead Hoffmeyer to endorse unknowingly Merleau-Ponty’s view in the Nature lectures that organisms are “bearers of evolutionary messages” (*Ibid.*, 47). He goes on to say that the intentionality of consciousness should not be puzzling because it is grounded in the body’s “aboutness.” Hence, he quotes Goethe’s verse:

War’ nicht das Auge sonnenhaft
Wie könnten wir das Licht erblicken?
(If the eye were not sun-like

How could we perceive the light?) [translation altered]¹⁹

To which von Uexküll added:

If the flower were not bee-like
And the bee were not flower-like
The unison could never be successful (SMU 47).

For Merleau-Ponty, the human body “issues from” evolution and marks the transition from the

¹⁶ According to Hoffman, the word, “*Umwelt*,” “can be traced back to a Danish poet, Jens Baggesen, who first used it around the year 1800” (SMU 54).

¹⁷ “. . . one cannot conceive of the relations between species or between the species and man in terms of a

hierarchy. What there is is a difference of quality” (RC 97/136).

¹⁸ Hoffmeyer never capitalizes *Umwelt*. Thus, the normal “[sic] is inappropriate here.

¹⁹ Hoffmeyer renders the last line, “It could never behold the sun.”

rest of animality to our species (N 208/269). Human corporeity includes animality as well—humanity is “interbeing” (*Ibid.*, 208/269-270). Animality consists of “rough sketches, partial prefigurations, and something like anticipatory caricatures of it” (S 124-125/157; N 214/277). Yet, although Merleau-Ponty agreed with Darwin that evolution requires the elimination of all competitors in a given situation (N 251/317), he disagreed strongly with Darwin’s eliminative explanation.

One reason is that there are counter-examples—that humble sea urchin, for instance, that successfully adapts itself to a dangerous world oblivious to its many predators. It does not have to struggle to survive and lives as if it were almost alone (N 171/224). And in general, animals, especially higher life forms, can achieve various degrees of creative solutions for survival. Parallel to Toadvine’s observation about mind having access to the invisible, we can say that, as Hoffmeyer notes, what distinguishes a more sophisticated *Umwelt* is the ability to anticipate, to make predictions about it. This ability to project a world implies the capacity to plan and develop defensive strategies (SMU 58-59).

Beyond empirical counter-examples, for Merleau-Ponty, the notion of an *Umwelt* has another crucial implication for evolutionary theory. Because the relations between organism and environment are internal rather than external—the environment is in the organism and vice-versa—selection cannot be a purely external force acting on a passive organism with mutations interpreted as random events having no inherent connection with the life of an organism. Von Uexküll pointed out that, as Hoffmeyer phrases it, “organisms do themselves interpret and respond to their environment” (SMU 57). Not only can the environment be shaped to some degree by an organism, but also the organism itself can change its shape to some extent in “the interplay between genes and the environment” (*Ibid.*). For example, a locust can change “not only its behavior but also its anatomy, as a response to climatic disorder” (*Ibid.*).²⁰

In the Nature lectures, Merleau-Ponty engages in a long, complex discussion of evolution itself. He

draws on the writings of several other scientific figures that illustrate the “rough sketches” and “prefigurations” of animality in the human body. Toward the end of those lectures, he describes his purpose as follows: “. . . to give this depth to the human body, this archeology, this natal past, this phylogenetic reference, to restore it in a fabric of pre-objective enveloping being” (N 273/341). In those “rough sketches” and “prefigurations” is also to be found the emergence of consciousness.

For example, he reports on Edward S. Russell’s discussions of animals’ intertwined behavior and physiological activities in the process of tissue repair (*Ibid.*, 179/234) as well as goal-oriented behavior in flatworms (*Ibid.*, 181/238). Merleau-Ponty also studied Adolf Portmann’s work on mimicry, even of animals of other species,²¹ because Portmann demonstrates the expressive nature of an animal’s behavior and its internal connection with its *Umwelt* (Toadvine, PN 89) as well as an internal relation between an organism’s environment and its morphology.

Animal appearances constitute a sort of language, often in relation to sexuality, as when male *Anolis carolinensis* lizards court females by bobbing up and down while waving a flap of skin called a “dewlap.” This is a key visual signal that stimulates females to produce more eggs.²² Moreover, the intimate connection between mimicry and the expressivity of animal appearances is manifested throughout Nature. For, quite apart from reproduction, mimicry functions as responses by potential prey to predators, as when, for example, some caterpillars can try to intimidate predators by taking the form of snakes.²³

For Merleau-Ponty, behavior becomes more expressive the higher the organism involved. For instance, a lower animal might use eye muscles to close its eyes for protection, but in a higher animal, a

²⁰ In this regard, Hoffmeyer points out nicely that the root of the word, “information,” is *informare*, to give form to something. “Form” is the “mangled” Latin translation of the Greek “morf” (with the “m” and the “f” transposed). Being “informed” therefore means being “formed” or “cultivated.” This sense has been lost, he points out, in the 20th-century because information has been broken into atomistic, isolable bits of data stripped of all subjective reference (SMU 62-63).

²¹ The translator of the English version of *La Nature* notes (p. 303, n. 14) challenges to the accuracy of Merleau-Ponty’s interpretation of Portmann’s research. See, for instance, Jacques Dewitte, “L’interanimalité comme intercorporéité et intervisibilité: Merleau-Ponty lecture de Portmann.” In *Corps et individuation: Colloque sous la direction de Jean Guyon et P.-F. Moreau*. Dijon: Université de Dijon, 1998. Cited in Toadvine, *op. cit.*, p. 161. Even if true, however, such a mistake does not invalidate a myriad of other examples or the philosophical significance of Merleau-Ponty’s conclusion.

²² Scott Freeman, *Biological Science* (Upper Saddle River, NJ: Prentice-Hall, 2002), p. 922.

²³ *Ibid.*, p. 956.

blink can become a wink and achieve a sexual expressivity. In such gestures, sexuality itself “takes on an expressive value” (N 188/246), and at a certain level, symbolic behavior becomes possible. That is one reason that Merleau-Ponty engages Karl Lorenz’s studies of animal communication and instinct. Lorenz shows the close links between instinct and symbolism when mimicry comes to replace instinctive behavior. Symbolic behavior comes into existence when “this behavior establishes a resonance” (*Ibid.*, 195/255). In addition, whenever symbolism creates and institutes a certain behavior pattern, that pattern assumes “a new value as social evocation” (*Ibid.*, 197/256-57). Therefore, Merleau-Ponty concludes, it is valid to speak of an “animal culture” (*Ibid.*, 198/259), and of the human body as “natural symbolism” (RC 131/180).

Lorenz refused to take a position on whether animals have a consciousness, though he virtually says that no one who has close experience with higher animals would deny it (N 199/259). His refusal is particularly odd given Lorenz’s work with chimpanzees, since certain “facial expressions used by chimpanzees are strikingly similar to those of humans.”²⁴ The animated human body consists of a “metamorphosis of life and the body as ‘body of the spirit’ (Valéry)” (RC 128/177), which would first require “an esthesiology”, a study of the body as a perceiving animal” (*Ibid.*). As we have seen, that study has shown that the animal life from which we have evolved is characterized in varying degrees by having an *Umwelt*, goal-oriented and expressive behavior, mimicry, natural signs, something very like languages, cultures, and symbolism. These results would be impossible without the presence of consciousness in varying degrees depending on, among other things, the complexity of brain development. Moreover, the natural phenomena referred to above—and ubiquitously in biological texts—fail to reveal throughout the whole range of animal life a state of pure unconsciousness from which consciousness somehow popped into being.²⁵ They also

show that consciousness is grounded in anticipations, “previous sketches,” and the like embodied in touch responses, potentials for action, and movement.²⁶

Since our species differs by degree rather than in kind from others, this “lateral” universality adds further support to Merleau-Ponty’s view of the emergence of consciousness in animality. Indeed, his account of that development closely maps his own earlier phenomenology of the embodied (human) subject as it progresses from the study of perception and behavior to “the body as expression and speech,” “sedimented meanings,” language, symbolism, and the institution of cultures. He never remarks on this parallelism, and indeed may not have fully realized it while developing his “new ontology.”

III

After establishing his (revised) phenomenology of embodied agency in a deeper study of Nature, Merleau-Ponty’s second step toward an adequate way to think the “compound of body and soul” was to develop the “new ontology” itself. It is an ontology to which, as noted above, Nature forms an indispensable and privileged access, and in which the studies of Nature are ultimately grounded. Its centerpiece consists of the notion of “flesh” (*la chair*), a large and complicated topic,²⁷ of which only a concise summary is possible here.

Flesh is an equivocal notion with at least three distinct but interrelated meanings. The first of these is carnality. This is my flesh, the flesh of others—intercorporeity that supersedes the earlier notion of

(*Ibid.*) effectively endorse his position in the Nature lectures and elsewhere.

²⁶ Darwin noticed this when he observed, “Animals may constantly be seen to pause, deliberate, and resolve.” *The Descent of Man and Selection in Relation to Sex* (Princeton University Press, 1981 [1871], p. 46; cited by Sheets-Johnstone at p. 290, n. 38. During this process, while responding to various sensory stimuli, “an animal’s nervous system sends rapid messages to precise locations in the body. Frequently these messages result in muscle contractions and movement.” Freeman, *op. cit.*, p. 851.

²⁷ There are a large number of books and articles about Merleau-Ponty’s final ontology. See, for instance, *Nature and Logos*, chapters 2 and 3; Toadvine, *op. cit.*; Hass, *op. cit.*; Martin C. Dillon, *Merleau-Ponty’s Ontology* (Bloomington: Indiana University Press, 1988); 2nd edition (Evanston: Northwestern University Press, 1997); and Patrick Burke and Jan Van der Veken, eds., *Merleau-Ponty in Contemporary Perspective* (Dordrecht: Kluwer Academic Publishers, 1993).

²⁴ *Ibid.*, p. 927.

²⁵ “It has never in fact been shown that nonhuman animals do not think, or choose, or even deliberate with respect to movement, or that they do not have a sense of speed, space, effort, and so on.” Maxine Sheets-Johnstone, “Consciousness: A Natural History,” 5, No. 3, 1998, pp. 260-294, at p. 290. I am indebted to Professor Maurita Harney for calling my attention to this article. Although the author does not refer to Merleau-Ponty, her arguments based on a “sensory-kinetic analysis of consciousness”

intersubjectivity—and the flesh of Nature generally. I am inextricably intertwined with the flesh of others (*Ineinander*) because we can see each other. Thus, I can participate in their corporeal schemas and they in mine. It becomes “a lexicon of corporeity in general, a system of equivalences between the inside and the outside which prescribes from one to the other its fulfillment in the other” (RC 129/178). As George Eliot once put it, “Men’s lives are as thoroughly blended with each other as the air they breathe: evil spreads as necessarily as disease.”²⁸

It is true that, as Ludwig Wittgenstein points out, “one human being can be a complete enigma to another.” We learn this, he adds, when we visit a “strange country with entirely strange traditions.” Even if we speak their language, we still “do not understand the people. (And not because of not knowing what they are saying to themselves.) We cannot find our feet with them.”²⁹ However, this possibility does not disturb Merleau-Ponty’s point. For other people can be “thoroughly blended” with us *qua* being misunderstood as well as being comprehended. It is the fundamental unity of flesh that makes understandings and misunderstandings possible. The latter do not stem from ontological separation. Indeed, Wittgenstein’s last sentence, had it been translated literally, would have testified to this point. “*Wir können uns nicht in sie finden*“ means “We cannot find ourselves in them.” Yet, as George Eliot saw, we are in them and they in us, and that is what makes understanding possible.

Hoffmeyer quotes approvingly Wittgenstein’s conclusion to the passage cited above that, “If a lion could talk, we could not understand him.”³⁰ For Hoffmeyer, the reason is that “we could never recognize the world in which it lives. Our language and our worlds are inextricably intertwined, living as they do in symbiosis with one another” (SMU 53). Yet, because human “interbeing” already embraces animality, profound *Umwelt* differences do not rule out all comprehension. In point of fact, we can understand much of the lion’s world and the challenges it poses, just as we can the plight of polar bears having to swim enormous distances to find ice floes and the undaunted stars of the celebrated film, *March of*

the Penguins. And Hoffmeyer himself refers to the study of the aesthetic nature of birdsongs by the biologist, Joan Hall-Cragg, and adds Charles Harts-horne’s comment, “Considering the enormous gap between the anatomies and lives of man and bird, it remains astonishing how much musical intelligibility the utterances of the latter have for the former.”³¹

In addition to interanimality, on Merleau-Ponty’s view, human flesh is also intertwined with that of the world (*Ineinander*). The difference between the two kinds of flesh is that the latter is not self-sensing (VI 304/250), but it is also true that there is no way to establish an exact frontier between my flesh and that of things. Nature, as Cézanne observed, “is on the inside” (OE 125/22). In more philosophical terms, as Whitehead observed, the human body is “that region of the world which is the primary field of human expression.”³² Too, the nature of our bodies implies that they function in the same way as other natural events (N 118/159) and the relationships between our bodies and Nature are the same as those that exist between other parts of Nature (*Ibid.*). In brief, bodies and other natural entities are all differentiations of the same ontological process of auto-production.

The second meaning of flesh, as “an ‘element’ of Being” (VI 139/184), is quite different. Influenced by Claude Lévi-Strauss, Merleau-Ponty also terms it “brute” or “wild” Being (*Ibid.* 253/307), and in his unpublished *Être et monde*, refers to it as the “prehuman in man.”³³ It is what he found valuable in Cézanne’s paintings that try, on his view, to plumb the depths of Being.

This second meaning entails that it is more difficult to say what this sense of flesh is than it is to say what it is not. It is “this Visibility, this generality of the Sensible in itself, this anonymity innate to Myself” for which “there is no name in traditional philosophy” (VI 139/183). It is not “matter,” “some ‘psychic’ material,” a physical or mental fact or set

²⁸ George Eliot, *Adam Bede*, Edited with an Introduction by Stephen Gill (Harmondsworth: Penguin Books, 1980 [1859]), p. 469.

²⁹ Ludwig Wittgenstein, *Philosophical Investigations*, trans. G.E.M. Anscombe (Basil Blackwell: Oxford University Press, 1968), p. 223e.

³⁰ *Ibid.*

³¹ Cited in Thomas A. Sebeok, *The Sign and its Masters* (Austin: University of Texas Press, 1979), p. 39. Understanding is a key part of empathy, and at least with regard to other species cited above, such examples are part of a large body of evidence of empathy not only within a species, but also between species—even those that are normally predators and prey.

³² Whitehead, *Modes of Thought* (New York: The Free Press, 1968 [1938]), p. 30.

³³ Cited in Emmanuel de Saint Aubert, *Vers une ontologie indirecte. Sources et enjeux critiques de l’appel à l’ontologie chez Merleau-Ponty* (Paris: Librairie J. Vrin, 2006), p. 40.

of them, a substance, a mind, or a mental representation (*Ibid.*, 139/184). It is, rather, an “element” in the Presocratic sense—“a *general thing*, midway between the spatio-temporal individual and the idea, a sort of incarnate principle that brings a style of being wherever there is a fragment of being” (*Ibid.*).

It is also the case that the only Being of which it makes sense to speak is Being for us (*Ibid.*, 37/60). This is the ontological radicalization of the early phenomenological claim that external objects and the external world generally really are there, but that the only things and world of which we can speak are those that we experience (PhP /384-385).³⁴ That view is also asserted of Nature (VI 167/220), which he accepted as one lesson of von Uexküll’s notion of the *Umwelt*.

How, then, is Being “for us?” Given the rejection of the ontology of the object, it is not a question of establishing an external connection with something from which we are separated. On the contrary, we have a fundamental openness to it, —better: we are that openness—for which Merleau-Ponty employs the Husserlian term, *Offenheit*. Because of that openness, we belong to Being in “one sole and massive adhesion” (*Ibid.*, 270/324). We are, as Bergson phrased it, “of it” (“*nous en sommes*”) (*Ibid.*, 135/178).³⁵

Another important implication of our *Offenheit* is that this belongingness underwrites our “perceptual faith” in the world (VI 3/17). This amounts to the confidence that “We see the things themselves, the world is what we see . . . they refer to a deep-seated set of mute ‘opinions’ implicated in our lives” (*Ibid.*). These “opinions” emerge through our questioning exploration of our world—“interrogation” (RC 165/148).

Because we are “of” the flesh that we interrogate, we cannot be divided from it. Inversely, flesh as an element of Being has its own indivisibility. It is therefore anterior to, and stands as a necessary condition of, dualistic divisions of subject and object, consciousness and nature, minds and bodies,

and lived versus objective bodies. Flesh functions as “the formative milieu of the object and the subject” (VI 147/193). Duality replaces dualism as consciousness and body, subject and object, and the lived body and the objective body form two “sides” of the same primitive element. They are all differential *naturata* of the same *Naturans* of flesh, inseparable aspects of it, “the body as sensible and the body as sentient” (*Ibid.*, 136/180). Therefore, the earlier distinctiveness of *être au monde* is replaced by a conception of the body as a part of the world.

The third meaning of flesh is the notion of the “chiasm.” In effect, it explains how the first two meanings get realized (in both senses). Derived from several sources, this notion is first a figure of rhetoric taken up from Valéry. In it, the order of words in the first part of a couplet is reversed in the second part. The poet himself later extended the notion to apply to the chiasm of perceptual life and to understand intercorporeity as the crossing over of self to others and vice-versa,³⁶ and Merleau-Ponty followed him in that regard.

A second principal source consisted of physiological structures, and especially a fascination with the optic chiasm—the intersection of the two optic nerves in which half of the fibers of each nerve cross over into the other hemisphere of the brain. Merleau-Ponty was captivated by this structure and used it as a model for understanding the body’s sensing and sensed relationships.

Those relationships in turn comprised a third source for the notion of the chiasm. As articulated in § 36 of Husserl’s *Ideas II*, the act of touching implies being touched. If one hand touches another, the subjective body experiences one of its parts as an object. But when the touched hand touches the touching one, the relationship of touching and touched is reversed. In this reversibility the body is both subjectivized object and objectivized subject.

The reversible relationship of sensing and sensed requires the body’s ability to divide into sensing and sensed to begin with, and Merleau-Ponty calls that process “dehiscence” (VI 123/165). This is a biological term for dividing into different parts. However, it is also true that sensing and sensed cannot coincide exactly. There is always a

³⁴ This view has a verbal similarity to the Kantian distinction between noumena and phenomena, but that is not at all what is meant. Among other things, for Merleau-Ponty there is no realm of unknowable things in themselves behind the phenomena.

³⁵ The complete sentence begins, “Bergson: de quelque nature que soient le monde et l’Être, *nous en sommes*. . . .” (“Whatever the nature of the world and Being might be, we are of it. . . .”) The English translation is both wrong and completely misses this crucial point: “Bergson: We are part of some nature that is the world and Being. . . .”

³⁶ Paul Valéry, *Choses tues VI, Tel Quel*, I, in *Œuvres*, II, Bibliothèque de la Pléiade (Paris: Gallimard, 1960, pp. 490-491. Cited in Emmanuel de Saint Aubert, *Le Scénario cartésien, recherches sur la formation et la cohérence de l’intention philosophique de Merleau-Ponty* (Paris: Librairie J. Vrin, 2005), p. 170, n. 1.

natural negativity, a slight temporal “gap” between them, which is what he calls the “*écart*” (*Ibid.*, 254/307). It is what we experience when, say, we try to see our eyes seeing. At the last instant the effort miscarries and we can be either seeing or seen.

We can detect in Merleau-Ponty’s late published and unpublished writings that he began to think of the chiasm in terms of the body and then generalized it as a description of Being itself. In general, the chiasm, which became the foremost symbol of his later ontology, is used to explain our *Offenheit* and *Ineinander* relationships that it makes possible. In other words, the chiasm makes possible the relational process of flesh.

Since sensing (*le sentant*) always implies a sensed (*le sensible*) and vice-versa, this reversibility means that, unlike a Kantian or Husserlian consciousness, sensing cannot stand to the sensed in a founding-founded relationship. Rather, they occur together as the necessarily conjoined couplet of activity and passivity.³⁷ Further, given the rejection of the ontology of the object, activity and passivity are not externally linked, but rather internally. This means that the sensed, passivity, is the outer envelope, so to say, of sensing—activity—and part of its definition.

Moreover, given this reversibility, there is an overlapping (*empiètement*) or envelopment between *le sentant* and *le sensible* such that “between my body looked at and my body looking, my body touched and my body touching . . . we must say that the things pass into us as well as we into the things” (VI 123/165). As a result, this overlapping expresses an ontological radicalization of what Gestalt psychologists showed about perceptual structuring enveloping stimuli and constituting them as such. As Merleau-Ponty put it in his “Working Notes” for completing *The Visible and the Invisible*, “The chiasm, reversibility, is the idea that every perception is doubled with a counter-perception . . . is an act with two faces, one no longer knows who speaks and who listens. Speaking-listening, seeing-being seen, perceiving-being perceived circularity . . . Activity = passivity” (VI 264-265/318).

³⁷ To express this, Merleau-Ponty makes use of Paul Claudel’s neologism, “co-naissance.” By conjoining the notions of birth and knowledge, Claudel sought to underscore the importance of relationships over the terms related. For more on Claudel’s influence on Merleau-Ponty, see de Saint Aubert, *Du lien des êtres aux éléments de l’être* (Paris: Librairie Philosophique J. Vrin, 2004), pp. 234-255.

There is an analogy between the process of dehiscence into *le sentant* and *le sensible* and Spinoza’s doctrine of the particularization of attributes of substance into mental and physical modes. Just as we do not find a Spinozist explanation for why attributes generate modes, so also do we not find in Merleau-Ponty’s writings an explanation of why there is dehiscence. It remains a matter of “wild Being,” the basic fact that there is something at all, which is what Merleau-Ponty calls the “*il y a*.” Nonetheless, there is one crucial difference from Spinoza. On his view, attributes can be thought as separate and distinct even if they cannot exist apart from each other. For Merleau-Ponty, by contrast, influenced as he was by Schelling, “attributes” of mind and body cannot even be thought of correctly as separate and distinct.

Reversibility and overlapping between sensing and sensed enable our “perceptual faith” to sustain us because a natural “fittingness” exists between us and perceptual objects, other people, and the world around us. That is, we know how to relate to the rest of the world because it is fitted to our engagements with it. To use one of Merleau-Ponty’s favorite earlier images, we “gear into them” (PhP 79/91): we fit them because they fit us. And this is true for other life forms as well, as in the case of von Uexküll’s bee and flower. The reason is that such “fittingness” is a necessary condition of having an *Umwelt*, at whatever level of life it exists.

Thus, no intellectual work is necessary to, say, hold this coffee cup in my hand, know how to respond to a soft summer breeze, appreciate the beauty of a sunset or the delicate, perfumed presence of a rose. Nor is it necessary to be awestruck by Kant’s starry heavens, for my three-week-old granddaughter to grasp my finger with her tiny fingers, to recognize the threat of a thunderstorm or the anger in someone’s face, or to pick up a plane in my shop. The reversibility of flesh is such that the world and other people conform to our desires to take them up in our own projects, and this is the foundation of a new transcendental aesthetic. To put it another way, the possibility and cohesion of experience are best explained by reversing Kant’s “Copernican Revolution,” while also insisting that consciousness and world are given together without one being the foundation of the other.

Consciousness is likewise no longer the foundation of knowledge any more than *le sentant* is of *le sensible*, and for the same reason. In fact, Merleau-Ponty’s last writings, except for the *Nature*

lectures, virtually set aside consciousness altogether. The reason is that the referents for his thinking are variously the Cartesian *cogito*, Kantian /Husserlian transcendental, constituting egos; and Sartre's *pour soi*—all of which he rejects. Consciousness consists of the “other side” of the body. The mind “overflows into it (*Ueberschreiten*), encroaches upon it, is hidden in it—and at the same time needs it, terminates in it, is *anchored* in it. . . . There is a body of the mind, and a mind of the body and a chiasm between them” (VI 259/313; italics in the original).

To understand this anchoring we must deepen our understanding of reversibility beyond Merleau-Ponty's own texts because reversibility is only a formal characterization of the chiasm. We need more detail about the actual functioning of the process of unifying *le sentant* and *le sensible*. In the first place, there must be a fundamental *attunement* to one's own body, other people, and the world around us.

Attunement is, in fact, ambiguous. One sense is simply connection, as when a radio dial is tuned to a certain frequency or the hand finds a “fittingness” in the world it engages. As we have seen, that sense is already part of the formal notion of the chiasm. However, its second meaning is that this connection presupposes the ontological equivalent of Merleau-Ponty's earlier notion of motor-intentionality and the Gestaltists' descriptions of the anticipative structuring activities of perceptual consciousness. This is to say that we are ontologically disposed to take up Nature in which we are already inscribed. We engage Nature, other people, and the world around us, with an active readiness.

What solicits this active readiness? Merleau-Ponty, and Whitehead as well—both substantially influenced by Schelling in this context—hold that the universe is permeated with meaningfulness. Both reject what Whitehead termed the “vacuous actuality”³⁸ of Nature portrayed in mechanistic accounts, namely that it is “a dull affair, soundless, scentless, colourless; merely the hurrying of material, endlessly, meaninglessly” (SMW 54). At the most primal level of sentience, at least two features of experience stand out as a fundamental groundwork of meaning in Nature: resonances and rhythms. Merleau-Ponty does not pay much attention to the former but, as we shall see, he does focus on the latter, though not in

this context.

To take resonances first, at the basic level of sentience, we have an “attunement with various natural forces such as electricity, gravity, magnetism, the influence of the moon and Earth's particular force fields.”³⁹ We live quite unreflectively with these forces that resonate in our bodies, as do other animals that are clearly sensitive to them in detecting, for instance, the vibrations of storms and earthquakes.

At more complex levels of consciousness in which there is not only sensing, but also self-sensing, resonance becomes more apparent. For the unseen vibrations of variable strengths of Nature in our flesh not only prevent Nature from becoming for us a (mere) spectacle or representation, but also give it temporal depth and richness. This is so because resonance is, as its etymology reveals (Lt.: *resonantia*, echo; *resonare*, resound), re-sounding in the flesh, which is a temporally thick experience. Resonance also adds depth of meaning, as when the experience of the starry heavens, the beautiful sunset, or the autumn leaves blowing in the cold wind, stay with us and continue to structure our experiences of ourselves and other people.

This means also that resonances in our body/consciousness are central to the fact that meaning given “in outline” (*en pointillé*) can be filled in by subsequent experiences. Likewise these re-soundings in our flesh are crucial for understanding our pre-conceptual grasp of *styles* of words, cities, behavior, art, music, and so on. The opening measures of the concerto, for example, stay with me, re-sounding in my flesh, as I am taken up into the world of Bach or Tchaikovsky without being able to say what makes it the world of one or the other.

Since resonances are also key to our appreciation of, and ability to respond to, the styles of things, they are central to anchoring us in our *Umwelt*. Hence, just after quoting Cézanne's statement that “nature is on the inside,” Merleau-Ponty writes, “Quality, light, color, depth, which are there before us, are there only because they awaken an echo in our bodies, and because the body welcomes them” (OE 125/22).

Merleau-Ponty's comment is a reference to resonances *sine nomine*, and it is true as far as it goes. Yet it is also the case that the depth of experience itself stems from these echoes. And these echoes can be awakened, and Nature welcomed, only because of

³⁸ Whitehead, *Process and Reality*, Corrected Edition. Ed. David Ray Griffiin and Donald W. Sherburne (New York: The Free Press, 1978 [1929]), p. 29 (referenced hereafter as “PR”).

³⁹ I owe this felicitous summary to Professor Jocelyn Dunphy-Blomfield (private correspondence).

Nature's insistent presence. Another way to say this is that *le sentant*—say, touching—is activity doubled by *le sensible*—here, being touched—which is the passive “side” of the experience. But in turn, Nature's insistent force is activity for which any passive flesh is *le sensible*. The echoes—or resoundings—of this persistent presence then function as active sensing within the body as *le sensible*, which can subsequently be data for self-sensing.⁴⁰ This is especially true in symbolic behavior such as a caress or a certain look.

At the deepest level of experience, the ontological importance of this oscillation is that, as Heidegger argued, it is “being that speaks in us and not we who speak of being” (VI 194/247). The same thought, expressed in terms of Nature, runs as follows: “[I]n a sense, as Valéry said, language is everything, since it is the voice of no one, since it is the very voice of the things, the waves, and the forests” (*Ibid.*, 203-204/155). Yet at the same time we must remember that it is always Being-for-us, which is another way of saying “activity=passivity.” The voice of Nature speaks to us, which we receive by actively welcoming it in our flesh that is already inextricably interwoven with it.

However, to say that we receive by welcoming—“Quality, light, color, depth, which are there before us, are there only . . . because the body welcomes them”—also creates a problem for Merleau-Ponty. In simple examples of touched and being touched, seeing and being seen, etc., there is a purely passive moment to the experience. Touching is a necessary and sufficient condition of being touched. However, in the kind of experiences to which Merleau-Ponty refers here, there is no purely passive aspect. Bodily welcoming is a necessary condition of the experience itself. Perhaps in the last analysis, he means to portray such experiences as examples of “overlapping” and “envelopment” of *le sensible* by *le sentant*, but in that case the passive element of the experience would exist only by analysis.

If this account of resonances is true, as I think it is, it explains why, when the body is deprived of the resonances of Nature, existence becomes impoverished and health is threatened. The body would be

reduced to passivity without the revivifying content of Nature for which it is fitted and to which it is open. This is why hospitals and clinics have been redesigning their facilities to bring patients closer to Nature. They have increased patient access to fresh air and gardens, pets, aquariums, windows in patient rooms with Nature views, which have all been shown to reduce stress and shorten the healing process. A good example of these effects is the Royal Children's Hospital in Melbourne, Australia, though as its Chief Executive Officer, Professor Christine Kilpatrick notes, these effects have been noticed internationally.⁴¹

The second way in which, at the basic level of sentience and beyond, the meaningfulness of Nature appears to us is through rhythms. We have already touched on one such example in terms of the musical intelligibility of birdsongs, and it is largely in the context of music that Merleau-Ponty discusses rhythms, especially in regard to melody. On the one hand, he was attracted to von Uexküll's view that “Every organism . . . is a melody which sings itself.”⁴² And much later, in the Nature lectures, he quotes von Uexküll's statement, “The deployment of an *Umwelt* is a melody, a melody that sings itself” (N 173-174/228).

Merleau-Ponty's attraction to melody is easily understandable because of its similarities to behavior. In Toadvine's nice summary, both are transposable from one key (situation) to another. Behavior also possesses a “kinetic melody” (SC 107/117) rather than a series of “now points,” which is lost in certain cases of pathological behavior, such as that of Schneider in *Phenomenology of Perception*. Additionally, both are “guided by an internal norm,”

⁴¹ See “Healing beyond the bedside,” at www.bphcentral.com/article/968-2. See also “Using the Healing Power of Nature in Health Care” in the construction of the new Palomar Medical Center West in San Diego, California, at

http://california.construction.com/california_construction_projects/2011/0606_PowerOfNatures.asp. A casual Internet search for this topic will reveal dozens of examples.

⁴² Merleau-Ponty, *The Structure of Behavior*, trans. Alden Fisher (Boston: Beacon Press, 1963), p. 159). Published originally as *La Structure du comportement* (Paris: Presses Universitaires de France, 1942), p. 172). Hoffmeyer also points out that von Uexküll's “fondness for employing musical metaphors” included a comparison of “the genes of a fertilized egg to the keys on a piano, upon which formative melodies may be played” (SMU 55). This statement may be found in the latter's article, “The Theory of Meaning,” *Semiotica*, 1982 [1940], 42/1: 25-82, at p. 71.

⁴⁰ Ovid, *Metamorphoses*, trans. Rolfe Humphries (Bloomington and Indianapolis: Indiana University Press, 1983), III: lines 342-371, p. 68. This energizing power of resonances, or echoes, shows what is tragic about Ovid's original. Juno's punishment reduced all of Echo's speech to passivity in that all she could say was only what was spoken to her.

and are “phenomenal or significative structures.” That is, they “exist only as meanings or senses, that is, as part of the perceived world rather than the ‘objective’ world” (PN 31-32).

There are, of course, rhythms of life not restricted to music. As Galen Johnson points out, rhythm “is vibration, rhythm is movement, rhythm is energy, rhythm is power, rhythm is Life.”⁴³ Some of these are pre-reflective and anonymous, such as one’s heart rate and blood pressure (alternation of systole and diastole), and circadian rhythms.⁴⁴ Others express the meaning of Nature in and through our reflections, and they also turn out to be quite important for both healing and inspiration. This is because they are inscribed in patterns of natural orderliness. The sea is an especially clear example.⁴⁵ It is not just the Joycean young artist who is inspired on the seashore, for it is a common expression (in English) that “The sea and meditation are forever wed.” There is also the rhythmic soothing of the waves that are recorded in many mobile phone applications for use as sleep aids. The insistent presence and even compulsion of Nature are also apparent in the regularity of tides that wait for no one. Moreover, to recur to the level of prehensions, the sea as the origin of life is reproduced in microcosm in the womb in which we spend our first months floating, listening to the rhythms of the maternal heartbeat, and being rocked back and forth by her movements.

Beyond the level of sentience, the picture of consciousness that has emerged through this long discussion has amounted to the mobilization of the powers of corporeity—including intercorporeity—to investigate, articulate, and creatively adumbrate

Nature and Being as such. It is not something infused into Nature, but rather something that emerges in and through it. Over the last several pages, our examination of this emergence has drifted into a discussion of how we encounter and articulate the meaningfulness of Nature. That is no accident, for to say that consciousness can articulate meanings in Nature implies that Nature has meanings that can be articulated. The rejection of “vacuous actuality” means that, as against the ancient Greek view of matter as an irrational surd, seventeenth- and eighteenth-century mechanism, and the early Sartrean *en soi*, both Merleau-Ponty and Whitehead are correct that Nature overflows with meaning. Indeed, both could be justly called philosophers of overwhelming meaning.

However, we still must inquire about how higher levels of consciousness—those with mentality above the level of sentience—emerge as well as the kinds of meanings that comprise its correlates. For the reasons given above, Merleau-Ponty does not center his ontology of Nature in consciousness, and he does not directly address the question at issue here. What he does say is that the mind, or consciousness, like ideas, is “hidden” in the body because it consists of the invisible-in-the-visible. It “comprises an aspect inaccessible to others, open in principle only to itself” (RC 129/177-178).

Based on what has been said so far, we know that such levels of consciousness must be the invisible dimensions of the natural processes from which they emerge. Once present, they must also be capable of generating expressive and symbolic behavior. As Whitehead said of symbolic (and other) behavior, “It is a matter of pure convention as to which of our experiential activities we term mental and which physical. . . . [T]here is no proper line to be drawn between the physical and the mental constitution of experience.”⁴⁶

Qua invisible dimensions of flesh, advanced levels of consciousness must also be doubled chiasmatically by *le sensible* as part of their definition because “activity = passivity.” In other words, they must also be part of reversible flesh, just as the identity of activity and passivity absorbed the earlier distinction between *être au monde* and *être dans le monde*. In other words, just as Merleau-Ponty’s early work revolved around perception and behavior, the later ontology stresses the primacy of reversible flesh of which intellectual consciousness is one of its

⁴³ Galen A. Johnson, *The Retrieval of the Beautiful* (Evanston: Northwestern University Press, 2010), p. 199.

⁴⁴ Toadvine claims that “The rhythm of the heart and the breath indicate the musicality of matter and life from which the mind emerges” (PN 49). Apart from having a tempo, it is difficult to see how this is so. Johnson is more correct in thinking that such rhythms transcend music. Aborigines have developed a pattern of circular breathing in order to play the didgeridoo without stopping for breath. They consider the sounds produced to be music, but it is highly doubtful that they would think the same of the breath that produced it.

⁴⁵ When Suzanne L. Cataldi and I edited *Merleau-Ponty and Environmental Philosophy* (Albany, NY: State University of New York Press, 2007), we were struck by the fact that none of the authors wrote about the sea. There was a double irony as well: all of them knew that the book’s honoree, Martin C. Dillon, was an expert sailor.

⁴⁶ Whitehead, *Symbolism, Its Meaning and Effect* (New York: The Macmillan Company, (1959 [1927]), p. 20.

many modes.

A partial explanation is that such conscious modes emerge at a certain level of *intensity* of feelings. Merleau-Ponty himself gives us two clues that he might have had this explanation in mind. The first is his previously noted claim that symbolic behavior exists “when that behavior establishes a resonance.” There are, of course, various degrees of resonance and intensity, but it is fair to say that human symbolic behavior that embodies conscious purpose must have a significant degree of intense feeling motivating it. As Whitehead writes in another context, “The relevant future consists of those elements in the anticipated future which are felt with effective intensity by the present subject by reason of the real potentiality for them to be derived from itself” (PR 27).

The second clue is a description of something’s becoming clear:

This experience of an event that suddenly becomes hollow, loses its opacity, reveals a transparency and makes itself meaning forever, this is constant in culture and in speech, and if one wanted to contest it, one would no longer even know what one seeks.⁴⁷

This experience often, but not necessarily, involves considerable intensity of feeling to generate intellectual consciousness as the medium of such clarity.

However, intensity of feeling cannot be the whole explanation, for when we encounter something fearsome, such as a poisonous snake or a salt-water crocodile, feeling can be maximally intense with no mentality entering the experience at all. Indeed, the intensity can be strong enough to neutralize all mental functioning. What is also necessary—as von Uexküll said of the *Umwelt* of higher animals—is the apprehension of potentiality, which is what saves experience from being a passive response to the actual. To express that fact, Whitehead interprets consciousness as a “subjective form” of the feeling of “the affirmation-negation contrast [comparison]” (PR 243). By this he means that it is how we feel in one unified experience a complex set of data together with a proposition about them. The proposition may or may not be true. It will be true if it is made true by the act of some occasion of experience, but if not it will be false. In any event, the

proposition is a potential truth that acts as a “lure for feeling” (*Ibid.*, 25). They are actual potentialities in Nature, as Merleau-Ponty holds (RC 98/137), which are latent meanings that we can explore imaginatively, articulate, and develop. They are, to borrow the phrase from his discussion of the *écart*, natural negativities.

Actual potentials for higher levels of consciousness consist of fleshly ideality, “sensible ideas,” and Merleau-Ponty is correct that Proust’s descriptions of them are *sans pareil*. Proust shows us that idea and flesh are not contradictories, but rather that the former is the “lining and depth” of the latter (VI 149/195). When, for example, Swann listened to the five notes of Vinteuil’s “little phrase,” “like a perfume or a caress, it swept over and enveloped him.”⁴⁸ He realized that the little phrase, like any cultural product such as “*the Princesse de Clèves* or *René*, love, the science of “a Lavoisier or an Ampère” (PCS 497/418), shows us “what richness, what variety lies hidden, unknown to us, in that vast, unfathomed and forbidding night of our soul which we take to be an impenetrable void” (*Ibid.*, 497/417). In addition, even if the little phrase offered a “clouded surface to the eye of reason, one sensed a content so solid, so consistent, so explicit, to which it gave so new, so original a force, that those who had once heard it preserved the memory of it on an equal footing with the ideas of the intellect” (*Ibid.*).

Swann was correct, therefore, to believe in the actual existence of the little phrase, which Vinteuil had managed to bring down from “the divine world to which he had access, to shine for a brief moment in the firmament of ours” (*Ibid.*, 498/419). As Antoine de Saint-Exupéry’s little prince learned, “The essential is invisible for the eyes”⁴⁹—or, in this case, for the ears. Swann’s listening, in fact, amounted to “assisting at the genesis of its birth”⁵⁰ (*Ibid.*, 499/420), just as did the musicians who “were not nearly so much playing the little phrase as performing the rites on which it insisted before it would

⁴⁷ Merleau-Ponty, *The Prose of the World*, trans. John O’Neill (Evanston: Northwestern University Press, 1973), p. 121. Published originally as *La Prose du monde*, Texte établi et présenté par Claude Lefort (Paris: Gallimard, 1969), p. 170.

⁴⁸ Marcel Proust, *In Search of Lost Time, Volume I, Swann’s Way*, trans. C.K. Scott Moncrieff and Terence Kilmartin; revised by D.J. Enright, with an Introduction by Richard Howard (New York: The Modern Library 2003), p. 496. Published originally as *Du Côté de chez Swann* (Paris: Gallimard, 1954 [1913], p. 417 (referenced hereafter as DCS, with pagination cited in English and then French).

⁴⁹ Antoine de Saint-Exupéry, *Le Petit Prince* (Paris: Gallimard, 1946 [1940]), p. 72.

⁵⁰ The English translation mysteriously translates “genèse” as “mystery.”

consent to appear" (*Ibid.*, 494/415). When the little phrase appeared, however, its "cries were so sudden" that the violinist had to "snatch up his bow and race to catch them as they came"⁵¹ (*Ibid.*, 500/442).

The essential lesson that Merleau-Ponty draws from Proust's scintillating descriptions is that the sensible is not a screen that conceals "a universe of ideas," but rather the necessary context for their apparition. They are necessarily in-the-visible. In the absence of a body and sensibility, not only could we not know ideas better, we could not know them at all. They "could not be given to us *as ideas* except in a carnal experience. . . . [T]hey are in transparency behind the sensible, or in its heart" (VI 150/196-197). Ideas are the other side or depth of the visible (*Ibid.*, 150/198). They are "recognizable," as Proust showed, "through their always special, always unique manner of entrenching themselves behind" the sensible (*Ibid.*, 151/198) as the invisible in the visible.

This "always unique manner" is another way of phrasing the notion of styles. The styles of things are sensible ideas, the unity of sign and signified, as when "the musical signification of the sonata is inseparable from the sounds that carry it. . . . During the performance, the sounds are not merely the 'signs' of the sonata; rather, the sonata is there through them and it descends into them" (PhP 188/213).

As styles of things, sensible ideas are the "carriers," so to say, of the expressivity of Nature. Our own expressions of these styles are, like "words, vowels, and phonemes . . . so many ways of singing the world" (*Ibid.*, 193/218)—and, Merleau-Ponty's final ontology would add, Being itself. However, because of the insistent power of Nature, there is a reversibility here through which, we have already seen, Being "speaks in us." And since this is the case, all of Nature can be seen as an expressive *naturans* manifesting itself in particular styles of the *naturata*. George Eliot shows us this when she writes:

For the beauty of a lovely woman is like music: what can one say more? Beauty has an expression beyond and far above the one woman's soul that it clothes . . . it is more than a woman's love that moves us in

⁵¹ Merleau-Ponty cites this passage twice—at PhP 526, n. 117/170, n. 1 and at VI 151/199. The English translation of the former describes not only the phrase as "little," but the violinist as well.

a woman's eyes—it seems to be a far-off mighty love that has come near to us, and made speech for itself there.⁵²

In a world of overwhelming meaning, all natural phenomena are creative expressions of Being that speaks to and in us and manifests itself in the styles of corporeal ideality. Whitehead is correct, therefore, to refer to creativity as the "universal of universals characterizing ultimate matter of fact" (PR 20).

The upshot of this discussion is, then, that the intimate unity of body and consciousness described so well in Merleau-Ponty's earlier writings becomes, in his final, unfinished ontology, part of a larger, or deeper, story about the reversibility of our flesh and that of Nature, and about the intelligibility of Being as such, through sensible ideas.

IV

The ultimate ground of intelligibility of Being for Merleau-Ponty consists of the Stoics' notion of the *logos endiathetos* and its articulation in the *logos proforikos*. This subject is well beyond the scope of this paper,⁵³ but by way of conclusion, I submit that Merleau-Ponty would have done better to refer much more to Heraclitus, on whom Zeno himself commented. For there is far more than a verbal similarity between Merleau-Ponty's late ontology and several of Heraclitus's fragments and comments on his thought. For instance, he argued that "Men should try to comprehend the underlying coherence of things: it is expressed in the Logos, the formula or element of arrangement common to all things."⁵⁴ G.S. Kirk and J.E. Raven point out that the narrow meaning of *logos* for Heraclitus "is probably related to the general meaning 'measure', 'reckoning' or 'proportion'" (K&R 188), and as Merleau-Ponty would insist, ". . . the arrangement would not be fully distinguished from the thing arranged, but would be felt to possess the same concreteness and reality as the thing itself" (*Ibid.*, 189). As Hippolytus

⁵² George Eliot, *op. cit.*, p. 400. On the same point, and from the world of non-human Nature, see Angelus Silesius's poem about how a rose roses cited by Heidegger in *Satz vom Grund* (Pfullingen: Verlag Günther Neske, 1957), p. 68.

⁵³ In *Nature and Logos*, the twin *logoi* comprise the subject matter of an entire chapter (IV).

⁵⁴ G.S. Kirk and J.E. Raven, *The Presocratic Philosophers, A Critical History with a Selection of Texts* (Cambridge: At the University Press, 1966), p. 187 (referenced hereafter as "K&R").

quoted Heraclitus: “An unapparent connexion is stronger than an apparent one” (*Ibid.*, 193).

Further, as Kirk and Raven point out, for Heraclitus the Logos expresses “the rule of measure in change which inheres in the world process” (*Ibid.*, 200). This function of the Logos corresponds to the natural rhythms and ordered changes described above. As Patrick Burke notes, Merleau-Ponty’s ontology of flesh hints at the Heraclitean “hidden principle of harmony within the universe and the active principle of its development, accounting thus not only for unity and stability of Being, but for multiplicity, diversity, and change as well.”⁵⁵

Kirk and Raven also point out that, for Heraclitus, “Wisdom—and therefore, it might be inferred, satisfactory living—consists in understanding the Logos . . . [the] measure which ensures that change does not produce disconnected, chaotic plurality” (K&R 205) and that in his philosophy, “ethics is for the first time formally interwoven with physics” (*Ibid.*, 213). In that light, Merleau-Ponty’s philosophy, as interpreted and extended here, has serious import for several contemporary social, political, and economic issues. It argues for Arne Naess’s sense of a deep ecology.⁵⁶ It argues with Cynthia Willett for a “social ontology of interdependence” as against an “ontologically detached and excessively rational agent.”⁵⁷

It also implicitly argues in favor of the current renewal of Schelling studies.⁵⁸ His works have been, and will continue to be, of great help for developing an empirically adequate and logically coherent metaphysics for this century. There are many reasons for the topicality of his thought, but perhaps the most important one is its pertinence to the destructive effects of climate change. Merleau-Ponty, Whitehead, and Heraclitus would all agree with Schel-

ling’s belief that we have a positive duty to care for Nature and that to become detached from it is dangerously unhealthy.⁵⁹

In the twentieth-century, philosophers such as Merleau-Ponty and Bertrand Russell, as well as people well beyond the philosophical world, worried about the planet falling victim to nuclear destruction. In our times, by contrast, we are daily witnesses to destruction owing to our own actions and practices that have degraded the environment. Manifestations of profligate use of fossil fuels—global warming, melting Arctic ice sheets, and ozone depletion—as well as drought and the increasing frequency of other extreme weather events, all testify to that destruction. Metaphysics in this century must continue to focus on Nature and our place within it in order to influence public policy. In that regard, I leave the last words for Václav Havel, writing in *The New York Times*, June 3, 1992, and who is now one of the “voices of silence” (André Malraux): “Man is not an omnipotent master of the universe, allowed to do with impunity whatever he thinks, or whatever suits him at the moment. The world we live in is made of an immensely complex and mysterious tissue about which we know very little and which we must treat with utmost humility.”

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⁵⁵ Patrick Burke, “Creativity and the Unconscious in Merleau-Ponty and Schelling,” in André Cloots and Santiago Sia, eds., *Framing a Vision of the World, Essays in Philosophy, Science, and Religion* (Leuven: Leuven University Press, 1999), pp. 188-189.

⁵⁶ Toadvine provides a convenient list of Naess’s more prominent publications (PN 165).

⁵⁷ Cynthia Willett, *Irony in the Age of Empire* (Bloomington and Indianapolis: Indiana University Press, 2008), pp. 37, 92.

⁵⁸ See particularly Arran Gare, “From Kant to Schelling to Process Metaphysics: On the Way to Ecological Civilization,” *Cosmos and History: The Journal of Natural and Social Philosophy*, vol. 7, no. 2, 2011: 26-69; and Jason Wirth, *The Conspiracy of Life, Meditations on Schelling and His Time* (Albany: State University of New York Press, 2003).

⁵⁹ See, for instance, Wirth, *op. cit.*, p. 93.

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THE MULTIPLE FUTURE OF ONTOLOGY

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Abstract:

For centuries most ontological systems have been based on the presupposition that the paradigmatic type of being is the kind of being things like stones and houses have. But if one looks at the beginning of Philosophy, at the emergence of philosophic thought, this choice was not an obvious one. For the pre-Socratics and even for Plato and Aristotle it was not obvious that reality is composed out of static and distinct elements.

In this paper I want to investigate the relationship between the static and the dynamic description of reality historically and systematically. I argue for the thesis that static ontologies are ultimately based on an analysis of predication and that dynamic ontologies are mainly based on an empirical or phenomenological investigation of singular and concrete reality.

Key words: Substance ontology, process ontology, Aristotle, Categories, phenomenology.

For centuries most ontological systems have been based on the presupposition that the paradigmatic type of being is the being of things. Everything that one can encounter in reality, so it has been thought, is best understood with reference to this type of 'being'. For these ontologies basic reality is composed out of 'static beings' that are independent and essentially unchanging. These kinds of *ontologies of 'being'* can be classified as fundamentally atomistic and static and are generally referred to as *substance ontologies*.

But if one takes a look at the beginning of Philosophy this preference for static entities is not yet established. For the pre-Socratics and even for Plato and Aristotle it was not obvious that reality at its basis is composed of static and distinct entities. At the beginning of philosophical thought, there was an equally strong tendency to regard reality as an

interrelated flux. Such a process-related reconstruction of the meaning of 'being' has its paradigmatic form in organic life, as it is embodied by plants, animals and humans or in nature as a whole. Dynamic ontologies could therefore be called *ontologies of φύσις*.

In this paper I want to investigate the relationship between the static and the dynamic description of reality historically and systematically. I will start with a historical introduction to the issue. Then I will argue for the thesis that *substance ontologies* are ultimately the consequence of an analysis of the structure of predication. The *ontology of φύσις* on the other hand has its roots in an empirical or phenomenological investigation of singular and concrete reality.

Historical introduction

Both ontological positions can trace their roots to the pre-Socratics. The first type of ontology is famously found in Parmenides. He is considered the father of the metaphysics of 'being'. The second type of ontology, the *ontology of φύσις* can be found in Heraclitus. He is often considered the paradigmatic thinker of flux. These thinkers set the philosophical standard: if one wanted to do philosophy, one had to address the issues set forth by these thinkers.

Aristotle for example passed down the knowledge that Plato was very interested and influenced by the teaching of flux; Kratylos, especially, influenced the young Plato greatly. Aristotle on the other hand did not think much of Heraclitus' theory. If we look at Aristotle's derogatory comments on Heraclitus, it seems wondrous that he even bothered to consider Heraclitus at all. Aristotle portrays Heraclitus as a somewhat

confused thinker, who thought that there are no true judgements. Since one cannot say anything true about a changing thing, there are no true judgements about a reality that is in constant movement.¹ Furthermore, according to Aristotle Heraclitus did not seem to know about the law of non-contradiction.² Surprisingly, even though for Aristotle Heraclitus was such a bad and confused thinker, Aristotle still could not just ignore Heraclitus. Aristotle felt he had to argue and *prove* him wrong.

Many interpreters in the Aristotelian tradition just followed the letter of the Aristotelian arguments and therefore came to the conclusion that they did not have to take Heraclitus seriously. To them Heraclitus seems stuck in a kind of pre-philosophical thinking, a kind of mythological thinking that does not take into consideration the law of non-contradiction and the law of the excluded middle. To these interpreters Parmenides, on the other hand, seems to embody the rational way of thinking called philosophy: a kind of thinking that has shed its mythological roots completely and is based solely on logical implication and rational argumentation.³

The general understanding of the thought of Heraclitus and Parmenides that we have today is mostly mediated through the writings of Plato and Aristotle and their commentators. Since both Plato and Aristotle looked for a way to reconcile Parmenides and Heraclitus, to reconcile the concept of 'being' with the concept of 'becoming' or 'flux', both agreed that there is change, but what does change is not basic reality. The basic and necessary elements of reality that are the reason and cause of all existence are unchanging. This was the kind of answer given in the early Platonic dialogues and the early Aristotelian writings. But this answer was not gained easily. Even after the distinction between essential and accidental had been introduced to solve the problem of change, there was still the problem of becoming of these essences: If the essential aspects of reality are unchanging, where do they come from, how do they come into being at all? Therefore even

after this distinction both Plato and Aristotle kept struggling to provide a unified theory that reconciles the static and dynamic aspects of reality. While Plato started to talk about the movement and interconnectedness of ideas only in his late philosophy⁴, Aristotle questioned and revised the status of change in his philosophy again and again.

Aristotle started out as a very static thinker in his *Categories*,⁵ where the question of becoming was not even asked and change is only mentioned as one of the Categories. In the *Metaphysics* the question of change becomes central, in the *Physics* movement is called the most fundamental property of existence, and in *de generatione et corruptione*⁶ Aristotle develops a type of dynamic ontology. Even though Aristotle revises his position again and again, he is usually referred to as the main proponent of substance ontology and for most of his works this characterisation is adequate. But as I stated, the question of change is not easily decided for Aristotle. He keeps on struggling throughout his philosophical work to find the answer to the question whether change is fundamental or not.

Substance thought and predication

My theory is that *substance ontology is a consequence of an investigation of abstraction and/or language*. Therefore substance ontology is the ontology of the way we usually *talk* about reality, of the way we usually *think* about reality, but it does not grasp the way reality *actually is*. I will argue for this thesis by analysing the book with which ontological thinking begins, the Aristotelian *Categories*. I choose this little book because the doctrines developed in it are the basis for other

¹ Aristotle, *Metaphysics*, 1010a 7

² Aristotle, *Metaphysics*, 1005b 25

³ This interpretation is far too one-sided. It does not take into consideration that Parmenides wrote a poem, not a philosophical tractate. He alludes to Gods and myths; it is a Goddess who explains the structure of reality. Heraclitus on the other hand was talking about the world of our experiences. We experience change as non-contradictory. He did not talk about the world of logic and theory, where change always leads to contradictions.

⁴ Plato tends more toward becoming in his later works beginning with *Parmenides* and *Sophistes* and ends up with a rather dynamic concept of reality in the *Timaios*.

⁵ Some think that the *Categories* are not an ontological work at all, but a mere investigation on our use of sentences. But I do not think this one-sided interpretation is adequate, as I will argue later on.

⁶ In this little book he suggests understanding the becoming of something as the result of the corruption of something else. So according to this work the corruption of things allows for the becoming of new things. Of course this is only one possible interpretation. The orthodox interpretation considers this book to be about the four elements and their movements or to be about real change that is carried by the *prima materia*. Today there are many voices that challenge this view. See Thomas Buchheim, *Aristoteles, Über Werden und Vergehen*, Sarah Broadie, *Distinguishing alteration, or Keimpe Algra, Substantial change and the Problem of Not-Being*.

Aristotelian investigations into ontology. Most of his other works are based on the findings of the *Categories*. It is therefore not only one of the earliest works of Aristotle; it is also the root of Aristotelian thinking in general. This is also the work that shapes our understanding of Aristotle as a thinker of static being, since most of his other works, especially the more dynamic works, were not available in Europe until the 12th and 13th century.⁷

It is telling that there has been a long tradition of questioning the focus of the *Categories*: Is it an ontological work or is it a purely grammatical or even logical work? Even if this question is not answered – and expert opinions still differ widely – I would suggest that the most plausible answer to this question is: both.⁸ In the *Categories* Aristotle tries to *explain reality by investigating the way we use predicates in language*.⁹ This methodology seems rather inappropriate to us, but this impression can be remedied if we take into consideration that for Aristotle words refer to concepts and concepts naturally signify or stand for objects in the world.¹⁰ On the conceptual level the *basis* of reality is called οὐσία (substance), its equivalent in predication and on an ontological level is the subject/substrate (ὑποκείμενον – that which is the basis). The corresponding actually existing entities in reality, like ‘this horse’ or ‘that man’, are usually called τόδε τι (hoc aliquid).¹¹ I make this distinction between the level of language, concepts, and reality here only for didactic reasons. There is no clean-cut distinction

between these elements in the *Categories*. Which is not surprising, since there is a strong tendency to equate these elements, at least in certain aspects. One example of these strong connections between the different levels is the hypokeimenon, which is to be interpreted either as subject or as substratum, depending on the context. Similarly the ousia is either to be understood as a concept, the tode ti or a hypokeimenon. Therefore there is a close relationship between words, concepts and reality¹², but opinions differ on how close this relationship is. However close this relationship is determined to be, there is no question that for Aristotle an investigation into words and meanings *can* lead to knowledge about reality.¹³ And knowledge about the basic elements of reality seems to be the aim of the investigation in the *Categories*.

We are first introduced to the ousia when Aristotle investigates predication. The categorical proposition is the theoretical guideline of this investigation. It is the type of judgement we usually make when we want to talk about reality. Especially in a scientific context we usually refer to reality through this type of predication. In its most basic form this judgement predicates something either necessary or just general of an individual (subject/substrate). The general element is usually called accident and the individual is called ousia (on the conceptual level) or hypokeimenon (on the level of language and/or the ontological level).¹⁴

Aristotle introduces the ousia with the assertion that only that which is without a predicate, and which is not predicable of another, is an ousia in the full sense: “οὐσία δὲ ἐστὶν ἡ κυριώτατά τε καὶ πρότος καὶ μάλιστα λεγόμενη, ἥ μήτε καθ’ ὑποκειμένου τινὸς λέγεται μήτε ἐν ὑποκειμένῳ τινὶ ἐστὶν, οἷον ὁ τις ἄνθρωπος ἢ ὁ τις ἵππος.”¹⁵

If we predicate, we always predicate some property of some entity. This something we

⁷ See Dirk Fonfara, *Die ousia-Lehren des Aristoteles*, p.36f

⁸ Other proponents of this reading are for example J.M.E. Moravcsik, *Aristotle’s theory of Categories*, p. 145 and William and Martha Kneale, *The development of logic*, pp. 25. For a detailed discussion of the onto-logical ambivalence of the *Categories* see Dirk Fonfara, *Die ousia-Lehren des Aristoteles*, pp.17 and pp. 199

⁹ This reading of the *Categories*, namely that the metaphysical structure of the world mirrors the structure of language (grammar) and that therefore we can discover the structure of metaphysical reality by investigating the grammatical structure, traces back to Adolf Trendelenburg, *Geschichte der Kategorienlehre* and has for example been defended currently by Michal Baumer, *Chasing Aristotle’s Categories Down the Tree of Grammar*.

¹⁰ Aristotle, *De Interpretatione* 16a3

¹¹ This correspondence between language, concept and reality in regard to the basis of existence in reality is presupposed and not argued for. Aristotle explicitly states that if these ousiai (and I would add: if their equivalent material particulars) did not exist, then nothing would exist.” μὴ οὐσῶν οὖν τῶν πρώτων οὐσῶν ἀδύνατον τῶν ἄλλων τι εἶναι“ Aristotle, *Categories*, 2b5

¹² In some passages of the *metaphysics* it even sounds as if in the analytic definition, the concept (ousia) and the essential properties of its equivalent in reality (hypokeimenon) are formally identical. See Aristotle, *Metaphysics*, 1030a6ff

¹³ Wolfgang-Rainer Mann, *The discovery of things*, p. 23

¹⁴ See Franz Brentano, *Kategorienlehre*, p. 110. In the Middle Ages the ousia is translated with the word substance (that which stands at the basis). This is the root of the name ‘substance ontology’.

¹⁵ “Substance (ousia), in the truest and primary and most definite sense of the word, is that which is neither predicable of a subject/substrate nor present in a subject/substrate; for instance, the individual man or horse.” Aristotle, *Categories*, 2a11

predicate a property of is the independent basis of predication, and in a certain sense it ‘carries’ its predicate, it gives its predicate reality or existence. This correlation can be described on the level of language or the ontological level of reality. If the hypokeimenon is understood in the ontological sense (as substrate) it gives existence to the actual entities and is called ousia: „ἔτι αἱ πρῶται οὐσίαι διὰ τὸ τοῖς ἄλλοις ἅπασιν ὑποκεῖσθαι κυριώτατα οὐσίαι λέγονται.”¹⁶ The ousia is the subject, which we can predicate something of and at the same time it denotes the ontological substrate that gives existence to its accidents.¹⁷

The main focus of the *Categories* is the ousia, which is simply presupposed. Wolfgang-Rainer Mann describes this fact in his “The discovery of things”: “the *Categories* are strikingly free of argument aimed at establishing or justifying this distinction (between things and properties, T.R.).”¹⁸ There is no argument at all for the distinction of ousia and properties. Especially there is no experiential or phenomenological deduction of the ousia. This might sound very strange to Aristotelians. Aristotelian thinkers like Bonitz¹⁹ and W. D. Ross²⁰ argue for the point that the *Categories* are only a description of the things in our experience and that only the later metaphysics and Physics are concerned with ontological questions. Therefore the *Categories*, according to Bonitz, is a work that *only describes our experience*.

There is a lot to be said in favour of these kinds of arguments. The tode ti is defined as this horse, that man or this ball of our experience. One can’t argue in a more phenomenological or concrete fashion. But what do we see if we *look at the way* Aristotle derives the notion of the ousia, which is the basis of the investigation and is supposed to denote this horse, that man or this ball? He begins with language, more precisely with predication. He looks at the way we speak about things. From this

investigation he arrives at the conclusion that when we predicate, we always predicate some general property of some concrete entity. From this Aristotle deduces that there are two general kinds of words, some, that denote singular entities and some, that denote general properties. Since words refer to reality or stand for reality there must be at least two equivalent types of existence: the type of existence of the concrete entity and the type of existence of the general property. The concrete entity must be independent from the general properties, not only because of the structure of predication but also because the concrete can endure while changing its properties²¹. The concrete entity then is called ousia and considered equivalent to the tode ti. The qualities of the ousia, we know of through an investigation of predication, are considered to be the properties of the tode ti. This approach of the *Categories* is deeply conceptual and not phenomenological at all.²² The ousia as an independent basis for the predicates does not actually grasp the tode ti, which is the concrete singular of our experience. What it refers to is an abstraction, a concept of the tode ti, but not the tode ti itself.

The problem is that grammatical-logical operations, like the distinction of essential and accidental properties, that work fine with concepts and predications, cannot be indiscriminately applied to reality. Within the realm of concepts and language it is no problem to distinguish the substance with its essential properties from the accidental properties. But in reality there is no way one can separate the horse-ness from the horse’s brownness, its legs or eyes and so on. There is only a horse that can be described as brown, having legs and eyes and so on. If I subtracted any of the horse’s properties in reality I would not be left with the essential properties, the horse-ness, instead I would be left with some flesh, skin, hair and other parts that used to be a horse. In reality such a subtraction of accidental properties cannot be done. How would I go about subtracting the brownness of this particular horse?

In reality one cannot distinguish the tode ti from its properties as one can in language, where all one

¹⁶ „Moreover, primary substances are most properly called substances in virtue of the fact that they are the entities that underlie everything.” Aristotle, *Categories*, 2b36 This is to say that ousiai act like a hypokeimenon and therefore can be called identical in a certain sense.

¹⁷ See Hermann Bonitz, *Über die Kategorien des Aristoteles*, pp. 31

¹⁸ Wolfgang-Rainer Mann, *The discovery of things*, pp.6

¹⁹ See Hermann Bonitz, *Über die Kategorien des Aristoteles*, especially pp. 21

²⁰ Ross for example states that the categories in this text are gained „by simple inspection of reality“, W.D. Ross, *Aristotle’s Metaphysics*, p. LXXXV

²¹ Aristotle, *Categories*, 4a10

²² „Diese (...) Auszeichnung des Einzelnen vor dem Allgemeinen geht einher mit einer logisch-grammatischen Bestimmung der ersten Ousia als Subjekt der Aussage, das selbst weder von einem Zugrundeliegenden prädiert wird noch in einem Subjekt inhäriert (...)“ Dirk Fonfara, *Die ousia-Lehren des Aristoteles*, p. 199

has to do is to separate the subjects from the predicates to have a neat distinction. There is a huge ontological difference between material entities and the concepts that refer to them. What can be said of the ousia or the hypokeimenon therefore cannot simply be applied indiscriminately to the tode ti. This ontological difference between ontological theory and concrete ontic reality is often forgotten or ignored in ontological investigations.

In gaining his basic concepts Aristotle does not look at the way the horses actually are, how they come into being, how they develop, or how they interact, which would be a truly phenomenological approach. Aristotle does not look at the horse, the men or the ball – he looks at language and concepts and equates them with what he sees in reality. The distinction between ousia (essential) and properties (accidental) is therefore not actually derived from concrete reality itself, but from the way we speak about reality. Nonetheless this is the basic division that informs all the other ontological investigations of Aristotle.

But even if one rejects this ontological reading of the *Categories* completely, even if one negates any connection to reality in the *Categories*, even if one is absolutely certain that the *Categories* is a purely logical work with no connection to reality, then my main argument, namely that static ontologies depart from the investigation of reality into language is still valid. Because even if the distinction in the *Categories* is purely logical, and the hypokeimenon or the ousia of the categories are purely grammatical entities, there is one distinction made in the *Categories* that is still the basis for all further arguments in the *Metaphysics*, the *Physics* and *de generatione*. This is the distinction between changing and unchanging, between a hypokeimenon-substance as that which undergoes change and properties that change: “Μάλιστα δὲ ἴδιον τῆς οὐσίας δοκεῖ εἶναι τὸ ταὐτὸν καὶ ἐν ἀριθμῷ ὄν τῶν ἐναντίων εἶναι δεκτικόν.”²³

However the *Categories* is interpreted, as a logical or an ontological work, one cannot doubt that it investigates the way we talk about being. And this investigation is the basis from which all further metaphysical and physical investigations depart. The distinction, between essential and accidental, between unchanging and changing is derived from an analysis of language and logic. For Aristotle it

will be the basis of all further ontological investigation.

Dynamic ontologies and the phenomenology of the concrete

As stated above, in the beginning of Philosophy the question of ‘static being’ and ‘becoming’ or ‘flux’ was central to philosophy and remained an open question for a long time. When we look toward philosophy in the middle ages and what came after it, it seems that this question has completely lost its philosophical standing. This leads to the consequence that for a long time anybody who thought about dynamic ontologies was considered to stand in the tradition of Heraclitus and therefore to be a kind of mythological thinker and not a rational one. Nowadays this conviction has faded. The high times of classical ‘being’ as a basis for ontology are long gone. Ontologies based on static being cannot cope with the changes and developments modernity brought about. Therefore there is a need for a new kind of ontology, as Nicolai Hartmann says:

But it is here that the roads of the old and the new ontology part. Just as in regard to the problem of being it is today no longer a question of substantial forms and of the teleological determination of actual processes by these forms, so also the problem at issue is no longer that of a post factum justification of a priori principles.²⁴

According to Hartmann this new kind of ontology cannot be based on a priori principles and cannot be concerned with teleology or substantial forms. What should it be based on then? Hartmann’s answer is that this new kind of ontology should be based on our experience of reality. This experience is not to be understood as experience of the abstract or the absolute, but as experience of the concrete and singular. What we can base our philosophy on is only the experience of changing and concrete reality. Hartmann therefore continues:

The *Categories* with which the new ontology deals are won neither by a definition of the universal nor through derivation from a formal table of judgments. They are rather gleaned step by step from an observation of existing realities. And since, of course, this method of their discovery does not allow for an absolute criterion of truth, here no more than in any other field of knowledge, it must be added that the procedure of finding and rechecking is a laborious and cumbersome one. Under the limited

²³ The main characteristic of substance seems to be the fact that something, one and the same in number, can receive contrary properties. Aristotle, *Categories*, 4a10

²⁴ Nicolai Hartmann – *New ways of Ontology*, p. 13–14

conditions of human research it requires manifold detours, demands constant corrections, and, like all genuine scholarly work, never comes to an end. (...)

From this alone it follows that the principles of being cannot be a priori principles of our intellect, that they, as a matter of fact, are just as indifferent to the dividing line between the knowable and the unknowable as the being whose principles they are.²⁵

This new kind of ontology of the concrete has to be an ontological system of the sensual and therefore of the ever changing. These remarks indicate that the new kind of ontology Hartmann speaks of stands more in the tradition of Heraclitus²⁶ than in the tradition of Parmenides. The big problem we face now is how to devise such an ontological system of changing concrete reality without slipping into what is mostly called and dismissed as ‘mythological thinking’?²⁷

In order to answer this question we should first clarify what constitutes ‘mythological thinking’. The type of thought mostly classified as ‘mythological thinking’ does not really have a direct link to mythology. The so-called ‘rational thinkers’ like Parmenides and Plato use mythological elements and mythological metaphors as arguments whereas Heraclitus,²⁸ for example, does not. The term ‘mythological thinking’ therefore must refer to a method of thought and not to any mythological content. Since the term ‘mythological thinking’ has many negative connotations and does not actually refer to myths at all, one should use a more neutral term to denote this thinking. Therefore I prefer to use the term *φύσις* which was introduced in the beginning of this paper.

What is here termed ‘thinking of *φύσις*’ mostly starts from empirical monism (there is just one unified reality accessible through the senses), it considers the concept of internal relation (i.e. there is no independent substance/substrate) central to its

understanding of reality and focuses on the changing real. There is furthermore generally no absolute ontological distinction between physical/sensual and mental/intelligible aspects of reality in this type of thinking, since all these are only aspects or elements of the one reality. This type of thought is mostly characterized through its disregard for either the law of the excluded middle and/or for the law of non-contradiction.

But this disregard for these laws is very restricted. These laws can only be disregarded when we are *trying to grasp concrete reality*. This disregard for the basic rules of logic is not arbitrary; it is rooted in theoretical presuppositions. Namely that these laws of logic and grammar are laws of thought, laws of language and not laws of concrete reality. Behind it stands the conviction that reality is not structured like a language, that concrete reality does not have the same structure as grammar or logic.

Even in this type of ‘thinking of *φύσις*’ the rules of grammar and logic do apply, but they do not apply indiscriminately. These rules do apply to language and thought, to propositions structured by the rules of grammar and judgements fashioned according to classical logic, *but they do not apply to reality*. Concrete reality as it is given in the senses is not structured according to the rules of classical logic or according to the rules of grammar. But this does not mean that propositions structured by the rules of grammar and judgements fashioned according to classical logic do not refer to reality at all. It just means that propositions structured by the rules of grammar and judgements refer only to *abstractions* from concrete reality, but not to concrete reality itself.

The consequence of this ‘disregard’ for the law of non-contradiction is only that a contradiction is not enough to automatically falsify a description. Classical logical systems cannot allow contradictions because a contradiction leads to an explosion of conclusions since anything follows from a contradiction (ex contradiction sequitur quodlibet). If we do not try to predicate something general of something concrete, but instead describe the way something is and its continuous changes through time, we do not have this problem of explosion. We do not have this problem of explosion in phenomenology, since we do not try to deduce a true judgement or proposition from the description of the concrete. Instead in the phenomenological description we try to come as close to the concrete

²⁵ Nicolai Hartmann – New ways of Ontology, p. 14

²⁶ Compare Heraclitus 22B55 „What one can see, hear, experience, that I prefer.“

²⁷ This is no judgement on the value of ‘mythological thinking’. Fact is that most ontologies are based on parmenidean type of rational thinking and if one wants to enter this discourse one needs to conform to the standards of this discourse as much as possible.

²⁸ Heraclitus thought the worship of the Gods madness, especially where people believed themselves to be purified with the blood from sacrifice, "as if one who had stepped into mud should wash himself off with mud". (22B5) He also criticised the custom to pray to statues: "Furthermore, they pray to these statues – as though one were to carry on a conversation with houses." (22B5)

as is possible. One might say that we try to listen to reality instead of categorizing reality. That is we try to fashion our thoughts according to the structure of reality instead of reconstructing reality according to our way of thinking and talking. Therefore, in classical logic, in predication and syllogisms, the law of non-contradiction must be adhered to; in phenomenological descriptions of the concrete this law can be disregarded.

In the phenomenal reality of our perception, there are no absolute distinctions between elements. There are no distinct and static subjects and predicates. All reality in our perception is interconnected and changing, some elements of reality changing faster, some slower, but reality as a whole is always in movement. It is therefore impossible to single out one element which should correspond to a distinct subject and to ascribe just some types of properties to it *without abstracting* from the concrete interconnectedness of reality. If concrete reality is an interacting and changing whole, it is not possible to describe it adequately with propositions of the form ‘S is p’. But this is exactly how predication and judgement works. To predicate something of something means to single out some type of thing and to ascribe some property to it, without any regard to the fact that the thing I am talking about is changing even while I talk about it. Classical judgements are a perfectly sensible way of communicating and investigating abstract laws that govern reality – but what this method cannot grasp is concrete reality in its interconnectedness and its movement.

This basic structure of reality, concrete interconnectedness (i.e. internal relations) and change is central for ‘thinking of *φύσις*’ and dynamic ontologies and not the abstract structures of language or logic which is central for analytical thinking and substance ontologies. So if the main difference between substance ontologies and the ontology of *φύσις* is rooted in the object of their investigation and there is a necessary correspondence between this object and the way language is used to express this object, we should be able to find a way to reconcile the two views. First, I do not mean to say that there is an absolute distinction between the two approaches or methodologies. All I want to point out is the following tendency: investigations that are oriented toward abstractions, toward language and logic tend to lead to static ontologies and investigations that are

oriented toward the concrete empirical reality or the phenomena tend to be more dynamic.

I believe that the static and the dynamic approach to ontology are only consequences of the methods used in their constitution. Therefore I cannot see a qualitative difference between them. The adequacy of ontological systems then depends on the questions asked and the object investigated. If I want to know something about the concrete reality, about the *tode ti*, I should adopt a more phenomenological approach, which leads, as I hope to have shown, to some form of ‘thinking of *φύσις*’. On the other hand, if I want to clarify our concepts of reality, if I want to investigate the ontological status of natural laws or abstractions in general I should use the theoretical approach of investigating the way we talk about reality since it is undeniable that our talking about reality corresponds and correlates to reality *to a certain extent*. Which is enough for many investigations. But we have to keep in mind that our talking about reality is not equivalent to reality, that concepts do not fully grasp what they intend to refer to. If we want to grasp reality as it is in its concreteness, the theoretical approach will only hinder the investigation, since it is formed through the structure of predication and not by the structure of reality.

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THE ONTOLOGY OF SECONDARY AND TERTIARY QUALITIES

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Abstract:

Non-primary qualities are ubiquitous and humanly quite important. This paper briefly argues that they can be best understood on a dispositional model (or, that they are what is nowadays called in literature “response-dependent”), and offers a particular version of the model, the response-intentionalist one. It then discusses combinations of non-primary qualities and argues that there is a layered structure of iterated response-dependence, underlying aesthetic and other interesting properties such as meaningfulness.

Key words: ontology, secondary and tertiary qualities, dispositional model.

I. Introduction: non-primary qualities

The official ontology of contemporary philosophy (and science) crucially includes physically defined, respectable and robust properties such as shape, size, momentum, etc., often called primary qualities.¹ The world of everyday experience contains many qualities that do not seem to be ontologically equally respectable. Most conspicuous among these are the secondary qualities: colors and sounds, tastes and smells. There are others, sometimes called tertiary, like being pleasant or unpleasant, embarrassing, boring or frightful. To this we add the aesthetic and value qualities, like being unified, beautiful or graceful. And, for good measure, the meaningfulness of events, courses of life and the like, together with its contrary, the absurd.

Together with colors, smells and sounds, the so-called secondary qualities, these make up the “manifest picture” of the world, in which, or at least with which, most of us usually live; they are the crucial humanly important properties in the world. Non-primary qualities are ubiquitous, useful and are detected very early on at the evolutionary scale. Smell is one of the most primitive and earliest senses: the world of many primitive animals is, presumably, the world of smells. So, such qualities are detected *at least as early* as the primary ones. Non-primary qualities are central to ordinary life. Secondary qualities are clearly a case in point. But this is not all. The human world is the world of emotional and desiderative qualities. Things and situations appear as disgusting or thrilling, sad or funny, people appear as lovable or fascinating. Jon Elster notes that “with one exception, (i.e. “hedonic satisfaction produced by the senses”—added by N.M.) all human satisfaction comes in the form of emotional experiences” (1996: 1386). This has been noted throughout the history of philosophy—from Seneca through Spinoza, Schopenhauer and James to our contemporary colleagues—whether with approval or disapproval. In short, *from practical, cognitive and semantic points of view non-primary qualities are on equal footing with the primary ones*, although metaphysically they are not. What is their ontology? Where should we locate them in relation to primary qualities?

The location question is extremely general, and the project of answering it extremely ambitious. From the times of Locke and Hume a project has developed of accounting for them in terms of the dispositions of physical things and events to act upon us. Some au-

¹ Thanks go to K. Farkas, B. Kante, F. Klampfer, B. Borstneru, M. Reicher, D. Šuster. My biggest debt is to Mohan Matthen with whom I have been discussing color for several years; hopefully the discussion will go on.

thors (C. Wright and D Wiggins, for instance, see the References) have formulated it clearly and in terms of present-day ontological debates. The view is usually called dispositionalism, and more recently response-dependence view. Both authors just mentioned have been arguing for a very extended use of response-dependence, and I endorse this line as well: most humanly important properties, emotional, aesthetic, moral and the meaningfulness-related ones, are response-dependent, I would claim. In any case, we should strive for a unitary account of problematic properties; and if one is for response-dependence in one area, it is reasonable to be on the same side for other, at least *prima facie*.

So, in this paper I want to do two things. First, taking color as my basic example, sketch my own version of response-dependence view, the version which I will call response-intentionalism, RI-for short. My second project is a bit more complicated. I want to show that it is useful for the general ontological project not just to admit many areas of response-dependence, but to point to the possibility, and hopefully even to the fact that they *combine in some of the areas*. Take the simple (and for myself a worrisome) example: that of chocolate being pleasant because sweet. Pleasantness is not rooted directly in physical properties, say molecular structure. It supervenes upon sweetness, which is itself rooted more directly in physical properties of chocolate, and of course, in properties of our sense of taste. Mine is overdoing its work, I am a true chocolate addict, all this because of iterated response-dependent properties of my favorite chocolate. Take next emotional properties. Some of them seem to depend on ordinary secondary qualities (a dark, smelly room that feels oppressive), some on other emotional properties, like, for instance being a lovable pet might depend on being “sweet” (in the emotional sense) and endearing. More dramatically, a life can be meaningful (partly) in virtue of responding to some important emotional properties of the surrounding niche the person living the life is inhabiting. If you are constantly facing depressing, awful and cruel events-and-doings, it might be meaningful to you to rebel and live a risky life of an engaged political activist, even if it very dangerous for you (apparently, this was the choice of the whole generation of young Bulgarian intellectuals around Levsky, a century and half ago.) I have chosen for this occasion to illustrate the general idea using aesthetic

properties as my example, and putting forward the idea of iterated response-dependence as the general form of combination of response-dependent properties.

In brief, in section Two I briefly summarize the idea of RI, and then I apply it to the topic of color. Section three discusses aesthetic qualities factual and evaluative, and introduces the idea of iterated response-dependence. It ends with a very brief proposal of generalizing RI further to moral properties and to meaningfulness and its opposite, absurdity.

II. The world of color

Colors present themselves to the naive observer as simple properties of objects. Once we unpack our intuitions about them, colors seem to display curious features: they seem to be tied to vision internally, in the sense that the only criterion determining what color an item has is the way the item looks. Orange is the color of the fruit, not of experience. The way colors present themselves suggests they are objective, the internal link with appearances suggests they are not completely so. Philosophers have then turned to science for the resolution of the tension.

Many of them take into account the fact that the commonsensical notion of color is different from the scientific one: on the commonsensical line the fruit not only looks simply-and-manifestly orange, but the color presented is seen as *the* color of the object. Neither dispositions nor reflectances are literally seen as such: the surface of the orange does not look like disposition, nor do various orange surfaces exhibit the actual dramatic differences in reflectance profiles to the naked eye. Science tells us that one can explain color phenomena without postulating intrinsic color in objects, over and above their physical properties, and this much was almost certain at the time of Newton. Moreover, recent science informs us that the crucial features of color perception are to be explained by appeal to the internal organization of the perceiving apparatus: color categories (dividing the continuous physical range into discontinuous segments), and color opponency (contrasting red to green and blue to yellow) are literally artifacts of our perceptual and conceptual make-up. The best physiological theory available (Hurvich's) suggests that color can hardly be identified with the surface reflectance, since many combinations of reflected light yield the same color. A large number of surfaces with different reflectance

properties can therefore be indistinguishable in color appearance. Any two such surfaces are called "metameres" of each other, and their indistinguishability as to color is called "metameric matching". Although the phenomenon of color constancy grants some measure of objectivity, it is by itself too weak to counterbalance the contrary evidence. Finally, recent comparative research has uncovered a wealth of variation in animal perception of color, including possibly novel colors and unusual partitions of color space. It suggests that we might have to relativize color to particular animal kinds. The evidence seems to point in the following direction: faced with the opposing pulls of the naive view, one should weaken the assumption that color is completely objective, sacrifice the assumption that it is a categorical property and retain the assumption that it is internally tied to perception. This suggests a relational view, best captured by the response-dispositional analysis. My sensory states of being appeared to redly in front of a ripe tomato manifests the disposition of the tomato's surface to induce such experience in the normal viewer. A measure of falsity is ascribed thereby to the naive view: we do not see colors as dispositions, but this is not unusual, since other clearly relational properties (like being sexy) are not experienced as dispositional. Many problems remain, e.g. how to characterize the internal component ("looks red") without circularity and without introducing two kinds of color, one categorical for experiential states, and one dispositional for objects.

In contrast to full intentionalism I don't propose to reduce the events on the subjective side to the way of seeing the surface. I stay with an experiential datum: the property of uniform, manifest color, that objects probably don't have. The orangeness is experienced *as transparently* on the surface but, such manifest orangeness is not really there. The datum is both obvious and robust. It crucially distinguishes the experience of color from the experience of pain-causing devices. Locke's mana (a laxative inducing stomach pain), a device that produces pain in the thumb, say a thumbscrew, or an imaginary pain-producing surface, like those in Wittgenstein's thought experiment are, or would be, experienced in quite different ways.² A

² Kati Farkas has usefully pointed to her theory about how we objectify experienced properties and how pain can become an external perceptual experience, offered in her "Constructing a World for the Senses", to appear in a volume edited by Uriah Kriegel.

victim's perceptual apparatus does not ascribe to those a phenomenal property corresponding to their pain-producing power.

What about qualia? Qualia might accompany the intentional experience, but they don't enter the "orangeness" of the surface. The viewer does not experience additional "subjective qualities" of the surface.

Now, as against the "simple view of color", science tells us that there is no manifest phenomenal orange on the surface, just reflectances. So here is a kind of Master argument for Response-intentionalism (RI):

1. Full phenomenal orange is being intentionally experienced as being on the surface of the fruit.

(A transparency datum)

2. Full phenomenal orange is not on the surface of the fruit. (From science)

3. Full phenomenal orange is not a property of subjective state (From Transparency). Therefore (by principles of charity and by inference to the best explanation),

RI: Being Orange in a fully objective (scientific) sense is being such as to cause the response of intentionally experiencing phenomenal orange in normal observers under normal circumstances. (Miscevic, 2004)³

Next comes the definition of response-dependence. I propose the following working definition.⁴ Starting from the standard idea of disposition:

³ I am being very brief here. For the discussion with full-scale color realists see my "Response-dependence without tears", and with Mohan Matthen's ecological realism my paper in Croatian Journal (in press), both available also at academia.edu.

⁴ I am following Mark Johnston while replacing his concept-talk with property talk. Mark Johnston defines response-dependent concepts in two steps. First, and most importantly comes response-dispositionality. Start from the standard idea of disposition:

The concept F is a dispositional concept just in case there is an identity of the form

The concept F = the concept of the disposition to produce R in S under C,

where R is the manifestation of the disposition, S is the locus of the manifestation and C is the condition of manifestation. (Johnston: 1993, 103).

The property F is a dispositional concept just in case there is an identity of the form
 The property F = the disposition to produce R in S under C,
 where R is the manifestation of the disposition, S is the locus of the manifestation and C is the condition of manifestation.

Now, for response dispositionality consider dispositions of subjects - loci of disposition to give response R that essentially involves some mental process, all this under specified circumstances. The twin concepts of the relevant dispositions in subjects (to issue R) and in the object (to prompt R) are then narrowly response-dependent concepts. To put it as principle, it is necessary for F being a narrowly response-dependent property that the following Basic Equation holds:

x is F iff X tends to elicit such-and-such reaction from such-and-such persons under specified circumstances.

And of course, the Equation is to be read from right to left: x is F in virtue of eliciting a certain response (call this, with C. Wright, the right order of determination).⁵ Second, a property is a response-dependent one in a wide sense if it is either response-dependent or a combination of properties with at least one non-redundant narrowly response-dependent component.

The responses are the paint with which the manifest picture is painted. The picture makes manifest that the surface is colored, and that the dog is frightful, and not the exact nature of color or frightfulness. This modest sense of "manifest" is rather ordinary. "It was manifest to everybody that Helen was worried" entails that Helen's worry was manifest; but very little about worries can be known by their mere manifestation. The notion of response-dependence offers a general framework for answering the question: what is the place of various interesting qualities within the natural world? What unifies various orange-looking surfaces is that they cause the experience. We should then perform an inference to the best (causal) explanation: stress the source of unity, the causal power or disposition. Why not stress relationalism? The term points to the form while, in contrast, "RI" points to the content: what unifies different kinds of orange surfaces (see also the paper of Kristina Pucko in the same issue). On

the other hand, there is the principle of charity: ascribe to commonsense the maximal amount of truth possible. We deploy both. What follows is:

RI: Being orange in the scientific sense is being such as to cause in normal observers under normal circumstances the response of experiencing intentionally

Similar views have been proposed in terms of color looks, Peacocke's red (see References), as well as Crane's characterization (Crane, 2001, section 43; this has influenced my RI a lot). Janet Levin talks about a disposition to look blue (2000: 151), and B. Maund (in press) proposes the following further option for the dispositionalist to adopt:

(1B) X is blue = X is disposed to have a certain type of look (the look of something blue) for normal perceivers, in standard conditions. (in press, ms p:13)

Brian McLaughlin has asked me in a discussion in Graz how eliminativist my view is. Well, it is not really eliminativist. The simple manifest (commonsical) color is only projected by our intentional experience, but the color-in-objects is there as disposition/causal power. Leopold Stubenberg has asked: Where is color, then? The simple, manifest color is nowhere in reality; it is merely intentional, but color-in-objects is in the objects.

What about concepts of such qualities? We, the theoreticians, should introduce a response-dependent concept (or re-interpret an existing concept as response-dependent) only if we cannot identify a suitable categorial basis, or if we think there are principled reasons that prevent the thinker from referring to them. The attribution thus has a certain deflationary taste. A further distinction is needed at this juncture. Some response-dispositional concepts, like for instance sexy, wear their response-dispositional character on their sleeve: these might come to appear as such even to a naive thinker on sufficient reflection. For such a concept the test involves an appeal to counterfactual situations: given the thinker's cognitive, perceptual and emotional apparatus, how would she react to changed circumstances? Would she call a person sexy if he had completely different categorial properties, but her dispositions to react were suitably adapted to the new properties, so that her primary response remained the same? If yes, the concept and the corresponding prop-

⁵ This is inspired by Blackburn's nicely general formulation from his (1993: 260).

erty are response-dependent. Other concepts and properties, such as the naïve concept *red*, do not contain an appeal to a subject's response, but stand for a property that involves such a response. (Notoriously, a naïve thinker sees colors as simple properties of material bodies.) In these cases, we should put metaphysics first and count the concept as response-dependent if it stands for a mind-involving quality. We have to be generous in this way, since many central response-dependent concepts only *refer* to dispositional properties but do not present their referents *as* being dispositional.

Non-primary qualities are ubiquitous, useful and are detected very early at the evolutionary scale. Smell is one of the most primitive and earliest senses: the world of many primitive animals is, presumably, the world of smells. So, such qualities are detected *at least as early* as the primary ones. Non-primary qualities are central to ordinary life. Secondary qualities are clearly a case in point. But this is not all. The human world is a world of emotional and desiderative qualities. Things and situations appear as disgusting or thrilling, sad or funny, people appear as lovable or fascinating. Jon Elster notes that "with one exception, (i.e. "hedonic satisfaction produced by the senses"—added by N.M.) all human satisfaction comes in the form of emotional experiences" (1996: 1386). This has been noted throughout the history of philosophy—from Seneca through Spinoza, Schopenhauer and James to our contemporary colleagues—whether with approval or disapproval. In short, *from practical, cognitive and semantic points of view non-primary qualities are on equal footing with the primary ones*, although metaphysically they are not.

This is the generalized Lockean compromise, a dispositional account of the qualities in question. According to it, they are dispositions of things and situations such as to evoke certain responses in normal cognizers under specified circumstances. An obvious case of response-dispositional property is the property of being sexy: it is the property sexually to appeal to certain persons under normal circumstances. The dispositional account assimilates all secondary and tertiary qualities to properties like being sexy. For instance, to be a third octave C-sound is to be an arrangement of sound-waves capable of eliciting an experience (as) of hearing C of the third octave in normal listeners. To be a sad situation is to be disposed to appear sad to normal people under normal circumstances, i.e. to make them feel sad when con-

fronted with it. This account has been famously proposed by Locke for secondary qualities, developed by a long series of his interpreters and followers, extended to emotional qualities and values by Hume, and further generalized in our time. The account presents both kinds of qualities as mind/brain-involving, though not as outright projection of mental states upon physical reality. I have already borrowed Mark Johnston's labels "response-dispositional" and "response-dependent" for such properties as being red.⁶ Here, I am adding the RI specification for the subjective side of the response.

III. Generalizing the picture – emotional and aesthetic properties

a. Introduction

We pass now to emotional properties. Picture a situation featuring a large salivating dog in front of one (to use an example from Mulligan (1998; see also his 2011), which prompts its owner to run away. Being frightful is an emotional-desiderative quality, being pleasant a "hedonic" one; both are sometimes described as tertiary qualities. Scientists know less about emotional properties than about colors, but the former are judged to be at least as subjective, if not more, than the later. Most theories acknowledge and stress the existence of a bodily element in emotions, from simple arousal to more complex reactions, and speculate that it is then being linked to situations evoking the emotion. What is the point of this linkage? Cognitivist theories proposed by psychologists (Johnson-Laird and Oatly: 1988) and philosophers (de Sousa:1991, for a recent collection see Bagnoli 2011.) propose that emotions are signals from the motivational sub-system to the cognitive one that establish "patterns of salience". A sophisticated version proposed by A. Damasio in his interesting and readable book (1994) concentrates upon the bodily feeling, a "perception"—as he puts it—of the bodily state and upon its role in "emotionally coloring" actual or prospective

⁶ For a recent collection on color see Cohen, J. & Matthen, M, (Eds.) (2010), and the volume 36 of *Croatian Journal of Philosophy*, dedicated to color. For a classical, readable and authoritative account of the primary/secondary distinction see Mackie (1976). For a dispositional analysis of secondary and tertiary qualities see McGinn, C., (1983), Peacocke, C. (1984) and Mark Johnston, in his earlier writings (1991), (1992), (1993). For a recent collection see Nolan (2011).

situations. An actual emotionally significant situation—say, having to admit to one's wife that one has lied to her—becomes accompanied by an unpleasant visceral feeling. The feeling—the somatic component of embarrassment—is then attached to the representation of the situation, thus becoming a "somatic marker" of the situation-type: the situation is experienced as embarrassing_e, where the subscript "e", like in the case of color, refers to experienced embarrassing quality of the situation itself. In Damasio's view, nature has taught us to represent the outside world with the help of "modifications it provokes in our body". Damasio marshals an impressive amount of neurological evidence to substantiate his theory of somatic markers. He details in his book the neural mechanism of the hypothesized production of somatic markers. The marker accompanies the representation, and plays a crucial role in future deliberations: the next time one considers a course of action involving lying to one's wife, the marker—the feeling—signals the danger and warns the agent that the prospective outcome is to be avoided. The marker is an automatic device of evaluation, that makes the agent view the situation as embarrassing. The same holds for, say, sadness. We can reiterate our argument-scheme for the RI-view.

A transparency datum: Sadness_e is being intentionally experienced (felt) as being a property of an action, or state of affairs.

Of course, most response-dependent properties don't wear their character on their sleeves. Color looks objective since our faculties are blind to the order of determination. The same holds for aesthetic properties. The ecstatic character or sadness of a musical phrase is equally perceived as non-subjective. Barbarina's famous air "Non la trovo" (from Mozart's *Figaro*) paints *her* sadness for our ears, not the sadness of our heart. This blindness to the order of determination is the deep explanation for the naturalness of our feeling of such tertiary qualities.

Sadness_e is not an experiencer-independent property of action, or state of affairs.

(From psychology, e.g. from Damasio's account just sketched)

Sadness_e is not a property of subjective state (From Transparency).

Therefore (by principles of charity and by inference to the best explanation)

Being sad in an objective sense is being such as to cause the response of feeling sadness in normal observers under normal circumstances. (*Response-intentionalism*)

But now we have to pass to art and aesthetic qualities, to go from sad events to sad pictures, like the *Avignon Pietà*, representing the entombment of Christ. It has interesting colors, it is sad and it is beautiful. How do response-dependent qualities combine here?

b. Factual aesthetic properties and iterated response-dependence

Here is the idea to be proposed (leaving the detailed defense for another occasion): aesthetic and value properties are response-dependent. The dependence has a rich structure the essentials of which can be captured roughly in the following way: value qualities (e.g. beauty) depend on our response to aesthetic properties (e.g. unified, magnificent), which in turn depend on our response to a pattern of primary and secondary qualities (shapes and colors). Secondary qualities are themselves response-dependent. The basic dependence relation is thus iterated, and the structure is one of iterated response-dependence.

As an illustration consider the *Avignon Pietà*, representing the entombment of Christ. It is a *mournful* work, expressing the sadness of the event. I see it as itself being *intensely sad*. On the side of form and composition, it seems to be *unified* by a triangular composition (with the head of the mourning Virgin at its apex) with stress placed on the horizontal line, uniting Christ's body with the heads of the mourners. Many viewers find it *exquisitely beautiful*.

Now the epithets in italics seem to stand for properties (in a large sense), that have to do with art and aesthetics. Following a tradition (and the work of Hermeren), I shall divide them into two groups. In the first group there is *mournful*, *intensely sad* and *unified*. All three are basically descriptive. Call these and similar properties "factual aesthetic properties". In the second group is the (artistic) value property *exquisitely beautiful*. I shall say more on this in the next section.

I shall assume, with the tradition, that both factual aesthetic properties and the value properties depend on our response; something is mournful because it looks to a normal and knowledgeable ob-

server as expressing sadness, something is beautiful because it pleases in a certain way a normal, sensitive and knowledgeable observer. Let me start with a sketch of an argument for a RI view of beauty.

1. Beauty (phenomenal) is being intentionally experienced (visaged) as being a property of the picture. (*A transparency datum*)
2. Beauty is not a viewer-independent property of the picture. (*From science*)
3. Beauty is not a property of subjective state. (*From Transparency*)

Therefore (*by principles of charity and by inference to the best explanation*)

C. Being Beautiful in an objective sense is being such as to cause the response of visaging phenomenal beauty in normal observers under normal circumstances.

A lot more needs to be said here, but I want to propose A Big Picture, so I apologize for brevity and for being programmatic (I realize “programmatic” is a slur these days, since I have been working on slurs). So let us return now to the *Avignon Pietà*, a *mournful* and *intensely sad* work. Some authors would classify these two properties as *aesthetic*, for instance see Hermerén, in his (1988). To emotional and affective properties (e.g. being saddening, funny, moving) he adds *gestalt* ones: unified, disorganized, integrated, and what he calls *behavioral* ones: vigorous, nervous. I shall follow him in this. What makes all of these aesthetic qualities is that they are phenomenal and they give reasons for ascribing value properties.⁷ He also claims that aesthetic qualities are like secondary ones. I will take this to mean “being response-dependent”. Finally, he claims that they also supervene on secondary ones. This is in my view only partly correct: aesthetic qualities supervene on secondary ones plus other items, above all states of the normal observer.

Other authors reserve the term “aesthetic” for properties that are value-laden. We might take as examples “elegant”, “beautiful” “original” and the like. I shall take a line of compromise, and count both groups as “aesthetic”. But let me distinguish the clear *value properties* (having to do with aesthetic/artistic value), like “beautiful” from *factual aes-*

thetic properties like unified, disorganized, vigorous, nervous, sad, which concern the way a work is in fact, and not its value. (Although they ground its value properties: for instance, a picture is good, has a value property, because it is expressive and well organized, i.e. has the two factual aesthetic properties). In this section the later shall be briefly discussed.

So why is the *Avignon Pietà* sad? Partly because of the event depicted, partly because of somber colors that dominate it; these colors are intensified by the whiteness of the leftmost onlooker’s habit. So the pattern of primary and secondary qualities it exemplifies grounds the aesthetic qualities (*mournful* and *intensely sad*). But the secondary qualities, here colors, are themselves narrowly response-dependent, so the pattern itself contains essentially narrowly response-dependent properties and is therefore itself response-dependent (in a wide sense). The tertiary quality theoreticians (prominently Hermerén, Thesis Six, in 1988, p. 270) claim are aesthetic qualities are generally dependent upon secondary ones. The dependence has not been made very clear in the literature. It seems that the response-dependent pattern of shapes and colors normally causes the impression of sadness and mournfulness in the observer, and that this makes the painting into a sad and mournful one.

Of course, not all qualities usually taken to be aesthetic are response-dependent. Being *ingenious* is probably an aesthetic property of some works (e.g. Beethoven’s *Grosse Fuge* might be thought to be ingenious in blending Bach-style counterpoint with classical and romantic harmony). But it is not response-dependent; it points rather to requirements of ingeniousness that the problem to be solved, say combining Bach with classicism, makes upon the author.

Consider again *Pietà* and the sadness expressed. It is to a large extent a matter of our affective response to the pattern presented. The pattern is itself response-dependent and is the ground of a further response (impression of sadness) which makes the picture into a sad work. In such cases the dependence on response is thus twofold: first, pattern of colors itself depends upon one’s perceptual response, and the sadness depends on one’s further, emotional response to the pattern of colors. The response-dependence is *iterated*. The pattern of dependence is easily diagrammed as follows:

⁷ The view has its problems: if “phenomenal” means “immediately perceivable”, there is a problem of inferred (and/or culture-bound) aesthetic qualities.

sadness

emotional system

color (etc.)

response 2
(emotional)

visual system

micro-physical
properties

response 1
(perceptual)

Remember that in regards to composition, Pieta seems to be *unified*. The impression it gives is as of a unitary, solid object whose parts belong and move together. The impression is a response. It derives from the pattern of colors and shapes; I have speculated that it is due to the triangular composition and a stress on the horizontal line. Again, we have a response (this time a Gestalt-response, to use Hermerén's phrase) to a pattern which is itself dependent on a (perceptual) response. Here is a musical example. A critic describes "the slow, raising ecstatic phrase" of the fourth meditation of Messiaen's *Ascension* (Perier, A. (1979), p. 31). The phrase is presumably *ecstatic* (expressing ecstatic feeling) partly in virtue of being *slow* and *ascending* (in particular, perceivable and normally perceived as slow and ascending, not just containing a series of sounds of long duration and ever higher pitch). *Ecstatic* is thus a property that the musical meditation has partly in virtue of our response to the more basic, but equally response-dependent properties of its sound series.

There is nothing particularly mysterious about iterated response-dependence. It is present already in very primitive cases. Having a particular smell, say patchouli, is an olfactory response-dependent property. Now, the smell's being pleasant is a further response-dependent property, grounded in the hedonic response to the original response-dependent property. Call the smell first level, and its pleasantness second level response-dependent property.

1st level	smell	dependent on olfactory response
2nd level	pleasantness of smell	dependent on hedonic response to the olfactory property

Applying the same terminology, it seems that aesthetic properties are also second level response-dependent properties.

1st level	colors and their patterns	dependent on perceptual response
2nd level	sadness of the picture, its being unified	dependent respectively on affective and Gestalt responses to the perceptual property

Some action properties might exhibit the same pattern. A freedom fighter submits himself to police torture in order to save innocent villagers. Submitting oneself to torture is a *painful* thing to do (first-level response-dependence). And the gesture is *brave* to a large extent because of the painfulness (possible, braveness is a response-dependent property depending on whether we judge an action as brave). If braveness is a response-dependent property it is thus an iterated one.

c. Aesthetic value properties, narrow and wide

Let us now pass to the value properties, like being *exquisitely beautiful*, *elegant*, *masterly*, *original*, and *the like*. An air's being beautiful often depends on sound properties of its melody line (first order response-dependent properties), but often also on basic aesthetic qualities, like being *unified* and *organized* (response-dependent properties of second level). Many authors, from Beardsley onwards, argue that value properties (or value judgments) derive from aesthetic properties. Hermerén, for one, states that aesthetic properties of a work give one reasons to ascribe value properties to it. Thus value properties seem to depend, to a large extent, on response-dependent properties, of both first and second levels.

A response-dependence theorist will go on and claim that value properties are themselves response-dependent. Let me take the lead from ethical debate in which response-dependence has been discussed more thoroughly. The main idea is that value is constitutively dependent on an evaluators' responses or dispositions to respond (for an extended discussion see Brower, (1993) p. 222). David Lewis, for example, proposes the following general schema:

(L) *x* is a value iff we would be disposed to value *x* under conditions of the fullest im-

aginative acquaintance with x (D. Lewis (1989), p. 113).⁸

The proposal seems to work for artistic value. Let us take it then as our starting point.

The next step is to inquire about iterated response-dependence. If our disposition to value x is itself due to x 's response-dependent properties of first and second level (e.g. if we value *Avignon Pieta* for its being harmonious, unified and intensely sad), then the dependence of artistic value is of level three. Given that aesthetic properties are mostly response-dependent of level two, and that value properties depend on our response to factual aesthetic properties, the value properties will often be thus response-dependent properties of third level.

Here is probably the simplest pattern of value-detecting. An organized and unified Gestalt is being perceived at the first level. Such mere unified Gestalt is sometimes sufficient to produce an aesthetic response:

beauty

valuational "module"

gestalt

**response 2
(esthetic evaluative)**

visual system

**structural
properties**

**response 1
(perceptual)**

Many value properties seem thus to depend on either perceptually primitive properties like Gestalt ones or on narrow factual aesthetic properties. The *exquisiteness* of a drawing is a case in point, having to do with aesthetic properties of shape and texture of the work (like being detailed, agitated, and the like). But not all value properties are so dependent. For example, a work is *original* if it is conspicuously different from earlier works, in the right direction, of course. *Originality* and *independence* thus crucially involve an external negative relation to earlier authors and works, in addition to (some amount of)

narrow value qualities. The narrow value qualities make for response-dependent character of *originality*, the external relation of being different from predecessors makes for its being response-dependent only in a wide sense: it is a complex property that involves response-dependent (value) and non-dependent components (like being different from predecessors). So, some value qualities, like *exquisiteness* and *elegance*, are narrowly response-dependent, while others, like *originality* and *independence*, are response-dependent only in a wide sense.

In more sophisticated cases the hierarchy of iterated response-dependence is more complicated. Take the sadness of *Pieta* which contributes to its expressiveness, and expressiveness which contributes to its beauty and consider four layers of responses.

beauty

**expressive-
ness (etc.)**

response 4 (valuational)

sadness

response 3 (factual aesthetic)

color (etc.)

response 2 (emotional)

**micro-physical
properties**

response 1 (perceptual)

Iterated response-dependence accounts for *the complex and layered structure* of our responses, and gives some idea of how to think of the richness and complexity of the manifest world, in this case the "world" of aesthetic and artistic qualities. It is seen as depending on several layers of both properties and responses, some more basic, some derived and dependent.

Given the structure sketched above, one can surmise that artistic learning and the development of sensibility might follow the same pattern. We can now make a further step, and consider the kinematics of response-dependence. Philosophers have noticed the interplay between our perceptions and responses. Wiggins, for example, writes:

Finer perceptions can both intensify and refine responses. Intenser responses can further heighten and refine perceptions (..). When this point is reached, a system of an-

⁸ Lewis's further proposal is the following: "I say that to be *valued* by us means to be that which we desire to desire." (D. Lewis (1989), "The dispositional theories of value", *Proceedings of the Aristotelian Society, Suppl. volume*, LXII, p.116). This does not seem to fit artistic value.

thropocentric properties and human responses has surely taken on a life of its own. Civilization has begun (Wiggins, 1987:196).

Consider first what might happen in a primitive interplay between various aspects and levels of response-dependence. One can conjecture that the most primitive responses are the basic perceptual responses that make for secondary qualities: smell first, then color. These first-level properties are objectified, taken by the cognitive apparatus to characterize the object perceived. Primitive affective responses are then attached to them: some smells trigger sexual responses, other trigger fear. Some primitive second-level response-dependent properties (being fearful) thus come into being. At each iteration the lower level property is taken for granted, and a response to it is being built. Thus a new, higher level response-dependent property is born. A primitive kind of interplay between perception and response can then take place across levels. If an organism-kind's reaction is tuned to a property of being fearful, whose basis is detected by smell (say of predators), it will probably learn to discriminate between relevant olfactory properties. And it will perhaps learn to adjust its level of fear-response to the nuances of the smell perceived. The sensitivity to the second level property (fearfulness) goes hand in hand with the sensitivity to the first level one (such-and-such smell).

Consider now a more refined interaction, say between learning to perceive features of a picture and coming to respond to them with a proper appreciation. Such interaction seems to be essential for aesthetic sensibility (and probably also for a moral one). But notice that in order to explain complex phenomena of aesthetic experience this interaction needs to be supplemented by an inter-level interaction. Here is a very simplified and anecdotal illustration.

For some reason I became one day interested in and sensitive to the nervousness of someone's (say, Schiele's) paintings which is a factual aesthetic, second-level property. (If you need a story, suppose I have been leading a quiet life and enjoying quiet, classical and balanced paintings. Then my life enters a somewhat tempestuous and erratic phase, which leads me to become sensitive to less quiet and balanced potentialities of human feeling.) This will lead me to focus my attention to the details of the organi-

zation of lines, to color contrasts and similar secondary properties (first-level response-dependent properties of the painting). The bold arrow shows this new, top-down directed influence.

nervousness

evaluative aesthetic response

**organization
of lines,color
contrast**

factual aesthetic response

Once I have become thoroughly acquainted with these, the familiarity might lead me better to appreciate the variation in the degree and kind of nervousness expressed in various pictures of my target painter. This might then change my aesthetic evaluation of nervousness.

Similarly, in musical education it is a commonplace to start with "programmatic" music, or to tie a given piece of music to an author's biography. Once the novice has learned to recognize emotion in a programmatic piece of music, she can progress to recognizing it elsewhere, which is a development in responses. At the same time, with some luck, she will become more sensitive to purely perceptual, structural features of music. Second level change thus leads to first level improvement. (Things are more complicated for philosophy teachers or students who cannot resist mixing theory with listening. I vividly remember that many years ago I was listening to soprano and alto parties of Bach's *Saint John Passion*, after having immersed myself in psychoanalytic literature and seminars. I was quite confident of detecting hysteria in those parties. And at that time the "discourse of the hysterical" was a highly valued item which made me listen more and more to the *Passion*. But this response to affective features then lead me to recognize purely musical modulations I would never have paid attention to. Morals: bad theory can lead to improved listening!)

We have set aside a very important set of issues, namely those that relate aesthetic experience to factors of history. On this much larger scale, changes in dominant artistic value (third level) can focus one's attention to different aesthetic properties (second level). *Avignon Pietà* would not have been accepted in the early Middle Ages, partly because the dominant goal of religious painting was to induce awe and respect. Properties like *being majestic and awesome* were in the forefront, and both perception of

them and response to them were being exploited, developed and refined. The change of goal in the high Middle Ages brought compassion into the forefront and Christ crucified and mourned replaced Christ the Judge. Thus was born the mournful gothic genre of Pieta. Much more has to be said about history and culture, but it is a task for another occasion.

Let me conclude this section by mentioning two implications of the foregoing. The interaction of levels might be an important feature of “proper upbringing” which makes one properly sensitive to aesthetic values (or moral ones), thus making one’s “second nature” into one of an art lover (or of a moral person). We may now begin to understand the complexity of the phenomena. All the fine discriminations that a properly brought up person is capable of performing are intertwined with her rich and nuanced repertoire of responses. The two might become, and often do become, welded together so that particular components are hardly distinguishable and recognizable. This produces the impression that “second nature” not only resists analysis, but has to be considered as a primitive, rock-bottom phenomenon.

A related explanatory job that iterated response-dependence might do is to (begin to) explain the way “thick” value-concepts function. Take the concept “elegant”. It is both descriptive and evaluative, but it is very hard, perhaps impossible, to prize apart its descriptive and the evaluative components. How does the critic then apply the concept? How does she recognize the descriptive features that merit the title of elegance? We should reject the easy answer that the recognitional capacity for elegance is “primitive” or “rock-bottom”. The application is rather learned in an iterative process: in a culture like ours that appreciates thin bodily shape and gracious movement the novice learns both to recognize and value them, and thus acquires a very simple and basic application of “elegant”. She then goes through the process of refining both perception and response, so that eventually the intricacies of result defy analysis into descriptive and value components.

Let me finish by reminding the reader of the further possibilities of generalizations. Moral value has been a prime candidate. Dispositionalist and RD accounts treat moral properties analogously to 2Q, like being sweet and being red, which are themselves construed as RD-properties. For instance, we can narrow down the proposals for value quoted in

the previous section to obtain a proposal for moral value. First, with Brower’s proposal, we obtain something like the following.

X has moral value V iff evaluators would, under appropriate conditions, respond to X with moral reaction R(Bower (1993:222)).

Next, to add David Lewis’ proposal,

x is a value iff we would be disposed to value x under conditions of the fullest imaginative acquaintance with x

To which we can now apply the RI perspective to the project:

Goodness_e is being intentionally experienced as being a property of an action, or state of affairs.

1a. The experiencing is the source of moral intuition. (A transparency datum)

2. Goodness_e is not an experience-independent property of action, or state of affairs. (From science)

3. Goodness_e is not a property of subjective state. (From Transparency)

Therefore (by principles of charity and by inference to the best explanation)

C: Being Good in an objective sense is being such as to cause the response of visaging goodness in normal observers under normal circumstances. (Response-intentionalism)

We thus obtain a candidate specification of goodness. A parallel account might be proposed for the idea of meaningful vs. absurd ways of life: C: Being meaningful in an objective sense is being such as to cause the response of intentionally experiencing meaningfulness in well-informed and impartial observers under normal (or slightly idealized) circumstances.

Let me reiterate my point about iteration of response-dependence. I claimed that a life can be meaningful (partly) in virtue of responding to some important emotional properties of the surrounding niche the person living the life is inhabiting. Take a person, call her Vicdan: she is constantly facing depressing, awful and cruel events-and-doings; so, it is meaningful to and for her to rebel and live a risky life of an engaged political activist. The first level response-dependent emotional qualities, pertaining

to the events surrounding her, namely the ones of being depressing and awful, and the first level response-dependent property of being cruel, pertaining to actions, are such as properly to induce the response of rebelling against them. Therefore, a life of rebellion is meaningful for Vicdan. It has the second-level response-dependent property of meaningfulness in virtue of having a combination of first level moral and emotional response-dependent properties as their external base, and the characteristic response of Vicdan (and the impartial spectator) as their immediate constitutive center.

IV. Summary and conclusion

We can now summarize our main strategic point. Take any of the non-primary qualities mentioned, and call it Q . We have argued that an item a has Q if it has the disposition to cause an intentional experiencing of the experiential counterpart, Q_e as belonging to Q , which happens to be of the relevant kind of experiencers under relevant kind of conditions. The general strategy for arguing for this kind of claim is the one the reader already knows by heart:

1. Q_e is being intentionally experienced as being a property of a . (*A transparency datum*)
 2. Q is not an experiencer-independent property of the action, or state of affairs. (*From science*)
 3. Q_e is not a property of subjective state. (*From Transparency*)
- Therefore (*by principles of charity and by inference to the best explanation*)
- C: Having Q in an objective sense is being such as to cause the response of intentional experiencing of the experiential counterpart, Q_e as belonging to Q , which happens to be of the relevant kind of experiencers under relevant kind of conditions. (*Response-intentionalism*)

We have argued that color and aesthetic properties are response-dependent. The dependence has a rich structure: value qualities (e.g. beauty) depend on our response to aesthetic properties (e.g. unified, magnificent), which in turn depend on our response to a pattern of primary and secondary qualities (shapes and colors). Secondary qualities are them-

selves response-dependent. The basic dependence relation is thus *iterated*. The resulting structure is one of *iterated response-dependence*. This is the main point to be argued in this paper. It is also suggested that the iterated structure depends on the objectifying character of the response: since a response-dependent property of a given level is felt as an objective property, one can develop a further response to it, which then produces a new response-dependent property on a higher level. The hierarchy of increasingly subtle iterated properties makes sense from an evolutionary viewpoint, suggesting increasingly subtle kinds of response to a give physical configuration. Let me schematize the idea:

The object (event, state) A has the response-dependent quality Q as a result of its disposition to cause the intentional experiencing of the corresponding experienced quality Q_e in a normal observer. Some qualities, call the typical one Q^i , are built upon the combination Q^{i-1} of qualities of the level below it, which typically causes the intentional experience of Q_e^i the corresponding experiential response of i -the level. To reformulate it, Q_e^i is based upon the experiencing of a combination of lower level qualities, say $Q^{i-1} Q^{i-1} Q^{i-1}$ all of them entering the combination Q^{i-1} .

To illustrate, let the experienced meaningfulness of a rebellious, activist life be our Q_e^i , the higher level response-dependent property of Vicdan's life. Its external basis is the combination Q^{i-1} of qualities for which the emotional ones can be $Q^{i-1} Q^{i-1}$ and the moral one, say cruelty, can be Q^{i-1} and its internal basis is the response on the i -th level. Similarly, in the aesthetic example, there will be some quality like beauty at the j -th level, and we have as the external basis again some combination Q^{j-1} of qualities where emotional ones can be $Q^{j-1} Q^{j-1}$ and the chromatic ones can be Q^{j-2} and Q^{j-2} (color properties are certainly at some level below the emotional ones) whereas its internal basis is the aesthetic response on the j -th level.

Let me conclude, with apologies for brevity. We have been dealing with the location problem for color as well as aesthetic and artistic value properties. The proposal was that response-dependence and in particular its iterated variety is the key to solving this problem. A significant part of the complexity of

aesthetic phenomena derives from rich hierarchical or layered tissues of dependency that integrates perceptual, emotional and evaluative responses into an almost seamless whole. We have presented some schematic, simplified ways of resolving this whole into its components. They all feature iteration of dependence, wherein more sophisticated responses are evoked in response to properties which in turn depend on simpler responses. The resulting layered structure seems to capture rather well the pattern of dependencies intuitively discerned by art observers and critics.

I hope that the account can be extended by analogy to other high-level response-dependent properties, above all moral ones, plus properties like significance (of an action, or a life-style) and even the property of being a good life. As it stands it is still not reductionist, since it involves the notion of a normal or adequate observer that might itself be value-laden. However, there is some hope of cashing it out in less demanding terms. It would thus offer a chance of a more naturalist account of humanly interesting and important sophisticated manifest properties that make out our life-world. But even if we have to replace reduction with (mere) analysis, the resulting analysis makes the mysterious and crucially important qualities less mysterious than they appear at the first glance.

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EVERYDAY CONDITION OF METAPHYSICS

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Abstract:

The question I intend to answer is whether one can speak of a tacit metaphysics, not expressed conceptually, but nevertheless common. If the answer is positive and providing that it is specific to day-to-day life, such metaphysics may be called everyday metaphysics. To this end, I review the meaning of everyday life and its ambivalent character. Next, I present several milestones in the debate on the subject, from authors who have focused on a kind of usual, common or 'natural' metaphysics. Lastly, I formulate the idea under consideration, namely that the everyday life implies or underlies a certain metaphysics. I note that it is an implicit metaphysics – not expressed formally – and rather free. Embraced in experience with a certain degree of freedom, it is recognisable by means of certain representations active in our mind, by the manner of speaking or of understanding and by the common forms of expression. Its vibrancy, concrete and relaxed character makes it highly evocative of the mental life of an era. It ensures a truly essential difference in our everyday mode of being.

Key words: everyday life, vulgar understanding of time, background beliefs, metaphysical presuppositions, tacit metaphysics, implicit metaphysics, everyday metaphysics.

1. Preliminary considerations

I would like to draw attention to a few relatively simple issues, starting from certain recurrent questions in our debates, such as: Can one speak of a tacit metaphysics, not expressed conceptually, yet customary, usually? Can it be viewed as an habitual

or everyday metaphysics? Which authors might encourage such a perspective on metaphysics and what arguments might they invoke to this end? How could such usual metaphysics be justified within what we designate as the everyday life-world?

I would not dwell on these questions were it not for the frequent occurrence of the term "metaphysics" in debates which do not concern any of the doctrines about this concept which have evolved over time. One may find the term in discussions about the prevailing worldview in a particular period (for instance, when referring to "the metaphysics of the modern man"). Or in reflections about a meaningful attitude towards one's own existence (such as a "natural attitude" and the metaphysics it entails). At other times, attention is focused on the perspectives opened up by allegorical narratives (for example, the underlying metaphysics in José Saramago's novel *All the Names*). The term is also used to refer to certain convictions assumed by a dominant experience, such as the technological one. Indeed, it has been asserted that current technique is a culmination of modern metaphysics (Martin Heidegger): they both express the same kind of will and the same beliefs or presuppositions. Nevertheless, I would note that the term "metaphysics" is especially used to designate the power of a language to generate concepts, images or representations. We know, for that matter, a

much debated claim in recent times asserts that any language brings with itself a certain metaphysics (Friedrich Nietzsche). This is an idea espoused by many analysts of language, and certain writers, concerned with the link between language and underlying beliefs¹. Research on natural language as well as on common or everyday language has also rediscovered this idea.

Moreover, others have claimed that modern man, despite what he might think about himself, cannot completely escape the sphere of the historical logos and its underlying metaphysics (Jacques Derrida). This entails that the metaphysical attitude can be traced as a sub-layer in diverse activities and pursuits, from the scholarly to the mundane (Richard Rorty). It will not appear necessarily as a well-structured vision, but rather as a set of presuppositions, beliefs and representations.

Yet none of the situations evoked above fall under the scholarly or academic meaning of metaphysics. They are not related to a theory conceptually developed or to an erudite pursuit of metaphysics. Rather, most often they concern a particular behaviour of the mind, a mode of understanding the state of the self and of the world it is a part of. In other words, the focus is on a concrete manner of understanding, as experienced by someone among us or by a community as a whole. Metaphysics, under this guise, represents a *forma mentis*, therefore it may not appear in the form of elaborate theories and concepts.

It is not hard to notice that, in essence, modern man's attitude towards metaphysics is profoundly ambivalent. On the one hand, one may witness an explicit rejection of metaphysics, especially when it is the doctrine of an author or of an entire school of thought. On the other hand, however, metaphysics may be invoked rather naturally as an obvious level of comprehension². In the latter case, there is a fair

degree of freedom in the use of the term and in the acknowledgment of metaphysical representations or perspectives.

Ultimately, it is not necessary to think like Aristotle or Schopenhauer – or even to think what they thought in their own time – to speak of metaphysics. It suffices, say, to use certain representations of the self and of the other, the life-world, temporality and space, appearance and reality. Indeed, whose mind is detached from such representations, ideas or beliefs? When such representations blend into a vision and transgress empirical knowledge (or “physical”, in the ancient sense of the term), they can be called metaphysical. This is also true when their role is that of “first instance” or “ultimate instance”, as preliminary elements in the pursuit of knowledge. In such situations they emerge as boundary data or edges of the horizon beyond which the mind cannot go³.

2. On the ambivalence of everyday life

I believe I should state what I understand “everyday life” to be. I do not have a definition for the phrase, yet I am not necessarily looking for one either. The synonymy brought into play by certain dictionaries is not particularly useful to this end. For example, the understanding of everyday life as habitual life, or as regular or publicly exposed life, does not sufficiently clarify this issue. Each of these phrases requires an explanation and, occasionally, may further obscure the meaning of everyday life.

We could say though, to start with, that everyday life is the habitual life, the generic place of habitual behaviours and gestures. I use the word “habitual” in the sense expressed by the past participle of “to habituate”. One leads a habitual life when one is habituated with certain behaviours or acts, on the one hand, and with certain regular situations, on the other hand. Yet how does a habitual behaviour become an everyday behaviour?

A habitual behaviour, whether it is thinking, expressing or doing, is regularly an acquired behav-

¹ This is a possible interpretation of Charles Péguy's statement, in *Notre jeunesse* (1910), that every person has their own metaphysics, manifest or latent, otherwise they would not exist as man. This proposition was borrowed – and, to an extent, assumed – by Maurice Merleau-Ponty, in *Sens et non-sens* (Paris: Nagel, 1948), 53; the idea then emerges in *Le Visible et l'invisible* (Paris: Gallimard, 1964), 138.

² Highly illustrative in this respect is Emil Cioran's attitude towards metaphysics, knowing that he did not accept himself as philosopher, less so as metaphysician. Cf. Emil

Cioran, *Entretiens avec Sylvie Jaudeau, suivis d'une analyse des oeuvres* (Paris: José Corti, 1990).

³ Cf. Ștefan Afloroaei, *Metafizica noastră de toate zilele* (*Our Daily Metaphysics*) (Bucharest: Humanitas Publishing House, 2008), §§ 21–24.

our, that is, one which has reached a familiar form, as a habit accepted naturally. It is a behaviour learned over time, yet in a fairly contingent and free manner. Becoming habituated with something means learning a particular behaviour⁴. Behaviour is in this state a reflexive act: you become habituated with travelling daily the same road or with the basic use of certain tools. To acquire something, to adopt it as natural and wholly expected, to become familiar with it, all of these pertain to our everyday life. That which is acquired is learned one way or another, depending on one's own manner of relating with others and the surrounding world. It eventually becomes a familiar fact, accepted as such by almost everyone, sometimes as an instinct of everyday life.

We are all aware of such behaviours and follow them in our own way. Let us consider, almost at random, habits such as reading the paper in the morning, using a means of transport, strolling in the park in the evening, drinking coffee, going to work every day, making daily notes, using an umbrella or walking stick, meeting friends, wearing a wristwatch, talking about the weather or the death of acquaintances, casually looking outside the window, searching for a quiet place to rest, employing certain tools and machinery, talking on the phone with loved ones, etc. Everyday life consists of such behaviours and gestures. Some are apparently disarmingly simple, yet others seem to contradict the common notion of everyday life.

To be a part of everyday life, habits take the form of stable and relatively free dispositions. For example, the habit of taking down all sorts of data, names and events in a diary is not governed by strictly determined conditions. It is actualised only when one receives an explicit exterior motivation, as when one deems the action to be absolutely use-

ful. It does not require any special preparation. It is dependant rather on elementary and concrete experience. The act does not necessarily involve a certain regularity to become habitual or any particular deliberate repetition.

Indeed, the free acquisition of certain attitudes or gestures indicates the elementary form of human experience. I do not believe that there is any other form of experience that precedes it essentially and exceeds it in scope. We might say that this is in reality a preliminary experience, whether it aids or thwarts other experiences. Its scope is ultimately that of life proper, even when man ends up battling it and opposing it by what he does or thinks. Yet compared with other experiences, it occurs most often by itself. It is usually relaxed and tranquil without any severe exigencies. One cannot properly speak of a technique of modern life or a finely tuned mechanics of its articulations. When harsh exigency or elaborate technique come into play, everyday life breaks down and makes way for a different experience.

What could we observe in fact in such situations of ordinary life? Ultimately, there is a kind of alchemy of habit. It is capable of transforming a specific fact into a common one, an uncanny phenomenon into a familiar one, difference into the unremarkable and the beauty of the moment into something prosaic. That is to say, there exists a genuine *athanor* of everyday life. In this *athanor*, the data of life can change their meaning decisively. Yet – and this is paramount to my comments further on – the change in a behaviour does not mean it is restricted to a univocal sense. When a specific fact becomes common, it does not completely lose its specific character. Similarly, when the uncanny event becomes familiar to us, it does not entail the complete loss of its uncanniness⁵. It will never disappear completely; rather it will undergo a process of concealment or withdrawal.

Each term that casually describes everyday life – as we have seen, the common character, famili-

⁴ Peter L. Berger & Thomas Luckmann (1966 II, 1 b–d) describe the constitution of everyday reality in relation to the data of common sense and ordinary knowledge. The meaning of ordinary life can be delimited in a more general manner, as Charles Taylor (*Sources of the Self*, 1989, chap. III, 13. 1) argues when referring to aspects of human life related to work, producing the necessities of life, and life as sexual beings, including here marriage and family. This is what Aristotle considered when he stated that the purposes of political association are “life itself and the good life”. In other words, ordinary life spans everything necessary to achieve and in order to sustain and restore our life.

⁵ It would be useful here, I believe, to recall Sigmund Freud's assertion in the essay *Das Unheimliche*, of 1920, precisely on the actualisation of the dual meaning of the term uncanny, *unheimlich*. He observes in advance that the sense of uncanniness is generated either by “outdated” beliefs, or by suppressing certain complexes. Freud is also the author of *Zur Psychopathologie des Alltagslebens*, 1904.

arity, indifference or prosaic character – does not mean anything by itself. In their singularity, they signal only one facet of this phenomenon. As soon as we hear such terms, we must think of the term which has been excluded or left on the side. Their correlation is important, as their meaning is brought to light in conjunction, through contrasts or divergences.

My point is that everyday life is not by definition univocal: strictly common or strictly ordinary. On the contrary, it invites the elementary co-presence of contrary terms: common and specific, familiar and uncanny, ordinary and extraordinary, etc. It is not characterised by a single attitude, “natural” or “naïve”, as once it would have been called. Rather, in its scope, such an attitude meets the “critical” attitude, and they affect each other constantly. Everyday life is the space of their encounter, of their natural and preliminary “collusion”. It does not separate the “opposites”, but makes possible their emergence and maintains it in a fundamental, elementary correlation. The differences manifested, for instance between the banal and the significant, do not become separations. When they do take the form of separations, accentuating the oppositions they conceal, consciousness passes from its everyday mode to a different one. Consciousness is then able to deal with a distinct, highly elaborate condition, such as the theoretical and the speculative condition. Ultimately, each human experience can elaborate a different form from the everyday one, more severe or more formal. Yet it never withdraws from the sphere of everyday life. This sphere, elementary or preliminary, retains these other forms to a certain extent and determines their relations with the others.

3. The vulgar understanding of time (Martin Heidegger)

I will first return to a few pages from *The Basic Problems of Phenomenology* (II, § 19, b), where Martin Heidegger discusses “the common understanding of time (*vulgäres Zeitverständnis*)”. I believe that such understanding of time, beyond its problematic aspects, illustrates the workings of metaphysics in our daily life. Simply put, the common or vulgar understanding of time can indicate the presence of a common or vulgar metaphysics. I

would prefer to call it everyday metaphysics, or metaphysics for everyday use.

We know that Heidegger often deals with the multiple manner of signification of being. He discusses both the pre-ontological signification and the ontological, or ultimately, metaphysical signification. He states at a certain point that “we live in an understanding of Being” even though the meaning of Being is sometimes veiled in darkness (*Being and Time*, § 1). In other words, the *Dasein* “is ontological”, not in the sense that inquires theoretically about the Being of entities, but “being in such a way that one has an understanding of Being” (§ 4). As regards man, there is a “predilection for metaphysics” (as he notes in a phenomenological study on the *Critique of Pure Reason*). The idea brings to mind the notion of a natural disposition (*Naturanlage*) for metaphysics once asserted by Kant (*Critique of Pure Reason*, Introduction, VI). Yet such remarks do not focus on the metaphysics viewed in the Aristotelian tradition, as examination of being in general. They also do not deal with metaphysics viewed as a mode of understanding being in opposition with time (hence, either as “Platonism”, as Nietzsche preferred to say, or as “ontologism”, a thematisation in relationship with “*what truly exists*”). And they focus even less so on metaphysics understood as an era of forgetting Being⁶. In light of these three great meanings of metaphysics, to be found especially in certain reference doctrines, Heidegger refers to a type of metaphysics where “every time we live already”. We live, that is, to the extent that we live in “an understanding of Being”. In other words, this is about experienced metaphysics, assumed through the senses and already presupposed by what we do or think in our everyday lives.

At the outset, Heidegger remarks that, in the Aristotelian tradition, time is viewed primarily as “*sequence of nows* where it should be noted that ‘the nows’ are not parts from which time is pieced together into a whole”⁷. This is actually the “common, pre-scientific understanding of time”. He refers to the common understanding of time (*vulgäres Zeitverständnis*), common time (*vulgäre*

⁶ Cf. Gerd Haefner, *Heideggers Begriff der Metaphysik*, zweite Auflage, München: J. Berchmans, 1981.

⁷ Martin Heidegger, *Die Grundprobleme der Phänomenologie* (Frankfurt am Main: Vittorio Klostermann, 1997), 362 sq.

Zeit) and common conception of time (*vulgärer Begriff der Zeit*), each of these relating to the meaning of original time (*ursprüngliche Zeit*). If the phrase *vulgäres Zeitverständnis* were translated as “vulgar understanding of time”, the term “vulgar” should be taken in its neutral sense, considering its Latin etymon (*vulgaris*, meaning “common” or “ordinary”, “public”, “valid for many”).

How exactly does this representation of time become obvious? This meaning is at stake every time we measure time. For example, when we use a clock, “we measure time whenever we need it” (as when “we take time or let it pass”). We use it to easily produce a fore-understanding of time (“When we look at a clock, since time itself does not lie in the clock, we assign time to the clock. In looking at the clock we say ‘now’”)⁸. What does this fore-understanding of time consist in? First of all, the time determined by reading a clock is a usual time, which serves a purpose. As Heidegger states, “the time I am trying to determine is always ‘time to’, time *in order to* do this or that, time that I need *for*, time that I can permit myself *in order to* accomplish this or that, time that I must take *for* carrying through this or that”⁹. We are thus already taking time into account and reckoning with it whenever we measure it.

Therefore, we orient ourselves in advance based on a “now”, without reflecting on it (“In looking at the clock we say ‘now’”). This “now” we are directed to is not a naked pure, now, but “that wherefore and whereto there is still time now”¹⁰. It expresses my distinct relationship towards things or towards other people. Their unity is not elucidated in the common understanding of time. To be elucidated they ought to be placed in a relationship with an “original time”, by way of which the different moments of time could be understood, even in their possibility. Yet such unity is at this point greatly obscured.

As we have already noted, ordinary consciousness understands time “as a sequence of nows from the not-yet-now to the no-longer-now”. This sequence has meaning, an “intrinsic direction from the future to the past”. This is precisely why we usually “say that time passes, elapses”¹¹. This se-

quence is “directed uniformly”, in accordance with an irreversible movement. Moreover, about the sequence of now we tend to designate it “as infinite”. Therefore, the common understanding of time is that of the sequence of nows, in a single irreversible and infinite direction.

This common time is viewed as “already given to us”¹². Being “already given to us”, we can take time, let it pass, measure it and use it in various other ways. The “given” of time does not raise any doubts or questions (such as for instance, by whom exactly is it given? And to whom? Is it given naturally or in some other way?). We take time for granted, as we are already accustomed to this relationship with time and do not question how it was actually constituted.

In the common understanding, time appears as appropriate and inappropriate time for something specific. “All time we read from the clock is time to ..., ‘time to do this or that’, *appropriate* or *inappropriate* time /.../. We designate by the term “significance” this totality of relations of the ‘in-order-to’, ‘for-the-sake-of’, ‘for-that-purpose’, ‘to-that-end’”. In light of this character of significance, time understood as appropriate and inappropriate time is a “world-time /*Weltzeit*”. Yet the common understanding of time is “little aware of /.../ significance” and cannot thematise it¹³. We ordinarily believe that we live in a natural time, yet this does not exist. This statement, shocking at first, reflects the specific results of existential analysis. “/.../ This does not mean that the time we read from the clock is something present-at-hand, as intrawordly things. We know, of course, that the world is not something present-an-hand /*Vorhandenes*/, not nature, but that which first makes possible the discoveredness of nature. It is therefore inappropriate, as frequently happens, to call this time nature-time or natural time. There is no nature-time, since all time belongs essentially to the *Dasein*. But there is indeed a world-time /*Weltzeit*”.

This public character of time entails something paradoxical. “Although each one of us utters his own ‘now’, it is nevertheless the ‘now’ for everyone. The accessibility of the ‘now’ for everyone, without prejudice to the diverse datings, characterizes time as public”. What can we infer from this?

⁸ *Ibid*, 368.

⁹ *Ibid*, 364.

¹⁰ *Ibid*, 365.

¹¹ *Ibid*, 368–369.

¹² *Ibid*, 365.

¹³ *Ibid*, 370–372.

The existential structure called *Miteinandersein* does not cancel the solitude of each individual man. Ultimately, every single person is alone and yet with the others. Everyone is alone as they give a distinct understanding of their temporal “now”, dating it according to their own needs and the demands of their various preoccupations. However, everyone is able to understand the “now” uttered by others, to the best of their abilities. The other’s “now” is accessible to each; this is how “the ‘now’ is for all” must be understood.

Likewise, the fact of being-with-the-other makes us equal rather in terms of what we do not have or do not possess. The publicness of time declares that ultimately, to a certain extent, time does not belong to anyone. Like death, as a matter of fact. Yet this deprivation is compensated in a certain manner. “On account of this character of time a peculiar objectivity is assigned to it. The ‘now’ belongs neither to me nor to anyone else, but it is somehow there. There is time, time is given, it is present-at-hand, without our being able to say how and where”. All that is common – the common conception of something or its public character – does not therefore belong to anyone. In other words, we should not claim that a “common representation” or a “common meaning” exists in someone’s mind. Such common meaning is not constituted as such in one’s mind, but exists providing that each one, in their solitude, is being-with-one-another.

Common time seems to be given to us only in a univocal expression (such as “there is time” or “there is no time”, “we have time” or “we don’t have time”). Yet, as Heidegger notes, each characteristic of time reflects both what we feel in a particular way and its opposite. Hence he speaks of a specific fact in the common understanding of time, namely losing time. “We also lose time, just as immediately as we constantly take time for ourselves. We leave time for ourselves with something, and in fact in such a way that while we do so the time is not there. As we lose time, we give it away.” Perhaps in the vulgar understanding of time, we turn it into a thing, an object, which, consequently, might be had or lost. We ignore the fact that certain intentional attitudes play a role (“as we lose time, we give it away”). Likewise, we disregard the fact that time is not there, is not given and at-hand.

At this point, Heidegger discerns another aspect – in absolutely admirable fashion. It is the fact that prior to losing time we take time or reckon with time for our preoccupations. Consequently, losing time emerges as a way in which we leave time for ourselves: “But losing time is a particularly carefree leaving time for oneself, one way in which we have time in the oblivious passing of our lives¹⁴. Thus losing time is explained by a kind of indifference in how we make use of time, an indifference which is, in its turn, an everyday form of oblivion.

Yet what kind of oblivion is there in the everyday mode of life? Oblivion to what? If we take into account that everyday time must be placed in relationship with an “original time” and how it shapes the overall understanding of the being, then oblivion relates precisely to this “original time”. It also concerns the distinct understanding that this relationship makes possible. Indeed the first to lose its condition of possibility is one’s realisation of the meaning of being.

Heidegger assimilates, up to a certain point, “the traditional understanding of time”, inspired by Aristotle, with the vulgar understanding of time. His objections refer to both conceptions. For example, in both cases, the distance between concept and something understood is considerable. This is debatable however. Furthermore, I do not know whether for common consciousness the “nows” are “free-floating, relationless”. Why would they be seen as floating freely and without relation to each other? In this case, how could one account for the idea – typical of the common consciousness – that there is an ineluctable order of time? How could we refer to dramatic situations, such as the “burden of time” or the “terror of history”? We do know that in each cultural or ethnographic space there have been many explorations on the “popular representations of time”. Should we then distinguish clearly between the popular understanding of time and the common one? Or does the common understanding involve several levels, ranging from the one described by ethnography to the one specific to a scientist or indeed to a philosopher, provided that the latter do not question certain concepts or representations? It is possible that Heidegger, like Hus-

¹⁴ *Ibid*, 374.

serl before him, focuses on the latter variant of common understanding.

4. Common representations and beliefs (Robin G. Collingwood)

Robin G. Collingwood examined at length the topic of common thought and understanding. He argued that thinking operations always occur against the background of common beliefs and representations, which he termed presuppositions. The act of thought does not only involve mere statement, however subtle it may appear at a given point. In addition to specific statement, the act of thought presupposes a question to which it may provide an answer, and a common belief by reference to which a question is usually formulated. Thus, three elements converge to describe the act of thought: the statement itself, the question that may correspond to the statement and the presuppositions of a mental space.

Examples of such presuppositions are well-known, especially as many are particularly resilient, such as those relating to existence, the self, time and space, reality and appearance. To a certain extent, they engage our deepest convictions, although they vary from one era to another and from one mental space to another. For instance, the representation of time as circular, which was the foundation for the development of natural sciences in ancient Greece. One is only rarely aware of their presence and significance. They underlie the questions of an era and how people ask those questions and what questions they are ready to answer. They include the belief in a natural order of the world or in the causal relation, interpreted differently from one era to another¹⁵. One cannot argue that such beliefs are true or false, but rather active or inactive.

Some of these presuppositions can be considered truly metaphysical, for at least two reasons. First, because they refer to the nature and being of extant things; second, because they do not derive from other beliefs and consequently appear to us as “absolute”¹⁶. For example, the belief in a natural

order of the world can be viewed as metaphysical only when it does not derive from another belief.

I would like to focus on a rather peculiar aspect of presuppositions of a metaphysical kind. We are only rarely aware of their presence or significance. We rarely acknowledge them as ‘final instance’ data. Considering their condition, they cannot appear to us as true or false. They are never mere propositions, because they do not constitute answers to definite questions. They often emerge as *a priori* data, in which case they may be considered as “absolute presuppositions”, as designated by Collingwood. They are not the as our subjective presuppositions, reflecting what one might believe. They are not derived from experience; on the contrary, they guide human experience¹⁷. They are accepted in advance and implicitly, sometimes for an entire era.

Let us dwell for a while on this latter aspect. The presuppositions that we may call metaphysical have their own distinct history. They will emerge vigorously at a given moment and dominate an entire era in the life of humanity. Over time, they fade away, are eclipsed or become less active. They are then substituted for by others, without, however, disappearing. Their history seems to trace certain boundaries for the unfolding of real history. Over time they are subject to the effects of the passing of time, and their erosion means that one historical era must make way for a new one. This happened when the Greek-Roman tradition encountered the New-Testament tradition. As Collingwood states “the pagan world died because of its own failure to keep alive its own fundamental convictions”. Therefore, when metaphysical convictions fade away, a form of civilisation becomes extinct. This happens in the first instance in the everyday life of people.

¹⁵ Robin G. Collingwood, *An Essay on Metaphysics*, Introduction by Rex Martin (Oxford: Clarendon Press, 1998), 49–55.

¹⁶ Robin G. Collingwood, *An Autobiography*, Introduction by Stephen Toulmin (Oxford: University Press, 1988), chap. VII.

¹⁷ Commenting on Collingwood’s idea, Stephen Toulmin (in *Introduction* by Robin G. Collingwood, *An Autobiography*) does not overlook what Thomas Kuhn would claim later, namely the presence of paradigms of cognitive and research practice. He also quotes Alasdair MacIntyre, who would describe, in his *Short History of Ethics*, those conceptual configurations whose changes profoundly shaped Western moral thought. Important books on the topic would then be written by Hans-Georg Gadamer (*Truth and Method*, part II, § 3, section on *The logic of question and answer*), directly referencing Collingwood, or Patrick Suppes (*Probabilistic Metaphysics*, 1985), who placed metaphysical presuppositions in relation with the language we speak and whose grammar code we take for granted.

Metaphysics is therefore viewed in its two meanings. First, as an implicit mode of comprehension, specific to an entire community. This refers above all to those “absolute presuppositions” active in people’s minds. Yet metaphysics also means the profound reflection on these presuppositions of the mind. Collingwood terms it simply “metaphysical analysis”. He is actually aware of his personal affiliation with both forms of metaphysics. As a regular person, living in a particular community in Western Europe, he shares many beliefs and images specific to his community related variously to history, the world, time or everyday relations with others. As a philosopher, he is driven to an analytical examination of these presuppositions, especially those which pertain to the nature of extant things, their being and the boundaries of their existence.

As for the exploration of presuppositions, it has taken various forms, thanks in particular to epistemologists or historians of ideas¹⁸. Their own metaphysical analysis, as conducted by Collingwood and, later, Strawson, Suppes, Searle and others, differs in numerous ways, as we will show below.

Similar to other 20th-century philosophers, Peter F. Strawson argues that the object of metaphysics is not nature as such (the nature of real things, possible principles, kinds of objects etc.). Rather, it describes the actual structure of our thought about the world, meaning those concepts and categories which we use in order to think and to represent our world (*Individuals. An Essay in Descriptive Metaphysics*, 1959). Are they the same for all people, at every time and everywhere? Do they explain the nature of man – his rationality, for instance – in terms of its characterizing universals? Or, on the contrary, does it entail considerable distinctions from one era to another and among different communities? Strawson’s notion of shared conceptual schemes is particularly important. A shared conceptual scheme is composed of concepts operated in everyday life. They interconnect to create a sort of tissue or web, which describes shared thought, and provide the basic elements for a mode of understanding the world, under variable temporal and spatial conditions. They represent the forms we use to demarcate and imagine reality itself and our own situation within it. Yet never is a single conceptual structure active on its own. Consequently, such

structures are bound to be competitive or, in certain situations, operate in alternation. Strawson focuses in particular on the conceptual scheme active at a given moment. He argues that this is the object of metaphysical reflection, more precisely of descriptive metaphysics. He interprets the presuppositions of knowledge as conceptual schemes, considering both common or everyday knowledge, and elaborate knowledge. The concepts in use are revealed as we utter them. In fact, the language we use predisposes us to a distinct metaphysics (as we exhibit category-preference, favouring for instance the category of relation or of process). The privilege claimed by a category modifies the meaning of a whole range of other categories.

We may retain at least two aspects of this analysis for the purposes of our discussion of everyday life. First, the fact that the metaphysician has turned his attention ever more directly to the shared mode of thought. In this respect, what matters is not only the theoretical mode of thought but indeed the everyday or ordinary one. Also, each way of speaking – including the everyday one – activates certain metaphysical inclinations. Language – including everyday language – directs us to certain images of a metaphysical nature. It enables a vivid configuration of presupposition and thereby a metaphysics that we may call of common use. It is commonly and tacitly used. Commonly used, as the beliefs and concepts which express it sustain the concerns or expectations of an entire community. Tacitly used, because it is not articulated as such logically or formally. In their daily life, people do not necessarily seek to explain conceptually such beliefs or images. On the contrary, people effortlessly use them as references, rely on them for their statements or activities, because they take them for granted.

5. Implicit and symbolical metaphysics (Mircea Eliade)

Let us recall what Mircea Eliade states in the last pages of *Images and Symbols* (especially in the section *Remarks upon Method*). He focuses on a condition in which one may recognise the “metaphysical attitude” of people in traditional societies. He remarks, firstly, that certain modern scholars, Edward Burnett Tylor or James George Frazer, considered that the spiritual life in exotic lands was

¹⁸ Cf. Gerald Holton, *The Scientific Imagination. Case Studies* (Cambridge: Cambridge University Press, 1978).

dominated by superstitions (“the product of ancestral fears or of ‘primitive’ stupidity”, as he concludes). They referred in particular to religious life, difficult to separate from their aesthetic or technological experience. Eliade explains this view by the fact that these scholars were educated in an era that imposed a positivist perspective of human acts. Their statements about certain ancient beliefs ignore both the practical meaning of such beliefs and their elevated, symbolic character.

In light of these perspectives, Eliade observes that archaic humanity reveals an “existential consciousness” concerning the Cosmos and itself. Moreover, it sheds light on a distinct metaphysical attitude. “Where a Frazer could see nothing but ‘superstition’, a metaphysic was already implicit, though it was expressed by a pattern of symbols rather than by the interplay of concepts: a metaphysic – that is, a whole and coherent conception of Reality, not a series of instinctive gestures ruled by the same fundamental ‘reaction of the human animal in the confrontation with Nature’”¹⁹. Such a metaphysics deals with the elementary distinction between appearance and reality (in fact between what “appears to be real” and the “true reality”). Such a distinction relies on the belief that the “true reality” of the world does not emerge in the first stage of experience. It is not linked to the immediate state of things, rather it is archetypal in relation with them. Such consciousness seems to indicate, according to Eliade, a certain metaphysics, that is a vision of what may be considered real in the life-world. This vision is, however, implicit not explicit. It is expressed mainly by symbolic images and representations, not by highly elaborate concepts. The world it describes appears as an open and interconnected world (“everything is held together by a compact system of correspondences and likenesses). The symbolic images at play are proof of the fact of the awareness of “limit-situations” and the situation of man in an open world. Similar ideas were developed by Carl-Gustav Jung and Ernst Cassirer, and later on by Gilbert Durand, Jean-Jacques Wunenburger and others.

Eliade’s idea is important as it highlights that there is always a metaphysics at play, even in the quoted case of an implicit metaphysics expressed

mainly by symbolic images or representations. Eliade’s claim does not refer directly to the common behaviour of man. More precisely, it does not refer to everyday behaviour as being merely ordinary, without discontinuities and singular moments. As we know, it concerns a series of symbolic representations related to the mythical and religious behaviour or to the practice of magic. Such behaviours dislocate and – eventually – suspend the ordinary sequence of time and open up paths to other possible interpretations. Yet these behaviours, too, are a part of everyday life, making up its uncommon or out of the ordinary side.

In his dialogues with Claude-Henri Rocquet, Mircea Eliade enumerates such situations where ordinary life conceals something out of the ordinary²⁰. For example, the occurrence of an event which, although it might not announce anything initially, suspends unexpectedly the ordinary succession of time and makes way for a different temporal flow. The simple deviation from a known route, encountering a stranger, the vivid and persistent memory of a dream, such occurrences can affect the rhythm and quality of experienced time. In other situations, however, the obsessive yearning for change may interfere. Or perhaps the desire is to surpass human limits, which are experienced profoundly every day. This involves the motif of the double (for example, “the attempt to love two women at the same time, with equal sincerity”), the desire to transgress certain social rules (such as the one imposing monogamy) or the need to change the mental state (as in the case of the use of narcotics). This also refers to the daily yearning to gain access to a different reality, such as the virtual one – by reading science fiction stories, watching films or art performances or the free interplay of images. In such situations, everyday life unfolds on two separate levels. It involves a double mode (the waking and oneiric states, according to Eliade), so that the empirically verified reality makes way easily for utopias and phantasms as well as for myths and certain forms viewed as ideal.

Consequently, we ought to speak of a double or equivocal structure of everyday life. How can we then properly understand this?

¹⁹ Mircea Eliade, *Images et symboles. Essais sur le symbolisme magico-religieux*. Avant-propos de Georges Dumézil (Paris: Gallimard, 1952), 187.

²⁰ Cf. Mircea Eliade, *L’Épreuve du Labyrinthe. Entretiens avec Claude-Henri Rocquet* („Ordeal by Labyrinth. Dialogues with Claude-Henri Rocquet”) (Paris: Belfond, 1977), XI, § 1–2.

In temporal terms, it consists of distinct flows, which sometimes appear distinct from each other. They differ not only in terms of rhythm, but they may also be found at different levels, such as the pragmatic and oneiric, as we have noted above. Each of them possesses a distinct and irreducible quality. Nevertheless, they tend to intersect unpredictably, which may lead to some odd, shocking, or at times violent events. This may concern a double underlying tendency of mental life. To borrow Eliade's own terms, it appears as both diurnal and nocturnal. In the nocturnal mode of mind, it may be under the influence of ancient images or archetypes (an issue explored comprehensively by Carl-Gustav Jung). Everyday life is also known to be prone to unpredictable, hardly detectable transformations, in the form of happenings. An act becomes possible by always allowing for freer, looser relationships.

The researcher invoked above invites us to recall Van Gogh's famous canvas *Vincent's Chair with his pipe* (1888–1889). The chair painted there is plain and empty. The pipe itself, rather randomly positioned on the chair, accentuates the fact that the chair is empty. An ordinary chair in a nondescript place, nothing more. Its reality and that of the space it occupies are also rather ordinary, almost banal. The few elements that constitute such a reality belong to a certain extent to the painter's simple and ordinary world: a door on one side, odd items in a chest, a pipe left on a chair and a plain wall. Yet even in this ordinary space, there is something that gives pause. It is that empty, solitary chair itself. Should you dwell too much on it, your mind will be taken elsewhere, to something absent or concealed. This absence is ultimately the single genuinely significant aspect in this painting. It is a dense, persistent absence that grabs hold of your gaze and focuses it where you cannot actually see anything. However, you can sense something there, either the shadow of someone who left for somewhere, either another, foreign gaze, possibly of the painter himself, looking forlorn and wistful at the place of his absence. Yet it is not only this dense and persistent absence that troubles the gaze; it is also the overwhelming loneliness of that space. It does not derive from the fact that Vincent's chair sits alone there, just as the other few surrounding items, i.e. a pipe, a wall. A single thing, even when you expect to find many more, does not generate by this fact

alone the sense of loneliness. Such a feeling originates elsewhere, from the odd perspective on the items, which apparently lack any obvious relationship, as though any of them could be absent or be present in another place. It is a sort of total, absolute contingency which causes things to be so foreign one to the other that you are immediately stricken by the loneliness of the one who saw them through this perspective. Someone who is truly alone cannot find his own place. More precisely, there is no place for him in the world which he can nevertheless see in a certain manner. The lack of a place makes everything appear as an accident or void, his loneliness viewing things only in these terms. The empty chair in the painting expresses therefore the total loneliness of the gaze. All of these things can be said of a space that, at first glance, might seem completely ordinary.

Consequently, Eliade is right to repeat an idea that he obsesses about: "It is certain that this bleak reality /in Van Gogh's painting/, this daily life camouflages something else. This is my profound conviction"²¹. To him, such a view entails multiple consequences. One such consequence concerns the need to grasp the double or complicated structure of everyday life. Another one refers to the way in which we represent our own life and seek to express ourselves, whether it is a simple account, or one given through certain literary or research works. All novels can create a feeling of a certain camouflage of the uncanny in the life of the ordinary. This is not dependent on a type of writing or genre – such as fantasy stories – or on a particular style. It does not depend on a particular form of creativity, such as literature. Rather it concerns any of our life spaces and any form of creation, from those viewed as minor to the truly elevated ones.

One of Eliade's confessions is remarkable in this respect: "In all my stories, the narrative unfolds across several planes, in order to reveal progressively the "fantasy" hidden in everyday banality. Just as a new axiom reveals a certain design of reality, unknown until then – in other words, establishes a new world – fantasy literature discloses – or rather creates – parallel universes. This is not about escapism, as philosophers of history would claim, but *creativity* – on all levels and in all meanings of the term – as the hallmark of human

²¹ *Ibid*, chap. XI, § 2.

condition.” Indeed our image about everyday life could change considerably if we paid closer attention to its emergence and to what is particular to man.

6. “The metaphysical burden of social reality” (John R. Searle)

John R. Searle opened one of his later works, *The Construction of Social Reality*, with the rather startling subtitle “Metaphysical Burden of Social Reality”. He explained this in the opening lines of the book, describing a problem that had puzzled him for a long time: “there are portions of the real world, objective facts in the world, that are only facts by human agreement. In a sense there are things that exist only because we believe them to exist. I am thinking of things like money, property, governments, and marriages”²². Therefore, certain things, though they “exist because we believe them to exist”, are nevertheless real. Although they are dependent on our mental or subjective life, they do possess a dense, resilient objectivity.

To use the author’s example, this happens when you go to a café, sit in a chair at a table, call the waiter and order a coffee. The waiter brings what you ordered, you drink it, leave some money on the table and leave. “An innocent scene, but its metaphysical complexity is truly staggering, and its complexity would have taken Kant’s breath away if he had ever bothered to think about such things.” Why would such a scene leave Kant flabbergasted? Not necessarily because the German philosopher would have avoided entering a café, having a beer or a coffee and gazing outside the café window. But for another reason: if one attempted to describe what happens in this scene, one would not be able to capture the features of the description in the language of physics or mathematics. That is because the facts presented above become real on account of human belief and language. Considering the case of the person who goes to the café, he is served exactly what he ordered, finds that the price is exactly the price quoted on the menu and notices that he is left alone for some time. There is here, as Searle notes, “a vast, invisible ontology”, which

underlies everything that may happen to all of us, on an absolutely ordinary day.

Appropriately, Searle invites the reader to embark on a metaphysical analysis of these ordinary events which originate in the conventions we observe and our manner of speaking.

For this analysis he brings into play the notion of a background, as “the set of non-intentional or pre-intentional capacities that allow mental states to function”. He describes in great detail the functioning of the background, which enables linguistic and perceptive interpretations, gives an air of familiarity to conscious experiences and even a narrative or dramatic form. He also discusses the notion of background presupposition, arguing that there exists a realism external to the subjective life²³. It becomes particularly important in everyday life, because it is a condition for the intelligibility of any discourse. Absent such presuppositions, many statements would be unintelligible and we would fail to follow a particular line of thought. It is, as Searle argues, a necessary presupposition for a large chunk of thought and language. It is not an empirical thesis, but rather is construed as a necessary condition of intelligibility for certain types of theories. We can develop many theories of the existence of objects in space or of space itself, yet none of them will eliminate this condition of intelligibility (“were it proven that our notions of ‘objects’ and ‘space’ must be radically revised, as they have been since the development of the atomic theory or the relativity theory, external realism would not be affected”). This condition presupposes that there “is a way things are independent of how we, as observers, represent it”. The idea does not “establish what things are like” or determine their existence one way or another. In other words, it does not concern such issues whose solution is unfathomable or infinitely variable. Yet it achieves something of great importance, as “it articulates a space of possibilities”. The meaning of any statement (for instance, ‘there is some money in my wallet’) becomes possible only on account of “the presupposition of the existence of money”. In other words, the meaning of the statement “is articulated against a background of possibilities which includes the possibility of having money”. The idea

²² Cf. John R. Searle, *The Construction of Social Reality* (Cambridge: Cambridge University Press, 1995), chap. 1.

²³ *Ibid*, chap. 6–8. Cf. also Michael J. Loux, *Metaphysics. A Contemporary Introduction* (New York: Routledge, 2002), chap. 9.

of the reality of external things articulates “a space of possibilities for a very large number of statements”. It is connected with a background of presuppositions, each with a rather formal character, as horizons of possibilities.

I would like to recall that Ludwig Wittgenstein, John L. Austin, Patrick Strawson, Nelson Goodman and others are often quoted for their research on everyday language.

As in the case of Collingwood’s thesis, metaphysics, in this case, engages two levels in our lives. On the one hand, it refers to certain human conventions and some capacities which are manifest in such experiences that constitute social acts. In other words, they are indicative of the invisible web of social reality (the “vast, invisible ontology” as Searle terms it). On the other hand, it denotes the conceptual analysis one conducts with reference to the construction of social reality. The whole debate about non-intentional capacities, for instance, or the background of presuppositions and its functioning revolves around the metaphysical analysis of social reality.

7. Several conclusions

I believe that the situations described above indicate that there is, indeed, a metaphysics specific to everyday life. It appears as present constantly and before everything else (*zunächst und zumeist*, as Heidegger says). Ultimately, every human experience – in relationship with others, the effort to acquire knowledge or things, in private life, in creative work and in religious life – underlies such metaphysics. Regardless of one’s pursuits or level of education of the mind, it is present at least in an implicit manner.

Such metaphysics is not one and the same for all of us and at the same time. In the discussion so far I have recurrently used the singular form of a phrase, i.e. ‘an everyday metaphysics’. Yet this is due to the need for simplicity in expression. Because such metaphysics is related to the mental life of people or communities (Robin G. Collingwood), it is always plural. We might say, therefore, that there are as many everyday metaphysics at work as the distinct mental spaces we can recognise. They may coexist in a single mental space or can be in competition, sometimes clashing openly. This

should not come as a surprise. On the contrary, their vibrant co-presence helps to explain certain typical phenomena in everyday life: fragmented forms of consciousness, deeply equivocal behaviours, duplications or hypocrisies in relations with others, impersonal modes of life, and attitudes of total indecision or indifference.

We might call it, in certain cases, usual metaphysics, for at least two reasons: 1) it is a set of representations and meanings already active, that is, in use; 2) such representations or images become familiar and spent semantically, at least in certain situations.

As far as I can observe, the presence of this everyday metaphysics is acknowledged most often indirectly. There are references to implicit metaphysics, such as it is assumed on account of particular modes of thought (Robin G. Collingwood), or symbolic practices (Mircea Eliade). A latent or underlying metaphysics has also been invoked (Willard Van Orman Quine), especially with reference to statements of existence and modality (related to the possible, necessary or contingent character of certain relations). This is practically unavoidable in the case of *de re* formulations, especially descriptive ones, about the states of things or events. It also concerns deontic or moral modalities, as they are matched by ontological assumptions.

Taking into account the way of thinking of some of those who reflect on the issue of metaphysics, Jacques Derrida argues that in their case there is a concealed, camouflaged metaphysics, of which they are most often unaware; or even a residual metaphysics because, while they provide arguments against old ideas (“principle”, “reality taken for granted”, etc.), they unwittingly allow similar representations in their own discourse. Richard Rorty often makes reference to the presence of an underlying metaphysics, recognisable by in-depth language analysis. Beliefs commonly in use and the common way of speaking constantly actualise a common metaphysics (John R. Searle). Highly relevant in this respect are the shared beliefs against which the reality of everyday and social order is articulated. Moreover, such situations do not engage only the one who relies on common language, but also the speaker who may possess a certain theoretical training.

Ultimately, this type of metaphysics can be viewed as trivial, as Vincent Descombes names it, commenting on Quine²⁴. This designation plays on the ancient meaning of the word (the Latin *trivium* used to define the place where three roads meet, an easily accessible crossroad, where a weekly fair would be held). In other words, such metaphysics is specific to the life of a fair or market – precisely why it applies to everyday life. It becomes clear now that it is articulated, to a certain extent, through the regular and negotiated use of certain images or ideas.

As we can notice, ordinary or common metaphysics has been discussed frequently. It is viewed either as latent, or hidden, camouflaged. In certain respects, it involves residual elements. To the extent that it is common, it will sometimes be called vulgar or even trivial, as has been shown above. Through each of these terms will come to light its everyday character, the fact that it is active in people's everyday lives.

We know that in the past there were also discussions about *metaphysica naturalis*, considered to be real in that there is an inevitable inclination of the human mind to formulate certain ideas or questions which go beyond any sensitive experience (for example, ideas of the possibility of free action, of the nature of the human soul or of the existence of God). Such metaphysics must be re-assessed in critical terms, as Kant argued, for instance²⁵. We could accept, in the case of everyday life, the prevalence of a "natural attitude", yet what the phrase expresses should not be viewed as something deficient. Its "natural" condition does not exclude it from the scope of reflection proper, however simple it may appear to us at a given moment. It should not however be confused with "popular metaphysics", unsystematic, which modern authors often quote (for instance Hegel, in his lectures on the history of philosophy, or Schopenhauer, in *The Worlds as Will and Representation*, vol. II, chapter XVII).

Metaphysics, therefore, may be encountered in an everyday form, as a tacit or underlying meta-

physics of our understanding in our day-to-day life. I would note that precisely this usual or everyday hypostasis of metaphysics has been increasingly under scrutiny, especially since Nietzsche. Consequently, like our everyday life or, considering its sources, the life of our collective unconscious, it calls for ever more extensive and varied interpretations. I would place the interest in such metaphysics in an analogous situation with the focus on common, natural language or with the research on the mental life of communities. We know that this interest has grown enormously over the past century, especially after the Second World War, which profoundly changed our everyday and cultural history.

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²⁴ Cf. Vincent Descombes, *Latences de la métaphysique*, in Karl-Otto Apel et alii, *Un siècle de la philosophie, 1900-2000* (Paris: Gallimard, 2000), 13.

²⁵ Cf. Ștefan Afloroaei, *Metafizica noastră de toate zilele* („Our Daily Metaphysics”) (Bucharest: Humanitas Publishing House, 2008), §§ 9–12.

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ONTOLOGY AND METAPHYSICS: WHETHER THEY ARE ONE

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Abstract:

This investigation discusses the relation between ontology and metaphysics. They are different, but how different? While metaphysics is transcendental and has as purpose the justification of being as existence, it establishes it, too. Metaphysics is speculation (as theoretical approach in the strong meaning of the term) on being. This relation can only emphasize the aporetic quality of metaphysics.

Key words: ontology, metaphysics, existence, being, *Dasein*, “as if”, philosophical reconstruction.

1. That ontology and metaphysics are not one, there is no need for a demonstration: following the Occamian principle of the “economy” of thought, why should there be two terms with the same meaning? From here on in though, difficulties emerge; since they are distinct, what is one and what the other, what do they have in common, to which extent do they interfere and in which manner they relate to one another?

Etymologically, ontology and metaphysics are close, but individualized enough, so that, elementary, they do not seem one, as in the ulterior developments, following other trajectories and embracing different purposes to distance themselves.

Even though *ontology*, as a term, was a late invention, apparently coined by Goclenius in 1613, and *metaphysics* was named, in the beginning, in an “editorial” order, after more than two centuries since its institution by Plato and Aristotle as a different modality of philosophical reconstruction, even without a name or, rather, using un-homologated names, as logic and as system, ontology was a forerunner. Maybe the name given by Parmenides to ontology, “The Path of Persuasion” – *peithous...keleuthos* was not quite the most suitable; it was not consecrated, either. But there is no doubt

that formally, as logic, it was a term of Parmenidean institution. The fragments 2-8, especially the last one, established what we could consider now the very canon of ontology.

Not even *philosophia proté*, the primary, Aristotelian, philosophy, was meant to enter as such into the language of philosophy. By what it signified it was fundamental in the history of metaphysics. And not only in its history, but also in its system, if whatever is first in a certain order of things is the same way situated in another one (Hegel, *The Science of Logic*, I, Section I, Ch. 1c).

Thus, in their way, the Greeks still distinguished *nominally* between ontology and metaphysics. It matters less that neither *The Path of Persuasion*, nor *primary philosophy* entered the philosophical language even deeper, as long as they are decisive for the formal distinction and reconstruction. But what is one, and what is the other since there is no metaphysics (and also there is no ontology) similar to geometry, considering this in a similar manner to Kant, because according to various factors (cultural time, philosophical situation, intentionality) the presuppositions are, to a similar extent, different. That is not at all an epistemological default as philosophies in their understanding as hypothetical reconstructions share the same formal foundation, hence their complementary relation. Maybe each philosophy is an attempt within the fictional logic: “as if” (*als ob vaihingerian*) things might be one way, or another.

As a pair, they are not as much two numerically, as they are a pair by specification, and as such they are measured one through the other. Thus, ontology and metaphysics have the same object of application, only that, according to their situation they reconstruct that object entirely. As a consequence, no matter how varied the re-

significations, they are brought close together by the fact that, within their definition, one presupposes the other.

2. Etymologically, an Aristotelian suggestion even, the metaphysics was about what-is-beyond-*physis*. If nature “is called *physis* and if we cannot arrive at the concepts of nature but through experience, then the corresponding science is called metaphysics” (from *meta* or *trans* and *physika*). It is then the science “on what lays beyond the domain of physics” (Kant, *Über die Fortschritte der Metaphysik seit Leibniz und Wolf*, in *Werke*, VIII 1969, p.301).

The concept of metaphysics as science “which investigates transphysical realities (a concept spread broadly in the Middle Ages) is based on a particular understanding of the preposition *meta*” (Aubenque, *Aristote et le Lycée*, in *Histoire de la philosophie*, I, 1969, p.649). This understanding indicates also something else, hence not only *meta*, but also, for what we are discussing here, *among*, *in the middle* (of something): Odysseus “drunk and ate *among* the servants” – *meta dmóon pine kai esthe* (*Odyssey* XIV, 140); Gyges “takes seat *among* his shepherds” – *katheménon meta tón állon* (Plato, *The Republic*, 359e).

Institution of being in itself (as far as it, something, exists) ontology was (and is) anterior in relation to metaphysics, which is to investigate the mechanisms of the institution. The anteriority is though only logical and not temporal; otherwise it would be as if morphology could exist without syntax.

In its logic ontology is paradoxal as soon as the term of the being-in-itself, *tò ón*, is contrary to the common opinion (*para doxos*). Un-comprised (*apeiria*) and, through cognition, with an un-comprising quality to it – *apeiron* – if it is one, unlimited, without beginning and without end, it could not have been instituted otherwise than in a paradoxal logic, therefore, in an apophatic manner. As well undetermined and unlimited, one, un-born and un-perishing, simple and indivisible, being was thought of as being for reason; how was it to be explained as existence besides reason? Existence as *existentia* (from *sisto-sistere* and *ex*, that is, to come from, to stay on) could not have been self-sufficient. As a consequence, existence is what it is; only founded on the self. Otherwise, (1) either it is, but as consequence we have two prime terms, with equal ontological dignity (which, following the argument of “the third man” implies a ruinous regression forever and ever), (2) or, in a Cratylean manner, it ra-

ther does not exist. Then, neither the things of the world nor we exist. Therefore, with necessity, there is only one prime term and that one, single as it is, is also unlimited, undetermined, simple, etc. This way, *tò ón* cannot possibly generate (establish) something, neither by transformation, nor by division.

But how to think in non-contradictory terms this passing from one (*hen*) to the multiple (the Platonic model, henological, or from the unlimited, undetermined and simple to what is limited, determined, composed, corruptible)? Or, in other phrasing how should we think in terms of identity and difference being and existence, both?

In two distinct registers, very similar to the primary Platonism, where “ideas” and things are separated ontologically, how is it possible that “being” is accomplishing to be what is not, and how it is not? Having foundation in what it is and in what can only be, and not sufficient ontologically to itself, results that existence is rather not. Nevertheless, it is.

In a metaphysical exercise, therefore, our mind is to find out how the foundation is and is not the existence and how it is and it is not the being itself. “Metaphysics is the fundamental development in *Dasein*. It is *Dasein* itself.”

While thinking as being and thinking existence as not being, but existing, we legitimate both the fact of being (to be) and the fact of not being (not to be, nothingness). Nothingness is described by a metaphysical and not by an ontological concept.

As a consequence, metaphysics, transcendental in the scholastic meaning of the term, had and has as purpose the justification of being as existence, because it establishes it, without that by this fact to devolve from its own logic. In other words, metaphysics is speculation on being (“speculation” has here a similar meaning to *theôria* from Greek), present within existence, but neither by division, nor by transformation. How then? This is the eternal question of metaphysics, aporetic by its very own logic.

This aspect ensures its perpetual openness.

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TRUTH AND KNOWLEDGE IN HEGEL'S *PHENOMENOLOGY OF MIND*

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Abstract:

The following text presents the concept of knowledge that founds the Hegelian *Phenomenology of Mind*, as this concept is developed mainly in the “Introduction.” Starting with Hegel’s critique of the Kantian epistemological presuppositions, it shows that in Hegel’s method the terms of “object” and “subject” of knowledge receive a new signification. Due to this signification, Hegelian “knowledge” is no longer a knowledge of outer reality, but a dynamic knowledge of knowledge itself, i.e. a knowledge of the different forms and phenomena of knowledge that emerge dialectically in human history.

Key words: truth, knowledge, concept, category, subject, object, ontology.

There is a presupposition, says Hegel¹ in the *Introduction* to his *Phenomenology of Mind*, that in philosophy, before we undertake the process of knowledge, we must try to accomplish a knowledge of knowledge itself, i.e. of that instrument which allows us to appropriate “the thing”. The reference to Kant is obvious. Following the Enlightenment skepticism regarding the metaphysical urge of reason, Kant had tried to temper the naive impulse of reason to surpass the limits of experience, by demonstrating, after an extensive inquiry of what reason is and of its possibilities, that it cannot go beyond these limits, because its constitution itself is that which doesn’t allow it to accomplish, with a full

legitimacy, such a step. In the Kantian research there is a certain prejudice that sustains the entire critical edifice: human cognition and its object (real, exterior) are completely different and their relationship cannot be known.

This premise is denied by Hegel; or rather, the German philosopher considered it to be only a premise and nothing else. In other words, it is only an idea and not a fact on which we should found our future researches, as Kant assumed. According to such a presupposition we are different from the outer things and due to this (ontological) difference our knowledge is doomed to remain separated from them. But this is only an idea, a theoretical representation. In fact, we permanently see and manipulate the things that surround us. We live in a very complex world. Between us and this world there is an obvious, immediate relationship, which doesn’t require us to question the possibility of knowledge. By wishing to bring about something practical, we do not ask after the conditions that would allow us to accomplish that action. For example, if we want to go for a trip, usually we do not ask about our physical constitution, but we simply take the journey. Only when an uncertainty appears, an intention of self-analyzing also arises. Thus, if there exists a certain debility we ask ourselves, of course, if we are able to accomplish that journey. Though, our usual frame of mind isn’t this. In the same way, the Kantian criticism emerged after a time when philosophical culture, in general, had lost its self-confidence regarding the possibility of metaphysical knowledge, being confronted, on the one side, with a multitude of metaphysical

¹ G. W. F. Hegel, *The Phenomenology of Mind*, translated by J. B. Billie, vol. I, London, Swan Sonnenschein, 1910, p. 73.

conceptions which contradicted each other, and, on the other, with the unity of the new Newtonian science, which was affirming itself in that time and where could be found a general agreement between the scientists.

The presupposition of the ontological difference between human cognition and real things cannot be demonstrated because nobody can go out of his mind in order to see in which way this mind corresponds or not to reality. We always encounter a result and not that which exists before the process that leads to that result. In this situation, there are only two options available: either one denies that there exists an original correspondence between mind and reality, or one accepts it. In both cases one must be aware that an indubitable, unequivocal and provable answer to this question is impossible. In both cases one is constrained to *admit* a priori something that cannot be proved and thus to place oneself on a meta-physical ground. But when, usually, the question of human cognition arises, one forgets exactly the fact that this problem hasn't got or cannot admit a physical solution, because this problem is not a physical problem, i.e. one that aims at the relationship between the outer (physical) environment of human cognition and its inner environment, which is represented by our sense organs (which are actually also a physical medium for this cognition). The metaphysical character of this problem arises due to the fact that in discussion there appears the question of truth, that is to say of the correspondence between the content that is reflected in the cognition and the outer object, which it should reflect. The difficulty of this question was already well understood by Plato. He formulated the argument which in the philosophical tradition was known as "the third man argument". Following this argument, when one says that a certain reflected content of our cognition corresponds to the object which it reflects, we should possess a criterion, a measure through which we can measure the two realities (the objective and the reflected one) and then compare them. But in order to do this, we must compare the criterion with another criterion, the measure that we possess with another measure, and so forth. Hence the comparison of the content of cognition to its outer object can never be accomplished and thus the truth as the adequacy of knowledge to the outer thing remains a naïve utopia. The theoretical impasse regarding the question of the origin of human cognition led also to the method of contemporary phenomenology: Ed. Husserl, its

founder, by considering that we cannot give any indubitable answer to the question of the outer world, and thus being unable to confirm either idealism or the materialism, thought that we must bracket this question and limit our philosophical inquiries to the description of the eidetic contents of our cognition. In the same way, Hegel has cut the Gordian knot of this problem by rejecting the question of adequacy or non-adequacy of our knowledge to the outer reality as being a false problem. Human cognition cannot go beyond itself in order to measure its reflecting capacities. It has only itself. The object of knowledge is never given outside of it, but always inside of this knowledge and through the knowing activity. Hence, the subject and the object of cognition cannot be separated, they represent a whole, a unity, a totality. The subject doesn't rest on the one side and the object on the other side, between them existing an abyss, but they stay in an original rapport of identity. This identity means that they are parts of the same whole, which appears, on the one hand, as the outer, material, concrete reality, and, on the other hand, as an ideal, spiritual reality, which only reflects the material one. This unity is for Hegel the Absolute: only the Absolute exists truly, and knowledge is true because it expresses that which exists truly, or as Hegel formulates it: "the Absolute alone is true" and "the Truth alone is absolute"².

From the beginning, the object of philosophy was that which truly is, i.e. what permanently, and not ephemerally, exists. Already the Greek philosophers of Antiquity were not so much interested in that which appears and disappears, in that which ceases to exist, but in that what should have a permanent existence. But such an existence cannot be distinguished by means of the senses, which give us only that which is transforming itself. An existence that doesn't transform itself, that exists permanently, can nowhere be seen. What could then be that which exists forever, what exists without being born and without ceasing to be? There is the belief that this thing which has a true existence could reside outside of our thinking and cognition, in the same way as a stone or a house rests before us. Except that that which truly is comprises also our thinking and cognition. The essence of reality (the true being) is not an essence that ceases to be on the spot where knowledge begins. Such an idea would interpret knowledge as a species of existence which

² Hegel, *The Phenomenology*, p. 75.

resides outside of life. It would resemble the situation in which we would try to know life by taking into account all the phenomena of life except the phenomenon of consciousness. But we encounter the phenomenon of consciousness only in connection with a living organism, i.e. with the human organism, it appears only in connection with such an organism. Hence, life means consciousness, too, and consciousness cannot ignore itself by researching life. In the same way, the essence of reality must comprise consciousness too. While the essence of reality produces the entire reality, it must produce also consciousness. In this point resides Hegel's polemic with the Kantian criticism and, in general, with all the prejudices of the common mind, which separates thought from reality.

On the other hand, when one says that the essence of reality comprises the fact of consciousness, a strange conclusion arises: the fact of cognition belongs to the essence of reality too and it is not just added to it, as our cognition would seem to be added from outside to a book or a pencil, these things appearing to have nothing to do with knowledge. As the essence of reality makes possible a multitude of phenomena and of processes, in the same way it makes knowledge possible, too. Knowledge is not estranged from the essence of reality, it participates in a certain way in that which is "material" and appears as existing outside of us. This Absolute comprises the reality perceived as outer reality, but comprises also our knowledge; it is both this reality and our knowledge of it. If we admit such an essence of reality, then it also comprises a certain form of knowledge, which also makes human knowledge possible. For thousands of years this idea represented the background of the conception regarding the participation of the human intellect with God's intellect.

Hence, from a metaphysical viewpoint, the object of knowledge cannot be thought of as existing apart from this knowledge. But what does the fact that this object stays in a rapport of identity with knowledge mean? It would mean, finally, that every object of knowledge is known by man before the empirical process of knowing begins (in this sense, Plato describes knowledge as an *anamnesis*). Of course, it is not entirely known, but it is somehow, under certain aspects, known. And these aspects are precisely the intellectual structures of consciousness, which it meets again and again in its experience, the so-called categories. According to the idea of these categories, as much as possible I should try to move

away from consciousness by trying to conceive a theory about the very beginning of the world, about the Big-Bang for example, where there, in those remote spaces, I would encounter only things which, in one way or another, confirm anew my old categories. If we could go truly outside of our consciousness (and such an "outside" means to accept the existence of something that is different from consciousness), then we could say absolutely nothing about this "outside", not even if it is separated from our consciousness, because to maintain such a separation means to project onto something, about which we say that it is in principle unknown to consciousness, something that belongs to this consciousness, namely such concepts as duality, limitation, difference and so on, aspects which consciousness uses everywhere in its common experience. Kant was right to say that the concept of the "thing in itself" is a problematic and limiting concept of human thought and cognition, but he contradicted himself by admitting the existence of a certain "affection" suffered by consciousness from that "thing in itself". Inevitably, the limiting concept received thus some categorial traits, i.e. finally empirical ones.

Hence, the hypothesis of a so-called thing in itself, different from human knowledge, had to be given up and the question of "truth" had to be rethought. The truth always meant in philosophy correspondence between knowledge and its object. But, as follows from the previous presentation, such a significance became in Modernity very difficult to accept, because knowledge could not be understood anymore as having outer objects. We may name such a significance the *metaphysical concept* of knowledge. The knowledge we meet in the activity of man is never such a metaphysical and absolute knowledge, but only an empirical one. This means that it can, in one way or another, observe its object; it has access to its objects. And when we ask ourselves about the "truth" of this knowledge, this question, from the Hegelian point of view, should not aim at a possible object existing in itself but at the truth-claims which this (empirical) knowledge would present. Paradoxically, these claims can be analyzed without reference to an outer object by analyzing knowledge itself.

By such an approach we remain in that which could be named the subjective dimension of knowledge. However, in this dimension there exist two different aspects: on the one hand, the fact of objectual knowledge, and on the other hand the

knowledge of this fact. For example, in the case of perception, we usually talk about the perception of an object, of a house, of a mountain, of a river. This perception appears to us as being knowledge, namely of the object that is perceived. But beside this form of knowledge, which contains in itself the object considered as existing outside of us, we have also the relationship of our thinking to this act of knowledge. If we ignore the relation to the outer object, there remain only these two sides: the subjective fact of perception and our reflection on this perception. That is all that we have to compare. We cannot compare anymore the perception with its outer object, but only the perception (as a subjective state) with the consciousness, i.e. reflection on that perception (also as a subjective state). These are the two new poles of the knowledge relationship: the subjective state of perception – which now represents the object of knowledge – and our reflection on it, the way we understand this perception, or its concept, being the so-called “subject” of knowledge. In this way, truth means to see if our knowledge corresponds to its object; that is to say to see if our reflection on perception is consistent with that which the perception says about itself.

Hegel anticipates in the *Introduction* the future development of the *Phenomenology* by saying that in this research an ascending pathway is opened by the fact that the objectual form of knowledge, i.e. that form of knowledge which, at a certain moment, is the object in this new relationship, doesn't correspond anymore with its truth-claims; that our reflection about the cognition which appears as being the object reveals that this cognition is something different from that which it claimed first to be. Then, what we have to do, says Hegel, is to see which is the form in which knowledge presents itself each time, respectively to see which are the contents that knowledge assigns to itself as being real contents of knowledge and not of the outer object. Therefore a research of knowledge is required in those forms of knowledge which we already possess. Hence, we do not meet in Hegel's text a metaphysical research of knowledge, in the traditional sense, a research which should go beyond the plain facts of knowledge in order to take a separate position regarding the knowledge relationship between subject and object, as if this research could be then a passive witnessing. Rather, we encounter an evaluation of each knowledge form, respectively of the various materialization forms of

knowledge (in this sense, Hegel talks about a research regarding the “reality of knowing”³, i.e. about those forms which knowledge took each time when it became real). These real forms of knowledge are the true objects of the Hegelian phenomenological research.

Thus we have the materialized form of knowledge – which is the object in this new correspondence relationship – and our research about this object – this research represents the subject or proper knowledge, its concept, says Hegel. Such a real cognition form is associated with a certain “self-consciousness”, i.e. with a certain understanding of that which this knowledge form is and what it intends to do. Actually, each real knowledge form assumes about itself that it is a presentation of truth, of that which truly is. Thus, by wanting to analyze it, we want to see if this real cognition form is indeed that which it assumes about itself to be, i.e. if it is a knowledge of truth and thus a true knowledge. For example, in the case of sense-certainty we compare the cognitive content of this certainty with that which we think about it in the very moment when we accomplish this knowledge form. We see thus that Hegel doesn't discuss correspondence with the outer objects of sense certainty, but its inner correspondence with its *meaning*, with its *concept*.

The Hegelian method contradicts our expectations. We have a certain representation about perception as being a knowing act, in general, and thus a certain idea regarding the truth involved in perception. This idea about perception is then related to the real act of perception, in order to see if this act truly gives us the same content as the idea that we have about it claims to give us. The philosopher is the one who compares these two levels (the level of perception and the level of the way we understand the truth which this knowledge form gives us). But, during the research, it seems that each time the two levels are heterogeneous to each other and they do not correspond to each other, as we would expect. Due to this incongruence, philosophical reflection must advance and search, in the multitude of historical knowledge forms, for a knowledge that should entirely correspond to its meaning. This course is what Hegel calls in this context dialectics, namely, the permanent change and enriching of our knowledge concept.

³ Hegel, *The Phenomenology*, p. 82.

The Hegelian phenomenological approach, as a presentation of this course of the consciousness, from the most elementary knowledge form, and the meaning associated with it, towards the most elaborated knowledge form and its meaning, is actually the description of a process which was already covered by human consciousness during its history. In other words, in the course of time, human beings also understood that there exists an incongruence between that which a certain knowledge form is really offering and what they believed that it was offering. The discovery of this incongruence led to the transformation of the way in which that knowledge form was understood, of the truth content involved in it. But through such a transformation of the meaning the object itself was each time modified. The paradox of this changing disappears when we realize that the object is not an outer thing, but the object was each time a content of knowledge, a content that was understood in a certain way until that moment. Thus, by returning to the example of sense certainty, if we say that it offers us the richest truth content and then we discover that our opinion is false, that the "truth" involved in it is a very vague and poor one, we will never say again that sense-certainty is the highest knowledge form, but we will accept that it is only an elementary form, in which the meaning of things is the most abstract, i.e. the poorest in determinations, that from the viewpoint of truth sense-certainty is merely a pointing and that the real thing can here be thought of only as *this* or *that*, without any other conceptual traits. In the same way, after physics has modified its *atom* concept, from the most elementary material form into a configuration that has itself an inner structure, it is obvious that no physicist will further use the concept of "atom" in the ancient meaning of this word.

Precisely because the main subject matter of Hegelian *Phenomenology* is not the relationship between consciousness and its outer object, this *Phenomenology* is not a scholastic and dry treatise regarding our cognitive faculty and its capacities. Due to the fact that the research object is the relationship between two aspects of consciousness – aspects which both belong to the inner world of consciousness – this research can be now oriented not only towards what traditionally was meant by "knowledge" (i.e. towards that which has a logical and intellectual content), but also towards something that traditionally doesn't pertain to the concept of "knowledge", towards religion, morals, art or even

politics. Therefore phenomenology can now analyze all that belongs to the human being, because all human actions and creations involve both an act and an understanding of this act, and the relationship between them continuously changes throughout history.

Thus, we may say that the knowledge which represents the main interest point for Hegel could be seen as an ontological or conceptual knowledge, or even better as a categorial one. Hegel's main question is to discover the instruments that allow us to think of the things on a certain historical – and ontogenetic – level of knowledge. In this context, for example, it doesn't matter which concrete thing is perceived, but what matters is the perception as a whole and that what appears on its level in every perceived thing. Therefore we should renounce the practice of searching along the Hegelian text for references to outer objects of our experience, descriptions of this or that phenomenon or process. Hegel's concern is the way such phenomena are and can be thought of. Nonetheless, thinking is for him not a psychological act, not something that we possess and can voluntarily control, but something in which we live and which builds our very essence. Knowledge, as Hegel interprets it, is actually thinking, the conceptual structure involved in our relationship to the things that belong to our entire experience.

The Hegelian term of "knowledge" is therefore somehow confusing. Because it doesn't mean "knowledge" in the sense we use it habitually, but it means the conceptual structure involved in the object of our knowledge, it means thus that what must be thought of in every and each object of our knowledge and experience in order that this object may become an object of our knowledge in general. From this point of view, if we would take as an example the knowledge involved in the quantum physics of our day, Hegel's intention would aim not so much at the way the subatomic particle appears in quantum theory, but at the way this particle may be thought of in general, as an existent among other existents. From this point of view, although today physicists insist on the differences between Newtonian and quantum physics, these differences aren't so important. The subatomic particle, as far as it denies the usual laws of thinking (and of Newtonian physics) must be, certainly, considered after other criteria, as are the things of common experience. But as far as it *is* something, anything, and has certain qualities, and as far as these qualities

are attributed by our thinking to that particle, this particle is not different from other empirical things. Precisely such thought-instruments that allow us to think objects in general, such “categories”, are Hegel’s main interest. The different levels of reality are analyzed by him not so much in order to offer us “information” about them, but in order to present the way our thought-categories develop from the way we first think of an inanimate thing to the way we finally think of the human and divine Self. The Hegelian Science (*die Wissenschaft*) is therefore the complete development of this conceptual structure or of this ontological knowledge. It is a complete ontology, which brings into light all the categories, all the universal concepts which we use when we think every existent, and every reality level.

Yet, these categories are not our products, they are not our creations. *They are simultaneously in mind and in things.* They are structures through which things are given to us, meanings which allow us to think of things. We cannot even imagine how a world would be without such pure thought structures, how a world would be where something should have no qualities, being thus absolutely indeterminable. The absence of every determination, and therefore of every propriety, means the impossibility of thinking such an “object”. Hegelian “knowledge” means the knowledge of *these* structures and not an objectual, “empirical”, concrete knowledge, where, on the skeleton represented by such universal structures, the concrete proprieties of various objects are placed. It is impossible to say that these structures belong to us, that they are our creations, as far as we use them without knowing how and from where we have got them. They aren’t a result of our education, because every child who hasn’t attended any school possess them (as one of Plato’s dialogues has already substantiated in Antiquity), as we can see by way of his behavior that shows us that he distinguishes the objects one from another and their proprieties. It is true that he possesses these categories without reflection, as in the case of animals, who also have an experience founded on these structures.

Because Hegel analyzes entire domains of knowledge, meanings that cover entire domains of existences, and not a concrete area of knowledge, he can renounce in his research the idea of the criterion of knowledge. Such a criterion would be necessary if we would have a concrete object before us, about which we should say something, and thereafter our sentence should be verified through the observation of the object. But in this case, the “object” is not a real thing, but the meaning that we assign to these things on different stages of knowledge. This meaning is not provable but builds the ground of every proving activity. Who could ever proof that a certain thing is deprived of any proprieties?

We may say that the fabric of these universal meanings is the ensemble, the totality which Hegel calls the “Absolute”. From this point of view, there is nothing paradoxical or unexpected in his sentence – which should contradict the Kantian philosophy, on the one hand, and all sorts of mystiques, on the other hand –, that the very nature of the Absolute is to exist “beside us from the start”⁴ and thus that we are in its possession. All the categorial instrumentarium that builds our knowledge and that we see projected everywhere around us in reality forms this Absolute. But although we possess it, this possession is not from the beginning a reflected and conscious one, and we do not always understand the meaning of this possession. Hegel’s entire speculative inquiry aims towards bringing under reflection that which lies only implicitly in the logical structure of our knowledge. Once this reflective process is finished, knowledge becomes an “absolute knowledge”, i.e. a knowledge that is aware of its true condition, of the identity between itself and reality, a knowledge that would succeed to clear away the illusion of the ontological difference.

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⁴ Hegel, *The Phenomenology*, p. 74.

INAUTHENTIC DASEIN AND ITS RELATION TO A “CHINESE-LIKE ‘CONSTANCY’”¹

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Abstract:

It has long been theorized that Heidegger's idea for Dasein was highly influenced by the Chinese notion of the Dao. This is due to a misinterpretation on behalf of Heideggerian scholars and others of what the Dao represents. In fact, Heidegger, in explicating what he thought to be “the most extreme inversion of φύσις-ουσία [*phusis-ousia*],” made this equal to “Chinese-like ‘constancy,’” which is the basis of the Dao. Taking what Heidegger interpreted *phusis* to be (derived from Aristotelian metaphysics and an assumption of pre-Socratic thought) as a process of unconcealment from continuing re-concealment which signals a kind of “truth” of being [*phusis*], that which calls for constant presence is inauthentic Dasein, rather than authentic Dasein. In other words, Heidegger's idea of what inauthentic Dasein calls for could be explained within Aristotle's system as equal to aiming to replace *phusis* with the know-how of τέχνη [*techne*]. The Dao, as rightfully understood and utilized by the master craftsman and the Sage, is accessible, constant, and knowable. This could not be in more opposition to Heidegger's notion of *phusis*.

Key words: Metaphysics, Heidegger, Dasein, Daoism, Laozi.

1. Introduction

It has long been theorized that Heidegger's idea for Dasein was highly influenced by the Chinese notion of the Dao (May 1999; Parkes 1987). How-

ever, Heidegger, in explicating what he thought to be “the most extreme inversion of φύσις-ουσία [*phusis-ousia*]” (Heidegger 1939, 236), made this equal to “Chinese-like ‘constancy,’” which is the basis of the Dao. Taking what Heidegger interpreted *phusis* to be (derived from Aristotelian metaphysics and an assumption of pre-Socratic thought) as a process of unconcealment from continuing re-concealment which signals a kind of “truth” of being [*phusis*], that which calls for constant presence is inauthentic Dasein, rather than authentic Dasein. In other words, Heidegger's idea of what inauthentic Dasein calls for could be explained within Aristotle's system as equal to aiming to replace *phusis* with τέχνη [*techne*] (*phusis* here would be associated with *being* as originally thought of, by way of Heraclitus: “Being loves to hide itself.”).

If this replacement is done, what *phusis* is, “the origin and ordering of change, such that each thing that changes has this ordering within itself” (Heidegger 1939, 230), is no longer available; its replacement is a constant “know-how in dealing with things” (Heidegger 1939, 231) and this know-how would not be associated with Dasein but rather with the outside “they”. Effectively, this would be Dasein not being conscious of its possibilities, because it is the “they” who decide its trajectory. This inauthentic Dasein could be seen as calling for the constancy of the Dao, for the Dao is defined as the stuff and pattern of the universe that is predetermined and knowable to sages and master craftsmen alike. One can attain the Dao by having an excellent

¹ M Heidegger (1939) On the being and conception of φύσις [*phusis*] in Aristotle's Physics B, 1. T Sheehan (trans). *Man and World* 9(3) (August, 1976): 236.

grasp of its “know-how,” its workings, which could be gained through practice and keen awareness of the outside natural world. The Being of the Dao is thus the constant structure of what is, absent of any notion of Being that is conscious of its own possibilities to change (authentic Dasein).

How did the misconception of connecting Heidegger’s system of being with the Dao come about? Following Heidegger’s attempt² to translate the *Dao de jing* 道德經, a work attributed to Laozi, and one explicit mention of Daoism in one of Heidegger’s later writings,³ an overly sentimentalized and speculative correlative version has come about, one that has been perpetrated by scholars who in trying to better understand Heidegger’s notions and with a general lack of understanding of the tenets of Daoism have in effect erected an inverted “straw man” argument that welds together two disparate notions in order to validate the one.

It may be that Heidegger had genuinely wanted to find some kind of deep connection between Dao-

ism and his system, hence his brief study of the *Dao de jing*. However, outside of any superficial confabulation, a connection cannot be viably made. Taking how Sheehan has represented an inaccurate depiction of Dasein, that Heidegger had rejected (Sheehan 2001, 270 ff 52), as a further confirmation that Daoism would be an ill-fitted paradigm:

In the literature this bifurcated view—*Dasein* on one side, being on the other—has generally taken two forms, with their apposite narratives...(2) the still popular “Big Being” story, according to which Being Itself, lying hidden somewhere beyond our ken, occasionally pulls back the veil and reveals Itself to properly disposed human beings—who in our days are, almost exclusively, paid-up Heideggerians (Sheehan 2001, 10).

This description of an inaccurately represented Dasein is actually an accurate description of the Dao, which is that which is hidden to most, but “reveals Itself to properly disposed human beings,” in effect a highly exclusionary “being” with regards to showing itself, *always* persistent and pervasive in all living and non-living things.

My aim here is to further demonstrate how the Dao is discordant with Heidegger’s notion of authentic Dasein. As implicated in authentic Dasein, Heidegger’s notion of *phusis* is the key to unraveling faulty connections to the Dao. This will explicate how inauthentic Dasein would actually be a better fit to the Daoist tenets of constancy and pervasiveness, for inauthentic Dasein seeks and basks in constant presence, projecting it when it is not there, even in itself.

Regarding Heidegger’s initial exposure to Daoism, it is possible that he could have read the Daoist work *Zhuangzi*, via a German translation by Buber in 1921, before writing *Being and Time*. However, there is no definitive evidence to that effect, either in Heidegger’s reading, or application, of any Daoist principles in *Being and Time*. As a result, my analysis here is based off of Heidegger’s thought following the so-called “turn” in 1935, with his lecture, as put down in *Introduction to Metaphysics* (Heidegger 1953 [1935 lecture]). This is also the taking-off point of those who connect Heidegger with Daoism, and where *phusis* starts to play an important role. I interpret the “turn” in the same way as Sheehan has (Sheehan 2001, 13-14), *that is* that it is not a turn in Heidegger’s thought, but rather a functional turn that

² Only a tenth of the relatively small work *Dao de jing* was ever translated into German by Heidegger, and all of this was done during the summer of 1946, with the help and collaboration of Paul Shih-yi Hsiao. Hsiao had translated the work into Italian from Classical Chinese, and it is from the Italian translation that they then both worked off of. From: PS Hsiao (2001) Heidegger and our translation of the *Tao Te Ching*. In: R Polt, G Fried (eds) *A companion to Heidegger’s Introduction to metaphysics*. Yale University Press, New Haven, London, pp 93–101.

³ M Heidegger (1959) *On the way to language*. PD Hertz (trans). Harper and Row, New York, 1971, p 92:

The word “way” probably is an ancient primary word that speaks to the reflective mind of man. The key word in Laotse’s poetic thinking is *Tao*, which “properly speaking” means way. But because we are prone to think of “way” superficially, as a stretch connecting two places, our word “way” has all too rashly been considered unfit to name what *Tao* says. *Tao* is then translated as reason, mind, *raison*, meaning, *logos*. Yet *Tao* could be the way that gives all ways, the very source of our power to think what reason, mind, meaning, *logos* properly mean to say—properly, by their proper nature. Perhaps the mystery of mysteries of thoughtful Saying conceals itself in the word “way,” *Tao*, if only we will let these names return to what they leave unspoken, if only we are capable of this, to allow them to do so. Perhaps the enigmatic power of today’s reign of method also, and indeed preeminently, stem from the fact that the methods, notwithstanding their efficiency, are after all merely the runoff of a great hidden stream which moves all things along and makes way for everything. All is way.

Note: The word “Tao” is equivalent to “Dao”. The spelling “Tao” comes from an old way of representing Chinese phonetics that is no longer generally used.

was manifested in the newly elaborated process of the opening up of Dasein.

2. The process of opening that is *phusis*⁴

Interpreted by Heidegger, *phusis* is a process of coming to presence, and does not name a presence or being of any kind. This “emerging-abiding sway” (*das aufgehend-verweilende Walten*), this process of disclosure, of unconcealment is described by Sheehan as within Heidegger’s system as follows:

...the being of entities is implicitly some form of the presence of entities: not merely their presence-to-themselves or their presence-out-there apart from human beings, but their *presence to and availability for possible human engagement*—their humanly specific (“ad hominem”) givenness and accessibility. In this implicit phenomenological sense, the being of entities is their ability to be of concern to human beings, that is, to be significant, understandable, usable. Thus, in what follows, the term “givenness” always means “humanly specific givenness”... φύσις [*phusis*] refers to the givenness of entities (Sheehan 2001, 7).

This *phusis*, as “givenness”, is not constant, but rather a disclosure that is impermanent and unforeseeable. It is when the being of entities are open to the world that authentic Dasein is possible, and the form of the process of this openness is *phusis*. Heidegger viewed *phusis* as a kind of *truth* (ἀλήθεια, also understood as the state of being evident, and unconcealment), not in the sense of correctness or propositional thinking, but rather as a process of disclosure by which the being of entities “can become manifest or appear in the world” (Guignon 2001, 52).

As interpreted by Heidegger, this *truth* is located in the process of disclosure itself and not within any being itself. Heidegger was not very clear in distinctly explaining how the process of disclosure

would be brought about. According to Guignon, this process would be as a result of an interplay between Dasein and Being, which he associates with “a previous manifestation of *polemos* [πόλεμος] that is circulating in the world at a particular time” (Guignon 2001, 53; Schoenbohm 2001, 151). What the process of disclosure would disclose of an entity could perhaps be many truths, representing many different aspects.

There is also a sense of a “naming force” that the word *phusis* has, in that the force of language and words, and thus according to Heidegger, of thought, calls it out as the process of disclosure, of process of opening that it is (Scott 2001, 26-28).⁵ However, what kind of opening is the process of *phusis* concerned with?

The opening associated with the process of *phusis* is connected to Dasein. According to Sheehan:

For Heidegger the verbal emphasis in “Dasein” falls on the second syllable of *Da-sein*, “*being* the open.” The point is that the open is what we “have to be” (compare *zu-sein*). But human beings do not “open up the open” by their own subjective powers. Rather, the open is “thrown and pulled” open (*geworfen/ereignet*), “drawn out” in such a way that, within the opened, the availability of entities occurs. This “openedness” is what Jean Beaufret had in mind when he interpreted *Dasein* as *l’ouverture*, and it is the meaning we intend when we render this key term as “openness” (Sheehan 2001, 8).

Phusis names the process by which the opening occurs, and it is this which human beings do not have control over. In effect, human beings do not have control over *truth* in the world.

2.1 The Dao and *phusis*

Before I contrast the Dao with *phusis*, I provide below a brief, relevant summary of how the Dao was represented in early Chinese thought.

The two works of Daoism that Heidegger had come across, the *Zhuangzi* and the *Dao de jing* happen to be the most widely known of Daoist works.

4 My focus here is on *phusis*, rather than Ereignis, to get at Heidegger’s original basis for Ereignis that was derived from the pre-Socratic and Aristotelian notions of *phusis*, rather than Heidegger’s more developed (for his needs) and integrated version of Ereignis. Also, those who connect Heidegger with Daoism usually do so via the notion of *phusis*, and not Ereignis. See: Sheehan (2001), 14, for more detail on how “Ereignis was almost—but not quite—envisioned by the early Greek thinkers.”

5 Scott further claims that “*Phusis* thus appears in Greek language and thought not primarily as something observed in ‘nature’ but as the power of language and thought to give things to appear” (Scott 2001, 28). This is a highly debatable point that I will not address here.

There are other early Chinese works that include Daoism as a major influence, such as the *Huainanzi*, but many of these to this day have either not been translated or have only had some partial translation. This is mainly due to the difficulty of translating these works from the original Classical Chinese language, which is notoriously frustrating, time consuming, and many times, indeterminable.

Although the representation of the Dao differs a little between the *Zhuangzi* and the *Dao de jing*, the differences are one of degree, rather than “substance”. In the *Zhuangzi*, the common man as possible master craftsman, whether it be as a cook, woodmaker, fisherman, or other kind of craftsman, has the capability of understanding and embracing the Dao (although these occurrences would be relatively rare), while in the *Dao de jing*, it is only the Sage, a rare man of extreme ability that can do so; all others do not have this capability and have minor, shadowy and totally indeterminable experiences of the Dao, and are “condemned” to live an ignorant and almost animal-like existence, finding solace in creature comforts.

It is the interpretation of the Dao as shadowy, obscure, and unfathomable that is its most famous, and usually its only known characteristic, yet this interpretation is only reserved for and refers to those human beings that have no capability of piercing through the Dao to see its true structure.

The passage below from the *Dao de jing* exemplifies the exclusivity of those who have access to the Dao:

When the man of highest capacities hears Dao
He does his best to put it into practice.
When the man of middling capacity hears Dao
He is in two minds about it.
When the man of lowly capacity hears Dao
He laughs loudly at it (Laozi c2005, 193).

In the *Zhuangzi*, nature, with man as an interwoven component, is more stressed, while in the *Dao de jing*, the sage, as an extraordinary man, seems to be able to rise above all others and above ordinary nature to be able to get a kind of birds-eye view of things-in-themselves, having the capability of peering to a thing’s constant essence to capture it for his own use and manipulation. This aspect is especially important since it is now understood that the *Dao de jing* was probably written with the idea of ruling in mind, as a handbook of how rulers could

effectively control the masses to avoid uprisings. This is a far reach from earlier interpretations from Western scholars of the early-to-mid 20th century who believed that the writer of the *Dao de jing* had a kind of spiritual gentleness in mind.

Some characterizations from the *Dao de jing* of what the Dao is comprised of and its nature include: “It is from the Nameless that Heaven and Earth sprang” (Laozi c2005, 141); “For truly Being and Not-being grow out of one another” (Laozi c2005, 143); “The Way is like an empty vessel that yet may be drawn from without ever needing to be filled” (Laozi c2005, 146); “Dao never does; yet through it all things are done.” (Laozi c2005, 188); and “Dao gave birth to the One; the One gave birth successively to two things, three things, up to ten thousand (everything)” (Laozi c2005, 195).”

Basically, according to the *Dao de jing*, in the beginning of time, something came out of nothing, but now there are “somethings”, not nothing, and the Dao comprises both the origination point of nothing and the “somethings” that now exist. These “somethings” are the constant and balanced essences of all living and non-living things in the universe across time, and also the determinable essences of happenings or events (also interpreted as situations) through time.

In this way, by gaining insight of the Dao, either the master craftsman (in the *Zhuangzi*) or the Sage (in the *Dao de jing*) could discover the optimum way with which to approach entities and situations. The key to be able to do this is the constancy of the essences that are embedded in the Dao.

A particularly famous passage from the *Dao de jing* is:

We put thirty spokes together and call it a wheel;
But it is on the space where there is nothing that the
Usefulness of the wheel depends.
We turn clay to make a vessel;
But it is on the space where there is nothing that the
Usefulness of the vessel depends.
We pierce doors and windows to make a house;
And it is on these spaces where there is nothing that the
Usefulness of the house depends.
Therefore just as we take advantage of what is, we should

Recognize the usefulness of what is not
(Laozi c2005, 155).

It is clear that this passage has to do with the relationship of enclosed, contained space to the usefulness of what this kind of construction could produce, and what is not stressed here is the notion of an abstract and empty void. Yet, a notion that Heidegger had in his essay “The Thing” regarding a jug was that “the vessel’s thingness does not lie at all in the material of which it consists, but in the void that it holds” (Heidegger 1971 [1950 lecture], 210). Though Heidegger does not mention Daoism here whatsoever, arguments have been made that this is what he was intimating. However, his viewpoint is far from the Daoist spirit of the passage.

Many of those who associate Heidegger’s concept of being with the Dao make it equivalent to Heidegger’s notion of *phusis* (Pöggeler 1987, 55-56), while some others connect the Dao with the pre-Socratic idea of λόγος [*logos*] (which they then connect to *phusis*) (Parkes 1987, 106), and still some others with Heidegger’s notion of “original nothing” (*nihil originarium*) (Yao 2010, 81; May 1999, 21-34).

However, it should now be clear that any of these interpretations would be faulty with regards to the Dao. For, the following characteristics of the Dao are incompatible with these notions: 1) The Dao holds the constant essences of things (while *phusis* is a process of unconcealment, and this is followed by concealment, on an ongoing basis); 2) There is no early Chinese notion of the Dao as a *logos*-type “entity”; the Dao is that which is “nameless” (Laozi c2005, 141) and prior to language; and 3) by insisting that the Dao is just the “original nothing”, the “somethings” (the essences of things and situations) that it now contains is completely ignored.

Additionally, the exclusivity of those rare, capable few who are able to access the Dao (without any effort) is in deep contrast to Heidegger’s concept (and hope and trust) that authentic Dasein would be open and available to all those that were willing to be open to it, and that the capability (if worked and acted upon) of being open to it would be available to everyone (though the actual “opening up of the open” is not within our human power).

2.2. The Dao and inauthentic Dasein

The connection between inauthentic Dasein and the Dao, the “Chinese-like ‘constancy’” I had referenced on the first page, can now be made. Since authentic Dasein is that which is open to *phusis*, the

process of unconcealment that inevitably leads back to concealment (and unconcealment and concealment again, that cannot be foretold or planned for), is not concerned with nor seeks out constant presence. That which is inauthentic Dasein requires and seeks constant presence, thus not being open to the process of *phusis*. Additionally, inauthentic Dasein surmises that constant presence always *is* (including within itself), and that it is here-and-there for the searching.

The master craftsman of the *Zhuangzi* and the Sage of the *Dao de jing* who access the Dao are able to do so on a consistent and constant basis. They are able to access the Dao because they have exceptional and rare capabilities of perception to see beyond the shadowy veil of the Dao. All those who fall beneath this “bar” of capability would not be able to access the Dao and would experience it as indeterminable and falsely changeable. This system is therefore a two-tiered system that is comprised of the “Haves” and the “Have-nots”.

The parallel that can be made here to inauthentic Dasein is that inauthentic Dasein searches and believes in constancy, constancy that could accurately be represented as the Dao. Inauthentic Dasein fancies itself to be exceptional. Ironically, this would curtail its possibilities since it was not interested in change, passing off its power to the “they” who would then be in charge of dictating its life.

2.3. Conclusion

It is a misinterpretation of what the Dao represents that has driven some Heideggerian scholars and others into believing that the Dao could be positively associated with Heidegger’s conception of being. In connecting the “Have-nots” to those who have an understanding of the true nature of the Dao, they have misconstrued the Dao’s characteristics as shadowy, undeterminable, and unstable. Contrary to this, the Dao, as rightfully understood by the master craftsman and the Sage, is accessible, constant, and knowable. This could not be in more opposition to Heidegger’s notion of *phusis*.

In this way, inauthentic Dasein could be seen to be closely aligned with the concept of the Dao. Its belief in a structure of constant presence belies the notion of authenticity and *truth*.

3. Epilogue

It is my hope that in the future more scholarship is devoted to clearing up the differences between Daoism and Heidegger’s body of work concerning

being. What is needed are far more scholars of early Chinese philosophy who dare to cross over from their discipline into the “wild forests” of continental philosophy, in order to get a wider and fuller understanding of the world, both past and present. Before this happens, the segmentation and limited nature of their horizons will undoubtedly keep them rooted, passive, and stagnant as they stand.

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THE STRUCTURALIST ONTOLOGY OF MATHEMATICS: A BRIEF INTRODUCTION

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Abstract:

The paper offers an overview of the motivation for structuralist ontology of mathematics and of the main structuralist position. It discusses the shortcomings of eliminativist structuralism, and then presents the more promising options: *ante rem* structuralism, Platonic structuralism, and Parsons' particular version of structuralism. Our discussion does not cover all of the issues that have relevance for the choice of the particular version of mathematical structuralism, but we do focus on the problem of indeterminacy and on the solution to it. So the positions of some versions of structuralism and the solutions to the problem of indeterminacy are briefly presented and compared, and a clear picture of structuralist ontologies is drawn.

Key words: mathematical ontology, structuralism, *ante rem* structuralism, Benacerraf's dilemma, the indeterminacy problem.

1. Introduction: Versions of Structuralism and the Problem of Indeterminacy

This paper gives a brief overview of structuralist ontology of mathematics and a solution to the problem of indeterminacy. For philosophical readers not specifically working in the area of mathematics; we hope that it is useful to expound some main views and solutions in a simple and non-technical manner.

Firstly we will explain structuralism in the philosophy of mathematics (or mathematical structuralism). Mathematical structuralists assert: "structures

are primary; mathematical objects are nothing but places in a structure" (Brown, 2008, 62). Therefore, mathematical structuralism is a position that deals with structures which are described by mathematical theories and holds that mathematical entities (e.g., numbers, sets, ...) are not independent objects, but instead are roles or positions in a mathematical structure. As we will see, the central theme of structuralism is which kinds of entities *are* mathematical objects and not which kinds of existence do mathematical objects or structures have. It all depends on the structure in which they are located. For instance, what would the structuralist say about the number 3? Well, the number 3 is only a third place within the structure of natural numbers.

Furthermore we explain that we will investigate the problem of indeterminacy because it can be solved by mathematical structuralism. So the problem of indeterminacy and solutions will be explored below.

Therefore before we start our investigation we explain that in this introduction, we will briefly present various versions of structuralism; particularly focusing on the problem of indeterminacy and on the solution to it. We stress that our discussion does not cover all issues that have relevance for the choice of the particular version of mathematical structuralism. For example, we will not investigate the identity problem that poses great difficulties for *ante rem* structuralism which seems less threatening for the *in re* variety.

1.1. Eliminative Structuralism

Paul Joseph Salomon Benacerraf proposes *eliminative structuralism* because “numbers are nothing more than places in the “natural number” structure”¹ (Trobok, 2006, 73) (see also Brown, 2008, 62).

In this section we summarize Benacerraf’s understanding of numbers and briefly explain that in the philosophy of mathematics platonism² has two problems, according to Benacerraf.

In Benacerraf’s famous article *Mathematical Truth* (1973) we find his *epistemological argument against platonism*. The latter is hidden in Benacerraf’s argument for the claim that the standard Tarskian semantics for mathematics is not compatible with our best epistemology, which is, according to Benacerraf, *the causal theory of knowledge*.³

We present the epistemological argument against platonism as follows. It is assumed that knowledge requires causal contact with its object (the causal theory of knowledge). Now, we reconstruct the argument:

1. People exist entirely in time and space.

¹ We pursue the idea, which is developed by Majda Trobok in her book, *Platonism in The Philosophy of Mathematics* (2006).

² Øystein Linnebo in his article, *Platonism and Philosophy of Mathematics* (2009), explains that mathematical platonism is the metaphysical view that there are abstract mathematical objects whose existence is independent of us and our language, thought, and practices. (Linnebo, 2009)

³ We pursue the idea, which is developed by Mark Balaguer in his book, *Platonism and Anti-Platonism in Mathematics* (1998).

The causal theory of knowledge, according to Benacerraf, holds: “for X to know that S is true requires some causal relation to obtain between X and the referents of the names, predicates, and quantifiers of S ” (Benacerraf, 1973, 671). This Balaguer explains as follows, that is “for a person S to know that p , it is necessary that S be causally related to the fact that p in an appropriate way” (Balaguer, 1998, 22). According to Benacerraf therefore, the causal theory of knowledge is not compatible with the standard Tarskian semantics for mathematics, because it is not compatible with platonism.

Balaguer argues that Benacerraf seems to assume that if we adopt a Tarskian semantics for mathematics, we are committed to platonism. But this assumption, according to Balaguer, is not true, because fictionalists endorse a Tarskian semantics for mathematics but reject platonism. But this, according to Balaguer, did not occur to Benacerraf. Benacerraf was assuming that statements like “There is an integer between 1 and 3” are true, and therefore it seems to him that if we adopt a Tarskian account of the truth conditions of such statements, we will be committed to things like 2, which, it would seem, could only be abstract objects (Balaguer, 1998, 184).

2. If there exist any abstract mathematical objects, then they exist outside of time and space.
3. If there exist any abstract mathematical objects, then people could not have knowledge of them. Therefore,
4. If mathematical platonism is correct, then people could not have mathematical knowledge.
5. People have mathematical knowledge. Therefore,
6. Mathematical platonism is not correct (Balaguer, 1998, 22).⁴

We are now in a position to explain *Benacerraf’s dilemma*. We start with two key issues in philosophy of mathematics: the metaphysical question of what is the subject matter of mathematics, and the epistemological question of how do we know mathematics, more specifically, how do we know the subject matter? Here arises a dilemma between the necessity and knowability of mathematics. Put briefly, the dilemma is a conflict between platonism and empiricism. The first represents the ontology of abstract objects that are necessary for mathematical truth, and the other represents understanding that the perception is the basis of knowledge about objects.

Take, for example, the mathematical assertion “ $1+1=2$ ”. This assertion talks about numbers. Truth requires reference to objects. We adopt this claim temporarily, just for the sake of the argument. Otherwise we should be driven to claim that structuralism, which treats numbers not as full-blown objects but as places in structures, implies that mathematical knowledge is impossible. The above mathematical assertion will not be true unless there are numbers. Because numbers are abstract, there are abstract objects (these are objects which are not in time and space). This is the metaphysical thesis of platonism. The problem with this is as follows. In order that we would know that “ $1+1=2$ ” the objects in mathemati-

⁴ Balaguer seems that here is everything the argument for the third premise. He explains that if it can be proved, then so can be the sixth premise, because the third premise trivially entails the fourth premise, the fifth premise is beyond doubt, and the fourth and the fifth premise trivially entail the sixth premise. Balaguer says that now is the first thing to notice that the first and the second premise entail that people could not be causally related to any mathematical objects. But, if we add the causal theory of knowledge to the claim that people could not be causally related to mathematical objects, it seems that this leads to the third premise (Balaguer, 1998, 22-23).

cal assertion must play a causal role in shaping beliefs. Here one may ask, how can abstract objects be in any causal relation, since they are not in the time and the space? Abstract is understood as causally inaccessible. So if platonism is correct, then people could not have any mathematical knowledge. By assumption that people have mathematical knowledge, platonism is not correct. In the case that knowledge is necessary for causality, then people have two choices. Firstly, people can accept the abstract nature of mathematical objects. In this case, people can't have knowledge of them. Secondly, people can accept the ability of knowledge of mathematics. In the latter case, mathematical objects are not abstract, but they are accessible to the senses. In this case, it is obvious, we get an epistemological story and lose ontology. So Benacerraf's dilemma is that, "what is necessary for mathematical truth makes mathematical knowledge impossible" (Hart, 1991, 87).

Furthermore, we explain that in classical mathematics it is a well-known result that any mathematical theory is reducible to *some* system of set theory. This, in particular, means that "numbers themselves can be identified with certain sets, and that theorems about them can be proved from the axioms of set theory"⁵ (Trobok, 2006, 66). There may be different reductions of arithmetic to set theory.

The following table (see table 1) shows, how it is possible to identify numbers with sets in different ways. We have in mind von Neumann's reduction and Zermelo's reduction.⁶

Table 1: Two reductions of arithmetic to set theory.

von Neumann's reduction	Zermelo's reduction
$0 = \Phi$	$0 = \Phi$
$1 = \{\Phi\}$	$1 = \{\Phi\}$
$2 = \{\Phi, \{\Phi\}\}$	$2 = \{\{\Phi\}\}$
$3 = \{\Phi, \{\Phi\}, \{\Phi, \{\Phi\}\}\}$	$3 = \{\{\{\Phi\}\}\}$
$\vdots$	$\vdots$

⁵ Set theory is the basis for all modern mathematical theory; its basic concepts are "set" and the relation "is an element of", $\in$. These two basic concepts are usually axiomatized by Zermelo-Fraenkel's axioms.

⁶ Benacerraf himself gives this sort of example.

The above reductions of numbers to sets, in mathematics itself, do not cause any problem.

For the philosophy of mathematics, from the point of view of platonism, these two reductions of numbers to sets are problematic. Platonism is, on the one hand, committed to the existence of numbers, and, on the other hand, to the existence of sets. But, if both numbers and sets are objects, here arises the question,

which objects they are most surely be a determinate matter, no less independent of our mathematical practice than is any other feature of the realm of abstract mathematical objects (Trobok, 2006, 67).

If we look, for example, at von Neumann's reduction of the number 3 to the set and Zermelo's reduction of the number 3 to the set, we have the question of how we will determine which reduction of the number 3 to the set is correct. Benacerraf deals with this *ontological problem*, which lays in the apparent *indeterminacy*, in his article, *What Numbers Could not Be* (1965).

Benacerraf wants to find a truth value of the number 3 (Benacerraf, 1965, 56). He gives us a negative answer on the question, whether we should replace the object $\{\{\{\Phi\}\}\}$ with the number 3. As a reason for this, he states:

"Objects" do not do the job of numbers singly; the whole system performs the job or nothing does. I therefore argue, ... numbers could not be sets, ... numbers could not be objects at all; for there is no more reason to identify any individual number with any one particular object than with any other (not already known to be a number) (Benacerraf, 1965, 69).

We can see that from the cognition that numbers cannot be sets. Benacerraf extends the conclusion that numbers are not objects at all. Any kind of identification of numbers with some sort of objects is, according to Benacerraf, simply pointless. It is clear from his citations:

The pointlessness of trying to determine which objects the numbers are thus derives directly from the pointlessness of asking the question of any individual number (Benacerraf, 1965, 69).

Therefore, numbers are not objects at all, because in giving the properties ... of

numbers you merely characterize an *abstract structure* - and the distinction lies in the fact that the "elements" of the structure have no properties other than those relating them to other "elements" of the same structure (Benacerraf, 1965, 70).⁷

So Benacerraf's solution is that mathematics is about structures.

As we have explained, he adopts eliminative structuralism: "numbers are nothing more than places in the "natural number" structure". He states:

To be the number 3 is no more and no less than to be preceded by 2, 1, and possibly 0, and to be followed by 4, 5, and so forth. And to be the number 4 is no more and no less than to be preceded by 3, 2, 1, and possibly 0, and to be followed by ... [5, 6, 7, and so forth.] Any object can play the role of 3; that is, any object can be the third element in some progression (Benacerraf, 1965, 70, note I. M.).

For example, Benacerraf would say the number 5 is not an independent object, but it is only fifth place in a structure. Different objects can play the role of the number 5; this may be, for example, chapters in the book, which follow according to a fixed sequence. It is important that the system depicts the natural number structure.

We can determine the properties to the each object. With those properties we identify the object. According to Benacerraf, we cannot do this with numbers. The number theory is, according to Benacerraf, not about particular objects – the numbers; it is about the properties of all the systems of the order type of the numbers.

Let us remember Benacerraf's assertion: "Any object can play the role of 3" (Benacerraf, 1965, 70). According to Benacerraf, numbers are not objects, but rather the roles. Let us return to the case of the number 5. An individual object plays the role of the number 5, and it is not identical with that number. The fifth chapter in the book, that occupies fifth

place in the sequence, is a single object that performs the role of the number five.

Next, we present the question which is not typical for Benacerraf, a kind of question which he avoids.

whether any concept has the number Julius Caesar belonging to it, or whether that same familiar conqueror of Gaul is a number or is not⁸ (Frege, 1953, §56, 68).

Gottlob Frege deals with this question in *Die Grundlagen der Arithmetik* (1884). He wonders which criteria are sufficient, so that we can say that the number is identical with Caesar, or that the number is not identical with Caesar. Frege takes identity or self-identity for the recognizable sign that he can attribute the status of the real thing or subject matter to something.

We are now in a position to analyze the following Benacerraf's quote:

There are not two kinds of things, numbers and number words, but just one, the words themselves. ... In counting, we do not correlate sets with initial segments of the numbers as extra - linguistic entities, but correlate sets with initial segments of the sequence of number words (Benacerraf, 1965, 71).

It is obvious that Benacerraf, in fact, rejects the existence of numbers, i.e., he identifies numbers with numerals. According to Benacerraf, numbers therefore do not exist and he does not identify them with the objects.

We realize that Benacerraf shows us that the question, "which reduction of arithmetic to set theory is correct (see table 1)?" is meaningless. Previously we explained that we get into troubles with that if we are both mathematical Platonists and attempt set-theoretic reduction.

Next we will examine the structuralism of the philosopher who identifies eliminative structuralism with what he calls *in re* structuralism. He states: "Benacerraf (1965) adopts an eliminative, *in re* version of structuralism when he writes that number theory 'is the elaboration of the properties of all [systems] of the order type of the numbers'". This, of course, is of a piece with his rejection of the thesis

⁷ Benacerraf's final conclusion, that *numbers are not objects*, is seen from his intermediate conclusion, that *numbers have no properties other than structural ones*, and the metaphysical premise, that *there can be no objects with only structural properties*. This Linnebo sees as a metaphysical objection to mathematical platonism (Linnebo, 2009).

⁸ "ob einem Begriffe die Zahl Julius Caesar zukomme, ob dieser bekannte Eroberer Galliens eine Zahl ist oder nicht" (Frege, 1884a, §56, 67).

that numbers are objects” (Shapiro, 2000, 271). Therefore we analyze Shapiro's version of structuralism.

1.2 *Ante Rem Structuralism*

In Stewart Shapiro's book *Thinking about Mathematics: The Philosophy of Mathematics* (2000) and in his *Introduction* to volume four (Special Issue: *Mathematical Structuralism*) of the *Philosophia Mathematica* (1996), the following slogan is offered: “*mathematics is the science of structure*” [Italics added] (Shapiro, 2000, 257, note I. M.) (see also Shapiro 1996, 81-82). We recognize the same slogan in his work, *Philosophy of Mathematics: Structure and Ontology* (1997) in the basic thesis of structuralism; he writes: “The mathematics book is not describing a system of sets or Platonic objects or people. It describes a structure or a class of structures” (Shapiro, 1997, 131-132). So, according to Shapiro, mathematics is not about systems but about structures.

At this point it seems reasonable that we explain Shapiro's distinction between structures and systems. He says that a *structure* is a pattern, the form of a system; a *system* is a collection of related objects (Shapiro, 1997, 84).

In this section we summarize Shapiro's understanding of structuralism and briefly explain how *ante rem* structuralism solves the problem of indeterminacy and the epistemological problem of platonism.

We are now in a position to explain Shapiro's version of structuralism, i.e., *ante rem* structuralism. He argues:

The first takes structures, and their places, to exist independently of whether there are any systems of objects that exemplify them. The natural-number structure, the real-number structure, ... all exist whether or not there are systems of objects structured that way. I call this *ante rem* structuralism (Shapiro, 1997, 9).

Trobok interprets Shapiro's version of structuralism, as follows: “*Ante rem* structuralism holds that structures are genuine objects and they exist even if

there are no systems of objects that exemplify them”⁹ (Trobok, 2006, 71).

Let us show how Shapiro explains the subject matter of arithmetic:

The subject matter of arithmetic is a single abstract structure, the pattern common to any infinite collection of objects that has a successor relation with a unique initial object and satisfies the (second-order) induction principle (Shapiro, 1997, 72).

For example, the number 3, according to Shapiro, is nothing more and nothing less than the third place in the natural number structure. Structuralists defend this; for them it seems to be reasonable that mathematics deals with abstract structures.

Therefore Shapiro's *ante rem* structuralism is a view that structures are ontologically independent on the existence of systems that instantiate them. The natural-number structure would exist even if there were no infinite systems found in Nature. So, Shapiro understands structures as abstract, platonic entities.

In what follows, we will examine whether *ante rem* structuralism can be seen as platonism and we will present Resnik's platonistic structuralism. We will analyze whether Shapiro's version of structuralism is identical with Resnik's version of structuralism.

The following Shapiro's quotation will show how he divides his structuralist program on “a realism in ontology” and “a realism in truth-value”. The philosopher argues:

Structuralists hold that a nonalgebraic field like arithmetic is about a realm of objects – numbers – that exist independently of the mathematician, and they hold that arithmetic assertions have nonvacuous, bivalent, objective truth-values in reference to this domain (Shapiro, 1997, 72).

Shapiro discusses this in his article, *Modality and Ontology* (1993), where he clearly argues that *a realism in ontology* is that mathematical objects, sets exist independently of the mathematician, and he also clearly argues that *a realism in truth-value* is that the assertions of set theory have objective truth

⁹ Except for the structure itself. Namely, each structure exemplifies itself since its places, bona fide objects, form a system that exemplifies the structure.

values, independent of the conventions, languages, and minds of the mathematicians (Shapiro, 1993, 455). It is evident that Shapiro's *ante rem* structuralism is ontological realism about mathematical objects.

Despite the fact that *platonism* is the most famous realistic position in the philosophy of mathematics, we cannot equate it with structuralism, according to Shapiro. It is evident from Shapiro's following quote: "Structuralism is contrasted with a more traditional view, called 'objects platonism', which holds that arithmetic, say, is about a particular collection of objects, the natural numbers" (Shapiro, 1993, 466). As a reason for this, that mathematical platonism cannot be equated with the *ante rem* structuralism, is Shapiro's following quote: "The essence of a natural number is its *relations* to other natural numbers. ... There is no more to the individual numbers 'in themselves' than the relations they bear to each other" (Shapiro, 1997, 72-73). It is clear from the quotation that structuralists can determine the essence of the natural numbers with reference to the other natural numbers. For example, the essence of 3 is to be the successor of the successor of 1, the predecessor of 4, the second prime, and so on.

Platonists claim to be able to determine the essence of each number without referring to the other natural numbers (Shapiro, 1997, 72) (see also Trobok, 2006, 76). According to platonism abstract objects are independent of each other, as well as concrete objects. This means that for platonists numbers are independent of each other. For example, when platonist defines the number 3, he does not need to know all the other numbers and their relations, because the essence of 3 does not invoke 7 or any other number. Therefore, we cannot say that Shapiro's *ante rem* structuralism is the same with traditional platonism.

Furthermore, we will analyze Shapiro's *ontological status of structures*, and we will consider whether Shapiro thinks, in terms of structures, that he is "methodological platonist". We must be very careful here. Shapiro explains that Resnik calls "working realism" as "methodological platonism" (Shapiro, 1997, 38). Shapiro understands *working realism* as follows:

... working realism is not a philosophical view. It is a statement of how mathematics is done, or perhaps a statement of how mathematics ought to be done, but there is no attempt to answer the important philosophical questions about mathematics.

Working realism, by itself, has no consequences concerning the semantics, ontology, and epistemology of mathematics, nor the application of mathematics in science. The strongest versions of working realism are no more than claims that mathematics can (or should) be practiced *as if* its subject matter were a realm of independently existing, abstract, eternal entities. Working realism does not go beyond this "as if". Indeed, it is consistent with antirealism (Shapiro, 1997, 7-8).

Linnebo explains working realism as follows:

Working realism is the methodological view that mathematics should be practiced *as if* platonism was true (Linnebo, 2009).

But, soon after this quote, Linnebo explains that working realism does not, in any obvious way, imply platonism. (Linnebo, 2009) Let us return to our study of Shapiro. We want to know, whether Shapiro has himself for "methodological platonist".

Shapiro explains that "structures exist independently of the systems that exemplify them" (Shapiro, 1997, 85). He has every structure for universal and every system that exemplifies it for an instance (Shapiro, 1997, 84) (see also Trobok, 2006, 77). The properties of structures are independent of us. Shapiro, in his article, *Space, number and structure: a tale of two debates* (1996), explains that "mathematical statements are taken at face value ... numerals, are singular terms denoting places in structures" (Shapiro, 1996, 151). It seems there are two difficulties concerning above Shapiro's explanation (see also Trobok, 2006, 77).

Firstly Shapiro states, that "the *ante rem* structuralist holds that natural numbers exist as *bona fide* objects" [Italics added] (Shapiro, 1997, 10, note I. M.). The philosopher writes about mathematical objects as follows: "mathematical objects – places in structures – are abstract and causally inert" (Shapiro, 1997, 112). As we shall see below, Shapiro has places for objects. On the other hand, he says that the term "object" refers to the following: "Our conclusion is that in mathematics, at least, one should think of 'object' as elliptical for 'object of a theory' ... The idea of a single, fixed universe, divided into objects a priori, is rejected here" (Shapiro, 1997, 127). Therefore, if the natural numbers are *bona fide* objects, then they are a priori and independent of us.

Secondly, Shapiro characterizes himself as a “methodological platonist”, with no ontological commitments toward structures. In the following quote we will see that Shapiro speaks about the objective existence of the natural-number structure. Shapiro states: “The natural-number structure has objective existence and facts about it are not of our making” (Shapiro, 1997, 137) (see also Trobok, 2006, 77). It follows, as already explained above, that the natural number structure exists independently of us.

Before we study Resnik’s version of structuralism, we will focus on Shapiro’s two views: on structures and places in these structures.

On the one hand, Shapiro takes *the places of the structure as different roles* when he says “*places-are-offices*” (Shapiro, 2000, 268). According to Shapiro, this position requires a *background ontology* that supplies objects that fill the places of the structures. (Shapiro, 2000, 268). He puts the emphasis on the person, for example, the president of the country, who fills the place or the role of the (political) structure or organization of the state. Furthermore, Shapiro notes: “the positions of a structure are more like properties than objects” (Shapiro, 2000, 268). So, the president of the country is the position in the (political) structure or organization of the state, and therefore he is the property of a specific object not the object itself.

On the other hand, Shapiro says “*places-are-objects*” (Shapiro, 2000, str. 268). According to Shapiro’s second view, we can explain the normal language of mathematical statements. When we say » $7 + 9 = 16$ « (Shapiro, 2000, 269), we mean that each of the numerals refers to something. Finally Shapiro explains that, in mathematics, the places of mathematical structures are *bona fide* objects (Shapiro, 2000, 269). Furthermore, we give Shapiro’s formulation of *ante rem* structuralism. Shapiro states:

From *the ante rem* perspective, however, the sentence “the natural number structure itself exemplifies the natural number structure” turns on the different orientations toward structures. The idea is that the places of the natural number structure, considered from the places-are-objects perspective, can be organized into a system, and this system exemplifies the natural number structure (whose places are now viewed from the places-are-offices perspective). The natural number structure, as a system

of places, exemplifies itself, as does every structure [*Italics added*] (Shapiro, 2000, 269-270, note I. M.).

So, according to *ante rem* structuralism, places of the each structure (which is the universal) can be organized into a system (which is particular), which instantiates this structure.

The *in re* structuralist, on the other hand, holds that

[a] statement of arithmetic is *not taken at face value* as a statement about particular collection of objects. Instead, a statement of arithmetic *is a generalization over all systems of certain type* ... Thus, [*in re* structuralism] does not countenance mathematical objects, or structure for that matter, as *bona fide* objects. Talk of numbers is convenient shorthand for talk about all systems that exemplify the structure. Talk of structure generally is convenient shorthand for talk about systems of objects [*Italics added*] (Shapiro, 1996, 150, note I. M.).

As we have seen above, Shapiro identifies eliminative structuralism with what he calls *in re* structuralism; its definition is in his *Philosophy of Mathematics and Its Logic: Introduction* (2005), as follows: “Eliminative structuralism is a structuralism without structures” (Shapiro, 2005, 22).

Furthermore we explain how *ante rem* structuralism solves *the problem of indeterminacy*.

Shapiro believes that a good philosophy of mathematics does not need the answers to questions, such as: “Is Julius Caesar = 2?” and “Is $1 \in 4$?” (Shapiro, 1997, 79). With the first question he has in mind Frege’s “*Caesar problem*” (Shapiro, 1997, 78). According to Shapiro, the above two questions need no answers; he wants to see, why even a realist in ontology does not need to answer to the above two questions. (Shapiro, 1997, 79). According to Shapiro it is not sensible

to pursue the identity between a place in the natural-number structure and some other object, ... Identity between natural numbers is determinate; identity between numbers and other sorts of objects is not, and neither is identity between numbers and the positions of other structures (Shapiro, 1997, 79).

Shapiro notes that Benacerraf and Kitcher conclude, against Frege, that *numbers are not objects*.

(Shapiro, 1997, 79) He states that *numbers are objects*, namely, they are objects of arithmetic. Therefore we realize, that we can ask questions about numbers if such questions are internal to the natural number structure. This mean, if such questions are about relations, which we can define in the language of arithmetic. (see also Trobok, 2006, 89)

As we have already mentioned, according to Shapiro, places in the “natural number” structure are *bona fide* objects of the system. This can be seen as the reason why Shapiro permits the first question, i.e., Caesar problem. He identifies Caesar with a natural number that applies to the object of the natural numbers system. Therefore, this question should have a definite answer. Finally, Shapiro finds that it is “a matter of decision not discovery” (Shapiro, 1997, 258). Because of the last quote above our impression is that this solution is not specific for *ante rem* structuralism, it can be formulated in the framework of *in re* structuralism.

In what follows, we will examine how *ante rem* structuralism solves *the epistemological problem of platonism*.

According to Shapiro, there are three ways of grasping a structure, namely: abstraction through pattern recognition, linguistic abstraction and implicit definition.

Firstly, Shapiro explains that by *abstraction via pattern recognition* we grasp small, finite structures. This means that we view or hear one or more structured systems and come to grasp the structure of those systems. Since structures are abstract we do not have direct causal contact with them. Therefore, the idea is “that we grasp some structures through their system” (Shapiro, 1997, 11). It works in the same way as in the case of characters and strings. Shapiro states:

the 4 pattern is the structure common to all collections of four objects. The 4 pattern is exemplified by ... the corners of my desk, and two pairs of shoes. We define the 2 pattern, 3 pattern, and so on, similarly (Shapiro, 1997, 115).

Shapiro calls these, in the quote above, “cardinal structures”, or “finite cardinal structures” and explains that the finite cardinal structures have no relations and so are as simple as structures get (Shapiro, 1997, 115). Here we remember Shapiro's case about the child. The child learns to recognize the 4 pattern after different groups of 4 objects have been pointed out to him (Shapiro, 1997, 115).

The next problem will be how the child grasps large cardinal structures and later, how the child grasps infinite systems and structures.

Large cardinal structures are not apprehended through simple abstraction, according to Shapiro (Shapiro, 1997, 11). Since the child learns during his linguistic development, to parse tokens of strings he has never seen and strings that may have no tokens at all. Shapiro says:

At some point, still early in our child's education, she develops an ability to understand cardinal and ordinal structures beyond those that she can recognize all at once via pattern recognition and beyond those that she has actually counted, or even could count (Shapiro, 1997, 117) (see also Trobok, 2006, 93-94).

In order to understand the natural number structure, we have to imagine a sequence of strokes, which is always longer, and we have to form the notation of a never ending sequence of strokes. Shapiro clarifies this as follows:

This is an infinite string, and so I cannot give a token of it in this finite book. The practice is to write something like this instead: I I I I I ... The point is that students eventually come to understand what is meant by the ellipses “...” (Shapiro, 1997, 119).

Therefore, when children understand what is meant by “...”, they grasp the natural number structure. Then Shapiro states, once when the natural-number structure is understood, then the other infinite structures can be describe in those terms (Shapiro, 1997, 119).

Furthermore we see that Shapiro has *linguistic abstraction* in mind when he explains his grasping of the structure. He argues that “grasping a [mathematical] structure and understanding the language of its theory amount to the same thing. There is no more to understanding a structure and having the ability to refer to its places than having the ability to use the language correctly” (Shapiro, 1997, 137, note I. M.). Therefore, according to Shapiro, “language provides our epistemic access to mathematical structures” (Shapiro, 1997, 137). For the cognition above, he gives us an example:

To obtain larger [structures then the denumerable] ones, our subject can contemplate certain sets of rationals, as in Dedekind

cuts, or she can contemplate certain infinite sequences of rationals, as in Cauchy sequences (assuming that such talk of sets or sequences is coherent) (Shapiro, 1997, 120, note I. M.).

So, according to Shapiro, to obtain structures larger than the denumerable ones, we have to contemplate sets of rationals (as in Dedekind cuts¹⁰) and in this way we contemplate the structure of the real numbers (see also Trobok, 2006, 94).

The third way to grasp a structure is, according to Shapiro, through a direct description of it, i.e., through its *implicit definition*. Shapiro explains the implicit definition as follows: “In the present context, an implicit definition is a *simultaneous* characterization of a number of items in terms of their relations to each other. In contemporary philosophy, such definitions are sometimes called “functional definitions”” (Shapiro, 1997, 130). Furthermore, Shapiro explains that we accept the Dedekind-Peano axioms as an implicit definition of the natural-number structure (Shapiro, 1997, 141). He therefore believes that we grasp the natural-number structure via the understanding of the Dedekind-Peano axioms; but we have to know that he does not say what it means to understand the Dedekind-Peano axioms. It seems again a way of learning about the natural-number structure rather than a way of grasping it (Trobok, 2006, str. 96). Dedekind-Peano axioms are a description of the natural-number structure. If this is true, how can we describe them before grasping them?

Shapiro explains that typically

the theorist gives a collection of axioms and states that the theory is about any system of objects that satisfies the axioms. As I would put it, the axioms characterize a structure or a class of structures, if they characterize anything at all. The subject matter of the theory is that structure or class of structures (Shapiro, 1997, 13).

It is not clear how the theorist gets the (Dedekind-Peano) axioms. Does the theorist grasp them or are they a result of the theorist’s imagination? If the theorist grasps the (Dedekind-Peano) axioms, the question is “how”; if the (Dedekind-Peano) axioms are a result of the theorist’s imagination, then it is unclear how we know that a structure corresponds to them. (Trobok, 2006, 96-97) The theorist could not have grasped the axioms by grasping the structure since structures are abstract and causally inert. But, the theorist could grasp the axioms by grasping a system, which exemplifies the natural-number structure (Trobok, 2006, 96-97) (see also Shapiro, 1997, 137).

The critics point out that none of Shapiro’s suggested ways of grasping a structure explains how it is possible, if it is possible at all, to grasp a structure, which no system exemplifies it, except for the structure itself. Grasping such a structure would be as problematic as it is grasping mathematical objects for platonism, because structures are abstract and causally inert.

Because Shapiro follows Resnik with his ideas, we believe that here is the right place to state Resnik’s answer to the above question: we grasp structures by postulating axioms, which characterize them (and postulation is a procedure by means of which we posit something as independent).

1.3 Platonic Structuralism

Michael David Resnik is, like Shapiro, a representative of the realistic version of structuralism.

In this section we summarize Resnik’s understanding of structuralism and briefly explain how Resnik’s structuralism solves the problem of indeterminacy and the epistemological problem of platonism.

In his book, *Mathematics as a Science of Patterns* (1997), Resnik explains to readers that for him “*mathematics is a science of patterns*” [Italics added] (Resnik, 1997, 199, note I. M.), and mathematical objects are positions in patterns (one could also

¹⁰ We will examine how Julius Wilhelm Richard Dedekind (1831-1916), the German mathematician, around 1858 introduced the *Dedekind cut*, i.e., the idea of construction of the real numbers as a cut of the rational numbers.

We suppose that we want to find a number, on a numeric line, which square is 2. In order to find this number on the numeric line, we have to all rational numbers cut into two parts, that is, one which square is less than 2 and those which square is greater (or equal to) 2. So we get the upper and lower class. So every real number divides the numeric line into two parts (Globevnik and Brojan, 2012, 11).

Irrational number, $\sqrt{2}$, is therefore a cut that divides the set of rational numbers into two classes. In short, Dedekind cuts can be proclaimed as the real numbers. With the above method, we presented how Dedekind published *construction of the real numbers based on rational numbers*.

say, in structures)¹¹. Thus, Resnik is a representative of the realistic version of structuralism, because his ontological commitment to his realism is the form of structuralism. His realism consists in three theses:

1. mathematical objects exist independently of us and our constructions,
2. much of contemporary mathematics is true,
3. mathematical truths obtain independently of our beliefs, theories, and proofs (Resnik, 1997, str. 4).

But Resnik's *structuralism is a kind of platonism*. At the beginning of his article, *Mathematics as a Science of Patterns: Ontology and Reference* (1981), where he begins to develop a clear structuralistic approach to epistemology and ontology of mathematics, he explains that he is a mathematical platonist. He says: "mathematics is a science of abstract entities, that is, immaterial and nonmental things, which do not exist in space and time. So I am a Platonist" (Resnik, 1981, 529).

Stephen Pollard, in his work, *Philosophical Introduction to Set Theory* (1990), explains that Resnik is a representative mathematical platonism. Pollard realizes this when he states Resnik's quote from *Mathematical Knowledge and Pattern cognition* (1975): "'Since structures are [non-spatio-temporal] entities, structuralism is a variant of [p]latonism' (Resnik, 1975, 34)" (Pollard, 1990, 150).

Bojan Borstner in his article, *Mathematical Structuralism is a Kind of Platonism* (2002), joins Pollard in noting that Resnik's version of structuralism is a kind platonism. Borstner states: "Mathematical structuralism as a kind of platonism is distinguished in emphasizing the primary role patterns [one could say also, structures] in the interpretations of what mathematics is about, which nicely illustrates the case with numbers" (Borstner, 2002, 7, note I. M.).

According to Resnik, mathematical objects are featureless, abstract positions in structures (Resnik, 1997, 4). Let us show how Resnik sees mathematical objects in more detail:

In mathematics, I claim, we do not have objects with an "internal" composition ar-

ranged in structures, we have only structures. The objects of mathematics, that is, the entities which our mathematical constants and quantifiers denote, are structureless points or positions in structures. As positions in structures, they have no identity or features outside of a structure (Resnik, 1981, 530).

So, according to Resnik, mathematical entities have no intrinsic properties and are only positions in structures. From here it follows that they have no identity or features outside of a structure.

We are now in a position to explain what Borstner has in mind, when he claims "to illustrate the case with numbers". Borstner states that the essence of a natural number is its relations to other natural numbers, according to mathematical structuralists. Numbers are free of forms and have only those properties that arise from or are as a result of relations between the natural numbers (which are constructed as abstract objects). Therefore, *natural numbers are abstract* (Borstner explains that we do not have concrete object which is internal featureless in this way) (Borstner, 2002, 7).

Below we give Borstner's *argument for the fact that the natural numbers are*, according to structuralists, *abstract objects, which are denoted with individual constants* and are not denoted with predicative terms:

1. Concrete objects are elements of a concrete ω -sequence. A concrete ω -sequence is a collection of concrete objects, which are arranged in a certain way.
2. Abstract ω -sequence is a collection of abstract objects (for example, natural numbers), which are arranged in a certain way.
3. Abstract ω -sequence is a structure, a pattern of any ω -sequence.
4. Abstract ω -sequence is itself ω -sequence.
5. Therefore, abstract ω -sequence is itself a structure, a pattern, which it "has" – it is therefore an instance, a token of itself (Borstner, 2002, 9).

Furthermore we explain what Resnik has in mind when he discusses *the patterns*. He states: "On my view, a pattern is a complex entity consisting of one or more objects, which I call positions, standing in various relationships" (Resnik, 1981, 532). Resnik also explains that "previous patterns may be represented as positions in the new pattern" (Resnik,

¹¹ Resnik uses structures and patterns alternately and he uses the terms "object" and "individual" for things of the lowest logical type and the term "entity" as a generic term for anything of any logical type. (Resnik, 1997, 246-247) (see also Trobok, 2006, 80)

1997, 240). He states that the individual cardinalities can be represented by positions in the natural number sequence as an example (Resnik, 1997, 240).

We can see from the quote below that Resnik compares a position with the point in geometry: “A position is like a geometrical point in that it has no distinguishing features other than those it has in virtue of being that position in the pattern to which it belongs” (Resnik, 1981, 532). Furthermore Resnik realizes that positions, which are within a structure or pattern, may be identified or distinguished, because the structure or pattern containing them provides the context for so doing (Resnik, 1981, 532) (see also Trobok, 2006, 79).

When Resnik talks about patterns he says that we need to distinguish *concrete patterns*, which are tokens and for which he uses the term template of *the abstract patterns* that are types (Resnik, 1997, 226-227). According to Resnik, the tokens of pattern (one could say also, structure) often refer to concrete models, drawings, blueprints, and so on. However, templates also represent other concrete things, such as buildings, artifacts, and so on (Resnik, 1997, 227). Apart from that, we can have linguistic patterns. In mathematics they represent the most reliable method for representing patterns. These are descriptions of patterns. The example might be the Dedekind-Peano axioms (see also Trobok, 2006, 78).

As the reader may notice, Shapiro reminds us that speech about mathematical objects is speech about patterns (one could also say, structures) and their positions. According to Resnik, however, despite the fact that mathematics studies structures and mathematical objects are positions in structures, *he does not have patterns as entities of any kind* (Resnik, 1997, 246-247) (see also Trobok, 2006, 80).

Furthermore, we will examine why, according to Resnik, realism about mathematical objects is not committed to realism about structures. The typical mathematical theory describes structures; current mathematics does not recognize them as mathematical objects and does not affirm their existence. The idea is that the position in the structure can be real even though the structures itself are not (Resnik, 1997, 211) (see also Trobok, 2006, 81).

Some critics find several things unclear in Resnik’s version of structuralism. We will try to point out two of them.

Resnik gives us two reasons for not treating structures as entities of any kind. *Firstly* he says that

the typical mathematical theory does not affirm the existence of structures, does not quantify over structures (Resnik, 1997, 261), and *secondly*, that some mathematical theories identify structures with mathematical objects, but others do not. Therefore, according to Resnik, there is no evidence that would indicate whether structures (or patterns) are mathematical objects or entities of any kind (Resnik, 1997, 248). So, according to Resnik, *structures* (one could say also, patterns) *are not entities of any kind*.

It seems that if we accept the first reason then the second one becomes superfluous. If we accept that the typical mathematical theory does not quantify over structures (it is a good reason for not treating structures as (mathematical) objects), then it is unimportant which approach might have other mathematical theories. But if it is not unimportant, then the first reason cannot be a good argument.

We are now in a position to explain *a typical mathematical theory*. If it can be found in every standard book of higher mathematics, then the first reason is simply false. An example will be given below.

Dedekind and Peano both supposed the Dedekind-Peano’s axioms.¹² And after these axioms (which are far from obvious) there is an infinite set. If we do not have axioms, then we do not have infinity and it is impossible to prove it. In set theory there is the axiom of infinity, according to which there is at least one infinite (inductive) set. This is equivalent to Dedekind-Peano’s axioms. Therefore the axiom of infinity affirms the existence of the natural number sequence, which explicitly or not, means assertion of the natural number structure. So, we have two possible points of view:

- a. “the natural number structure is the natural number sequence” (Trobok, 2006, 82),
- b. “the natural number structure is exemplified by the natural number sequence” (Trobok, 2006, 83).

We can see that in both *a.* and *b.* the existence of the latter implies the existence of the former. So, *a.* is obviously true and *b.* follows from a structuralist point of view, independently of the various versions (see also Trobok, 2006, 82-83).

Some critics suppose that Resnik cannot affirm *a.* because that would mean that patterns are treated

¹² In mathematical logic, *the Dedekind-Peano axioms* or the Peano postulates, also known as the Peano axioms, are a set of axioms for the natural numbers.

as entities of any kind or it would deny that the natural number sequence is some sort of entity, which would make the assertion that *numbers are mathematical objects*¹³ problematic. Therefore, Resnik affirms *b*. But if we accept *b*., then we encounter trouble while Resnik talks about the possibility for patterns to be positions in other pattern (Resnik, 1981, 541). Resnik gives us an example when he explains that the natural number sequence can be represented as a position in a set theoretic hierarchy (Resnik, 1981, 539) (see also Trobok, 2006, 83). From here it follows that the natural number sequence is identified with the natural number structure after all. Therefore neither option *a*. nor *b*. seems to be plausible with other of Resnik's views (see also Trobok, 2006, 83).

Given the above, it is obvious that Shapiro's version of structuralism is not identical with Resnik's version of structuralism. Resnik is a platonist in terms of mathematical objects, and he supports Platonic structuralism, while Shapiro's version of structuralism cannot be identical with platonism. However, we explain that Resnik mostly agrees with Shapiro. Resnik supports in *Mathematical Knowledge and Pattern Cognition* (1975), as Shapiro does, a *full-blooded ante rem structuralism*, according to which abstract structures exist independently of any system that exemplified them (Trobok, 2006, 72).

Next, we will look into Resnik's quotations. Shapiro fully agrees with them.

Furthermore, the various results of mathematics which seem to show that mathematical objects such as the numbers do have internal structures, e.g., their identification with sets, are in fact interstructural relationships" (Resnik, 1981, 530). "viewing mathematical objects as positions in patterns leads to a reconception of mathematical objects which defuses the objection to platonism based upon our inability to completely fix their identity" (Resnik, 1981, 530).

We can see from the last of Resnik's quote that he accepts structuralism and that Shapiro agrees with him (see also Trobok, 2006, 89).

In what follows, we will explore how Resnik's version of structuralism *solves the problem of indeterminacy*.

Firstly, it is clear that he does not treat numbers as sets. The philosopher says: "I am committed to more than denying truth-values to whole sentences, such as "each number is a set"" (Resnik, 1997, 245). Resnik restricts *the principle of bivalence*¹⁴ in order to solve the problem of incompleteness of mathematical objects. He restricts logic so that *the law of excluded middle*¹⁵ does not apply in general.

Furthermore, Resnik says: "Nothing in science or mathematics, as ordinarily understood, counts as evidence for or against numbers being sets" (Resnik, 1997, 246). In his opinion only philosophers are interested in having the answer. "Thus letting excluded middle lapse in these cases seems to have the benefit of resulting in a simpler philosophical account of mathematics without generating untoward reverberations elsewhere" (Resnik, 1997, 246).

Finally, Resnik's *dicta* concerning identities between various kinds of mathematical objects are based upon likening them to positions in patterns. Thus they derive from an insight concerning the nature of mathematical objects. They are consequences of Resnik's philosophical premises (Resnik, 1997, 246) (see also Trobok, 2006, 91).

According to some critics, the first reason that Resnik gives for not treating numbers as sets seem to be problematic. The main reason for him is that mathematics itself does not either deny or affirm it. This is not a good reason, because mathematics is neutral, and is not interested in answering "why is it not a good reason?", because it is not in its domain of interest. Also, we know that several possible identifications of numbers are quite often explained in the books of higher mathematics and that mathematics does not solve the problem of indeterminacy, because it does not see it as a problem and it does not start philosophical discussions about the existence of numbers (see also Trobok, 2006, 92).

As we have seen, according to Shapiro, structuralism *solves the epistemological problem of platonism*. Shapiro follows Resnik in his idea, who states:

If we conceive of the numbers, say, as objects each one of which can be given to us in isolation from the others as we think of, say, chairs or automobiles, then it is difficult to avoid conceiving of knowledge of a

¹³ In Resnik's version of structuralism this is one of the main theses.

¹⁴ The principle of bivalence says that every declarative sentence is true or false.

¹⁵ The law of excluded middle says that a statement is either true or false.

number as dependent upon some sort of interaction between us and that number (Resnik, 1981, 529).

We will also see that, according to Resnik and Shapiro, numbers and number systems are without causal force. Resnik, in *Proof as a Source of Truth* (1992), states: “numbers and numbers systems are causally inert, so there is no more reason to think that we see patterns with our senses than there is to think that we see numbers” (Resnik, 1992, 18).

From Resnik’s following quote we will see that if we judge mathematics as the science of patterns (one could also say, structures), we will solve platonist’s epistemological problems:

I also think that viewing mathematics as a science of patterns promises to solve the platonist’s epistemological problems as well - or at least to make them less urgent - by showing that mathematical knowledge has a fairly central place in our general epistemological picture (Resnik, 1981, 530).

It is thus obvious that Resnik, as well as Shapiro, with his version of structuralism, believes in solving platonist’s epistemological problems.

As the latest version of structuralism, we will examine Parson’s version of structuralism.

1.4 Parsons’ Version of Structuralism

Charles Dacre Parsons is the first contemporary philosopher of mathematics to elaborate a full-blown structuralist position. So, Parsons in his articles, *The Structuralist View of Mathematical Objects* (1990) and *Structuralism and Metaphysic* (2004), and his book, *Mathematical Thought and Its Objects* (2008), discusses different brands of structuralism, from which he then distances his own version.

In this section we summarize Parsons’ understanding of mathematical objects and various versions of structuralism, and we briefly explain how Parsons’ structuralism solves the problem of indeterminacy.

Parsons starts in *The Structuralist View of Mathematical Objects* with Resnik’s quote, which we cite above, “In mathematics, I claim, we do not have objects with an “internal” composition arranged in structures, we have only structures. ...” (Resnik, 1981, 530) (Parsons, 1990, 303) (see also Parsons, 2008, 40). Firstly, we expect that Parsons would use Resnik’s formulation of object for identifying math-

ematical objects with “positions in structures” or maybe with the “roles” they play within structures. But then we can see that he denies this philosophical move (Parsons, 2008, 40). Parsons explains about Resnik’s quote: “as well as my own preceding it, could be read as meaning that the objects have no properties and relations other than those definable in terms of the basic relations. However, that reading ignores the fact that the objects stand in relations to other objects outside the structure in question” (Parsons, 2008, 40).

Let us show which objects are mathematical, according to Parson. We can use the quote from Parsons’ article, *Mathematical Intuition* (1980):

The properties and relations of mathematical objects that play a role in mathematical reasoning are those determined by the basic relations of some system or structure to which all the objects involved belong, such as the natural numbers, Euclidean or some other space, a given group, field, or other such structure, or the universe of sets or some model thereof (Parsons, 1980, 100).

It is obvious that for Parsons mathematical objects are natural numbers, sets, etc., and that their properties and relations are determined by the basic relations of some structure or a system to which they belong. Parsons also explains that, what is truly “essential” for the mathematical objects are “the relations constituting the structure to which they belong” (Parsons, 1980, 101). For example, according to him, for the object of arithmetic it is essential that it occupies a place in the structure, where the conditions are codified by the Dedekind-Peano axioms. Moreover, we will see that, according to Parsons, mathematical objects have the other properties beside the relational properties that are definable with mathematics.

The idea behind the structuralist view of mathematical objects is that such objects have no more of a “nature” than is given by the basic relations of a structure to which they belong. A natural implication of this might be that they have no *properties* beyond what would be definable from the basic relations of the structure by some appropriate logical means. Although that inference has been drawn, it is pretty obviously incorrect; ... (Parsons, 2004, 57).

The critics realize that if mathematical objects have only the properties, which are definable with mathematics, they are not objects in the real sense. Stating this we have in mind Benacerraf version of structuralism or eliminative structuralism.

Parsons discusses two different versions of structuralism, i.e., *eliminative structuralism* and *non-eliminative structuralism*. With the first version he means a view that begins with the basic idea of the structuralist view of mathematical objects and develops it into an analysis in which reference or commitment to such objects is claimed to be eliminated (Parsons, 2008, 51). With the second version he means the structuralist view that does not claim to eliminate mathematical objects but holds that they are in some way only determined by the basic relations of a structure that is their home (Parsons, 2008, 51) (see also Parsons, 2004, 57).

When Parsons investigates Shapiro's version of structuralism, he explains that it is close to his version but it is not the same. He takes Shapiro's quote, which we cited above, "The first takes structures, and their places, to exist independently of whether there are any systems of objects that exemplify them. ... I call this *ante rem* structuralism" (Shapiro, 1997, 9), and realizes that it "is clearly a variety of non-eliminative structuralism" (Parsons, 2004, 58). Parsons explains his own, non-eliminative version of structuralism as follows. The idea is that we "can take the language of mathematics more at face value" (Parsons, 2008, 100) and that we do not "take more as objectively determined about the objects" (Parsons, 2008, 100). As quoted above we can see that Parsons does not give us an easy presentation of his view.

Parsons is the same kind of structuralist as Resnik and Shapiro, who defends the idea that natural numbers have only structural properties. Linnebo realizes that this is denied by neo-logicians and logicians who claim that the natural numbers itself are intrinsically tied to the cardinality of the sets that they number (Linnebo, 2009). We also explain that Parsons rejects, as do Resnik and Shapiro, that there cannot be objects that have only structural properties.

In what follows, we will try to explain how Parsons' version of structuralism solves the problem of indeterminacy or »multiple reductions" problem«, as he says (Parsons, 2008, 102).

Let us show how Parsons explains that mathematical objects are indeterminate:

There is an obvious sense in which identity of *natural numbers* and *sets* is *indeterminate*, in that different interpretations of number theory and set theory are possible which give different answers about the truth of identities of numbers and sets" [*Italics added.*] (Parsons, 1990, 334, note I. M.).

In Parsons' mind the one context " $2 = \{\Phi, \{\Phi\}\}$ " is true, while in another context " $2 = \{\{\Phi\}\}$ " is true as well; and he is surely that the case $\{\Phi, \{\Phi\}\} \neq \{\{\Phi\}\}$ is true in both contexts (Parsons, 2008, 103).¹⁶

Parsons explains that, in much mathematical discourse, the question of identity or non-identity of elements of one with elements of another just does not arise (even to be rejected). But there is one discourse about numbers and sets which makes identity statements between them meaningful, and the other, which makes commitments as to the truth-value of such identities. Because of this, according to Parsons, identities of numbers and sets are not meaningless or they do not lack truth-values. (Parsons, 1990, 334)

Therefore, the supposed problem here is which reduction is the correct one, and if there is no one, what then. We can see that Parsons, in *Mathematical Thought and Its Objects*, presents us with a complicated discussion of this problem, but at the end we are not sure what his own solution of the problem of indeterminacy is; and we also do not know whether he wants to give us such solution (Parsons, 2008, 102-105). Our impression is, although Parsons does not want to give us a solution, he has a strong tendency to accept the *sui generis* view.¹⁷ It seems that this view permits some sort of contextual analysis of equations like " $2 = \{\{\Phi\}\}$ " and " $2 = \{\Phi, \{\Phi\}\}$ " by saying that in different contexts someone has the right to present different surrogates for the natural numbers, as long as the relevant structural properties of the domain of natural numbers are respected (Parsons, 2008, 101) (see also Mühlhölzer, 2010, 275).

¹⁶ Parsons in the similar way discusses about Frege's Caesar; in particular whether Caesar is a natural number or not (Parsons, 2004, 75-77).

¹⁷ According to Parsons the natural numbers are *sui generis*, i.e., no natural number is identical with an object given independently. *Sui generis* view states that natural numbers "are just what they are" (Parsons, 2004, 61). They are not sets, or Frege's "logical objects", or other entities acting as natural numbers. (Parsons, 2004, 61).

This is the end of our brief presentation of structuralism and solutions of the indeterminacy problem; for space reasons, we leave the discussion open for some other occasion.

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ON RELATIONIST ONTOLOGY OF COLOR

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Abstract:

This paper critically discusses role functionalism about color and suggests that it is not such a *sui generis* position as it is often considered to be. The discussion focuses upon one, hopefully, central point. The main proponent of the idea of role functionalism is Jonathan Cohen who in his book *The Red and the Real* (2009) suggests a Refined Taxonomy of positions on color ontology. Namely, his proposal implies that color ontology should be divided into relationalist and non-relationalist accounts. Generally, he endorses the relationalist theory of color which roughly claims that colors are constituted in terms of some relation between objects and subjects (*inter alia*). Specifically, Cohen defends Role Functionalism as the best version of relationalism according to which the relations that constitute colors are functional relations. Based on his role functionalist stance, he distances himself from dispositionalists. However, in this paper I show that he could be interpreted as one and therefore needs to reconsider his Refined Taxonomy of positions on color ontology.

Key words: color, relationalism, role functionalism, dispositionalism.

On Relationist Ontology of Color

The problem of color has always been a part of discussions in history of philosophy (e.g., Aristotle, Galileo, Descartes, Locke, and Newton). Moreover, even though colors were not the main topic of certain debates they have been used for many examples. Byrne and Hilbert (2001) point out the following ones: Hume's missing shade of blue, G. E. Moore's

comparison of good with yellow, Nelson Goodman's "grue" and "bleen", and Frank Jackson's super-scientist Mary.¹ Towards the end of the twentieth century the color discourse among philosophers became more apparent. Some of the most influential contributions to the development of philosophy of color were works of Hardin with his significant book *Color for Philosophers* (1988), Hilbert (1987) and Thompson (1995). To turn to more recent works, Jonathan Cohen has largely contributed to the topic of color philosophy.²

In this paper I am going to discuss the color ontology proposed by Cohen in his book *The Red and The Real* (2009). My main concern will be whether Cohen's defense of role functionalism and its relation to other relationalist accounts fit in his positions on color ontology. In order to answer this question, I am going to first introduce his proposal of a Refined Taxonomy in contrast with a Standard Taxonomy of positions on color ontology. Secondly, I am going to present his argument for the defense of Relational Theory of color which will lead us to his account within relationalism, which is Role Functionalism. Further, I will turn to the relationalist rivals of role functionalism, specifically to functional theory of

¹ For references see Byrne and Hilbert (2001): *Readings on Color, Volume 1: The Philosophy of Color*.

² Cohen also edited a collection of essays *Color Ontology and Color Science* (2010) (co-edited with Mohan Matthen).

dispositions. On the basis of Cohen's claim that role functionalism and functional theory of dispositions about color coincide I will show that, as opposed to what he seems to maintain, he might be interpreted as a dispositionalist. Consequently, I will suggest that according to Ockham's Razor Cohen needs to reconsider his Refined Taxonomy of positions on color ontology.

1. The Taxonomy

1.1. The problems of the Standard Taxonomy

In his book *The Red and the Real* (2009) Cohen criticizes the standard taxonomy of positions on color ontology. For the reasons now to be given, he proposes a refined taxonomy which in his opinion more properly considers options in color ontology.

According to Cohen's description the standard view on positions in color ontology primarily differs between realism and irrealism about color. Realism, briefly, argues that objects bear color properties, while irrealism does not commit it-self to such a claim. Moreover, realism is usually divided into two subcategories: mentalism and externalism. The former account claims that bearers of colors are mental items in the sense of sense-datum and the latter account that colors are exemplified by physical objects. There are three well known branches of the externalist view: (i) Physicalism, which generally claims that instances of color are physical; (ii) Dispositionalism, according to which colors are dispositions to affect perceivers; and finally (iii) Primitivism, according to which colors are sui generis properties³. On the other side, the known branch of irrealism is eliminativism. Proponents of the latter view claim that objects just seem to be colored because of perceptual representations which are erroneous. For them, nothing in actual world is colored. Cohen lists four problems of standard taxonomy. First, irrealism as an opposite branch does not seem to be incompatible with physicalism, dispositionalism and primitivism. Second, it does not seem to be

the case that physicalism, dispositionalism and primitivism are exclusively forms of externalism. Third, ontological physicalist does not have to be committed to color physicalist as well. Finally, he lacks the relationalist account since there are also non-dispositionalist forms of color relationalism.⁴

1.2. Cohen's refined taxonomy

The main proponent of the idea of relationalism is Jonathan Cohen. In his book *The Red and The Real* (2009), he suggests a Refined Taxonomy of positions on color ontology (see Figure 1). Namely, his proposal implies that color ontology should be divided into relationalist and non-relationalist accounts. Generally, he endorses the relationalist theory of color which roughly claims that colors are constituted in terms of some relation between objects and subjects (inter alia). Specifically, Cohen defends Role Functionalism as the best version of relationalism according to which the relations that constitute colors are functional relations. His main motivation for a suggested Refined Taxonomy is to more properly locate his account on color and, thereby, put it into relation with other views on color ontology. Before discussing his account in a greater detail, I am going to briefly present his novel taxonomy of positions on color ontology.

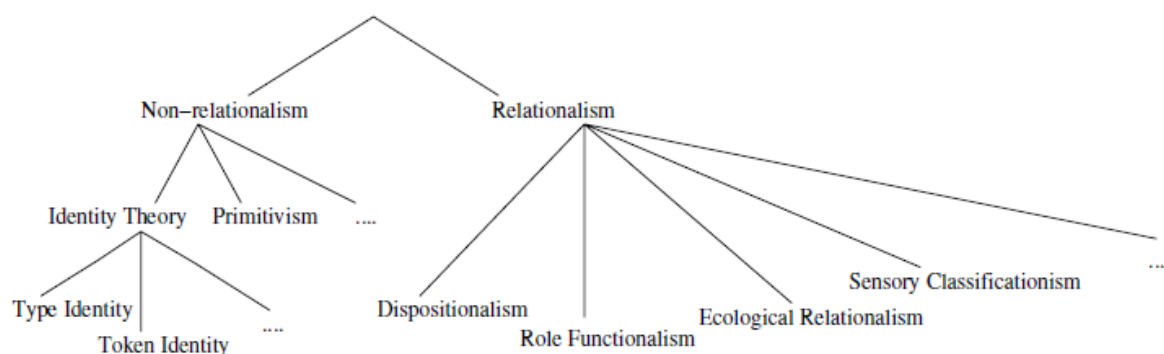
The main feature of Cohen's novel taxonomy of positions on color ontology is the distinction between relationalist and non-relationalist accounts. Non-relationalist accounts in general deny that colors are constituted in terms of relations to the perceiving subjects. Moreover, they assume that molecular duplicates of colored things will be colored even in the worlds where there are no perceiving subjects.⁵ Such theories are for example Identity Theory and Primitivism.

Cohen's relationalist branch is more elaborated since this is the view he generally defends. Under relationalist accounts Cohen subsumes dispositionalism, role functionalism, ecological relationalism, sensory classificationism etc. Except Role functionalism, here I will only briefly define what these sub-branches of relationalist account stand for. Ecological relationalism defined by Evan Thompson

³In Byrne and Hilbert (2007), Color Primitivism: "the colors are not identical to physical properties (e.g. ways of altering light), dispositions to affect perceivers, and the like: colors are sui generis properties. Primitivists typically hold that there is a single property of blueness, redness, and so on".

⁴J. Cohen (2009). *The Red and the Real*. 1 Ch.

⁵Cohen, 2004, p.453.

Figure 1: Cohen's refined taxonomy of positions on color ontology.⁶

(1995) and his colleagues (Thompson et al. 1992) argues against the separateness of perception and action, namely, animal and environment. According to the ecological view, colors are not properties in the world to be recovered but are rather properties which “result from animal-environment codetermination.”⁷ Cohen considers the ecological view as relationalist mainly because of Thompson’s (1995) claim that nothing bears any color apart from being related to perceivers and viewing conditions. The second account is sensory classificationism developed by Mohan Matthen (2005) according to which stimuli of sensory perception are sorted into sensory classes. His account about color perception is to the reverse of standard explanations: “things are not classified as red because they look red (under normal circumstances); instead, they look red because the visual system has determined that they are so.”⁸ On Cohen’s view, Matthen’s account is a branch of relationalist theory because it interprets colors in terms of relations between objects and its perceivers. However, Cohen argues for role functionalism as the best view among relational theories of color. In the following chapter I will briefly show Cohen’s general argument in favor of relational theories of color.

2. The Defense of Relational Theories of Color

Cohen (2004) claims that colors should be understood as relational properties. A typical relational

property is ‘being a sister’ and a typical non-relational property is ‘being cubical’. Cohen forms the following question in order to apply the relational/non-relational discussion to colors: “Suppose *x* is red; then, as we modify things other than *x* and thereby modify the relations *x* bears to other things, will *x* (necessary) continue to be red?”⁹ According to relational theory *x* will not continue to be red. This is why for Cohen ‘being colored’ is more like ‘being a sister’ rather than ‘being cubical’. More precisely he states that colors are constituted in terms of relations between objects, perceivers, and viewing conditions. Cohen presents an argument for color relationalism traces of which he found in works of some modern philosophers, such as Galileo, Locke and Hume and in recent ones like Bennett (1968) and McGinn (1983).

Cohen’s motivation for his defense of a relational account of color is based on the cases of perceptual variation that show the wide range of perceptual effects of a single stimulus. So, as a first premise he points to a concrete case of perceptual variation, shown in the figure 2. As it can be seen, the central grey squares look different, depending on the background they are placed against, though the two grey squares are intrinsically qualitatively identical. On the basis of this case and other similar ones¹⁰ he concludes that evidences show “there are multiple, psychologically distinguishable, perceptual effects of a single color stimulus.”¹¹

⁶ Cohen, 2009, p. 13.

⁷ Thompson et al. 1992, p. 21.

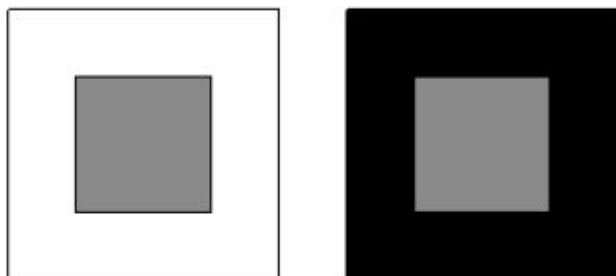
⁸ Matthen, 2005, p. 24.

⁹ Cohen, 2004, p. 453.

¹⁰ In Cohen, 2009, he also presents a chromatic example and an example with wider amount of variation.

¹¹ Cohen, 2009, p. 24.

Figure 2: The two center gray squares have equal reflectances, but the one against the lighter background appears darker than the one against the darker background.¹²



The second premise of Cohen's master argument goes along the lines of the following conditional: if colors are non-relational properties of objects, then it cannot be the case that the relevant things are as they look color-wise under each variation, for example, of the previous case. Non-relational properties do not depend on the background they are put against, nor on the perceiver or on the given circumstances because they are not in a (at least not essential) relation with any of those. On the contrary, if colors are relational properties of objects, then objects are as they look color-wise in each variation.

As the third premise Cohen claims that if we suppose that color, in fact, is a non-relational property, then "it follows that at most one of the perceptual effects can veridically represent the color of the patch".¹³ Cohen goes further by stating that we do not have any independent and well-motivated reason for singling out just one of the variations and saying that an object has the color it then looks to have.

As a fourth premise, Cohen suggests that we should not hold that colors are non-relational properties of objects, but instead that the best alternative is to say that colors are relational properties and that objects have all the colors they look to have in presented variations. For instance, red for a subject in certain circumstances, green for another subject in another circumstances and so on. From these premises Cohen infers that colors are relations between objects, perceiver, and viewing conditions.

Cohen points out that he is aware of the fact that his argument from perceptual variation is not intended to be a "knock-down deductive argument", but rather some kind of an inference to the best explanation and a way to avoid ad hoc stipulations usually implied by non-relationalists' answers to perceptual variation. In this paper, I do not discuss the described argument for a relationalist account. This is why I would like to turn now to his defense of a certain kind of color relationalism, namely, role functionalism.

3. Role functionalism

Cohen (2009) argues for a specific branch within relational theories, namely, role functionalism. He claims that the relations that represent colors are functional. These relations are functional because they involve "the performance of a certain functional role that connects surfaces, light, and the like, to visual systems"¹⁴. So, in his view, red is for a subject in certain circumstances the functional role of disposing its bearers to look red to a subject in certain conditions (*mutatis mutandis* for the other colors). Cohen specifies that the notion 'function' in his role functionalism is to be understood as an accomplishment of a certain task rather than in terms of some adaptive function.¹⁵

Cohen's starting point for the defense of role functionalism is the simple general assumption that colored objects have a disposition to look colored. This assumption implies that colors and dispositions coincide in extension. According to Cohen, role functionalism explains this extensional coincidence: "exemplifying a color just is exemplifying some or other property that realizes the disposition to look colored, and so exemplifying the disposition to look colored."¹⁶ This explanation suggests that the nature of color is to be understood in the terms of the dispositions to look colored.

Furthermore, Cohen proposes a functional analysis of color functionalism because color is analyzed in terms of its functional role. He points out five

¹⁴ Cohen, 2009, p. 177.

¹⁵ Here Cohen stresses out the distinction between teleological/adaptive and non-teleological understanding of expression 'function'.

¹⁶ Cohen, 2009, p. 178.

¹² *Ibid*, p. 20.

¹³ Cohen, 2004, p. 455.

consequences of his functional analysis. First, according to role functionalism color is independent of its structural or material constitution. So, what determines whether an object is colored in a certain way is its fulfillment of the relevant functional role and not its structural or material constitution. So the property of being red when functionally analyzed can be applied to different structural and material constitutions as long as the relevant functional role is being realized. Second, the feature of role functionalism is also that it is “officially neutral on whether colors are disjunctively realized properties in world *w*, whether colors are physically realized properties in world *w*, and so on.”¹⁷ Though, the latter is according to scientific fact an important requirement, Cohen takes the neutrality of his view to be a virtue because it allows a possibility that is actual – talking about colors in worlds that are very different from ours. Third, since colors are not tied to particular structures, for instance just to the surface color, role functionalism proposes a completely unified treatment of different species of color. Such as volume color, surface color, source color, aperture color and film color. The forth feature of role functionalism is that colors are not categorical bases for a disposition to look colored but are realizers of the colors in particular possible worlds. Furthermore, the basis is only contingently connected with dispositions and colors are the ones that are essentially connected with dispositions to look colored. The final feature of role functionalism is that it provides an explanation between philosophical and scientific approaches of understanding the nature of colors. Namely the difference between understanding color as given by our experience and by science. To illustrate, role functionalism provides good grounds for understanding the scientific approach as an empirical project that wants to determine the physical (or non-physical) structures that happen to fill some functional roles in the actual world.¹⁸

4. Functionalist theory of dispositions

Cohen (2009) confronts role functionalism with other forms of relationalist accounts of color, namely, dispositionalism, ecological relationalism and

sensory classificationalism. For the purposes of this paper, I will focus only on his elaboration of the dispositionalist account, specifically on the functionalist theory of dispositions. Further on, I am going to point out Cohen’s proposed relationship between role functionalism and functional theory of dispositions.

According to dispositionalism, one distinguishes colored objects from uncolored by their “tendency to occasion characteristic visual states in subjects in relevant conditions.”¹⁹ The standard form of color dispositionalism is the following: Red for a normal subject in standard conditions is the disposition to look red to a normal subject in standard conditions. As an answer to the question about how dispositions are related to their bases Cohen introduces three standard variants of dispositionalism: type identity, token identity and functional theory. As mentioned before, I am going to focus on his elaboration of the functional theory of dispositions. Cohen defines the functionalist theory of dispositions by referring to Prior²⁰: “the disposition to look red is a second-order property of having some or other first order basis property that realizes the functional role of causing its bearers to look red to a normal subject in standard conditions.”²¹ After presenting the general idea of a functional theory of dispositions, let’s put it now in a relation with role functionalism mentioned before.

5. The Comparison of Role Functionalism and Functional theory of dispositions

Based on his role functionalist stance, in many places Cohen distances himself from dispositionalism. Nonetheless, in his paper *Color: A Functionalist Proposal* (2002) he points out two similarities between these two accounts. The first is that they closely relate the nature of color properties with the color experience because they analyze red in terms of *looks red*, which is further on understood in terms of a certain class of color experiences. The second similarity is that they both analyze properties in

¹⁷ Cohen, 2009, p. 180.

¹⁸ More detailed functional analysis can be found in Cohen (2009) on pages 179–181.

¹⁹ Cohen, 2009, p. 219.

²⁰ Prior, E., (1985). *Dispositions*. Aberdeen University Press, Aberdeen and Prior, E., et al. (1982). *Three theses about dispositions*. American Philosophical Quarterly, 19, 251–257.

²¹ Cohen, 2009, p. 220.

terms of functional roles: “since dispositions are multiply realizable functional properties, the functionalist and the dispositionalist agree that colors are multiply realized functional properties of one sort or another.”²²

However, Cohen compares role functionalism with its important relationalist rivals, among others also dispositionalism. He specifically confronts role functionalism with the theory presented before – the functional theory of dispositions. In order to compare these two, I will first recall the major claim of role functionalism: Color for S in C is the functional role of disposing its bearers to look red to S in C. Furthermore, a functional role is a second-order property that has some first-order property which realizes the functional role of disposing its bearers to look red to S in C. On the other hand, the functional theory of dispositions holds that a disposition to look red is a second-order property of having some first-order property that realizes the functional role of causing its bearers to look red to S in C. So, for role functionalism a functional role is a second-order property and for the functional theory of dispositions disposition is a second-order property.²³ As a result, functional role and a disposition are alike. According to this interpretation it seems that Cohen could be understood as dispositionalist about color.

In my opinion, by the just given comparison his distinction between role functionalism and dispositionalism disappears entirely. Besides, he himself accepts that the functionalist theory of dispositions is not a genuine alternative to role functionalism about color. To wit: “If dispositions are understood according to the functionalist theory of dispositions, then color dispositionalism and role functionalism about color coincide.”²⁴

6. The Ockham’s Razor suggestion

On the basis of the comparison drawn in the previous part, I would now like to turn to the possible consequences of Cohen’s view on functionalist

theory. In his review of the book *The Red and The Real* (2009) Allen (2011) claims that “Cohen’s role functionalist theory of color itself turns out to be a refined version of a traditional dispositional theory.”²⁵ Here I agree with Allen but I would like to make a step further by suggesting a more simple taxonomy of positions on color ontology.

The fact that role functionalism and the functional theory of dispositions coincide is explicitly mentioned in a few more places in his book. The first and most direct one is the following: “On the theory of dispositions, then, the role properties identified with colors by the role functionalist just are the dispositions to look colored – which is to say that, given this view about dispositions, color dispositionalists and role functionalists are in complete agreement about the nature of the color.”²⁶ The second direct implication is when he refutes all versions of dispositionalism except functional theory: “Either she (dispositionalist) can accept the functionalist theory of dispositions, and thereby accept the role functionalist theory of color I am defending, or else, in holding some alternative metaphysics of dispositions, she will render her dispositionalism vulnerable to pressing metaphysical objections.”²⁷ The third evidence for explicit coincidence can be found in his considerations of objections against the functional theory of dispositions where he states that the objection which affects functional theory also affects role functionalism about color because they coincide in respect to the nature of the color.²⁸

Based on the fact that Cohen could be interpreted as a dispositionalist and he also himself states that role functionalism and functional theory of dispositions about color coincide I raise the following question: Why Cohen has two distinct theories about color in his taxonomy tree when in fact they agree on the nature of color? It seems to me that there is no need for Cohen to include a special branch of relational theory into his taxonomy of positions on color ontology since he already agrees with a type of dispositionalism about color, namely, functional theory of dispositions. That is why, according to the

²² Cohen, 2002, p. 24.

²³ Notice that in Cohen’s paper *Color: A Functionalist Proposal* (2002) he claimed that functionalism is not a second-order theory of color when in his book *The Red and The Real* (2009) he regards functional role as a second-order property.

²⁴ Cohen, 2009, p. 220.

²⁵ Allen, 2011, p. 315.

²⁶ Cohen, 2009, p. 220.

²⁷ *Ibid*, p. 220.

²⁸ *Ibid*, p. 223.

Ockham's Razor²⁹, I suggest a more economic taxonomy with which he could advocate for the functional theory of dispositions in view of the fact that it describes the color in the same way as the role functionalism about color does. For that, he would have to abandon role functionalism about color as a separate branch of color relationalism. Although my suggestion might seem to be rather radical, I claim that Cohen's view on the nature of color would not change drastically for two reasons. Firstly, he would still remain relationalist about color since dispositionalism is clearly relationalist account. Secondly, he could still operate with notions like 'role' and 'function' considering the fact that according to the functional theory of dispositions the first-order basis property realizes the functional role of causing its bearers to look red to a normal subject in standard conditions.

Moreover, as I showed, Cohen's suggestion of Role Functionalism is not much different from the already established theory of dispositionalism about color. For this reason I do not see the need for a new separate account in the space of positions on color ontology.

Conclusion

To sum up, in the present paper I discussed Cohen's ontology of color comprehensively defended in his book *The Red and The Real* (2009). Firstly, I presented his suggestion for the Refined Taxonomy and his view on the space of options in the color ontology discourse. Secondly, I introduced his master argument in favor of relational theories of color in order to proceed to the defense of a specific branch of relationalism, namely role functionalism. Furthermore, I focused on his debate on the relationalist rivals of role functionalism and on the rivaling position of dispositionalism. By referring to the confrontation of Cohen's role functionalism with functionalist theory of dispositions I analyzed his claim that role functionalism and functional theory of dispositions about color coincide and showed that he might be interpreted as a dispositionalist. By way

of referring to Ockham's Razor, I suggested a more economic taxonomy in which role functionalism would be eliminated as a separate branch of relational theories of color and replaced by the functional theory of dispositions on color. As a result, Cohen would have to change his Refined Taxonomy of positions on color ontology.

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²⁹ Referring the following interpretation: «If a thing can be done adequately by means of one, it is superfluous to do it by means of several; for we observe that nature does not employ two instruments where one suffices» (Aquinas, 1945, p. 129).

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Discussion

Pro and Con Discussion Regarding the Tenets of the Hermeneutic Philosophy of Science (continuation)

Since the late 1960s studies in the hermeneutic philosophy of science have been gaining currency. In looking at this development from a historical perspective, one can today recognize an independent philosophical tradition. Scientific research is committed to the universe of interpretative phenomena – so the tradition's guiding tenet goes – since it is itself a hermeneutic process. To put it in an extended formulation, those phenomena which philosophical hermeneutics unveils in the being of history, language, and art can also be identified in natural science as a particular mode of being-in-the-world. This is a radical claim that provokes a double confrontation. On the one hand, the hermeneutic philosophy of science opposes the mainstream philosophical picture of science which is spelled out predominantly in terms of objectivism, epistemological representationalism, and cognitive essentialism. On the other hand, a conflict with traditional philosophical hermeneutics is inevitable. On this traditional

enterprise, a constitutive view of interpretation might be integrated into a theory of scientific communication, but by no means into a theory of scientific research and knowledge. Due to this double confrontation, the hermeneutic philosophy of science brings into play several interesting debates of general philosophical importance. This tradition is a target of criticism from positions as different as neo-scholastic ontology and neo-positivist epistemology. The publication of Professor Arvin Voss's article documents our desire to initiate on the pages of the *Balkan Journal of Philosophy* an ongoing pro and contra discussion regarding the tenets of the hermeneutic philosophy of science. To be sure, Professor Voss's elegant criticism of the hermeneutic view about the status of science's theoretical objects as well as his rehabilitation of essentialism concerning the constitution of scientific knowledge will meet a counter-criticism devised by the exponents of an interpretative turn in the philosophy of science.

CHASING THE SPECTRE OF ESSENTIALISM

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Arguments with clear premises and far-reaching conclusions distinguish Prof. Arvin Vos's elegant and lucid critical analysis of the hermeneutic approach to science's theoretical objects. I am deeply grateful to him for the penetrating and provocative comments. Moreover, he has successfully escalated the debate on the specificity of these objects by situating my conception in relation to the profound theory of the heuristic structure of scientific inquiry put forward by Bernard Lonergan. I will make use of this opportunity by continuing the escalation in my

counter-criticism. Though I think that some of the questions Prof. Vos poses in his paper are answered in my recent book *The Tenets of Cognitive Existentialism*, his critical considerations remain extremely important.¹ Prof. Vos gets in a perfect manner several weak and neuralgic points in the family of doctrines I call cognitive existentialism. He admirably explodes the exaggerated forms of science-as-

¹ The publication of that book (Ginev 2011) coincides chronologically with the publication of Vos's essay.

practice conception (especially those guided by social constructivism and social theory of practices) by pointing out that insight and discovery are the ingredients of human creativity with which one cannot come to grips within a framework of studying the contextual construction of research entities. Prof. Vos addresses in a remarkably precise way the philosophical background of cognitive existentialism. He manages to pay attention to nuances of several doctrines I have developed over the last five years. Nevertheless, I think that my views are only partially identified correctly in his paper.

When I wrote this paper, another comment on cognitive existentialism, written by Prof. Robert Crease, appeared in *Balkan Journal of Philosophy*. At stake here is the issue of the genesis of science's theoretical objects. The way in which this issue is discussed by Prof. Crease has much to do with Prof. Vos's criticism that my doctrine suffers from insufficient resources for approaching the theoretical objects' (trans-contextual) invariance. (More specifically, my doctrine cannot prevent one from accepting the essentialist implications from that invariance.) Obviously, addressing this issue in terms of cognitive existentialism hinges on taking into consideration a much broader constellation of topics pertinent to the hermeneutic-ontological status of science's theoretical objects. The symmetry principles, the contextuality of scientific idealizations, the scientific communities' quasi-religious belief in the existence of counterfactual theoretical objects, and the theoretical objects' immanent transcendence in the everydayness of scientific research are among these topics. In the course of writing the present paper, I realized that I will be not able to address in an appropriate manner the whole constellation. So, I decided to do this in a separate paper which will be chiefly devoted to responding Crease's comments and criticism. I am deeply indebted to Prof. Vesselin Petrov for giving me this opportunity.

I.

Prof. Vos criticizes my cognitive-existentialist conception of the status of science's theoretical objects for: (1) a crypto-essentialism in the practical construal of knowledge (manifested, in particular, in my account for theoretical objects by focusing solely on practices); (2) a lack of effective criterion for recognizing anti-essentialism; (3) the insufficiency of the explanation of why theoretical objects are only partially present-at-hand and ready-to-hand in the research process' spaces of representation; (4) a

presumed but not explained (trans-contextual) invariance of theoretical objects; (5) a kind of explanatory externalism regarding scientific practices that contradicts the internalist tenets of cognitive existentialism; (6) a neglect of the role which hypotheses play in scientific research (given that very often the theoretical objects come to the fore through the formulation of hypotheses); (7) ignoring the question of whether praxis is prior to theory or vice versa; (8) not addressing the constellation of anthropological (in particular, cognitive-psychological) factors such as intellectual awareness, curiosity, faculty of getting trans-empirical experience which poses necessary conditions of the production of knowledge based on theoretical objects; (9) a reduced account of discovery; and (10) the misunderstanding of understanding through disentangling it from the cognitive experience's procedural manifold, and treating it as a trans-subjective horizon of meaning constitution. Because of these deficiencies, flaws and shortcomings my conception "remains caught in a number of issues that are found in the essentialist framework." (Vos 2011, 240)

Vos's main assumption runs as follows: There is in the research process a residue of cognitive content that is not dissolvable in scientific practices. The most important ingredient of that residue is the hypothesis. Events like discovery and formulation of hypotheses exceed the scope of practical dealing with what is ready-to-hand in scientific research. (Yet Vos by no means advocates this claim by insisting on the irreducibility of the context of discovery to the context of justification. He rather defends the autonomy of a "heuristic context of inquiry". The residue I am speaking about is to be addressed in that context.) The aforementioned events do not originate in configurations of scientific practices. Accordingly, the theoretical account of them has to compensate the deficiencies of cognitive existentialism's practical account of science's cognitive structures. In forging such an account, one has to have recourse to science-as-knowledge conceptions. This claim in its turn presupposes a strong dividing line between practical and extra-practical part of scientific research. According to Vos, if one fails to address the extra-practical part in terms of science-as-knowledge, essentialism becomes unavoidable. I am not able to see the argument for this in Vos's paper. Yet I believe that the dualistic picture of practical and cognitive in scientific research is precisely what one has to overcome in order to achieve a consistent version of anti-essentialism.

II.

In trying to systematize my responses to Vos's bunch of critical points, let me start with "the essential anti-essentialism of cognitive existentialism". Imagine an analytical philosopher of science who in trying to elucidate the significance of her/his enterprise offers the following report. The aim of science is the construction of theories which are applied to phenomenal systems within their intended scopes. There are three main purposes of applying theories to such systems. The first of them is the testing of the theory. The second one is the prediction of phenomena that are unknown before the theory's construction. If an experiment designed in accordance with theory's explanatory scenarios succeeds in confirming the validity of the prediction then there is an independent test of the theory. The third purpose is the explanation of phenomena. (No doubt, the three purposes are in intimate mutual relations.) Testing, making predictions, and developing deductive-nomological explanations are normatively constrained procedures. By implication, applying theories to phenomenal systems is unavoidably subjected to a codex of epistemological norms (or, norms of epistemic rationality). Of course, there is a pluralism of alternative (including competing) codices of such norms. As a consequence, an inevitable conflict of different versions of scientific method takes place. Nonetheless, behind the plurality of normative methodological systems one is to find a meta-methodological core of non-contextual norms in this method that is eventually determined by what supposedly is the "axiological system of science" (the ultimate values of scientific research).

Prima facie nothing is wrong with this report. It can be found in thousands of elaborated versions in the vast literature of the analytical philosophy of science. Still, there is something wrong. The imaginary report tells us that there is a series of various sorts of determinism taking place (not necessarily in the actual scientific research, but indispensably) in the "context of justification" in which the analytical philosopher undertakes her/his "rational reconstruction". First, by admitting a fixed aim of science (pre-given to any research process) the report postulates a sort of teleological determinism.² Second, the report

assumes that each step in attaining the aim is normatively regulated. This assumption indicates a sort of normative determinism that is vehemently championed especially by those who oppose any naturalization of the philosophy of science. Normative determinism goes hand in hand with a sort of axiological determinism since the coherent advocacy of the former demands a substantiation of the epistemic norms through science's ultimate cognitive values. (The talk of under-determination of scientific behavior by norms, and of norms by values/aims, does not demand a substantial revision of the determinist picture of science. Thus, for instance, Laudan's reticulated model in which this under-determination comes to the fore only manages to create a common framework of all sorts of determinism. Weakening determinism by generalizing the Quinean figure of under-determination does not help one to escape essentialism.) Finally, the report presumes a kind of epistemological determinism since the initial distinction between theories and phenomenal systems is a specification of the subject-object cut as a prerequisite for procedural regimes of getting scientific knowledge. (In this case, it is the foundational representation of the world-out-there that determines the process of cognition.) To be sure, the list of possible sorts of determinism advocated in the traditional philosophy of science is by no means exhausted in the foregoing comment.

But why should one display discontent with determinism of all sorts? Through each particular sort – so the answer goes – one takes for granted an "essence of science" whose constitution is in need of a philosophical investigation. By skipping such an investigation, one commits the fallacy of hypostatizing cognitive essences. Cases in point for such essences are scientific method, scientific truth, the aim of science, the code of scientific rationality, the meta-methodological codex of scientific research, the invariant logical structure of scientific theory, the structure of explanation, the symmetry principles, and so on. (In the aforementioned formulation I would like to emphasize the term *constitution* which is not to be confused with the *empirical formation* that can be studied in the "context of discovery" or with the *methodical construction* as this gets stressed in constructivist doctrines.³ I am borrowing the term

² Another essentialist assumption in Vos's line of reasoning is that there is a goal of scientific research that can be extracted from the texture of the reading process, and presented as an autonomous aim. This is again a kind of teleological determinism/essentialism. On cognitive existentialism, there are tendencies, orientations and approximations, but not a final goal(s) in scientific research. Since the research process projects its being

upon an open horizon of possibilities, it is this process that constantly constructs its own future without assuming a pre-established teleological and axiological order.

³ The irreducibility of the *context of constitution* to the traditional context-distinction in the analytical philosophy is of crucial significance for championing the autonomy of the hermeneutic philosophy of science.

“constitution” from the phenomenological tradition where it refers first and foremost to the constitution of meaning as a pre-epistemic phenomenon. The production of knowledge takes always place – so a principal phenomenological argument goes – in a world that is already meaningfully constituted. This argument provides at the same time the rationale for distinguishing between constitution and construction. The latter refers only to the production of cognitive structures while the former takes into consideration the role of the meaningful world as a pre-epistemic horizon.) If the philosophy of science resigns from the duty to give accounts of the constitution of what seems to be cognitive essences then it will fail to accomplish the job for which it is entitled – to be both an interpretative theory of what is going on in the cognitive-practical dynamics of scientific research, and a critical theory of self-imposed inauthentic philosophical identities of science’s practitioners (in particular, the identities spelled out in terms of metaphysical realism, objectivism and scientism).

To put it in a lapidary way, cognitive existentialism is a family of doctrines that combat all forms of essentialism in the philosophy of science by unveiling the “existential genesis” of each putative and alleged cognitive essence in scientific research. According to a general reproach raised by Vos, my attempt at working out a radically anti-essentialist understanding of knowing falls short since it eliminates significant features about knowing in order to avoid essentialism. (Presumably, these features and events do not stem out of scientific practices.) This is a paradoxical formulation but it indicates shortcomings of the way I explicate my anti-essentialist position. Yet, I believe, these are not flaws of the very position. So, I am going to oppose Vos’s accusation that my approach has failed to break cleanly with the fundamental assumptions about knowing on which essentialism is based. To begin with, let me vindicate my observation that Vos’s criticism involves a paradoxical moment. In stressing the aforementioned features and events, Vos lays claim to the autonomous character of knowing. At the same time he purports to be a radical anti-essentialist. The combination is paradoxical since the former claim involves already an essentialist bias: An approach to scientific inquiry that appeals to cognitive events remaining presumably untranslatable in a language describing the inquiry’s contextuality is *per definitionem* a kind of cognitive essentialism. In what follows I will unfold this motif in several directions. In maintaining the untranslatable residuum, one admits that there is an essence in

scientific knowledge that makes science’s cognitive dynamics autonomous, i.e. enclosed in a self-sufficient circuit of interactions between theoretical reasoning and procedural experience.

This claim involves also a political moment that is in need of further clarification. On the “politics of cognitive existentialism”, one has to undo scientism and the other false philosophical identities of science *for the sake of the cognitive autonomy of scientific research*. This tenet seems as though in line with the claim of the untranslatable residuum. In both cases, the advocacy of science’s cognitive autonomy is at stake. Yet it is precisely the untranslatability of cognitive events in terms of scientific research’s contexts and situations that leads to the self-imposition of false (essentialist, objectivist and so on) identities. Scientific communities guided by false identities become easily manipulable, whereby the autonomy of the research process in their domains gets threatened. By combining the struggle against science’s false identities with the defense of the research’s cognitive autonomy, cognitive existentialism makes critical theorizing an intrinsic dimension of the hermeneutic philosophy of science.

III.

Vos makes the case that my denial of essentialism does nothing to explain the origin of science’s cognitive structures. I agree. It is the way of scrutinizing the hermeneutic fore-structuring of scientific research from the perspective of the ontico-ontological difference that helps one to give an account of this origin, thereby overcoming essentialism about these structures.⁴ It is not the denial of essentialism but the way of entering into the hermeneutic circularity of fore-structuring the domains of scientific research that should explain the origin of science’s theoretical objects (and more generally, cognitive structures). This observation has much to do with the method of double hermeneutics which I am going later to touch upon.

The nexus of understanding and interpretation (by means of which the ontico-ontological difference is introduced in hermeneutic phenomenology) plays a crucial role in cognitive existentialism. There is a trivial way in which one can explicate this role. Each scientific practice is at once a device of reading

⁴ In scrutinizing scientific research in such a manner, one is pursuing a much more ambitious task – to integrate the ontico-ontological difference in the actual production of scientific knowledge (or, in science’s cognitive body). A genuine hermeneutic phenomenology of science cannot avoid this task.

something ready-to-hand and a means for objectifying something (as an experimental outcome, a formalized object characterized by the possible values of parameters expressible by measurement scales, an idealized replica of a phenomenal system, a data-model, a physical system's behavior that consists in changing states over time and so on). As a device of reading scientific practice reads something-as-something whereby its status of something ready-to-hand gets retained. Here the "as" has the character of a "hermeneutic as". Accordingly, something-as-something in the reading process fore-structures the structure of objectification by means of which something gets *predicated* as an epistemologically identifiable object. (At this point I am following the hermeneutico-phenomenological thesis that the "interpretative as" fore-structures the "as of predication".) This fore-structuring proves to be (i) understanding of something-as-something within the meaningful whole of a context, tradition, paradigm, intellectual spirit, cultural milieu and so on, and (ii) interpretative articulation of that something-within-the-meaningful-whole.

On this trivial account, the nexus of understanding and interpretation is to be assigned to each particular scientific practice. Furthermore, the nexus concerns the continuity of reading by means of particular practices (reading controlling parameters of experimental systems, measurement scales, instruments, systems of partial differential equations, mathematical codifications of theoretical concepts, etc.) This continuity is contrasted with the discreteness of what becomes objectified. The trivial account, however, does not have resources to explain the contrast itself. The only conclusion one can reach in the framework of this account is that through objectifying something it gets de-contextualized (i.e. isolated from the contexts of reading or disentangled from the ongoing reading process). Finally, in the trivial account understanding and interpretation are closer to cognitive procedures than to existential phenomena.

Now, there is also a non-trivial way in which one can clarify the role of the understanding-interpretation nexus – a role whose analysis cognitive existentialism attributes to the *context of constitution* in studying scientific research. The non-triviality in this case concerns in the first place the notion of understanding. In the trivial explication, understanding is still a cognitive procedure accompanying all practices of scientific research. It simply means that there is a moment of contextual apprehension of what gets articulated in the domain of research. Yet, there is a hidden connotation in the

term of understanding that differs significantly from the meaning of a cognitive procedure. This connotation becomes clear when one says that one understands oneself upon the possibilities one can appropriate in one's existence (being-in-the-world). In this case, the whole of the possibilities that can be actualized is the *primary world* in which one exists. The actualizations of possibilities lead to "secondary worlds" such as the world as a habitat, the social world as an institutionalized network of roles and interactions, the cultural-historical world of patterns, symbols and traditions, etc. To claim that one understands oneself upon the possibilities one can appropriate amounts to claiming that the primary world is a projected horizon of possibilities that get actualized within-the-world. All "entities" in this world exist as projected upon possibilities. (In hermeneutic phenomenology, the expression of "the horizon of possibilities of understanding the world" is tantamount to the claim that "the world as understanding is a projected horizon of possibilities".) At the same time, the appropriation and actualization of possibilities articulates the world. This articulation has a character of interpretation since it is involved in an ongoing hermeneutic circle – the projection of the meaningful whole and the articulation of units of meaning are mutually presupposing each other. (On this account, the identification of a hermeneutic circle is a criterion for having interpretation. Again, the talk of interpretation here has nothing to do with a particular cognitive procedure. Interpretation is a phenomenon of the totality of being-in-the-world.) In this perspective, the nexus of understanding and interpretation is an ongoing hermeneutic circle that fore-structures each particular cognitive structure (as an outcome of actualized possibilities) within-the-world. Let me stress a special moment in the non-trivial explication of the role this nexus plays in cognitive existentialism that deserves to be discussed further: The hermeneutic circle of horizontal understanding and interpretative articulation is assigned not to particular practices but to the *interrelatedness of practices*.

IV.

On a leading motif of Arvin Vos's elaborations, scientific inquiry is carried out by those who are questioning (and creating problem situations). Through scientists' questioning events like insights, formulations of hypotheses and discoveries become possible. (No doubt, these events are hardly to be addressed in the context of justification. They belong rather to Lonergan's heuristics or to what

Peirce calls “abductive reasoning”). Only an individual person is able to generate questioning by thinking about something. On a Cartesian argument tacitly employed by Vos, because questioning is a modality of personal thinking, the ultimate subject of scientific inquiry is the individual. (Of course, within Vos’s elaborations the latter is taken to be a methodological regulative in focusing on pertinent issues and not the “only real subject” of scientific inquiry. In other words, Vos’s position tends to methodological individualism about the heuristic production of scientific knowledge.) On his position, cognitive existentialism’s insistence on horizontality, situated transcendence and trans-subjectivity seems at least quite suspicious. It drives the specter of essentialism from the back door. No doubt, Vos’s line of reasoning is intuitively quite reasonable and justified. Yet the intuitive vindication of the suspicion that there is a tacit rehabilitation of essentialism is not a philosophical argument.

The source of the principal disagreement between us is the trans-subjective dimension of scientific inquiry. For me, only by spelling out this dimension one would be able to overcome essentialism (and a fortiori scientism qua a false philosophical identity of science predicated on various forms of essentialism). I am afraid that there is no room for making sense of trans-subjectivity in Vos’s picture of scientific inquiry. In saying this, let me make a small detour to the hermeneutic logic of questioning. The reason for doing this is Vos’s accentuation of the role of hypothesis. There are no theoretical objects in science without formulation of hypotheses with testable consequences. And the formulation of hypotheses is not to be disentangled from the manners of scientific questioning. This is why the manners of questioning occupy a central place in what Vos calls (after Lonergan) the “context of inquiry”. For Lonergan, questioning determines “the heuristic structure of empirical method”. No doubt, what one achieves in the context of inquiry is a kind of “erotetic epistemology” that would address the interrogatory aspects of inquiry. Now, the logic of questioning is a topic of prime importance in hermeneutic philosophy as well.

Of course, in hermeneutic philosophy this logic is most profoundly scrutinized in Gadamer’s *Truth and Method*. The general presumption behind Gadamer’s considerations is that one is questioning when one experiences one’s situatedness in the tradition. What is experienced in the tradition is “meaning that is detached from the person who means it, from an I or a Thou” or from each particular group that experiences its situatedness intersubjectively.

(Gadamer 1989, 352) In that perspective, tradition is at once a genuine partner in a dialogue and an experiential reality to which we (as individuals and groups) belong. The experience which effectuates the openness to tradition being so characterized is the experience of the historically effected consciousness. “I” am able to meet the otherness of the other only within that experience: The fusion of horizons between me and the other can take place only in the historically effected consciousness. But then who is the subject of hermeneutic experience and historically effected consciousness? The obvious answer is that “we” who (by means of dialogue with) belong to tradition. Yet the obvious answer is not the correct one. “We” exemplify or instantiate that subject, but “we” are not identical with it. (What is important for Gadamer is that the particular dialogue between me and you that makes us “we” is mediated by the dialogue with the tradition.) The subject of historically effected consciousness transcends always already the situatedness of each particular form of “we” in the tradition. No doubt, it bears a resemblance to the Hegelian subject of the total historical experience. However, the conception of the hermeneutic experience implies a completely different (as compared with Hegel’s phenomenology) kind of trans-subjectivity (i.e. transcending of subjectivity). The trans-subjectivity of hermeneutic experience arises out of the situated transcendence of those who belong to tradition. Accordingly, the subject of the historically effected consciousness “embraces” both the empirical (individual and collective) subjects who because of their finitude are transcended by the tradition (and who indispensably are situated within it but nonetheless are constantly in a position to change their particular situatedness due to the dialogue with the other) and the trans-subjectivity of the fusion of horizons. The questioning is a “logical characteristic” of this integral subject (or to put it in Gadamer’s terms, a characteristic of the “logical structure of that openness which distinguishes the historically effected consciousness”). Within the structure of this openness, every question is to be understood as an answer to a previous question.

To a great extent, the subject of the reading process in scientific research bears resemblance to the subject of the historically effective consciousness. The former is both situated and transcended by the horizon of reading which is handed down through the everydayness of research practices. In other words, a kind of effective-historical situated transcendence operates in the ways in which the implementation of readable technologies constitutes scientific objects.

The openness which Gadamer attributes to the historically effected consciousness and hermeneutic experience characterizes also the research process which articulates a scientific domain. Consequently, the questioner in this process is the subject of reading that makes the readable meaningful. Doubtless, particular scientists and scientific teams pose the particular questions of inquiry. Yet the “ethos of questioning” which is inherent to the articulation of a domain is to be assigned to the trans-subjectivity of the reading process – the trans-subjectivity which remains unnoticed in Vos’s heuristic conception of inquiry. The questionability of what is under investigation in a scientific domain depends on possibilities projected by practices that can be appropriated within these practices. Since both practices and possibilities are trans-subjective the “ethos of questioning” is irreducible to the heuristic questioning of inventive individuals. I am not trying to underestimate the heuristic questioning. My point is only that the latter is to be understood by taking into account the deviations and transgressions of the established ethos of questioning. It is the trans-subjectivity of the research process that provides (what Gadamer calls) the “orientation toward openness”.

Let me sum up. On cognitive existentialism, the subject of scientific research is the subject of a reading process. It is the reading process where the “logic of question and answer” comes into play. This subject is at once (a) immersed (thrown) in the interrelatedness of practices taking place in the ongoing research and (b) equi-primordial with the very interrelatedness. In this formulation, (b) needs more elaboration. Negatively, it means that the subject of scientific research is not created or determined by configurations of practices already in progress. It would be wrong to say that only practical experience cultivates individuals who in their collectivity (by organizing their activities interactively) become the subject of scientific research. But it would be equally wrong to hold the view that only clever individuals are designing and planning configured scientific practices, thereby becoming the subject in question. The interrelatedness of practices is the ontologically primary reality of existence (the modes of being-in-the-world) to which the subject of the interrelatedness belongs as something equi-primordial with it. In its integrity this subject is to be neither recognized in the individuals nor in the interactively constructed social units. Its recognition requires a reflection that takes into account the ontico-ontological difference.

Here I have to repeat in a different perspective some claims already formulated. On the one hand, the subject is “ontically identifiable” in the choice of

possibilities whose actualization visualizes scientific research. In this partial identification, the subject of scientific research resides in the subjectivity of cognitive, emotive and volitional characteristics that are indispensable for choosing possibilities. On the other hand, the possibilities that get appropriated and actualized are not to be detached from the subject. Yet these possibilities do not exist as separate units or atoms. They are integrated in open and constantly changing horizons projected by the changing configurations of practices. Because of this projection the existence that is thrown in practices is always already projected upon possibilities. The subject of this existence is “ontologically identifiable” in the trans-subjective horizons. (Accordingly, the notion of trans-subjectivity is to be illuminated in the first place as that horizontality which always already transcends the subjectivity in such a manner that the choice, the appropriation, and the actualization of possibilities become possible.) However, the trans-subjective horizons do not exist *per se*, i.e. independent of the subjective acts of choosing, appropriating and actualizing possibilities.

The whole figure of choosing-possibilities-within-projected-horizons takes on the form of a *hermeneutic circle* between acts that articulate what is ready-to-hand within an interpretatively open world and horizons that transcend contextually performed acts. Entering into this circle requires an ontological reflection (in the sense of ontological difference) on the interpretative articulation. (The talk of the interrelatedness of practices is not to be simplified as a talk about a concatenation, coordination and subordination of particular practices. The interrelatedness of practices is the place where the hermeneutic circle in question operates, thereby constituting meaningfully the primordial reality of being in the world. This is the reality of the constitution of meaning within-the-world – a reality that is not determined by something external to it.) Thus, the subject of scientific research (as a particular mode of existence) is the circulative unity of subjectivity and trans-subjectivity.

Now, there is an important additional argument that demonstrates why this unity is to be spelled out on the model of interpretative circle. I began my considerations in this section with the thesis that the subject of scientific research is the subject of a reading process. To reiterate, each scientific practice of experimentation, construction of instruments, development of formalism, statistic interpretation of experimental results, creation of data-models, calculation, semantic interpretation of theoretical models, computer simulation and so on is distinguished by a

readable technology that allows reading of data, models, measurements, instruments etc. By implication, each configuration of practices taking place in scientific research is at the same time a “constellation of readable technologies”. (Such a constellation is by no means a “superposition” since the interaction of readable technologies creates very often non-linear effects.) Granted that a configuration of practices projects a situational and contextual horizon of possibilities, the readable technologies involved in a constellation are the means of appropriating and actualizing these possibilities. To the status of scientific research’s subject being as subject of a reading process corresponds the figure of situated transcendence. Having a potentiality-for-being (being projected upon possibilities) all entities involved in the reading of scientific research are at once in a situation set up by a configuration of practices (and their readable technologies) and beyond that situation. In working out the figure of situated transcendence with respect to different levels and aspects of scientific research, cognitive existentialism manages to avoid the dilemma between Popper’s “epistemology without knowing subject” (the hypostatization of scientific knowledge in its own Platonic world) and the kind of post-Quinean naturalism which reduces philosophy of science to cognitive psychology (the claim that all cognitive events in scientific research have their provenience in the individual mind). Both horns of that dilemma take for granted a relation of determinism. Cognitive existentialism is not a doctrine that seeks for a balance between the two kinds of determinism/essentialism. It does not hold, for instance, that the Popperian third-world-epistemology and the naturalist psychologism must be involved in a mutual compensation of their kinds of one-sidedness whereby the compensation would promote a sort of “feedback determinism”. The hermeneutic circle of subjectivity and trans-subjectivity excludes in a radical manner any relation of (causal, teleological or whatever) determinism. This is the basic argument of cognitive existentialism against essentialism.

V.

To be sure, Prof. Vos is right in criticizing my approach for not offering enough space for treating the real weight of hypotheses in scientific research. Yet he is not right in ascribing to hypothesis an independence from scientific practices. Once Vos has introduced the idea of this independence, he proceeds step-by-step to the full-fledged rehabilitation of the science-as-knowledge paradigm (or, in Vos’s

terms, the restoration of science’s image as a cognitive process). Arguing for this thesis would allow me to pinpoint another basic difference between our positions.

I am not ignoring the philosophical treatment of the structure of scientific knowledge. Yet for me, the dynamics of this knowledge is but the outcome of cognitive practices that are configured with different classes of non-cognitive practices. When Vos attacks cognitive existentialism for its lack of resources to address the issues of scientific hypothesis (and for its inadequate account of what knowing in scientific research is), he tacitly assumes the classical distinction between theory and praxis. However, the interrelatedness of scientific practices is not “the practical” as opposed to “the theoretical”.⁵ It is rather the existential mode of scientific research which becomes articulated in the scientific domains’ cognitive structures – the mode of being-in-the-world-by-doing-research. The articulation is due to the “work” done by the hermeneutic circle between subjectivity and trans-subjectivity, which is also the circle of situated transcendence in the reading process. Cognitive existentialism is not a doctrine that places emphasis upon practices as a strong alternative to cognitive operations and procedures. (The predicate “cognitive” in the title of my doctrine refers to the production of science’s *cognitive* specificity within interrelated practices distinguished by readable technologies. Originally, it was a doctrine of defending this specificity in terms of hermeneutic theory of practices.) By implication, cognitive existentialism is also not a particular position within the debate “science-as-praxis versus science-as-knowledge”.

On the tenets of cognitive existentialism, the very contradistinction between the theoretical and the practical belongs to the repertoire of essentialist philosophizing. Moreover, one can work out this contradistinction only by assuming a primacy of the epistemic relationship. If one goes on to claim that the practical has a priority over the theoretical, then one hypostatizes in a metaphysical manner a kind of practical essence. This would be a sort of “praxiological essentialism”. Cognitive existentialism avoids any reification of practices. The notion of practice does not single out an “independent body” of doings and performances. Practices have a being inasmuch as there is an iterative circularity of subjective choices and appropriation of possibilities and the horizons’ trans-subjectivity. Practices are not behind or beyond hermeneutic circularity. They are

⁵ On a corollary to this claim, the interrelatedness of practices has a priority over the particular practices.

the place where the latter comes to pass. Seen from another angle, practices have a being that gets revealed by the hermeneutic circularity which articulates the practices' relevant domain.

There is no component of science's cognitive content that resists reconstruction as a derivative of practices of inquiry. All kinds of hypotheses do not make exception. More specifically, the formulation of hypotheses is a *cognitive practice* that has a meaning only in configurations with other practices. (Along with all practices of developing and improving a theory's mathematical formalism, another example of purely cognitive practice is the *Gedanken* experiment.) Scientists formulate hypotheses if they are provoked by, for instance, some discrepancy or certain discordance of practices of formalization, calculation, measurement, experimentation, construction of instruments and so on involved in a given configuration. (Not to forget that there is a plenty of examples of important research processes that are not cases of hypothesis-guided research.) Vos's considerations are entirely in the (post-empiricist) spirit of the experience-theory correlations. By claiming that the formulation of a hypothesis does not supervene on the accumulation of experience, he follows a central epistemological paradigm of the analytical philosophy of science. The assertion that "discovery leads to the formulation of hypotheses which are composed of theoretical objects" (p. 242) seems to provide the rationale for the privileged status he assigns to hypothesis.⁶

Vos goes on to aver that the theoretical objects incorporated in hypotheses and hypothetical explanations are not essences in the sense I reject. I agree. They become essences if the hypotheses in which they are incorporated get treated in the epistemological framework of the experience-theory correlations. Vos advocates their non-essentialist character within a scenario that appeals to statements like (a) theoretical objects are mental products, and (b) theoretical objects are experienced as tied to a provisional discovery which will be open to revision or even reversal. In a sense of recapitulation, let me stress that placed in the Lonergan-Vos's context of inquiry

these statements make the commitment to dubious metaphysical figures of philosophizing unavoidable.

Since the alternative to cognitive existentialism which Prof. Vos adumbrates is essentially influenced by Bernard Lonergan's conception of the heuristic structure of scientific inquiry, a brief comment on this conception would be in place. Lonergan is pre-occupied with the circuit of scientific (empirical) inquiry. In contrast to the circuit of mathematical inquiry, it is not immanent. It does not move from initial images through insights to the production of new symbolic images whence higher insights arise. The circuit of scientific inquiry includes action upon "external things",⁷ and "moves from observation and experiment to tabulations and graphs, from these to insights and formulations, from formulations to forecasts, from forecasts to operations, in which it obtains fresh evidence either for the confirmation or for the revision of existing views." (Lonergan 1957, 1992, p. 59) Though not immanent, the circuit of scientific inquiry encloses an *order of cognitive procedures*. This order is normatively standardized but in a weak sense. At each stage of performing a class of procedures the possibility of deviating from the standardized order remains open. The weak normative determinism of the scientific inquiry's order of cognitive procedures is associated with the teleological structure of the research process. The deviations from the standardized order are allowed since there are many paths to reaching the final moment of the research process. The weak normativity of the teleological structure implies rather a quasi-algorithmic character of the order of cognitive procedures. It is this quasi-algorithmic way of carrying out scientific research that Lonergan calls "heuristic structure of empirical method", discriminating between classical and statistical version of this structure. ("Heuristic" here is to be understood as a procedural order that is revisable under circumstances. Furthermore, the structure is heuristic since its weak normativity makes the circuit of scientific research not decidable, in the sense that the norms and rules provide only orientations in moving from one to another set of cognitive procedures. By means of these norms and rules one cannot determine the exact choice of procedure at a certain stage. Presuppositions and expectations are always playing a heuristic role.)

The heuristic structure is at the same time a kind of teleological structure since it is informed by the final stage of the research process, which consists in

⁶ Discovery belongs presumably to a register of events that are not describable in the language of the interrelatedness of practices. But does it indeed belong to such a register? A discovery is only recognizable in a configuration of practices since it is generated by configured practices. On cognitive existentialism, appealing to self-sufficient cognitional process (enclosed in a circuit of procedures) and to knowledge (produced entirely by discrete cognitive acts) amounts to holding a version of the metaphysics of presence.

⁷ This talk of "external things" indicates how strongly Lonergan is committed to the primacy of the epistemic cut.

summarizing all relevant data from a single perspective and achieving symmetry between accurate (sweeping) deductions from laws and exact predictions of new phenomena made in accordance with a theoretical scenario. To sum up, Lonergan offers a prescriptive approach to science-as-knowledge that is akin to (a weak version of) normative epistemology. (Lakatos once suggested that by weakening epistemological normativism one is practicing epistemological heuristics.) Lonergan's cognitivist approach to scientific inquiry is reinforced by the role he attributes to insight. Not by accident he speaks about the "methodical genesis of insight". The latter is an ingredient of the order of cognitive procedures taking place in scientific inquiry. Insight mediates, for instance, between sets of measurements and the formulation of laws. Following Lonergan's philosophy, Vos depicts a picture of scientific inquiry that is a picture of ordered cognitive procedures (getting initial experience, formulating verifiable and falsifiable hypotheses, experimental testing, replicating experiments, and so on). Cognitive existentialism differs as a matter of principle from this approach to scientific inquiry because the notion of configured practices is by no means reducible to the notion of ordered cognitive procedures.

Against the background of the foregoing considerations, here is my response to another criticism. According to Vos, my scenario does not offer an explanation of why theoretical objects are only "partially" present-at-hand and ready-to-hand. On the shortest response, they are distinguished by this "dual partiality" just because they always contain non-actualized possibilities. Theoretical objects are always in a state of an *absent presence*. Each contextual actualization reveals a new potentiality, i.e. a "new absence" that in a further context might be made a "readable presence". My account of scientific research is based on the ongoing interplay between de- and re-contextualization of outcomes of scientific practices. Alternatively, a similar account can be given in terms of deferring spaces of representation. The former account is developed predominantly from a viewpoint of a neo-Aristotelian hermeneutics. At stake is the issue of the *phronēsis* of scientific research. The second account searches for a deconstructionist portrait of science's research dynamics. My contention is that both accounts complement each other.

Cognitive existentialism draws on the doctrine of hermeneutic realism. According to the latter, the reality of being-in-the-world is much more comprehensive than the reality which is out there as something that waits to be represented by mind and con-

ceptualized through the order of cognitive procedures. In this regard, hermeneutic realism is much stronger form of realist philosophizing than traditional scientific realism. Hermeneutic realism is sensitive to the hermeneutic situations of the modes of being-in-the-world. With regard to this sensitivity the methodology of double hermeneutics acquires a central status. Roughly, the double hermeneutics offers two complimentary approaches to the interpretative articulation. On the one hand, it offers a "thick description" of all contingent interpretations taking place in a domain of practices. On the other hand, it looks for the hermeneutic fore-structuring of what gets constituted in that domain. To address this fore-structuring requires to focusing on the characteristic hermeneutic situation of a domain's articulation. Cognitive existentialism forges the concept of such a situation by scrutinizing the forms of self-reflexivity taking place in scientific research. In a characteristic hermeneutic situation one makes explicit those presuppositions which guide the employment and the harmonization of readable technologies. This self-reflexivity aims at discerning the manner in which reading embedded in scientific practices constitutes objects of inquiry.

In reflecting upon the hermeneutic situation of a domain's articulation, those who are involved in the articulation a domain of research attain their consolidation and emancipation qua a scientific community devoted to a certain kind of constituting/reading theoretical objects in established laboratory everydayness. This is, however, a topic whose analysis I have to postpone for the next part of my rejoinder.

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Book reviews

Process and Consciousness: an alternative to reductionism and materialism

[(Reviewing *Process Approaches to Consciousness in Psychology, Neuroscience, and Philosophy of Mind*, Edited by Michel Weber and Anderson Weekes, Suny Press, 2009, 472 pp.)]

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In the last decades the topic of consciousness has regained increasing importance. Its role was a vital one in Modern philosophy. But in the first half of the 20th century it became a prohibited subject in virtue of its denial and almost total obliteration in the scientific milieu. Its rehabilitation in the mid-20th century sided with the discrediting of behaviourism. However, it was the surge of computer science and neuroscience that reinstated consciousness as a respectable subject matter for scientific studies. The classical divide between dualism and materialism presented itself once again as the only possible background to the mind-body problem. Materialism prevailed but both theories included dualistic pre-suppositions, if only in a surreptitious manner.

Process Approaches to Consciousness in Psychology, Neuroscience, and Philosophy of Mind considers consciousness and also the mind-body problem in a totally new light. It tries to supersede both dualism and materialism. It relies on process for a new method and for a new proposal. Whitehead's philosophy serves as the starting-point for many of the collected papers in this volume. However, very few remain faithful to a rigorous interpretation of the Whiteheadian doctrine. Process philosophy is only the main source of inspiration of most texts. The scope of the book is a comprehensive, interdisciplinary one. It is intended to target a large audience of readers, not only a small group of Whiteheadian scholars.

Its main topic is, of course, consciousness, which is mostly taken in a broad sense. It diverges

from the Whiteheadian notion *strictu sensu*. Whitehead ascribes consciousness only to higher organisms, but he does ascribe experience to every actual entity. This widespread subjectivity can be considered to coincide with consciousness in its broadest sense. In *Process Approaches to Consciousness*, the notion of 'consciousness' is used in broader and narrower senses. There is no unified meaning of this term and it is up to reader to clarify if the word bears a broader or narrower meaning.

The book is divided into five main sections: I) *Setting the Stage*, II) *Psychology and Philosophy of Mind*, III) *From Metaphysics to (Neuro) Science (and Back Again)* IV) *Clinical Applications: Consciousness as Process*, V) *History (and Future?) of Philosophy*. But what stands out, as the aggregate theme of this publication is the relevance of neuroscience and cognitive science to metaphysics and in particular to philosophy of mind. People from various fields author this collection of papers: psychologists, philosophers, biologists, and medical doctors. It is truly an interdisciplinary publication.

Michel Weber and Anderson Weekes are the co-editors of this volume and co-author the three opening papers. These are mainly of an introductory, presentational character. The "Introduction" is a very good précis of the whole book. It sticks very skilfully to the theses of each author preserving even what some authors misread in Whitehead's philosophy. At the end there is a brief overview of related literature, i.e. of the literature relating to Whitehead's theory of consciousness.

The second co-authored essay “Process Thought as a Heuristic for Investigating Consciousness” introduces process philosophy. And it is still an introduction to the collection of essays. It emphasises the scope of the book: to create an alternative theory of consciousness founded on process philosophy. One of the advantages of such a theory would be to accommodate empirical research to a sound philosophy. This paper presents a broad notion of consciousness and emphasises its qualitative character. It ascribes to consciousness experiences such as: “unity, intentionality, reflexivity, perspectivity and personality.”¹ It also draws attention to the so-called ‘abnormal’ states of consciousness. Normal consciousness is indirectly informed by ‘marginal information’, which does not present itself to consciousness in a clear and distinct way. Some of the papers in this volume are concerned with marginal phenomena to show how abnormal subjectivity can elucidate and even found normal consciousness: coma, hypnosis, dementia, paraplegia, aphasia, etc. Weber and Anderson’s essay makes it clear that the authors of the book take a stance that is very different from the mainstream consciousness studies. The main reason for this is Whitehead’s philosophy, which is the source of inspiration for every essay in this volume.

The third paper “Whitehead as a Neglected Figure of Twentieth-Century Philosophy” focuses on a certain revival of Whitehead’s doctrines, albeit his being ostracised from academic philosophy. Whitehead’s metaphysical endeavour has long been seen with suspicion. For most of the 20th century, metaphysics was treated as irrelevant speculation not subject to the scrutiny of the scientific method. Whitehead’s metaphysics aims at comprehensiveness, which he calls coherence: the metaphysical system should leave nothing out. Philosophy is thus an all-inclusive undertaking that embraces and aims to harmonise all branches of knowledge. This need for coherence defied the scientific establishment of Whitehead’s time as well as ours.

In fact, at the beginning of the 20th century Whitehead’s theory was at once too hard to understand and too well informed from a scientific standpoint. In the 21st century the novelty and brilliancy of his ideas continue to bother the established academia. His well-founded distrust of scientific materialism looks questionable as to contemporary neuroscience and cognitive science.

However, most of today’s neuroscientists still ignore almost completely the findings of physical theory in the beginning of the 20th century. Fashionable materialism has been around since the 17th century and its naïve pre-suppositions continue to appease most consciences. Whiteheadian metaphysics rejects substantialism and proposes a new mode of permanence: form.² Whitehead also advocates that becoming transforms incoherence into coherence.³ Both principles refute scientific materialism in its dogmatic and prevailing position. In adopting Whitehead’s philosophy as an inspiration *Process Approaches to Consciousness* considers thus consciousness from an unbiased perspective and endeavours to develop a new stance on metaphysics and consciousness studies.

Michel Weber is the single author of an essay in this collection titled “Consciousness and Rationality from a Process Perspective”, which is included in Part IV. Weber besides being a renowned Whiteheadian scholar is also a trained hypnotherapist. He is an original thinker who conciliates rigour in his interpretation of Whitehead’s philosophy with a distinctive thinking of his own. His long essay deals with the different rationalities of consciousness, and also with its different levels that “correlate” with such diversity.

Michel Weber draws attention to the process of the constitution of private consciousness, which cannot be separated from the way a socially rational consciousness is constituted. Both types of consciousness, private and public reflect one another in their constitution. The level of consciousness we are accustomed to leads to clear-cut perception and keeps itself on a level where ‘normal’ and sane rationality is to be found. There may be a discrepancy between the rationality of an individual and what society currently recognises and accepts as rational. According to Weber, the classification of insanity is always a social decision. Normal rationality is thus defined in accordance with social rationality.

Weber has recourse to Bergson and Whitehead’s philosophies to reject substantialism as well as the separateness of subject and object. Consciousness is not an entity; and it includes a diversity of levels of awareness that involves a variety of unconscious states. Although our perception is embodied, sense perception is normally reduced to the perception of the five senses ignoring all the rest. But there are other kinds of perception that should be taken into

¹ P. 47

² *Process and Reality*, p. 29 [44].

³ *Ibid.* p. 25 [38].

consideration, like interoception, the perception of 'interior' sensations such as hunger and pain. Weber reminds us of the Whiteheadian concept of the witness of the body. Our perceptions, no matter what kind are all rooted in this witness of the body. "For we feel *with the body*."⁴ This is an elusive feeling but still it is always there. Therefore the functioning and coordination of our bodily organs testify to the reality of the unconscious.

Hypnosis, which is used for therapy presents a rationality that is different from the normal, conscious one giving rise to a new form of consciousness. We are then in the realm of the unconscious, but not in a world of irrationality.

Weber understands the hypnotic state as something primordial that can originate a peculiar wakefulness that allows for alterations of personality, a reinvigorated lucidity and opens up many possibilities for the hypnotic subject.

It uncovers an ontological consciousness that can generate many different levels of consciousness, as well as their corresponding rationalities thus surpassing all the difficulties of "materialistic dualism, vitalism and panpsychism."⁵

Michel Weber's essay is of great originality and it is also consonant with process philosophy in regard to: the rejection of substantialism, the interaction of private and public consciousness that defines normal rationality, the acceptance of the unconscious and different levels of consciousness, and the experimentation with hypnosis in order to validate the reality of the unconscious and its different levels.

Anderson Weekes is the author of three essays: two introductory papers and the last essay that ends the book.

The first paper "Consciousness as a Topic of Investigation in Western Thought" describes the various concepts that gave rise to the unified notion of "consciousness" through the history of philosophy. Weekes examines the etymology of the word "consciousness" as well as that of some words that are related to it. He also explores the notion of subjectivity. Subjectivity leads to unreliable cognition because of the deficiencies of the subject. He draws on Whitehead's criticism of Modern philosophy as far as it relates to the need of a theory of knowledge and discards coordination. Despite its unreliability, subjectivity is a Modern discovery and Whitehead sympathises with it. Modern philosophy

starts with the experience of the subject, not with impersonal facts like Ancient or Scholastic philosophy. However, Whitehead recognises that Descartes himself was unable to draw adequate conclusions from his discovery. Cartesian philosophy adopts the substance-quality categories and applies them to subjectivity treating it as a thing. Substantialism thus ruins Descartes' insight that philosophy begins with the experiencing subject. Whitehead's reformed subjectivist principle establishes the subject as a process and not as a thing. Weekes is very skilful in treating consciousness and subjectivity right through the history of philosophy. His exposition of Modern philosophy and his evaluation of Whitehead's critique of Descartes' are very ingenious and well articulated.

The subsequent essay "Whitehead's Unique Approach to the Topic of Consciousness" is also written by Weekes. He underlines the relative metaphysical unimportance of consciousness in Whitehead's philosophy due to its rarity in nature. Consciousness is a late product of evolution that is characteristic of higher-order animals. It pictures the world clearly and distinctly but this perspective is not really a valuable one. Whitehead privileges unconscious perception or preconscious perception (i.e. causal efficacy) over clear-cut perception, which comes very close to what he calls presentational immediacy. Only causal efficacy is foundational.⁶

In reading Weekes's analysis, Whitehead's concept of the bifurcation of nature immediately comes to our mind, although Weekes does not mention it.

Weekes refers Cartesianism again and recognises in it the modern idea of absolute objectivity, which does not allow for the 'subjective uniqueness of an event in nature'. He also mentions the term 'panexperientialism' coined by Whiteheadian scholars to exempt Whitehead's philosophy from being labelled as panpsychism. Indeed, Whitehead does assign subjectivity to every actual occasion that is *causa sui*, but, as Weekes abundantly emphasises, there is no question of assigning consciousness throughout nature.

⁴ *Process and Reality* p. 311 [474].

⁵ P. 374.

⁶ The denial of this primacy to consciousness is opposed to philosophical theories such as Husserl's phenomenological reduction, logical positivism, materialism and idealism. In these theories consciousness is assigned a very important epistemological importance. It is taken to picture the world as it is and the world is taken to be as it is for consciousness. Consciousness then has no place in the world.

Whitehead's approach is really unique in that every actual occasion is a temporal unit that is self-determining in accordance with its own subjective aim.

"Consciousness and Causation in Whitehead's Phenomenology of Becoming" is the last essay in this volume and it is also of Weekes's single authorship. It is a very long paper that focuses on causality. Whitehead's solution to the problem of causality is again different from the mainstream. Weekes draws on the work of Eleanor Rosch and M. C. Price. Rosch examines causality within philosophical tradition, whereas Price argues that the problem of causality and the mind-body problem are closely related.

Anderson Weekes says that the mind-body problem cannot be solved apart from the problem of induction. He also states that Whitehead holds that the induction problem cannot be solved apart from the mind-body problem. It should be stressed, however, that Whitehead did not concern himself with the mind-body problem as such and that the relation of induction to the mind-body problem is far from being a straightforward and indisputable association.⁷

Weekes also mentions that the induction problem leads to the problem of causality. He holds that Whitehead in accommodating the past in his notion of process explains causation and sets consciousness as an important instance of process. According to Weekes it is really the consideration of process, and of consciousness as process that solves the question. However, as far as the problem of induction is concerned Whitehead emphasises in *Process and Reality* that what is determinant in induction is our "presupposition of the maintenance of the general order of the immediate environment"⁸ which within the philosophy of organism has a social generation. The past in some way determines the present but it allows for creativity. Induction does not really accommodate the past; it simply accommodates itself to the existing order.

⁷ As for induction, Whitehead held in *Science and the Modern World* it has a social character; in *Process and Reality*, after quoting a passage from *Science and the Modern World* about induction, he writes: "But the laws of nature are the outcome of the social environment. Hence when we have presupposed a type of actual occasions, we have already some information as to the laws of nature in operation throughout the environment." p. 204 [311].

⁸ Ibid.

David Griffin's paper "Consciousness as Subjective Form; Whitehead's Nonreductionist Naturalism" tries to adapt Whitehead's philosophy to a certain kind of Protestant theology, so that Cartesian dualism and reductionist materialism can be invalidated. He draws the reader's attention to the inadequacies of dualism and materialism and stresses the difficulties that both dualists and materialists encounter in the question of freedom. Griffin then describes what he calls 'Whitehead's panexperientialism' as a remedy for such difficulties. Griffin borrows from Charles Hartshorne a certain deviation and modification of Whitehead's theory. He also very emphatically rebuts the claim of Whitehead's philosophy as a panpsychism and draws painstakingly the line between panpsychism and panexperientialism. He regards his own view of panexperientialism as a convincing alternative to solve the mind-body problem.

Michael Katzko authors the next essay, "The Interpretation and Integration of the Literature on Consciousness from a Process Perspective". Katzko's essay is very well informed and sums up in a very skilful way the contemporary debate on the question of consciousness. His appreciation of Whitehead's philosophy is flawless. He examines the notions of coherence and adequacy as a useful interpretive methodology for the exploration of contemporary theories on consciousness. Katzko focuses on the works of Chalmers, Dennett and Searle. They all reduce consciousness to the physical and hold that the physical causes the mental. They also retain dualism as they consider consciousness as something subordinate to the biological. As such, contemporary literature is incoherent because as a rule, it presupposes dualism. In taking consciousness to try and reduce it to the physical world, contemporary literature perpetuates a mysterious phenomenon, because between the physical processing of the brain and the phenomenal event there is a huge gap.

As a proposed solution to the mind-body problem, Katzko reminds us that Whitehead rejects "the doctrine of vacuous actuality". This doctrine implies that individuals "need nothing but themselves in order to exist". The world is composed of separate, unrelated entities. Katzko writes: "What makes Whitehead's system monistic is the aim to provide one coherent scheme of explanation. In this sense it is neither physicalist/materialist, on the one hand,

nor idealistic/panpsychic, on the other.”⁹ He further analyses the vector character of actual entities and how this can account for the indivisibility of process. Actual entities are the outcome of concrescence; a concrescence is not a sequence of cause and effect; it is rather a cumulative, synthetic process in which the terminal actual occasion is a complex entity that incorporates all others.

Katzko concludes that process is the unifying concept that can provide a coherent explanation to the question of consciousness.

The late Donald Redfield Griffin wrote an essay “Windows on Nonhuman Minds” which is posthumously published in *Process Approaches to Consciousness*. This most interesting article explores “animal rationality”. It is a stimulating and unbiased approach to animal consciousness.

The application to animal brains of the same methods that are used to study human brains, such as neuroimaging, will lead to the conclusion that animals too have brain activity that correlates with some sort of consciousness. Donald Griffin describes different experiments with monkeys that show how the responses to certain stimuli in blindsight can be very similar both in humans and monkeys. He is also very much interested in the communication of subjective experiences.

Animal language is a topic of interest for Griffin. He mentions the Washoe experiment in which a chimpanzee is taught to communicate by gestures modelled after the gestures usually used by the deaf. He also alludes to parrots that can repeat the words they are taught in a meaningful way, and dolphins trained to understand human gestures. Honeybees seem to be able to communicate symbolically by means of their waggle dance. Griffin holds that bees can report “about important objects that are far removed in space and time”.

Donald Redfield Griffin concludes that animals can experience thoughts and feelings. Also they can communicate. This is in agreement with Whitehead’s view that “higher animals entertain notions, hopes and fears”¹⁰, even though there is a huge difference of degree between human consciousness and animal consciousness.

This is a groundbreaking article that shows how biased our conceptions on animal consciousness are. Process theories can indeed help unravel ‘the mystery’ of consciousness. And the study of different forms of animal consciousness can shed

new light on evolutionary perspectives of consciousness.

George W. Shields ambitious article on “Panexperientialism, Quantum Theory, and Neuroplasticity” opens the next section. It is a defence of panexperientialism in the light of Charles Hartshorne and David Griffin’s interpretations of Whitehead’s philosophy. As a consequence some basic concepts of Whitehead’s philosophy such as the concept of actual occasion are grossly misinterpreted. His analysis of panexperientialism aims at rebutting dualism and materialism, but in fact it reintroduces materialism by way of his misinterpretation of the concept of actual occasion. Shields also rejects the objections that are mainly raised against panexperientialism by analytic philosophy. His defence aims at being as rigorous as the analytic criticism.

In the second part of his essay he focuses on the plasticity of the brain. Shields says acts of attention can cause alterations in the brain. These modifications can influence behaviour and experience. So the relationship between acts of attention and brain plasticity can be described as top-down causality. He holds that Whiteheadian panexperientialism accommodates this kind of causality. But this thesis is once again anchored on a flawed notion of actual entity and it unmindfully reintroduces materialism.

Whiteheadian atomism is thus taken in the same sense as that of the old materialistic atomism of Democritus. It is a pity Shields’s rejection of materialism is not well founded on Whitehead’s philosophy.

The next essay “The Evolution of Consciousness” is written by Max Velmans. It is a clear, concise and well-articulated paper. It takes the view consentaneous with process philosophy that consciousness has many forms. Velmans considers consciousness not to be confined to humans and higher animals. The distribution of consciousness is directly related to its evolution. The notion of consciousness Velmans argues for is not identical to Whitehead’s, but it is not in disagreement with it. However, Velman’s view is very close to the view of the French process philosopher, Henri Bergson. Like Bergson, he holds that unicellular organisms and plants in their interactions with the world reveal a kind of “rudimentary consciousness” or “sentience”. This is also in accordance with Whitehead’s theory of feeling, even though Whitehead holds that consciousness is a feature of higher animals.

⁹ p. 210.

¹⁰ *Modes of Thought*, p. 3–4.

Velmans makes a useful distinction between consciousness and self-awareness. He ascribes self-awareness only to beings capable of self-representation.

Velmans also argues that consciousness is not limited to beings that have a brain. Contrary to what is frequently held, consciousness does not emerge with the appearance of the neo-cortex. It is a continuous process that does not supervene upon matter and cannot be traced back to a clearly defined moment. Like matter, consciousness emerged with the universe from the very beginning.

Velman's view is a refreshing, unbiased, well-founded perspective, which is perfectly tuned to process philosophy.

Velman's paper is followed by Gregg Rosenberg's essay "The Carrier Theory of Causation". He bases his argumentation on Whitehead's rejection of 'vacuous actuality', which Rosenberg considers to be the ontological side of the fallacy of misplaced concreteness. He examines the "relationships that define the explanatory structure of scientific theories". He describes these relationships as circular, for their elements presuppose one another.

Rosenberg holds the substantialist view that proposes "carriers" for the 'transport' of properties that have to be external to this circular relationship. This is an ingenious thesis and its substantialism is consonant with the scientific materialism and reductionism that informs science in general.¹¹

Rosenberg concludes that panexperientialism is acceptable in some degree. His substantialist presuppositions, however, prevent him from ascribing widely spread experience to everything.

In Part IV Maria Pachalska and Bruce Duncan Mac Queen author the first paper, "The Micro-genetic Revolution in Contemporary Neuropsychology and Neurolinguistics". It is a clear and well-informed critique of fashionable neuroscientific theories. It propounds a new paradigm: microgenesis.

Philosophy of mind and neuroscience should converge but they remain far apart; the former almost ignores completely the complexities of brainwork, the latter disregards the character of perception and thinking. The authors of this paper reject the view that the brain coincides with the mind and that the brain is a computer. Considering the brain as a computer raises a very difficult question:

how is the brain operated? The computer does not think by itself, it only responds to the instructions introduced by an operator. In the same way, "computers do not grow, and when damaged, they do not repair themselves, but brains do both of these things."¹²

On the other hand, cognitivist theories cannot account for brain activity either. They postulate mental modules as separate elements; finding the neural correlates of these modules is seen solely as an empirical problem, which can be overcome as soon as enough relevant data can be gathered.

Pachalska and Mac Queen examine micro-genetic theory as is developed by Jason Brown. Clinical observation is used as a basis for this theory. Time is taken as foundational; microgenesis borrows the notion of duration from process philosophy. In process philosophy the present time is not reduced to a timeless instant; experiential incidents have their own particular duration, and "this duration endures"; it has thickness.

Brown sees the brain as the outcome of evolution. And "consciousness is not purely a cortical phenomenon [...] but emerges precisely from the process of evolution, passing from an undifferentiated core, through an animist dream world, to a world of self and objects. It is the whole process, not just its endpoint, that constitutes and creates consciousness."¹³ According to Jason Brown, consciousness does not solely appear in the cortex, as is commonly believed. It is a whole process that is initiated earlier to the activity in the cortex. He considers several phases in the evolutionary process: the reflex, which is linked to the brainstem, the emotion, which is related to the limbic system, and consciousness that is connected to the cortex. Consciousness is thus the "product of the self pushing its way up through the evolutionary planes and perceiving itself in action."¹⁴ Pachalska and Mac Queen regard consciousness as a mental process by which the self generates itself. It is something more than a state of mind or a brain state.¹⁵

Pachalska and Mac Queen emphasise the importance of pathology for the study of the process of thinking. They examine akinetic mutism, tetraplegia and paraplegia, Parkinson's disease and Tourette's syndrome, aphasia and apraxia. In all of these diseases consciousness seems to persist, but

¹¹ The materialistic establishment might even accept Rosenberg's critique, at least from a formal point of view.

¹² P. 298.

¹³ P. 323.

¹⁴ Ibid.

¹⁵ P. 321.

motor behaviour is impaired.¹⁶ Their appreciation of Brown's theory is based on a sound analysis of clinical cases.

Avraham Schweiger, Michael Frost and Ofer Keren write "From coma to Consciousness Recovery and the Process of Differentiation". They examine the process of recovery from coma to normal consciousness and consider it a process of differentiation. Consciousness is in constant becoming and it is thus a process, not an emergent isolated property representing reality. Consciousness develops from a vague unity to a differentiated individuation. This is consonant with Whitehead's idea that early experience is vague and undetermined, whereas consciousness is a late phase in the process of experiencing, proper to higher-level animals. The process of recovery from coma fully illustrates the passage from diffuse states to a state of discreteness and differentiation. The authors of this paper draw on the work of Maturana and Varela for a phylogenic view; every living creature comes into being through a "self-making and self-defining" process. They also consider an ontogenic perspective through the work of Jean Piaget; cognition is a process of interaction and adaptation between the individual and the environment. Jason Brown's microgenetic perspective is the main source of this essay. Cognition is considered as a possibility to retrace the evolutionary pathway from a vague and diffuse state to conscious distinctiveness. Consciousness is thus the child of individuation.

This magnificent synthesis of different theories sheds a new light on the process of defining consciousness.

The last part of the book presents an article by

Xavier Verley "Consciousness, Memory, and Recollection According to Whitehead". It is a very proficient analysis of Whitehead's critique of Modern philosophy. Verley focuses on Descartes and the notion of subjectivity. He examines the appearance of consciousness as substance. He quotes Whitehead: "The simple notion of an enduring substance sustaining persistent qualities, either essentially or accidentally, expresses a useful abstract for many purposes of life. But whenever we try to use it as a fundamental statement of the nature of thing, it proves itself mistaken."¹⁷ The Cartesian self is defined in its relation to itself. This leads to solipsism and to a substance self that does not relate to the world and loses its integrity. Memory is an essential element in the process of integrity, for it establishes a continuous, unabridged tie between the 'I' and the world. Whitehead's idea of the bifurcation of nature is thus applied to the mind: "According to Whitehead, the alienation of consciousness isolated like a point springs foremost from a bifurcation of nature into what is in itself and what is for us. This bifurcation is repeated by a split in the mind between what the mind is in itself and what it is for itself."¹⁸ Verley thus brilliantly synthesises the double bifurcation of nature that is implicit to almost every philosophy of mind. Process philosophy can recover and validate the unity of the mind.

Process Approaches to Consciousness is a very provocative and innovative book on the topic of consciousness. It overcomes materialism and dualism and propounds a new solution to the mind-body problem. Process philosophy presents itself as a new, broad and unbiased alternative.

¹⁶ "What then is a symptom? Instead of the unreflective assumption that a lesion destroys or disables a centre, an operation or a representation, brain process should be conceived in terms of wave-fronts or recurring fields, and a lesion as a disruption in the flow, comparable to a rock in a stream." p. 319.

¹⁷ P. 405, note 2. (PR 79)

¹⁸ pp. 404–405.