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Research Article **Open Access**

Philipp Berghofer

Transcendental Phenomenology and Unobservable Entities

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Abstract: Can phenomenologists allow for the existence of unobservable entities such as atoms, electrons, and quarks? Can we justifiably believe in the existence of entities that are in principle unobservable? This paper addresses the relationship between Husserlian transcendental phenomenology and scientific realism. More precisely, the focus is on the question of whether there are basic epistemological principles phenomenologists are committed to that have anti-realist consequences with respect to unobservable entities. This question is relevant since Husserl's basic epistemological principles, such as the "principle of all principles," seem to suggest that epistemic justification is limited to what can be originally given in the sense that if an object cannot be given in an originary presentive intuition, then one cannot be justified in believing that this object exists. It is the main aim of this paper to show (i) that *interpretative* reasons exist for not reading Husserl in such a way and (ii) that *systematic* reasons exist as to why phenomenologists *should not* subscribe to this criterion. I shall put forward a different criterion of justification that satisfies the spirit of Husserlian transcendental phenomenology and allows for justifiably believing in the existence of unobservable scientific entities.

Keywords: transcendental phenomenology, unobservable entities, Edmund Husserl, criterion of justification

1. Towards a phenomenological transcendental idealism

Husserl's last major work, *The Crisis of European Sciences and Transcendental Phenomenology*, not only offers a new way to the transcendental reduction by taking the ontology of the life-world as the starting point, but also outlines the cornerstones of a phenomenological approach towards a philosophy of science. In this paper, I explore how phenomenological transcendental idealism (TI), as established in Husserl's *Crisis*, relates to scientific realism. More precisely, the question is whether phenomenological TI is compatible with affirming the existence of unobservable entities, which are taken for granted in currently established natural sciences. Examples of such unobservable entities include atoms, electrons, and quarks.[1] In this section, we will see that a Husserlian phenomenological TI has an intrinsic *epistemological*[2] component: via his conception of the correlational a priori, Husserl closely connects TI with a *theory of evidence*.

Husserl's *Crisis* might be best known for its criticism of what the European sciences have become, but there is little agreement and much confusion about what precisely is being criticized by Husserl. Does he criticize the natural sciences per se or only how they are philosophically interpreted? With respect to

1 With respect to the term "unobservable," I follow the terminology of Wiltsche 2017 and consider objects that cannot be directly observed due to their size as one type of unobservable entities. For the purpose of this present paper, it is not important to offer a precise analysis of when an object becomes too small to be observable. It suffices to know that we take atoms, electrons, and quarks as examples of such a type of unobservable entities.

2 Cf. Luft 2004, 204.

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formalisation and mathematization: Does he criticize *that* natural sciences use formalisations or *how* these formalisations and their significance are philosophically *interpreted*?[3] Thus, I begin with an overview of what Husserl explicitly criticizes:

(1) The demand that the kind of reasoning/formalisation that is so successful in the positive sciences must be the role model for all kinds of reasoning, i.e., for all kinds of scientific research, is "nonsense" (Hua VI, 317).
(2) Modern formalised science is incapable of providing answers to humanity's "most burning" questions (Hua VI, 4).
(3) In modern science there has taken place a "surreptitious substitution of the mathematically substructed world of idealities for the only real world," namely, "our everyday life-world" (Husserl 1970, 48 f.), not realizing that the life-world is the "constant fundament" of all positive sciences (Hua VI, 342).

Which means that

(4) the world of our everyday experiences, our life-world[4], has been reduced to mere illusion,
(5) formulas are not interpreted as a method to describe nature but as true nature itself.

Moreover,

(6) Science has lost its true sense, has become a mere technique, and all attempts to lead the scientist to a sense-revealing reflection are disregarded as metaphysics (Hua VI, 57).

Each of these points deserves its own discussion, but since we are interested in the relationship between transcendental phenomenology and scientific realism, we need to focus on (5). What Husserl wants to point out is that mathematics and geometry are only *methods* used to describe physical reality; they are not the "true" reality lying behind what we can intuitively (*anschaulich*) observe. He criticizes that scientists and philosophers seem to have forgotten this point and tend to confuse what is a method with what is reality. To be sure, Husserl does *not* criticize science or the formalisations that take place in scientific investigations per se. He criticizes how the scientists' methods are ontologically interpreted. As Rosemary Lerner puts it:

> The 'crisis of European sciences and humanity' is due not to the 'application' of analytic geometry to the physical world but to the 'shift in meaning' whereby it is *concealed* and *forgotten* that mathematical disciplines are only powerful 'methods' and ingenious 'hypotheses' *constructed by finite human beings*, not *ontological* descriptions regarding a supposed reality 'such as God sees it in itself'. (Lerner 2015, 168)

Husserl holds that transcendental phenomenology must clarify the foundations of the natural sciences, and Lerner is right when she says that precisely "[t]hese issues led Husserl in 1898 to the 'universal apriori of correlation' (Husserl 1970b: §46), and thus to the version of *intentionality* he developed in his transcendental phenomenology." (Lerner 2015, 165)

The life-world is the meaning-foundation for all positive sciences and *transcendental phenomenology* must investigate and clarify the basic role the life-world plays. To be sure, transcendental phenomenology cannot deliver the basic axioms, principles, or laws that occur in the "exact" sciences, but it can and must clarify why axioms, principles, or laws of a specific type are appropriate for the corresponding science. Transcendental phenomenology can do this, because it is the only science that goes beyond the life-world. It does so by adopting the transcendental attitude in which we are not directed towards the objects that occur in our everyday lives but towards the way in which these objects appear (cf. Hua VI, 155, 161 f.). By investigating how different types of objects can be given to us, i.e., investigating the correlation between consciousness and world, transcendental phenomenology has realized that the ultimate foundation of knowledge and science is not the life-world but subjectivity (cf. Hua VI, 70, 115). All objective knowledge is founded on subjectivity.

All knowledge is knowledge of an agent, and in explaining how knowledge is possible, one ultimately has to turn away from objective states of affairs and instead focus on the subject's consciousness. The

3 For such questions cf. Učník et al. 2015, especially Lerner 2015.

4 As is well known, Husserl's conception and usage of "life-world" is rather ambiguous (cf., e.g., Moran 2015). As I use this term here, the life-world is the world of the ordinary objects, the world of tables and chairs, the world that is immediately perceivable.

ultimate evidence for my knowing that there is a table in front of me is not the existence of the table but my experiencing this table. My experiencing this table gets its justificatory force not from the reliability of my sensory apparatus but from the distinctive, originally presentive phenomenal character of this experience (cf. Hua XXIV, 347). What ultimate evidence is cannot be investigated objectively but only subjectively by turning to one's experiences and to how these experiences can be described from a first-person perspective.

As transcendental phenomenology precisely is the science which investigates the structures of consciousness and experience from a first-person perspective, transcendental phenomenology is the ultimate science. Not because it can deliver the axioms, principles, laws, or theorems of every or even any individual science, but because it investigates how the objects of the respective sciences can be given and what type of evidence is appropriate for each type of object and, in further consequence, for each science.

According to my understanding of transcendental phenomenology, Husserl's correlational a priori is the key to understanding this doctrine. For Husserl, it is vital that the "*[c]ategory of objectivity and category of evidence are perfect correlates*," (Husserl 1969, 161) or, as Heffernan puts it, that "evidence is a function of the evident." (Heffernan 1998, 26) This means that the type of object I experience determines the type of evidence that is available to me (e.g., inadequate evidence for physical objects, apodictic evidence for mathematical truths, and adequate evidence for my existence). In his *Crisis* Husserl calls this doctrine the "universal a priori of correlation between experienced object and manners of givenness," and he has left no doubt that the significance of this doctrine can hardly be overestimated as he states that his "life-work has been dominated by the task of systematically elaborating on this a priori of correlation." (Husserl 1970, 166, note)

This means that at the bottom of Husserl's TI there is the *epistemological* thesis of the correlational a priori, telling us that the type of object determines the type of evidence, i.e., the type of justification that is possible for this object. Accordingly, we need to answer the following question: What kind of justification – if any – is possible for unobservable entities? In addition, we shall clarify what the basic epistemological principle looks like that governs the possibility of justification. What is the criterion of justification, i.e., which conditions need to be fulfilled so that justification is possible?

We have seen that Husserl considers formalisation and mathematisation in science to be tools or methods. They can be used to describe reality, they can be used to make predictions about reality, but they must not be confused with what reality is. Tables and chairs are real. I can use physical formulas to predict what happens when a chair drops from a table. These formulas might describe or capture reality, they are useful, but they are not part of what reality is.

Is the same true for unobservable entities such as atoms, electrons, and quarks? Are they only useful concepts to describe and predict the features and behavior of tables and chairs or are they real themselves? There are passages in Husserl's oeuvre that suggest an anti-realist reading.[5] I consider this to be the most forcible one: "[The physical sciences] aim at law-like formulae with the purpose of orientation in the world of appearances, and their existential claims have the value of mere auxiliary tools [*Hilfsmittel*] for precisely this purpose." (Hua XXII, 168; translation borrowed from Wiltsche 2012, 106) Such passages notwithstanding, commentators have tended to interpret Husserl as a proponent of scientific realism, even if often in a novel sense.[6] Recently, Wiltsche (2012) challenged such interpretations and opted for a clearly anti-realist reading of Husserl's philosophy of science.[7] According to Wiltsche, there is a systematic epistemological reason why Husserl must be an anti-realist with respect to unobservable entities. This is the claim that according to Husserl we can only gain justification for what can be given to us originarily.

It is the main aim of this contribution to show (i) that there are interpretative reasons for not reading Husserl in such a way and (ii) that there are systematic reasons why phenomenologists should not subscribe

5 Whenever I talk about (anti-)realism what is meant is scientific (anti-)realism, i.e., the claim that unobservable entities do (not) exist.

6 Heelan interprets Husserl as "a new kind of scientific realist, a scientific-(phenomena-)realist." (Heelan 1987, 368) According to Soffer, Husserl's position leads "to an epistemically sophisticated version of realism," (Soffer 1990, 68) and Vallor argues that "the phenomenological insights of Edmund Husserl, Maurice Merleau-Ponty and Patrick Heelan" can be used to defend Ian Hacking's experimental realism (Vallor 2009, 2).

7 For an examination of Wiltsche's phenomenological anti-realism cf. Reynolds 2017, section 3.4.

to this criterion. I shall put forward a different criterion of justification that satisfies the spirit of Husserlian transcendental phenomenology and allows for justifiably believing in the existence of unobservable scientific entities.

2. Originality and Justification

As mentioned above, Wiltsche holds that Husserl's basic epistemological theses lead to a version of scientific anti-realism that "is not ontological, but epistemological in nature." (Wiltsche 2012, 112) This means we must adopt "an agnostic stance with regard to existential claims about unobservable entities such as 'atoms, ions, and the like'." (Wiltsche 2012, 112) According to this reading, Husserl does not deny that unobservable scientific entities exist, but insists that we can never justifiably believe in their existence. Hence, we pose the following question: Which basic epistemological principle is it that forbids justification with respect to unobservable entities? I shall call this principle the Originality Thesis of Justification.

> Originality Thesis of Justification (OTJ): Epistemic justification is limited to what can be originally given in the sense that if X[8] cannot be given in an originary presentive intuition, then one cannot be justified in believing that X exists or obtains.

Accordingly, believing that *p* can only be justified if *p* can be originally given in an originary presentive intuition.[9] Originary presentive intuitions are intentional acts in which the object/content is presented as "bodily present," is given in a "fleshed out" manner. These acts are contrasted with empty, signitive acts in which what is given to us is not the object in its actual presence but the object as something that is meant only (cf. especially Husserl's Sixth Logical Investigation). The prime example of originary presentive acts are perceptual acts in which we are perceptually aware of the object in question.[10]

OTJ allows that justification for statements like "There is a book on the table" is possible since it is possible to have a visual experience of a book on the table. Seeing a book on your table means having an originary presentive intuition of a book on your table. Three clarifications are in order. First, Husserl uses the term of originary intuition in a very broad sense that encompasses not only perceptual experiences but also logical, mathematical, and epistemic intuitions such as "$\sim(p \wedge \sim p)$," "2 is the only even prime number," and "Originary presentive intuitions are a source of justification."[11] Secondly, OTJ states only that "justification is limited to what *can be* originally given." This means that it is only required that it must be *possible* that your belief's content is or becomes given originally. It is *not* required that the content actually is originally given.[12] This means OTJ is *not* incompatible with justification through inferential reasoning, testimony, and memory. For instance, if a trustworthy person tells you that your office door is open, you might be justified in believing this even if you are not visually aware of your office door. Of course, you can go and check. This means it is in principle possible that the content of your belief "my office door is open" can be originally given.

Thirdly, according to my reading, hallucinations and illusions can also be originary intuitions.[13] This is important because if you have a perfect hallucination of a table in front of you, you are plausibly justified in believing that there is a table. OTJ would be in trouble explaining this if hallucinations did not bear the mark of originary givenness.

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8 Here X is an object or a state of affairs.

9 This is the most straightforward way to express that what is given matches what is believed. I do not wish, however, to suggest that experiences are conceptual nor that Husserl thinks so. I shall remain neutral on this issue.

10 For more details on Husserl's conception of originary presentive intuition cf. Berghofer 2017a, section 2.1.

11 I would like to point out that Husserl's conception of value-ception ("Wertnehmung," cf. Hua XXXVII) suggests that also moral perceptions and ethical intuitions should count as originary intuitions. For the details and significance of a phenomenological intuitionism cf. Rinofner-Kreidl 2015.

12 Note that this is also how Wiltsche would define a phenomenological criterion of justification: Only possible but not actual originary givenness is required.

13 For the claim that hallucinations also are originary intuitions cf. Erhard 2012, 57, who confirms this by referring to Hua XVI, 15.

We shall see that there are many crucial passages in Husserl's oeuvre that seem to suggest OTJ. However, I argue (i) that Husserl on some occasions argues that OTJ is wrong, (ii) that phenomenologists are not forced to subscribe to OTJ, and further (iii) that phenomenologists should not subscribe to OTJ.

What textual evidence is there that Husserl subscribes to OTJ? For Wiltsche, one of the key passages is Husserl's principle of all principles. Husserl formulates his basic principle as follows:

> No conceivable theory can make us err with respect to the *principle of principles: that every originary presentive intuition is a legitimizing source of cognition*, that *everything originarily* (so to speak, in its 'personal' actuality) *offered* to us *in 'intuition' is to be accepted simply as what it is presented as being*, but also *only within the limits in which it is presented there*. (Husserl 1982, 44)

Wiltsche is clearly right when he says:

> It is nearly impossible to overestimate the importance of this passage for phenomenological philosophy. For with the introduction of the 'principle of principles', Husserl commits phenomenology to a method of intuition and thus fortifies the well-known slogan 'Back to the things themselves!' (Wiltsche 2012, 108)

What exactly does the principle of all principles tell us? There are at least two claims we need to elaborate on:

> C1: Every originary presentive intuition is a source of epistemic justification.

Unfortunately, Husserl often fails to explicitly distinguish between immediate (= non-iferential) and inferential justification, but in light of the context in which the principle of all principles is placed and the examples Husserl gives to clarify the justificatory force of originary givenness (cf. Hua XXIV, § 51), it is clear that originary presentive intuitions exhibit the crucial feature of providing *immediate* justification. Thus, we can specify:

> C1*: Every originary presentive intuition is a source of immediate justification.

The second claim concerns the limits Husserl discusses.

> C2: What is originarily presented to you in intuition is to be accepted "*only within the limits in which it is presented there*."

It is obvious that C2 is of crucial importance to Husserl; it is less clear, however, what it precisely means. Let us discuss three possible answers:

> A1: *Intuitive justification is prima facie justification*: What is originally given is immediately justified but not (necessarily) infallibly. Your acceptance of what is originally given to you is prima facie in nature. You need to be aware that further experiences (or further information in a broad sense) might defeat the justification provided by your current experience.

Connecting C2 with A1 makes sense, since shortly before the introduction of the principle of all principles, Husserl stresses that the fact that originary presentive intuitions are not only a source of justification but the ultimate source of justification:

> does not exclude the possibility that, under some circumstances, one seeing conflicts with another and likewise that one *legitimate* assertion conflicts with another. [...] It does say, however, that perhaps in a certain category of intuitions (and that is the case precisely with sensuously experiencing intuitions) seeing is, according to its essence, 'imperfect,' that of essential necessity it can become strengthened or weakened, that consequently an assertion having an immediate, and therefore genuine, legitimizing ground in experience nevertheless may have to be abandoned in the further course of experience because of a counter legitimacy outweighing and annulling it. (Husserl 1982, 36 f.)

A2: *The correlational a priori*: Every originary presentive intuition provides immediate prima facie justification, but what originary givenness means depends on the type of object that is given. Originary givenness of ordinary objects such as tables and chairs, for instance, differs from the originary givenness of mathematical truths in that, with respect to the former, only inadequate but not apodictic evidence is possible. Evidence is inadequate if the object in question is given inadequately, i.e., in adumbrations. The appropriate type of evidence for the latter is apodictic evidence. When you have apodictic evidence of *p*, you "see" why *p* is necessarily true. Connecting C2 with A2 makes sense due to the significance Husserl attributes to the correlational a priori.

A3: *Originary givenness vs. co-givenness*: In perception, one must differentiate between what is originally given and what is co-given. The object of your perception is always the whole object but, strictly speaking, what you can, for instance, visually perceive is only the front side of a physical object. Only the front side is originally given to you. Concerning the justificatory status of your beliefs, you must be careful when you go beyond what is originally given.

It is important to point out that Husserl subscribes to all these claims (A1-A3). All are important aspects of his phenomenological epistemology and it might well be that by talking about "limits" he had each of these aspects in mind. In my opinion, however, the wording of his principle of all principles suggests that he primarily wanted to point towards A3.[14] Also, it is A3 that is of primary importance for our present investigation. Notice that my formulation of A3 is rather vague. The demand to be "careful" in going beyond what is originally given could range from "you are never justified in believing what is not originally given" to "in some cases you are not justified in believing what only is co-given." Clarifying in which way what is originally given is epistemically distinguished from what only is co-given is of central epistemological importance and crucial for our specific question of whether we are justified in believing that there are unobservable entities. Let us introduce some possible interpretations of A3:

I1: An originary presentive intuition can have justificatory force only with respect to what is originally given.
I2: An originary presentive intuition can have *immediate* justificatory force (i.e., *immediately* justify) only with respect to what is originally given.
I3 (= Strong OTJ): What is not originally given cannot be justified.[15]
I4: What is not originally given cannot be *immediately* justified.
I5 (= OTJ): What cannot be originally given, cannot be justified.

The difference between I1 and I2 is the restriction to immediate justification in I2, which means that I1 is considerably stronger than I2. When I have an originary presentive intuition of a table, and what is originally given to me is only the top of the table, then, according to I1, this perceptual experience cannot have justificatory force with respect to the proposition "This object has four legs." I2 only forbids that my originary intuition can immediately justify believing this proposition but allows for inferential justification based on this intuition.

The difference between I3 (= Strong OTJ) and I4 is, again, that I4 implies a restriction to immediate justification. Notice that Strong OTJ is a *really* strong claim, considerably stronger than OTJ. According to Strong OTJ, when you know that your friend is a reliable person, and she tells you that your office door is open, you are not justified in believing this until you see it (or have another originary presentive intuition of the open door like by touching it). OTJ does not tell whether you are justified in believing that the door is open, but at least it *does not exclude* justification by testimony. We have seen that subscribing to OTJ would make Husserl an anti-realist with respect to unobservable entities. Since Strong OTJ is considerably stronger, subscribing to Strong OTJ would also make him an anti-realist.

The difference between I1 and I3 on the one hand and I2 and I4 on the other hand is that I1 and I2 are only concerned with justification delivered by originary presentive intuitions. Thus, if the four legs of the table in front of you are not originally but only co-given, I3 forbids that you can justifiably believe that it has

14 We will realize the plausibility of this interpretation when we pay attention to Husserl's formulations of the "first methodological principle" in his *Cartesian Meditations* and the "most general principle of justification" in *First Philosophy II*.

15 In the sense that if X is not originally given to subject S, then S cannot be justified in believing that X exists or obtains. Note that this claim is considerably stronger than OTJ in that I3 limits epistemic justification to what is actually originally given, which is why I call I3 Strong OTJ.

four legs, but I1 does not. I1 only forbids that your justification is provided by an originary intuition. Since I1 leaves open whether there are other sources of justification, strictly speaking, it does not forbid justification for beliefs whose contents are not originally given. Since Husserl holds that all justification ultimately rests on originary presentive intuitions (cf. Hua III/1, 43), this distinction might vanish or become blurred.

It is important to note that only Strong OTJ and OTJ would make Husserl an anti-realist. By discussing Husserl's "first methodological principle," established in his *Cartesian Meditations*, and his "most general principle of justification," stated in Husserliana VIII, we will see that textual evidence indeed exists that Husserl subscribes to Strong OTJ. Subsequently, however, we shall discuss a passage in Husserliana XXIV that clearly shows that Husserl denies Strong OTJ and that he does so for good reasons.

Husserl formulates his first methodological principle thus:

> By this preliminary work, here roughly indicated rather than done explicitly, we have gained a measure of clarity sufficient to let us fix, for our whole further procedure, a *first methodological principle*. It is plain that I, as someone beginning philosophically, since I am striving toward the presumptive end, genuine science, must neither make nor go on accepting any judgment as scientific *that I have not derived from evidence*, from 'experiences' in which the affairs and affair-complexes in question are present to me as '*they themselves*'. (Husserl 1960, 13)

Here, Husserl basically tells us: Accept nothing that is not originally given (= Strong OTJ). Similarly, in Husserliana VIII he introduces a "most general principle of justification" according to which we have to "obey the principle of pure evidence," which means:

> We shall not accept anything as being ultimately cognized, thus accept nothing as being or being in a specific way or being in a specific mode of being, that does not itself stand as being in a specific way or being in its specific mode of being before our eyes, that is grasped in precisely the way it has been meant and posited in our epistemic belief. (Hua VIII, 32)

This passage, again, is an acknowledgment of Strong OTJ. Can there be any doubt that Husserl subscribes to Strong OTJ and, accordingly, to scientific anti-realism? It ought to be pointed out that, in the contexts of his "first methodological principle" and his "most general principle of justification," he says we should follow these principles as "beginning philosophers." Thus, these principles might be considered methodological devices that are supposed to make sure that the scientist who is interested in ultimate grounding (i.e., the phenomenologist) begins with the clearest and most fundamental insights available to her. According to this reading, this does not imply that in your daily life you are not justified in believing what your reliable friends tell you or that the natural scientists are not justified in believing in the existence of unobservable entities.

In addition, we should reject Strong OTJ for systematic reasons as it is implausible and has highly counter-intuitive consequences. Strong OTJ prohibits justification by testimony, memory, and induction, as well as justification for everything that is co-given. To my knowledge, the passage in which Husserl is most explicitly aware of the shortcomings of Strong OTJ appears in Husserliana XXIV. This passage begins by acknowledging Strong OTJ:

> Originary, unbroken belief justifies simply because it is originary, namely as a quality of authentic consciousness of givenness and of that being fulfilled within its limits. Within these limits, just as long as the circle of experience is not expanded, the fulfilment is definitive and consequently confers justification. To be kept in mind in this regard, though, is that *perception justifies only so far as it actually is perception*, only so far as the authentic perceptual appearance is concerned, therefore, not in terms of the qualities belonging to the back not perceived authentically.[16] (Hua XXIV, 346)

Just like the aforementioned principles, this passage, so far, strongly speaks in favor of interpreting Husserl as subscribing to Strong OTJ. It is even more explicit since here he denies that perceptual experiences provide justification for what is merely co-given. However, directly following this passage there is a note in which Husserl says: "*That is not correct* [my emphasis]. The manner of justification may be different and more incomplete, *but the object's existence is also posited with information about its back* [my emphasis].

16 This translation slightly differs from the translation offered by Hill in Husserl 2008, 342 as Hill translates 'originär' with 'primitive.'

Otherwise, how could I justifiably say the thing is there? Therefore, differences of completeness." (Husserl 2008, 342, fn 36) Here, Husserl explicitly denies Strong OTJ in that he states that we can have justification for what is merely co-given. While "the manner of justification may be different," the point is, there can be justification. The question, of course, is: In which manner do they differ? What is the difference between justifiably believing what is originally given and justifiably believing what is motivated by being co-given? One possibility is to account for this difference in terms of degrees of justification.

> P1: The difference is a matter of degrees of justification. What is originally given is always justified to a higher degree than what is co-given.

However, it seems to me that the difference should be of a more fundamental or essential manner.

> P2: The difference is a matter of epistemic immediacy. What is originally given is immediately justified; what is co-given can only be inferentially justified.

It is important to distinguish between psychological/phenomenal immediacy and epistemic immediacy. When you see the traffic lights turn green, your belief that you are now allowed to set off might be psychologically immediate (you do not consciously make any inference), but epistemically this belief depends on your background knowledge of traffic rules. Seeing a green light provides *immediate* justification for believing that there is a green light. Your belief that now you are allowed to set off is something that goes beyond what is originally given and depends for its justification on your knowledge of traffic rules. As you do not consciously make an inference, this belief is *psychologically* immediate but *not epistemically*. Having refuted Strong OTJ for both systematic and interpretative[17] reasons, we now turn to the much more tenable OTJ.

3. Limits of originary givenness and a new criterion of justification

Again, OTJ is the claim

> Originality Thesis of Justification (OTJ): Epistemic justification is limited to what can be originally given in the sense that if X cannot be given in an originary presentive intuition, then one cannot be justified in believing that X exists or obtains.

Wiltsche characterizes this position as follows: "This is to say that if we accept judgments without actual insight and thus without intuition, we do so on the presupposition that the intuitive givenness of the intended thing or state of affairs *is a possibility* that could be realized *at least in principle*." (Wiltsche 2012, 109) My aim in this section is to demonstrate that Husserl contravenes this principle on important occasions. This implies that even if Husserl subscribes to OTJ, he cannot consistently do so. To put it differently, there are Husserlian doctrines that are incompatible with OTJ. The Husserlian doctrine I shall focus on in this section is the following one:

> HD: Empathy is a source of epistemic justification.

Husserl undeniably subscribes to HD. Importantly, what is justified by empathy are contents that *cannot*

17 By interpretative reasons, I refer to the footnote in Husserl 2008, 342, which we have just discussed. An anonymous referee of this journal has argued that my rejection of Strong OTJ is justified "for the reasonableness of the conclusion" but that I have not really offered interpretative reasons for doing so. However, in the quoted footnote Husserl literally says that it "is not correct" to restrict justification to what is originally given since we can also have justification for what is only co-given. By looking at the book in front of me, I am justified in believing that the book has a back side even if this back side is not originally given to me. I would agree with the referee that I am interpreting Husserl strongly in the sense that while there are many passages in Husserl's *oeuvre* that seem to suggest Strong OTJ (we have discussed some of them in this section), I have focused on the plausible passage in which he explicitly criticizes Strong OTJ. However, in what follows I will present systematic *and* interpretative reasons for rejecting even the weaker OTJ.

be originally given.[18] It is to be noted that Husserl himself holds that such contents cannot be originally given. An example of such content is the sadness of the person in front of me. The reason why I focus on HD is not only that Husserl's analysis of empathy reveals that he cannot consistently advocate OTJ. More importantly, he also provides an explanation of how it is possible that beliefs about others' mental states can be justified despite the fact that other minds cannot be originally given. We shall see that in this context Husserl sketches how OTJ could be replaced by a *more promising criterion of justification*.

When I see somebody squatting in a corner and crying, it is safe to say that this person feels miserable. My belief that this person feels miserable is justified, but what kind of justification do I have? Here, a central question is: Is my justification for this belief inferential or non-inferential (cf. Spaulding 2015)? Does my belief that this person feels miserable epistemically depend on other beliefs or is my experiencing this person as miserable sufficient for justifiably believing that this person feels miserable? And what do I perceive when I look at this person in the corner? Apart from the posture and the tears, can I also perceive this person's mental state, this person's misery? Such questions are of crucial importance for any theory of intersubjectivity (cf. Smith 2010, 733).

As Husserl points out on numerous occasions, the co-givenness of other minds is significantly different from the co-givenness of the book's back side. With respect to the latter, it is in principle always possible to make the object of your intention originally given. All I need to do is to turn the book. The case of the givenness of other minds is fundamentally different in that it is *per se impossible* to make other minds originally given. As Husserl puts it, experiencing other minds is always an act of appresentation for which it is characteristic that it can *never* be turned into an act of presentation. Husserl calls this appresentation an analogizing appresentation as it is fundamentally rooted in the originary givenness of one's own consciousness. In this sense, one might say that the experience of other minds is a "secondary form of perception" (Hua VIII, 63 f.). Sometimes he even says that the other's consciousness is given in a "tertiary originality" as we must take into account not only the originary givenness of one's own consciousness but also "everything that belongs to memory" (Hua XV, 641 f.).

The following passage gives us a pretty good idea of Husserl's conception of perceptually co-intending other minds:

> [N]either the other Ego himself, nor his subjective processes or his appearances themselves, nor anything else belonging to his own essence, becomes given in our experience originally. […] *A certain mediacy of intentionality* must be present here […] We have here, accordingly, a kind of *making 'co-present'*, a kind of *'appresentation'*. An appresentation occurs even in external experience, since the strictly seen front of a physical thing always and necessarily appresents a rear aspect and prescribes for it a more or less determinate content. On the other hand, experiencing someone else cannot be a matter of just this kind of appresentation, which already plays a role in the constitution of primordial Nature: Appresentation of this sort involves the possibility of verification by a corresponding fulfilling presentation (the back becomes the front); whereas, in the case of that appresentation which would lead over into the other original sphere, such verification must be excluded a priori. How can appresentation of another original sphere, and thereby the sense 'someone else', be motivated in my original sphere and, in fact, motivated as experience as the word 'appresentation' (making intended as co-present) already indicates? Not every non-originary making-present can do that. A non-originary making-present can do it only in combination with an originary presentation, an itself-giving proper; and only as demanded by the originary presentation can it have the character of appresentation somewhat as, in the case of experiencing a physical thing, what is there perceptually motivates <belief in> something else being there too. (Husserl 1960, 109 f.)

This passage is highly relevant. Not only does it show that for Husserl beliefs about the existence and contents of others' mental states can be justified even though other minds cannot be originally given, which entails that he cannot consistently subscribe to OTJ, but this passage also gives some hints on how OTJ can be replaced by a new criterion of justification. Thus, in this section I do not only want to show that Husserl must reject OTJ, but also that he puts forward (at least the sketch of) a more promising criterion.

18 In the next section, I briefly discuss that Husserl's claim that induction is a source of epistemic justification also contravenes OTJ. Arguably, memory should be added to empathy and induction. When I remember that yesterday I felt unhappy, I am justified in believing so, but my mental state from yesterday cannot be given to me originarily. Memory, however, is a tricky subject. Since Husserl's conception of empathy and the obvious success of induction suffice to make my point, I will not discuss memory.

We may summarize the theses of this passage as follows:

1. The other's mental state cannot be given originally (cf. also Hua III/1, 328; Hua VIII, 187-189).
2. Empathy (experiencing other minds) involves "a certain mediacy of intentionality."
3. The other's mental state can only be co-given, i.e, only be given in an appresentation.
4. Appresentation and co-givenness also occur in perceiving physical things, since what is given in perception always outstrips what is originally given, which means that there always are rear aspects appresented.
5. The co-givenness of rear aspects of physical things and the co-givenness of others' mental states are fundamentally different, since in the latter case the possibility of making originally given what only is co-given "must be excluded a priori."
6. The appresentations involved in empathy are motivated, i.e., justified.
7. "Not every non-originary making-present can" motivate, i.e., justify beliefs.
8. "A non-originary making-present can" justify beliefs "only in combination with an originary presentation," i.e., an originary presentive intuition.

Points 1, 3, 5, and 6 are of primary interest to us. Via empathy my beliefs about others' mental states can be justified even though others' mental states cannot, in principle, be originally given. By subscribing to these claims, Husserl clearly violates OTJ. Now, it is interesting to see how, according to Husserl, this is possible. His answer in 8 that this is only possible if originary presentive intuitions are involved is important but this is only the first step in resolving the puzzle. More details are needed to get at least a basic idea of the kind of dependency between originary presentive intuitions and appresentations that needs to be in place so that the former can motivate the latter. Some such details are provided in the following passage:

> Let us look at the intentional situation more closely. The appresentation which gives that component of the Other which is not accessible originaliter is combined with an original presentation [...] Every experience points to further experiences that would fulfil and verify the appresented horizons, which include, in the form of non-intuitive anticipations, potentially verifiable syntheses of harmonious further experience. Regarding experience of someone else, it is clear that its fulfillingly verifying continuation can ensue *only by means of new appresentations that proceed in a synthetically harmonious fashion*, and only by virtue of the manner in which *these appresentations owe their existence-value to their motivational connexion with the changing presentations proper, within my ownness*, that continually appertain to them. As a suggestive clue to the requisite clarification, this proposition may suffice: The experienced animate organism of another continues to prove itself as actually an animate organism, solely in its changing but incessantly *harmonious 'behavior'*. Such *harmonious* behavior (as having a physical side that indicates something psychic appresentatively) must present itself fulfillingly in original experience, and do so throughout the continuous change in behavior from phase to phase. (Husserl 1960, 114)

We may reformulate this as follows:

What is only co-given can be motivated/justified by the corresponding originary presentive intuitions only if (i) expectations are involved which can be verified by new originary presentive intuitions and (ii) the verification of these expectations speaks in favor of what is co-given.

In the case of ordinary physical objects, this process is rather simple. If it is co-given that the table in front of you has four legs, there is the expectation involved that - if you go and check - you will see four legs. This expectation can be verified by an originary intuition, and the verification of this expectation confirms your motivated belief. In the case of other minds, the situation is a bit trickier. Say, by looking at your friend's face, it is co-given to you that the way you have replied to his question has made him angry. Your friend's anger cannot be given originally to you, but there are expectations involved that can. Such expectations might be that he will raise his voice, respond impolitely, or simply stand up and leave. These are expectations that can be verified by originary presentive intuitions and that you take to speak in favor of what is co-given to you, namely your friend's anger. Thus, in the case of others' mental states, it is others' behavior with respect to which you have expectations that can be fulfilled.

As I read Husserl, his claim is not that your belief that a person is in a specific mental state is justified only when this belief has been confirmed by the person's behavior, but is justified from the very beginning in virtue of being motivated by originary intuitions directed towards the person. Motivation is possible since

there are expectations about their behavior that *can be* verified by future originary presentive intuitions directed towards the person's behavior.

Thus, let us replace OTJ with a new criterion of justification (CoJ):

> Criterion of Justification (CoJ): Justification with respect to content C or object O is only possible if C/O can either be originally given or if C/O can be reasonably associated with expectations that can be verified by originary presentive intuitions.

Now, there are surely many more or less subtle differences between the unobservability of other minds and the unobservability of scientific entities such as atoms, electrons, and quarks. Clearly, however, not only other minds but scientific entities too can meet CoJ. The whole idea of cloud chambers or particle accelerators is to verify/falsify the expectations you have with respect to entities you cannot directly observe!

4. Further limits of originary givenness

In the previous section, the line of reasoning was as follows: For Husserl, other minds are in principle unobservable. Since Husserl holds that justification with respect to other minds is possible, he must reject OTJ. The way Husserl explains how justification with respect to other minds is possible shows that he subscribes to CoJ instead of OTJ. If CoJ is fulfilled, justification with respect to the entity in question is possible, even if this entity is in principle unobservable. Unobservable scientific entities such as atoms, electrons, and quarks meet CoJ. Thus, there is no systematic epistemological-phenomenological reason why we should not accept the existence of such scientific entities, which means that the basic epistemological principles phenomenologists need to subscribe to do not commit them to anti-realism.[19]

Before I provide further arguments for why CoJ is more plausible than OTJ, let me briefly discuss two natural objections to the foregoing argument.

> O1: One might object that we should not interpret Husserl as claiming that other minds can only be co-given (but not originally given). This objection is pressing since not all phenomenologists subscribe to the claim that other minds cannot be originally given[20], nor do they agree on how to interpret Husserl. My argument, however, does not hinge on whether I have provided the more accurate interpretation. The point is that in the passages discussed in the previous section, Husserl offers CoJ as an alternative to OTJ. I argue that CoJ is more plausible than OTJ, which is why phenomenologists should subscribe to CoJ instead of OTJ. An opponent of my view must either show that OTJ is more plausible or phenomenologically more adequate than CoJ.

> O2: I have argued that just as other minds can meet CoJ, so can unobservable scientific entities like atoms, electrons, and quarks. One might rightly point out that, phenomenologically, there is a fundamental difference.[21] I know what it is like to have a mind, to be in a mental state, to have emotions, and to feel, for instance, sadness. While it might be true that *other* minds are unobservable, I do have originary presentive intuitions (namely introspective experiences) with respect to my own mind. However, there is no such analogy for unobservable scientific entities. I do not know what it is like to be a photon, to have zero rest mass, and so on. My response is that CoJ does not involve anything like a requirement for the kind of analogy that is in place with respect to other minds. It might be true that other minds fulfill CoJ because there is this analogy, but this does not imply that every object or state of affairs must fulfill CoJ by virtue of the very same reason. CoJ requires that unobservable objects must "be reasonably associated with expectations that can be verified by originary presentive intuitions." The fact that I know what it is like to have a mind and to have emotions might be the reason why I can reasonably associate other minds with certain expectations which can be verified by observing the behavior of other people. In the case of unobservable scientific entities this source of reasonableness might be something fundamentally

19 This, of course, does *not* imply that phenomenologists cannot be anti-realists. As Wiltsche has pointed out, there are passages in Husserl's oeuvre which suggest that he *defines* a real physical object as an object that can be the object of an originary intuition (cf. Wiltsche 2012, 110). My point is that the criterion of justification phenomenologists should subscribe to is perfectly *compatible* with scientific realism.

20 Examples are Merleau-Ponty and Krueger & Overgaard 2012.

21 I would like to thank Harald Wiltsche for raising this objection.

different. It may involve inferences to the best explanation. Thus, to make objections like objection 2, one must dispute the validity of inferences to the best explanation or at least argue that they do not work in the specific case of scientific entities.

Let me now turn to further reasons why CoJ is more plausible than OTJ. Perhaps the most straightforward example is induction. Most researchers including Husserl (cf., e.g., Hua III/1, 171; Hua VII, 88, 102; Hua VIII, 240) agree that induction is a valid source of justification. Hence, if natural scientists base their reasoning on induction, then, at least in some cases, they are justified in believing what induction tells them. Induction can be used to justify general physical principles like "all masses attract each other." Such principles, however, are unobservable. What can be originally given to us, at best, are concrete cases such as an apple falling from a tree. What can never be originally given to us are such general principles. You cannot "see" a principle or a law of nature. Thus, if justification with respect to such general principles is possible, OTJ is false. Is CoJ again a plausible alternative to OTJ? It is. Allow me to illustrate this by means of a superficial and overused example. Assume, by induction you are justified in believing "all swans are white." This general statement cannot be originally given to you, but just as CoJ demands, there are certain expectations involved that can be. Such expectations, clearly, include that the next swan you see will be white. Of course, "all swans are white" is not a law of nature, but it is a proposition you are *justified to believe* although this matter of fact cannot be perceived but only be confirmed by seeing concrete cases that fulfill your expectations.

Hence, there are systematic reasons to reject OTJ and replace it with CoJ. Since CoJ allows for justifiably believing in the existence of unobservable scientific entities such as atoms, electrons, and quarks, it does not seem that there are epistemological-phenomenological reasons why phenomenologists should subscribe to anti-realism.

Finally, I would like to point out that OTJ would restrict our ontology more radically than we have seen so far. Witsche 2017 discusses three types of unobservable objects. Objects that cannot be observed due to their location in space (such as a rock on Venus), objects that cannot be observed due to their position in time (such as an event that has happened prior to all consciousness), and objects that cannot be observed due to their size (such as atoms, electrons, and quarks). Wiltsche rightly points out that the former two types of objects can fulfill OTJ, but the last one cannot.[22]

However, very small objects are not the only objects postulated by science that cannot fulfill OTJ. What about objects such as electromagnetic fields? It is reasonable to assume that there is a reason why your compass always points north. Science tells you the Earth's magnetic field is responsible for this. Does this field exist? Certainly, electromagnetic fields do not fulfill OTJ; you cannot see them. But this is not because they are too small. According to modern physics, fields are entities that permeate the whole universe and have a value at each point in spacetime.[23] Besides fields, one might argue that spacetime as such is an object that exists but cannot fulfill OTJ. The same might be true for black holes. Note that all these objects could fulfill CoJ.

Conclusion

We have seen that Husserl's basic epistemological principles – the "principle of all principles" in *Ideas I*, the "first methodological principle" in the *Cartesian Meditations*, and the "most general principle of justification" in *First Philosophy II* – seem to suggest that phenomenologists are committed to the claim that we can gain justification only for what can be given to us originarily. This would directly lead to anti-realism with respect to unobservable entities. In this paper, we have both put forward interpretational

22 Events that happened prior to all consciousness can be observed due to the finiteness of the speed of light. An event that happened 777 years ago can now be observed at a position in the universe that is 777 light years away from where the event took place (given that one possesses a sufficiently powerful telescope).

23 It is to be noted that most physicists and philosophers of physics would agree that fields are objects just like particles are. "Thus *particles*, *fields*, *and spacetime points* have all been identified, largely without argument, as paradigms of objects in physics." (McKenzie 2017, 3) It has even been argued that fields are the most fundamental objects of physical reality (cf. Hobson 2013 and Berghofer 2017b).

and systematic reasons why such a criterion should be abandoned and replaced it with a new criterion of justification that satisfies the spirit of a Husserlian transcendental phenomenology while allowing for justifiably believing in the existence of unobservable scientific entities.[24]

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Research Article **Open Access**

Toby Lovat

The Loss of the Great Outdoors: Neither Correlationist Gem nor Kantian Catastrophe

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Abstract: This article concerns Quentin Meillassoux's claim that Kant's revolution is responsible for philosophy's catastrophic loss of the 'great outdoors', of our knowledge of things as they are in themselves. I argue that Meillassoux's critique of Kant's 'weak' correlationism and his defence of 'strong' correlationism are predicated on a fallacious argument (termed 'the Gem' by David Stove) and the traditional, but in my view mistaken, metaphysical interpretation of Kant's transcendental distinction. I draw on Henry Allison's interpretation of Kant's idealism to argue that when Kant's transcendental distinction is understood epistemologically we can avoid the fallacious reasoning underpinning Meillassoux's argument, and at the very least attenuate his concerns about the 'Kantian catastrophe'.

Keywords: Allison, Copernican Revolution, Correlationism, Kant, Meillassoux, Stove's Gem, Things in Themselves, Transcendental Idealism

1. The Loss of the Great Outdoors

According to Quentin Meillassoux, "contemporary philosophers have lost the great outdoors, the absolute outside of pre-critical thinkers".[1] The loss of "the great outdoors", of our "grasp [of] the in-itself" or knowledge of "what is whether we are or not" is the result of what Meillassoux terms "the Kantian catastrophe", or Kant's "Ptolemaic counter-revolution in philosophy".[2] Meillassoux's charge is that by making all actual and possible human knowledge and experience relative to human beings' intuitive and rational capacities, Kant's revolution catastrophically undermined the possibility of knowing things as they are in themselves, which is to say as they are independently of our modes of cognition and experience.

Correlationism

Meillassoux introduces the term 'correlationism' to refer to Kantian and post-Kantian perspectives that, he says, follow Kant in making all possible knowledge relative to us. In so doing, correlationist thinkers wind up proscribing possible knowledge of things as they are in themselves. For Kant, knowledge and

1 Meillassoux, Q., & Badiou, A. (2008). *After Finitude: An Essay on the Necessity of Contingency* (R. Brassier, trans.), London: Continuum, p.7. Hereafter, AF.

2 Ibid., p.27, 125, 118. The charge that Kant's philosophy is anti-Copernican or Ptolemaic is far from new. Norman Kemp Smith (2003, p.23) describes Kant's philosophy as a "Ptolemaic anthropocentric metaphysic"; Bertrand Russell (1992, p.9) claims that it would be "more accurate if [Kant] had spoken of a 'Ptolemaic counter-revolution'"; and J. J. C. Smart (1963, p.151) concludes that "Kant's so-called Copernican revolution was really an anti-Copernican counter revolution".

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experience of the world are not only correlated with our cognitive and intuitive faculties and frameworks, but are also correlated with the unknowable things in themselves that underpin phenomena.[3] According to Meillassoux, post-Kantian thought adds a further correlationist addendum to Kant's view that things in themselves are the unknown correlates of phenomena. He claims that post-Kantian philosophy holds that neither thought nor the world to which thought refers can be understood independently. Thus, Meillassoux explains that "[c]orrelationism is the idea according to which we only ever have access to the correlation between thinking and being, and never to either term considered apart from the other".[4] Correlationism, therefore, "consists in disqualifying the claim that it is possible to consider the realms of subjectivity and objectivity independently of each other".[5] The upshot, claims Meillassoux, is that it "[n]ot only become[s] possible to insist that we never grasp an object 'in itself', in isolation from its relation to the subject, but it also becomes necessary to maintain that we can never grasp a subject that would not always-already be related to an object".[6]

Correlationism, therefore, has two central theses. The first is that our knowledge (or 'grasp') of the world is always relative to us. The consequence of this is that we have no means of determining the extent to which our knowledge and experience of the world are generated by, or correspond to the way things are in themselves. The second thesis is that, despite this limitation, the nature of the thinking subject cannot be understood independently of the world of objects and its encounters as an object among other objects.

We will return to Meillassoux's analysis of correlationism shortly. For now, however, it is important to note his claim that even when correlationism holds that we are "always-already related to an object" this can mean only that the objects in question are objects 'for us' and thus not in themselves.[7] The upshot of this is that although correlationism is not (at least not explicitly) sceptical about the existence of an external world (it is not phenomenalism or subjective idealism) it will not only refuse the possibility of knowing the world as it is in itself, but, as we shall see, in its most strident form it also will deny the coherence of the thought of the world as it is in itself.

In this article I first focus on a central component of the argument by which Meillassoux attempts to breach correlationism's defences and deduce knowledge of things as they are in themselves. I will not address his important (though not unproblematic) claim that the 'literal' (and, therefore, deepest) meaning of certain scientific statements is incompatible with correlationist rejoinders, or the extraordinary absolute (or in-itself) he claims to have demonstrated.[8] Instead, I focus here on the small but crucial argumentative

3 The term 'correlate' (*korrelatum*) first appears in *The Critique of Pure Reason* at the end of the first section of 'The Transcendental Aesthetic'. Here, Kant explains that the "true correlate" (*wahres Korrelatum*) of "outer objects", "i.e., the thing in itself", "cannot be cognized through [representations]" and "is also never asked after in experience" (2005, A30/B45, p.162).

4 AF, p.5.

5 Ibid.

6 Ibid. We should emphasise here that although Kant denies the possibility of both knowledge and experience of the world as it is in itself, he does think that thought can be considered apart from its relationship to being or the world. Indeed, Kant is explicitly concerned with determining the nature and epistemic capacities of the human mind *qua* human mind, which is to say, as it is independently of being.

7 Ibid., p.5.

8 A note about the ancestral and Meillassoux's absolute is appropriate here, however. On the ancestral: according to Meillassoux, scientific statements that provide non-relative dates of profoundly ancient events like the big bang and the accretion of the earth (what he terms 'ancestral statements') ought to astonish honest modern correlationist philosophers. He argues that the reason for this is that 'the literal meaning' of ancestral statements is incompatible with the correlationist procedure of relativising knowledge to us. When ancestral statements are taken literally, which is to say, as in-principle correct claims about the dates of events that occurred at a time before the advent of life (and, therefore, before anything which is given to an experiencing entity) they violate the conditions of intelligibility entailed by correlationist thinking. For Meillassoux, insofar as there is no possible way to maintain that the literal meaning of ancestral statements is a relative meaning then, for him, ancestral statements are very good candidates for 'absolute knowledge', i.e., knowledge of the world as it is in itself. His approach is to pit the literal truth of ancestral statements against correlationism, to show that when confronted with the meaning of ancestral statements, "every variety of correlationism is exposed as an extreme idealism" because correlationism "is incapable of admitting that what science tells us about these occurrences of matter independent of humanity effectively occurred as described by science" (AF, p.18). Explaining how science is able to produce claims that make sense only if they cannot be made relative to or 'for us' is the central task Meillassoux sets himself in *After Finitude*. Ray Brassier (2010, pp.58–60) mounts a particularly robust critique of Meillassoux's so-called 'challenge of the ancestral'. On Meillassoux's absolute and his speculative materialism: The

step which precedes and which is required for Meillassoux to stage the confrontation between correlationism and absolute idealism that lies at the core of his argument in *After Finitude*, and from which his claims about things in themselves are drawn. Whatever the merits or defects of that argument, or the plausibility of the conclusions he draws from it, it relies on first establishing and defending what he takes to be the most consistent correlationist position. To establish this position (which will set the terms for the confrontation between correlationism and idealism) he contrasts two articulations of correlationism: one labelled 'weak' and the other labelled 'strong'. Meillassoux argues that, insofar as strong correlationism avoids the contradictions of weak correlationism, it constitutes a more consistent and robust philosophical position.

To understand the difference between the two positions we should briefly return to Meillassoux's account of the argument upon which correlationism rests. Although correlationist philosophies are diverse and not at all exclusively focused on the relation between mind and world, they are all, he claims, underpinned by "the correlationist circle".[9] Essentially a reworking of Berkeley's so-called 'Master Argument', the correlationist circle entails that any attempt to think something in itself that is not in some way 'for us' is self-defeating because we cannot think a non-thought.[10] "[O]ne cannot think the in-itself", writes Meillassoux, "without entering a vicious circle, thereby immediately contradicting oneself".[11] The result of the correlationist circle is that "it is impossible to conceive an absolute X, i.e., an X which would be essentially separate from a subject".[12] The basic distinction between the weak and strong correlationist positions is drawn sharply when he writes:

> According to Kant's [weak correlationism], we know a priori that the thing-in-itself is non-contradictory and that it actually exists. By way of contrast, the strong model of correlationism maintains not only that it is illegitimate to claim that we can know the in-itself, but also that it is illegitimate to claim that we can at least think it. The argument for this de-legitimation is very simple and familiar to everyone...the correlationist circle.[13]

Meillassoux makes the point again when he notes that "the 'argument from the circle' means not only that the thing in itself is unknowable, as in Kant, but that the in itself is radically unthinkable".[14] To this he adds that, unlike strong correlationism, which adheres more robustly to the 'argument from the circle', Kant:

> [G]ranted to theoretical reason ... the capacity to access four determinations of the in-itself: according to Kant, I know 1) that the thing in itself effectively exists outside of consciousness (there are not only phenomena); 2) we know that it affects our sensibility and produces in us representations (that's why our sensibility is passive, finite, and not spontaneous); 3) the thing in itself is not contradictory- the principle of non-contradiction is an absolute principle, not one that is merely

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extraordinary absolute Meillassoux claims to demonstrate in *After Finitude* is that, as it is in itself, the universe is necessarily contingent. This, he says, means that anything could happen at any time and in any place neither for any reason nor on account of any cause. The argument by which he demonstrates this is deft, even if it is not always persuasive. Put very briefly and crudely, it turns on an effort to show that once we enter Kant's critical philosophy and reject dogmatic or naïve metaphysical realism then the only means by which we can avoid endorsing a form of absolute or subjective idealism (for which there is nothing outside of thought) is to hold fast to the idea that, whether thinkable or not, we cannot rule out the possibility of the existence of things in themselves. From here Meillassoux argues that for this possibility to make sense it must be a real possibility (and not just an incapacity of thought). According to Meillassoux, the only way that this real possibility can be established is if we take the thought-world correlate as a merely contingent (and so non-necessary) fact. From the facticity or contingency of the correlate he claims to derive the proof that all things are necessarily contingent. And this conclusion, argues Meillassoux, constitutes absolute knowledge of the universe as it is in itself.

9 AF, p.8.

10 The phrase 'Berkeley's Master Argument' is first used by André Gallois (1974). It amounts to the view that thinking about an unperceived or un-conceived material tree, for example, would be impossible because any attempt to do so would be a thought. Berkeley (1999, p.xxix) writes that "[w]hen we do our utmost to conceive the existence of external bodies, we are all the while only contemplating our own ideas". We will see presently why this argument is far from compelling.

11 Meillassoux, Q., (2008). 'Time Without Becoming'. Unpublished paper delivered at Middlesex University, London, 2008, p.2. Hereafter, TWB.

12 Ibid., p.2. Of course, this is why Meillassoux finds the literal meaning of ancestral statements (that cannot be conceived as 'for us') so problematic.

13 AF, p.35.

14 TWB, p.2.

> relative to our consciousness; and lastly, 4) we know that the thing in itself can't be spatiotemporal because space and time can only be forms of subjective sensibility and not properties of the in itself.[15]

Meillassoux's critique of (the Kantian) weak correlationist model is straightforward. Kant simply oversteps the limits imposed by the correlationist circle. Again, the circle argument entails that because we cannot think a non-thought, any knowledge we have about the world is by definition knowledge about the world as it is 'for us', and therefore, not about the world as it is in itself. In contrast to Kant's position, the virtue of the strong correlationist model is that it "prohibits most decisively the possibility of thinking what there is when there is no thought".[16] By properly embracing the correlationist circle the strong correlationist model holds that the very notion of a thing in itself is contradictory and thus meaningless.[17]

Stove's Gem

Before responding to Meillassoux's critique of what he says is Kant's weak correlationism and to his argument for strong correlationism it is important to pause here to register that, even if we accept that knowing things independently of our means of knowing is impossible, it is not at all obvious that thought (or indeed knowledge) of things in themselves, of 'an absolute X', is a contradiction. It has been argued that Meillassoux's belief in "the exceptional strength of [correlationism's] antirealist argumentation" is misplaced.[18] Ray Brassier and Graham Harman have noted that the correlationist circle argument is an unambiguous example of what David Stove sarcastically termed, 'the Gem', by which he means the worst argument in the world.[19] Put simply, the Gem points out that even if we must employ thoughts to think of anything it does not follow that what is thought *of* must itself be a thought.

Although Stove's critique of the Gem is directed principally at Berkeley's argument, Alan Musgrave rearticulates the Gem's basic form like this: "You cannot X things unless C, a necessary condition for X-ing things, is met. Therefore, you cannot X things-as-they-are-in-themselves".[20] Put this way, any argument that states that knowledge is relative to (or correlated with) us (our thought, culture, mind, language, biology, etc.) and that, therefore, we cannot know things in themselves, is an example of the Gem. Musgrave stresses that the Gem is the worst argument not only because it derives a non-tautological conclusion (we cannot know or think things in themselves) from a tautological premise (we cannot think something without thinking it) but also because, for him, its conclusion is clearly false. For both Musgrave and Stove it is clear that we can, and do, have objects such as "trees-without-the-mind" in mind all the time, because that is

15 Ibid.

16 AF, p.36.

17 Although the focus here is the coherence of Meillassoux's critique of Kant's 'weak' correlationism, it is worth noting that Meillassoux combines the strong correlationist commitment to the meaninglessness of the notion of things in themselves with the view that this meaninglessness does not prohibit the possibility of the existence of things in themselves to draw the distinction between strong correlationism and absolute idealism, and then transform the former in to his speculative materialist position.

18 TWB, p.1.

19 Brassier, R. (2011). 'Concepts and Objects'. In L. R. Bryant, N. Srnicek, & G. Harman, *The Speculative Turn: Continental Materialism and Realism* (pp.47–66). Melbourne: Re.press, p.57; Harman, G. (2015). *Quentin Meillassoux: Philosophy in the Making*. Edinburgh: Edinburgh University Press, p.56; Stove, D. C. (1991). *The Plato Cult and other Philosophical Follies*. Oxford: Basil Blackwell, pp.83–113.

20 Musgrave, A. (1999). 'Conceptual Idealism and Stove's Gem'. In M. Chiara, R. Giuntini, & F. Laudisa (Eds.), *Language, Quantum, Music (Selected Contributed Papers of the Tenth International Congress of Logic, Methodology and Philosophy of Science, Florence, August 1995)* (pp. 25–35). Dordrecht, NL: Springer Verlag, p.27. Stove locates the clearest expression of the Gem in Berkeley's master argument. For Stove, Berkeley's argument amounts to this: "you cannot have trees-without-the-mind in mind, without having them in mind. Therefore, you cannot have trees-without-the-mind in mind" (Stove, 1991, p.139). According to Stove, Berkeley's argument is both formally fallacious and relies on an equivocation between things conceived (or perceived) and physical things. The tacit equivocation between the thought of an object and a physical object allows Berkeley to collapse the latter into the former and then claim to conclude that the latter is incoherent, and so impossible. In this respect, Berkeley's conclusion assumes what he says it proves: it is question begging. Stove was not the first to identify this problem in Berkeley's argument. See Downing (2013) for an account of a similar critique developed by Bertrand Russell.

simply what it means to speak about physical or material objects.[21]

Unsurprisingly, for both Stove and Musgrave, Kant is one of philosophy's greatest Gem-mongers. "Observing that we cannot think of things without bringing them under the categories of our thought", writes Musgrave, "Kant concluded that we cannot think of things-as-they-are-in-themselves ... we think of things-as-thought-of-by-us".[22] Although, as above, Stove's and Musgrave's direct realist approach tends to the view that we do in fact know things as they are in themselves, the point here is that for them Kant's conclusion (that we cannot know things as they are in themselves) does not follow from his premise ('that we cannot think of things without bringing them under the categories of our thought').[23]

From the Gem to Idealism

Musgrave claims that once Kant embraced the Gem, and once a pursuant distinction between phenomena and noumena is postulated, two core problems emerge that encourage the embrace of full-blown idealism. The first problem is the "inescapable cognitive disadvantage" that we cannot know "the real things".[24] The second problem is that, in order to maintain the sharp distinction between appearances and things in themselves, Kant is compelled to claim that although things in themselves exist they possess no phenomenal qualities ("no colours, smells, tastes, shapes or sizes, motions or weights") and (what is "queerer still") they are not in space or time and cannot play a role in causing phenomena.[25] In short, as Musgrave puts it, "things-in-themselves are nowhere, at no time, and do nothing".[26] For Musgrave, the problems that result from Kant's embrace of the Gem "disappear... if we do away with the noumenal world and its things-in-themselves, and opt for idealism". [27]

It is interesting that Musgrave's brief account of the pressures to embrace idealism to a large extent tracks Meillassoux's account of why the strong correlationist position is more rigorous than Kant's weak position. Although Musgrave and Meillassoux clearly disagree about the strength of the correlationist circle argument, they both hold that the correlationist reply to Kant's problematic claims about things in themselves tends towards a full-fledged idealism in which the notion of the thing in itself is finally extirpated.[28] Of course, in contrast to Musgrave — for whom Kant's problems stem from embracing the correlationist circle (and the pursuant view that there are distinct noumenal and phenomenal domains) —

21 Stove's appeal to the common-sense use of language is persuasive, not least because it is very witty. He writes: "All sane use of language requires that we never relax our grip on the tautology that when we speak of kangaroos, it is kangaroos of which we speak. Berkeley would persuade us that we lose nothing, and avoid metaphysical error, if we give up kangaroos in favour of phenomenal kangaroos: in fact we would lose everything. Phenomenal kangaroos are an even poorer substitute for kangaroos than suspected murderers are for murderers. At least a suspected murderer may happen to be also a murderer; but a phenomenal kangaroo is a certain kind of experience, and there is no way it might happen to be also a kangaroo" (Stove, 1991, p.110). Stove takes a similar approach to what he says is Berkeley's meaning argument. According to him, Berkeley's meaning argument begins from the premise that when we say an object exists, or has certain qualities, we mean that this object or quality is perceived, or that under particular circumstances it would be perceived. Berkeley, says Stove, concludes from this that "[i]t either makes no sense or is self-contradictory, to say of a physical object or a quality of a physical object, that it is unperceived and would not be perceived whatever the circumstances were" (Stove, 1991, p.141). In reply, Stove complains that "the only rational response to Berkeley's meaning argument is simply to say that we do not mean that a physical object or quality is perceived, or would be perceived under such-and-such circumstances, when we say that it exists. And this is something which (to borrow a phrase from Berkeley) *whoever understands English, cannot but know*" (ibid., p.142).

22 Musgrave A. (1999), p.26.

23 Strictly speaking Kant's point is not that we cannot know things in themselves because we must use categories to think them. It would be more accurate to say that for Kant we cannot know things in themselves because we must 'use' our forms of intuition to know them. The difference is crucial to Kant's argument but does not affect Musgrave's critique.

24 Ibid.

25 Ibid., p.27.

26 Ibid.

27 Ibid.

28 Hegel sums up this trajectory in post-Kantian thought well in *The Science of Logic*: "In its more consistent form, transcendental idealism did recognize the nothingness of the spectral thing-in-itself, this abstract shadow divorced from all content left over by critical philosophy, and its goal was to destroy it completely" (2010, p.27).

Meillassoux holds that Kant's problems emerge from an inconsistent embrace of the circle argument in the first place, from a failure to adhere fully to the circle argument's demand that the in itself is unknowable. As we saw above, Meillassoux claims that in its more robust form the (strong) correlationist reply to Kant's weak correlationism maintains that even the notion of things in themselves is incoherent: it is a contradiction in terms and, therefore, meaningless.[29]

F. H. Jacobi's Challenge and the Metaphysical Interpretation of Kant's Idealism

The complaints both Musgrave and Meillassoux raise in response to Kant's distinction between, and claims about, appearances and things in themselves are far from new. Musgrave's issue (that Kant's things in themselves seem to have no properties, are not in space and time and yet somehow cause phenomena) and Meillassoux's critique that Kant contradicts himself (when he claims to know that things in themselves are unknown and unknowable but also that they exist, are non-contradictory, non-spatiotemporal and affect our sensibility) are at least as old as the second edition of the *Critique of Pure Reason*.[30] Their complaints almost exactly repeat the words of Kant's influential contemporary F.H. Jacobi, who in 1787 raised three discrete but overlapping problems in Kant's *Critique*. The first is Meillassoux's issue: Kant's claim that things in themselves are unknown and unknowable is incompatible with his claims that they exist, are not in space and time, and cause appearances. The second, related, ontological problem is closer to Musgrave's concerns. It is the question of how things in themselves which are not in space and time could possibly affect us and cause appearances. The third issue for Jacobi (which Musgrave basically shares) is that transcendental idealism amounts to Berkeleyan idealism or phenomenalism, despite Kant's explicit refutation of this charge.[31] The conclusion Jacobi draws from these issues is summarised in his frequently quoted remark that "without that presupposition [of the thing in itself] I could not enter into [Kant's] system, but with it I could not stay within it".[32]

The question of how to make sense of (let alone reconcile) Kant's claims about things in themselves remains a mainstay of Kantian scholarship. Underpinning this question, however, is a more basic question of how we should interpret the nature of the distinction between appearances and things in themselves. The debate is centred on the question of whether that distinction should be understood metaphysically or epistemologically. The metaphysical ('traditional') reading remains common. At the heart of this

29 Meillassoux notes that it is Fichte who gets closest to the strong correlationist position he has in mind. In his presentation at the Speculative Realism workshop at Goldsmith's University in 2007 he says that it was Fichte who provides "the most rigorous expression of the correlationist challenge to realism" (Collapse III, 2007, p.410). It is not hard to see why. Fichte writes that "[t]he thing-in-itself is something for the self, and consequently in the self, though it ought not to be in the self: it is thus a contradiction" (1991, p.249). Indeed, for Fichte, the correlationist circle is inescapable: "that the ... finite spirit must necessarily posit something absolute outside itself (a thing-in-itself), and yet must recognize, from the other side, that the latter exists only for it (as a necessary noumenon), is that circle which it is able to extend into infinity, but can never escape" (ibid., p.248). Fortunately, we need not enter into a reconstruction of Fichte's idealism here (or, for that matter, examine the extent to which Hegel's response to both Kant and Fichte's idealism excises the contradictory notion of things in themselves).

30 See quotation from TWB referenced in note 14.

31 This charge (that Kant's transcendental idealism amounts to a Berkeleyan or phenomenalist variety of idealism) was articulated in the very first published review of the *Critique*, by Christian Feder and J. G. Garve in 1782. It so infuriated Kant that in response he published an appendix to the *Prolegomena*, explaining how and why transcendental idealism differs from Berkeley's idealism. Moreover, the addition of the chapter on 'The Refutation of Idealism' in the second edition of the *Critique* can be seen as another attempt to address this persistent critique. For the Feder/Garve review and a discussion, see Sassen, B. (2007), pp.53–77.

32 Jacobi, F. H. (1994). 'Appendix to David Hume on Faith, or Idealism and Realism, A Dialogue'. In G. D. Giovanni, *The Main Philosophical Writings and the Novel Allwill* (pp. 253–339). Montreal: McGill-Queen's University Press, p.336. Accordingly, Jacobi argues that in order to avoid collapsing under its internal tensions, transcendental idealism should be unburdened from its vestigial commitment to things in themselves (and hence to the existence of an extra-mental reality). It is for this reason that Jacobi concludes his appendix with the following challenge: "The transcendental idealist must have the courage, therefore, to assert the strongest idealism that was ever professed, and not be afraid of the objection of speculative egoism, for it is impossible for him to pretend to stay within his system if he tries to repel from himself even just this last objection" (ibid., p.338).

interpretation is the idea that things in themselves and appearances denote two distinct ontological domains or realms. On this view, the realm of appearances is known to us and organised according to our forms of intuition and the categories of the understanding, and the world of things in themselves is the real but unknowable world of things that lie beyond, and yet somehow cause the world of appearances. This traditional metaphysical interpretation very clearly underpins Jacobi's reading and rejection of Kant's transcendental idealism, just as it does Peter Strawson's reading and rejection of Kant's idealism 200 years later.[33] On the basis of their complaints it is clear that both Musgrave's and Meillassoux's critiques of Kant are based on the traditional metaphysical reading of Kant's idealism.[34]

The Epistemological Interpretation of Kant's Idealism

We can now turn to the alternative, epistemological interpretation of Kant's idealism. In what follows I briefly explain and defend the core features of this interpretation. From this explanation and defence I aim to demonstrate four things: first, when understood according to the epistemological interpretation Kant's transcendental idealism is well equipped to answer Jacobi's complaint that Kant contradicts himself; second, the consequence of this is that the step from weak to strong correlationism that Meillassoux requires to stage the confrontation between correlationism and idealism is at best unnecessary; third, when properly construed, Kant's transcendental idealism is not reliant on the Gem (or correlationist circle argument); and fourth, when read metaphysically, Kant's transcendental idealism is indeed reliant on the Gem.

Components of an epistemological and one world/two aspect interpretation of Kant's idealism can be located in Fichte's philosophy, but it is given clearest expression by three contemporary thinkers: Gerold Prauss, Henry Allison and Graham Bird.[35] I will focus on two components of Allison's systematic interpretation and reconstruction of Kant's transcendental: the transcendental distinction between appearances and things in themselves; and Kant's critique of transcendental realism in relation to his Copernican revolution and argument for transcendental idealism.

Drawing on Gerold Prauss' reading of Kant's *Critique*, Allison argues that Kant's distinction between appearances and things in themselves is best understood as resting on the difference between two ways of thinking about objects, "as a contrast between two ways in which such objects can be considered in a

33 Strawson explicitly characterises Kant's notion of things in themselves as indexing a reality that exists independently of the sensible world (i.e., the world of appearances). He writes that for Kant "reality is supersensible and . . . we can have no knowledge of it" (2007, p.16). Like Jacobi, Strawson takes Kant's claims about things in themselves to be epistemologically and ontologically incoherent and concludes that Kant's transcendental idealism amounts to phenomenalism. "The only element in transcendental idealism which has any significant part to play in those structures [the structures of Kant's arguments and solutions]", writes Strawson, "is the phenomenalistic idealism according to which the physical world is nothing apart from perceptions" (ibid., p.246). Rather than reject Kant's project outright (or, like Jacobi, suggest that the only remedy is a more robust idealism) Strawson argues that, despite providing no remedies for its obvious epistemological and ontological inconsistencies, when transcendental idealism is jettisoned from the *Critique* many of Kant's insights can be usefully reconstructed and defended. The central Kantian insight that Strawson defends in *The Bounds of Sense* is what he calls Kant's 'principle of significance', which he formulates as follows: "There can be no legitimate or even meaningful employment of ideas or concepts which does not relate them to empirical or experiential conditions of their application" (ibid., p.3). Strawson takes this to be both central to Kant's thought and an especially useful insight because it underpins "the framework of a truly empiricist philosophy, freed, on the one hand, from the delusions of transcendent metaphysics, on the other, from the classical empiricist obsession with the private contents of consciousness" (ibid., p.5).

34 There are, of course, some interpreters who are committed to the view that Kant's distinction between appearances and things in themselves is metaphysical (things in themselves just are the real entities or real properties of entities) but who, unlike Jacobi, (who suggests a more robust idealism) and unlike Strawson (who suggests that we ought to jettison the idealist-cum-phenomenalist components of Kant's thought) adopt other strategies to explain the compatibility of Kant's determinations of things in themselves with the thesis that things in themselves are unknowable. See, for example, the approach developed by Rae Langton (1998).

35 For a discussion of Fichte's anticipation of the epistemological reading of Kant's idealism see Allan Woods (2016, p.38). Allison, Bird and Prauss' treatments of Kant's transcendental idealism are developed in: Allison, H. E. (2004). *Kant's Transcendental Idealism: An Interpretation and Defence*; Bird, G. (2006). *The Revolutionary Kant: A Commentary on the Critique of Pure Reason*; and Prauss, G. (1977). *Kant und das Problem der Dinge an Sich*.

philosophical reflection on the conditions of their cognition".[36] On this interpretation Kant's distinction between appearances and things in themselves is one of logical entailment. Thus, as Michelle Grier puts it, Kant's approach to "the representation of the thing in itself" can be "very generally characterized [as] methodologically entailed by the critical procedure of reflecting on objects in relation to our cognitive faculties".[37] According to this reading, when (in transcendental reflection) we consider things as appearances we consider them in accordance with the categorial and intuitive frameworks of human experience. This means that when considered as they appear, objects are in space and time (as these are the forms of our intuition) and can be brought under the twelve categories or rules of the understanding. Crucially, in order for the notion of appearance to make sense (to avoid "a constant circle" as Kant puts it) it must be contrasted with the notion of something that is not appearance, but which we must assume underpins appearance.[38] Thus, the relationship between appearances and things in themselves is one of logical implication, so that, as Allison explains, "the expression *appearance* is parasitic upon, or at least correlative with, the expression *thing in itself* ".[39] Just as the notion of 'up' makes sense only in contrast to 'not up', and black makes sense only in contrast to 'not black', the notion of appearance makes sense only in contrast to the notion of non-appearance, which (on the epistemological reading) is what Kant means by things in themselves. More specifically, in contrast to objects considered as appearances (which are in space and time, and necessarily appear in accordance with the categories of the understanding) objects considered as they are in themselves are objects *considered as they are not appearances*, which is to say, as they are non-spatiotemporally and as they do not appear according to the categories. Allison puts it this way: "[i]n considering things as they appear, we are considering them in the way they are presented to discursive knowers with our form of sensibility. Conversely, to consider them as they are in themselves is to consider them apart from their epistemic relation to these forms or epistemic conditions".[40]

This procedure helps us make sense of Kant's *prima facie* contradictory claims about things in themselves that Jacobi *et al*. identify. We have already seen why consideration of objects as they are in themselves (and thus as not appearances) is by definition the consideration of objects as non-spatiotemporal. I have also suggested why, *pace* Meillassoux, the consideration of objects as they are in themselves is not a contradiction: despite objects as they are in themselves being unknowable, the notion of such objects in transcendental reflection is logically entailed by the notion of objects as appearances. Indeed, it is worth noting that without this entailment it is the notion of appearances that would be contradictory. For without the notion of an object in itself as the logical corollary of the notion of an object as it appears we would be forced to conclude that there are only appearances. But, as Kant famously puts it in the introduction to the *Critique*, "an appearance without anything that appears" is an "absurd proposition".[41] In fact, the conclusion that there are only appearances is tantamount to the view that appearances *are* things in themselves; which is effectively Berkeleyan phenomenalism.

The same procedure of logical entailment can be used to unpack the meaning of the claims that objects considered as they are in themselves exist and are the grounds or cause of appearances. To avoid both the conclusion that appearances are all that there is (and in so doing destroying the notion of appearance in the first place) and being forced to embrace Berkeleyan idealism or phenomenalism, we must reason that there *is* something unknown and unknowable that, nonetheless, underpins the appearance of objects, and which is itself something other than an appearance. In this way, the claim that objects considered as

36 Allison, H. E. (2012). 'Transcendental Realism, Empirical Realism and Transcendental Idealism'. In H. E. Allison, *Essays on Kant* (pp. 67–83). Oxford: Oxford University Press, p.67. According to Prauss (1977, p.20) the phrase "thing in itself" is an abbreviation of "thing considered in itself" (*Ding an sich selbst* betrachtet).

37 Grier, M. (2001). *Kant's Doctrine of Transcendental Illusion*. Cambridge: Cambridge University Press, p.89.

38 Here is the full passage from the *Critique*: "if there is not to be a constant circle the word 'appearance' must already indicate a relation to something the immediate representation of which is, to be sure, sensible, but which in itself, without this constitution of our sensibility (on which the form of our intuition is grounded) must be something, i.e., an object independent of sensibility" (1998, A252, p.348).

39 Allison (2004), p. 55.

40 Ibid., pp.16–17.

41 Kant (1998), Bxxvii, p.115

they are in themselves exist is another way of stating that the notion of appearances entails the notion of things in themselves as that which underpin or ground appearances. We should, nonetheless, note a concern here: in claiming that objects as they are in themselves exist, Kant seems to apply the categories of the understanding beyond their legitimate field of application, i.e., the field of objects considered as appearances. The same worry arises when explaining the meaning of the claim that objects considered as they are in themselves can be taken as the ground or cause of objects considered as they appear. However, Allison's treatment of the so-called 'problem of noumenal affection' (i.e., the question of how unknown and non-spatiotemporal things in themselves could cause or ground appearances) offers a persuasive response to these concerns.[42] In reply to the problem of noumenal affection he first addresses and then dismisses one approach that might seem to follow from an epistemological reading of Kant's idealism. On this approach, Kant should have avoided the claim that things in themselves ground or cause appearances (just as he should have avoided the claim that things in themselves exist and are non-spatiotemporal). Instead, Kant should have concluded that the object that affects us and produces sensation can be only an empirical object, that is, an object considered as an appearance. Thus, we are affected by objects as they appear; as phenomena governed by space, time, and as falling under the categories. In this way, the problem of affection avoids the conclusion that something non-empirical gives rise to or causes sensation. But Allison himself notes that however compelling this reply is, it is unsatisfactory because it relies on "assigning to an object, considered apart from its relation to human sensibility precisely those features that, according to the theory, it only possesses in virtue of this relation".[43] As a consequence, he argues, the thought of the object in question (as the ground or cause of appearances) is by definition the thought of something non-sensible; it is the thought of a thing as it is in itself. This might seem to suggest that Kant's account does indeed tell us something about the matter or the content of things as they are in themselves; to which Allison replies that the requirement to hold the view that what causes or is the ground of appearances cannot be itself an appearance (and must, therefore, be non-empirical or super-sensible) does not commit Kant to any claims about the matter or content of things as they are in themselves. Rather, the conclusion that to think of an object as the ground of appearances is to think of an object as it is in itself (and not as itself an appearance) is merely an *analytic* claim based on the concept of an object conceived within transcendental reflection, which is to say, from two logically correlative ways of thinking about objects. Accordingly, to conceive of an object as the ground of appearance is to conceive of it as it is in itself, just as to conceive of an object as appearance is to conceive of it as not its own ground. In other words, the notion of the ground or cause of an object as an appearance indexes that object considered apart from (but as a logical correlate of) our forms of sensibility. This is what it means to consider an object as it is in itself. Taken as a whole, as Allison puts it, Kant's claims about things in themselves do not and are not supposed to "provide a [metaphysical] story about *how* the mind is affected by a non-sensible entity".[44] Rather, the determinations that Kant ascribes to objects considered as they are in themselves "merely stipulate how the affecting object must be conceived of in the transcendental account of affection required for the explication of Kant's theory of sensibility".[45]

Allison acknowledges that Kant uses the language of the categories of the understanding when referring to objects considered as they are in themselves (specifically causation and existence) and he claims that this makes sense because the categories are concepts or rules that apply to the consideration of objects in general. This does not mean that Kant is *applying* the categories to objects that lie beyond the empirical sphere of appearances. Instead, according to Allison, whether we are dealing with the consideration of objects in general or the consideration of objects in transcendental reflection (which is to say as either appearances or as things in themselves) the function of the categories is purely logical, carrying with it no assumptions about the objects that may or may not lie in an empirically inaccessible realm. To highlight the point, Allison notes that although objects considered as they are in themselves and as the cause of appearances cannot be represented in space and time, this does not prevent such objects or causes *being* in

42 Allison (2004), pp.64–73.
43 Ibid., p. 67.
44 Ibid., p.72.
45 Ibid., p.73.

space or time.[46] His point is that, for Kant, establishing that things in themselves are in space and time (which may or may not be true) is beyond our possible knowledge even if we can conclude that in transcendental reflection the consideration of objects as they are in themselves is by definition the consideration of objects as non-spatiotemporal.

If Allison's epistemological or methodological interpretation of Kant's transcendental distinction holds water, then it certainly seems to address both Jacobi's and Meillassoux's concerns. Jacobi's complaint that "without that presupposition [of the thing in itself] I could not enter into [Kant's] system, but with it I could not stay within it" could have been written by Meillassoux. On Allison's account one can consistently remain within Kant's system so long as one works with the method of transcendental reflection and the correlative notions of appearances and things in themselves properly, which is to say, non-metaphysically.

The Critique of Transcendental Realism and Kant's Revolution

The other crucial component of Allison's epistemological interpretation of Kant's transcendental distinction is the critique of transcendental realism that, he says, underpins Kant's defence of transcendental idealism. Put bluntly, the distinction between transcendental idealism and transcendental realism is that the latter "systematically identifies appearances with things in themselves".[47] Rather than providing a summary of Kant's account of why philosophies as diverse and antithetical as "rationalism... empiricism, metaphysical realism, as ordinarily understood, and Berkeleyan idealism...may be said in one way or another to conflate appearances with things in themselves" I shall focus on what Allison takes to be the common feature of these philosophical positions and their fundamental contrast with Kant's transcendental idealism.[48] According to Allison, what these philosophies share is a "meta-epistemological...commitment (either tacit or overt) to what is sometimes described as the 'theocentric paradigm' or model of knowledge".[49] He explains that "the defining feature of transcendental realism is its underlying assumption that human knowledge is to be measured and evaluated in terms of its conformity (or lack thereof) to the norm of a putatively perfect divine knowledge".[50] Thus, although empiricists marshalled sceptical arguments to criticise rationalists' claims to have attained *a priori* metaphysical knowledge, they remain, like the rationalists, "committed to the normative status of...the theocentric paradigm".[51] By contrast, Kant's transcendental idealism shifts the grounds of legitimate knowledge of objects from the theocentric, or God's eye, view to the epistemic conditions that underpin human cognition and experience. It is these conditions that determine what for us could count as an object of knowledge and what objective knowledge of these objects thus consists in. Kant's argument is that *a priori* knowledge of objects, but only of objects considered as appearances, is possible. In contrast, according to Allison, the metaphysical interpretation of Kant's transcendental distinction assumes a transcendental realist approach to the *Critique*. On the transcendental realist approach, Kant fails because he should, but cannot, provide an ultimate and metaphysical account of things in themselves that explains precisely what objects are like outside of appearances and exactly how these objects affect, cause, or ground appearances. In other words, on the transcendental realist view Kant fails because he owes us a God's eye account of objects. Such an approach, however, is entirely to misunderstand his Copernican revolution in philosophy. Kant's revolution is precisely an attempt to demonstrate that it is the conditions of human cognition that underpin possible human knowledge of objects rather than the opposite, traditional, view that knowledge consist in cognition conforming to objects as they are in themselves. Indeed, Kant's revolution consists in showing that such knowledge is impossible for finite beings. For him, the possibility

46 Ibid., p.70.

47 Ibid., p.25.

48 Allison, H. (2006). 'Kant's Transcendental Idealism'. In G. Bird, *A Companion to Kant* (pp. 111–124). Oxford: Wiley-Blackwell. p.113. Also see Allison (2004, pp.23–34) for a discussion of the varieties of transcendental realist philosophies against which Kant positions transcendental idealism.

49 Allison (2006), pp.113–114.

50 Ibid.

51 Ibid.

of knowledge and experience of the world is predicated on epistemic and intuitive frameworks. In contrast, knowledge of the world from a God's eye perspective would be knowledge of objects as they do *not* appear, i.e., as they are *not according to any intuitive framework*. In the absence of ordered sensory material there is no object, no world, to which the categories of the understanding can be applied to yield knowledge. Kant's point is that in the absence of an epistemic framework that combines ordered sensations with the categories of the understanding, knowledge is all but a contradiction in terms.[52]

Since my argument relies on Allison's interpretation of Kant, I need to address a straightforward concern that has been raised against it. Both Paul Guyer and Rae Langton have argued that the entailment argument (wherein the consideration of objects as things in themselves is methodologically entailed by the consideration of objects as appearances) transforms the notion of things in themselves into a trivial and anodyne idea which amounts to the claim that we cannot know things in themselves because, by definition, knowing things in themselves means knowing things apart from the conditions that make knowledge possible.[53] Put this way, Allison's take on Kant's argument for the unknowability of things in themselves is at least suggestive of the Gem. Is Allison's Kant not saying that knowledge of the world requires certain conditions and that, therefore, we cannot know things in themselves? The short answer is that this *is* Allison's argument. Crucially, however, and as we have seen, when the notion of things in themselves is taken to apply to objects considered apart from the conditions of their appearance (i.e., as they are not according to some intuitive framework) then as a matter of definition things in themselves are unknowable —even if in transcendental reflection we can apply the categories of the understanding to the notion of things considered as they are in themselves. Unlike the Gem, Kant's conclusion that we cannot know things in themselves is not a non-tautological conclusion based on the tautology that knowledge requires certain conditions. Rather, Kant's conclusion (that we cannot know things as they are in themselves) *is itself tautological*, following directly from the thesis that to consider things as they are in themselves *means* to consider them as abstracted from, or apart from, the conditions of our knowledge of the world.

However, although we can be satisfied that Allison's interpretation of the transcendental distinction avoids the Gem's fallacious reasoning, this seems only to reinforce Guyer's and Langton's complaint that in Allison's hands, Kant's conclusions about things in themselves are trivial and anodyne; that "[in his reading of Kant, Allison] ... endeavored to resolve a substantive metaphysical dispute by a semantic sleight of hand, [by] making the non-spatiotemporality of things as they are in themselves virtually into a matter of definition".[54] But the complaint is not reinforced.

Allison's reply both demonstrates that the "objection...rests on a misunderstanding of the terms" and indicates that when viewed according to the metaphysical interpretation, Kant's conclusion that things in themselves are unknowable *does* follow the Gem's fallacious reasoning.[55] Allison argues that the conclusion that things in themselves are unknowable is not merely the result of the definition of things considered as they are in themselves. Rather, the definition of things considered as they are in themselves *follows* from Kant's Copernican revolution. As we have seen, Kant's Copernican revolution is based on the view that the theocentric model of knowledge and the transcendental realist approach to its attainment (which tacitly

52 I use the qualification 'all but' here because, according to the reading of Kant I have developed, God's knowledge indexes a way of knowing through pure intellectual intuition, as Kant states. In contrast to the knowledge of finite rational beings (for whom knowledge of the world requires the synthesis of given sensations — pre-formed by our intuition — and the categories of the understanding) the way in which an infinite rational being might know (or even think) is a mystery. Whereas a discursive intellect requires sensation, i.e., information provided from an external world, a purely intellectual intuition would create content directly from its mind. It is, therefore, not at all clear that there would be any separation between God (an infinite being) and the universe God creates. As such, there would be no separation between knower and known. See McCormick, M. (2000)

53 Guyer, P. (1987). *Kant and the Claims of Knowledge*. Cambridge: Cambridge University Press, p.333; Langton, R. (1998). *Kantian Humility: Our Ignorance of Things in Themselves*. Oxford: Clarendon, pp.8–12.

54 Allison (2012), p.75.

55 Ibid. We should note here that Alison's reply to Langton and Guyer is framed through a reply to the so-called 'neglected alternative' objection wherein Kant neglected the possibility that space and time were both forms of human sensibility and pertained to things as they are in themselves. Allison's reply (that Langton and Guyer assume a transcendental realist approach to Kant's claims about things in themselves) is a response to their complaint that the epistemological reading can neither *rule out* the possibility that things in themselves are spatiotemporal nor *rule in* the possibility that they are not.

underpins both dogmatic metaphysics and empiricist scepticism) is incoherent because, in the absence of an intuitive framework through which sensory material appears, there can be no empirical object to which the categories of the understanding can be applied; and, therefore, there can be no knowledge of the world and its furniture. For Allison, Kant's conclusion that things in themselves are (by definition) unknowable is far from trivial: for that conclusion follows from his argument that the particular spatiotemporal form of sensibility that structures the way in which the human mind receives sensory material (and which is required for that material to be ordered and orderable) can be (non-dogmatically) accounted for only if it is regarded as "a contribution of the cognitive subject".[56] Thus, Allison's reply to the complaint that he tries to 'resolve a substantive metaphysical dispute by a sleight of hand' is that the complaint itself assumes "a transcendentally realist analysis of the situation", "an ontological thesis about the true nature of *an sich* reality".[57] His point is that if Kant's notion of things in themselves is taken metaphysically — if is taken to index that which is really real (in opposition to that which is merely apparent) — then we have misunderstood the way in which the transcendental distinction (according to which the notion of things in themselves is the logical correlate of the notion of appearances) follows from the central insight that underpins Kant's Copernican revolution: that "the way in which sensibility presents its data to the understanding for its conceptualisation already reflects a particular manner of receiving...which is determined by the nature of human sensibility rather than by the affecting object".[58] What is more, when the transcendental distinction is construed metaphysically, so that the notion of things in themselves is understood to index real reality (whatever that is), then the charge that Kant falls for the Gem fallacy seems to hold. For the claim that we cannot know what is really real does not at all follow from the claim that the conditions of our knowing (and experiencing) the world are underpinned or framed by specific *a priori* forms of intuition.[59]

Conclusion

I am now in a position to be able to spell out the conclusions that can be drawn. On the whole, these conclusions emerge from the view that Allison's epistemological interpretation of Kant's transcendental idealism is sound, not least because that view avoids the problems of the traditional metaphysical interpretation. We have seen that Allison's interpretation enables us to make sense of Kant's claims that unknowable things in themselves exist, and that they are non-spatiotemporal and the ground of appearances. In each case these attributes of objects considered as things in themselves is established by logical entailment, from their logical contrast with objects considered as appearances. In addition to giving a robust reply to the traditional complaint (exemplified by Jacobi, Musgrave, and Strawson) that Kant contradicts himself, this reading puts into question Meillassoux's defence of strong correlationism. For if Kant has not contradicted himself then it cannot be said that the strong correlationist position is superior to Kant's weak correlationism *because* it is more consistent. Of course, Meillassoux's critique of Kant's correlationism is predicated on the view that his contradictory claims about things in themselves are the result of failing to adhere to the correlationist circle argument. Despite their considerably different approaches, Jacobi, Musgrave, and Meillassoux all argue that once the correlationist circle argument is embraced, the demands of greater consistency lead us towards absolute idealism and a rejection of the notion of things in themselves.[60] But the correlationist circle argument is a version of the Gem. Just as it does not follow that we cannot think things as they are independently of us (or in themselves) because we cannot but think in thought, so it does not follow that we cannot know things as they are independently of us (or in themselves) because there are conditions of knowing. I have argued that the metaphysical interpretation

56 Allison (2004), p.14.

57 Ibid., p.132.

58 Ibid., p.14.

59 Indeed, we would expect a scientific realist (like Stove or Musgrave) to claim that even if we do not know the details of the ultimate nature of reality, we are well equipped to draw inferences and deploy scientific techniques that enable us to be reasonably confident that we have some knowledge of what is real, as opposed to what is merely apparent.

60 Meillassoux's whole argument consists in avoiding this slide into absolute idealism encouraged by the correlationist circle.

of Kant's transcendental distinction does indeed engage in the fallacious reasoning characteristic of the Gem because even if we add the qualification that the conditions of our knowing (and experiencing) the world are underpinned or framed by specific *a priori* forms of intuition then the claim that we can know things only as they appear (and not as they really are) does not follow. In contrast, I have argued, when we employ Allison's entailment argument and take the notion of things in themselves to refer to the consideration of objects in abstraction from (or as they are not according to) the transcendental framework of appearances (which is to say, as they are non-spatiotemporal and, hence, as they do not appear according to the categories of the understanding) then, by definition, we can know nothing of objects as they are in themselves, even if in transcendental reflection we can make claims about objects *considered* as they are in themselves. Allison's epistemological interpretation of Kant's transcendental distinction is significantly bolstered (and responds to the charge of triviality) when Kant's Copernican revolution is understood as a response to the scepticism and dogmatism generated by assuming a theocentric model of knowledge and a transcendental realist approach to its attainment. For Allison, Kant's point is that, in contrast to an anthropocentric model of knowledge, the theocentric model of knowledge indexes knowledge of the world and its furniture as they are not conditioned by, or as they are not according to, an intuitive framework; and, thus, as they do not appear. As we have seen, although we can deploy the categories of the understanding in transcendental reflection to generate determinations about objects *considered* as they are in themselves (as a contrast to objects *considered* as appearances) the categories of the understanding can yield genuine knowledge of objects only as they appear. Hence, we can have no genuine knowledge of objects as they are in themselves. Indeed, even though Kant retains the notion of things in themselves (not least to avoid a slide in to Berkeleyan idealism) for all that we know things in themselves could be any way or no way at all.

The lesson of Kant's revolutionary reply to the challenge of dogmatism and scepticism is that any and all knowledge of the world that we (or any other discursive intellect) could obtain is knowledge of appearances because knowledge (for such beings) requires an epistemic framework comprising the application of rules to something given (e.g., a sensory manifold). In broad terms, knowledge of appearances consists in the application of a formal, rule-governed framework (e.g., the categories of the understanding) to some thing (or class of things) pre-ordered by some basic form or forms of intuition and taken or sensed by some being as an object or phenomenon.[61] In contrast, to know things as they are in themselves (as God might) would be to know things as they are not according to any such intuitive-epistemic framework. So defined, knowledge of things as they are in themselves has the air of a contradiction in terms. For although God, an infinite rational being, might know things in themselves it is not clear what knowledge so construed could be.[62] Meillassoux is right that Kant's correlationist philosophy puts paid to our possible knowledge of things as they are in themselves. Lamentable as this may be, I have tried to demonstrate that it is far from catastrophic.

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61 Thus, we could speculate that there may be rational beings who do not experience time because their forms of intuition are in five dimensions. What appears to these beings through their form or forms of intuition and sensory faculties combined with the application of a set of rules or categories of the understanding will provide them with the basic framework by which they will produce knowledge of the universe. There is an interesting question about the extent to which these rules could be different from those of Kant's categories. On this issue see Quarfood, M. (2004), pp.28–29.

62 See note 52. The basic issue is that although we can conceive of what it means for Ann to know something about the universe and its furniture we cannot conceive of what it might mean for God to know. My thanks to the anonymous reviewer at *Perspectives* for useful feedback, not least of which was the advice that I clarify my account of God's knowledge in the epistemological framework reading of Kant's transcendental distinction. Thanks also to Bob Brecher and the editors at *Perspectives* (in particular David Markwell and Conor Morris) for helpful feedback on earlier drafts.

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Book review **Open Access**

Clarisse Monahan

Almost There: Lauer's glimpses of Intimacy

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1. The purpose of Christopher Lauer´s *Intimacy, A Dialectical Study* (2016) is twofold: first, he wants to discuss the concept of intimacy, and wants to undertake this task by suspending judgements on what intimacy is. Second, he intends to do this using a dialectical approach and through it review various hypothesised forms of intimacy. Lauer, whose previous work *The Suspension of Reason in Hegel and Schelling*, conceived this book as a first part in a proposed trio on recognition: intimacy, value, and solidarity. A review of the literature on intimacy and dialectics indicates that relatively little has been written on the connection between the two. Although friendship has been covered extensively, dating back to Plato's Lysis, intimacy has been somewhat left aside. According to the author, defying cultural limits is always easier in fantasy than reality, and as William Gass says, ´for the voyeur, fiction is what's called going all the way´[1]. Hence intimacy has traditionally been easier to interrogate through literature.

Showing the continued relevance of the dialectical approach Lauer draws mostly on Georg Wilhelm Hegel and Friedrich Wilhelm Schelling but also refers to Georges Bataille for his unabashed glorification of eroticism and Simone de Beauvoir who understands well what we might call the dialectic of transgression. The introduction takes us on a swift tour through the history of dialectics from Plato to Hegel before looking at the ways we attempt to establish intimacy 'If intimate means what is most inside then a full analysis of it calls for a study not only of various levels of insideness but of the very striving for more insideness'[2].

Giving a rough overview, the book can be summarised as follows: *Intimacy, A Dialectical Study* analyses ten major ways that we aim to get intimate with the other. This non-exhaustive list begins the first chapter with gift giving, which for Lauer provides an occasion for the giver and recipient to come together. However its failure to leave behind a lasting remainder neatly leads to the following chapter, *Touching*. Each chapter ends in collapse guiding Lauer to explore other options in search of a more stable form of intimacy. The following chapters The Heartbeat, The Between, The Fetish, Embedding, Conflict, The Mêlée, the Future and Mourning all attempt to bring about a ´closeness beyond closeness´[3]. By exploring the myths and minutiae of courtship and relationships, Lauer is able to chart intimacy's course from the first flowering of attraction as outlined in the *Gift*, to complete breakdown in the last chapter on *Mourning*.

There is something to be said for the view that life involves a continual struggle to achieve intimacy. It seems that what we seek from others is recognition, trust, and connection, sometimes quite an unachievable triumvirate. As each person's desire and capacity for intimacy varies widely, it would be imprudent to suggest intimacy as a panacea. Lauer by not making any assumptions about intimacy's power for transformation, is free to look openly at how intimacy aims at fulfillment 'the dialectician should not aim to hurry toward the end of the mission but should hang back and explore the territory's range of possibilities'[4]. According to the author, using dialectics assumes every thought or action can be suspended. But such a suspension does not mean that reason becomes inactive or is without force[5]. What is suspended conserves its vigour, but is just not allowed to put its force into effect. As we work through Lauer's arguments, it is useful to be aware that 'suspend' also has a spatial meaning signifying allowing and encouraging something to persist in its

1 (Gass, p.82)
2 Lauer (p.9)
3 (Lauer, p.136)
4 Lauer (p.6)
5 Lauer (p.6)

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already raised state. This promotes Hegel's methodical charge to present discrepancies as they first arise in reason by allowing their meaning to be kept even as the thinking grows increasingly abstract.

Lauer´s attempts at a ´closeness beyond closeness´[6] come across a nest of problems: namely, why intimacy is so hard to find, so hard to achieve and, especially, so hard to maintain. Even talking about it tends to dilute it and lead to the opposite, a distancing, and a retreat further into our own private world, "[asking about the status will provoke immediate backtracking from one or both partners[7]¨. Though there have been many books in popular culture about the general anxiety around the decline of intimate relationships as a result of technology, such as Shelly Turkle's *Alone Together or Reclaiming Conversation*, Lauer's intuition is that this anxiety arises not from any structural changes or lessening of constraints in the modern world but from intimacy's inherently contradictory nature. Of course, intimacy is experienced in various ways in different cultural contexts but the differences should not prevent us from discussing the ubiquitous ways we cultivate it. Even if one agrees with the poststructuralists, that each generation comes up with their own version of what intimacy is, it is important to analyse the common ways we tend to go about creating closeness with each other.

Giving a provocative account of why our emotional adventures end so often in *chagrin d'amour* or disappointment, Lauer views intimacy as being equally open to destructive or beneficial possibilities. However, by understanding that for greater self-knowledge it is healthy and necessary to document discontent and discomfort Lauer fleshes out most of the common problems that arise in intimate relationships. Delving into these vulnerabilities highlights what Rollo May would call the 'I am' experience[8]. In intimate encounters one is freed of the burden to perform any type of role or adhere to particular demands and judgements of others. One has access to exist more fully in an intimate space in the sense that there is no need to postpone existence to an ever-receding future[9]. Life seems easier when you are in this realm of intimacy and time apart harder.

An adequate analysis of a subjective experience like intimacy must begin with an approach to experiencing that tries to take feelings at face value, divorced from any causal hypothesis. Deconstruction has shown it impossible to ever completely eradicate misinterpretation when describing subjective experiences so in this instance, Lauer's dialectical project is a welcome change. Though the theoretical importance of the concept of the space of intimacy is pronounced in Lauer´s analysis, and he is interested in interpersonal relationships that involve physical or emotional reciprocity characterised by romantic love and sexual activity, it would have been beneficial for him to describe as accurately as possible the way it works at the concrete level and what prerequisites are necessary before the flourishing of intimacy can even begin to emerge. This is especially important in light of the tendency to confuse intimacy with a mere juxtaposition of ordinary friendship and sexual attraction. Though he does say his definition does not include intimate feelings induced by drugs such as MDMA nor the phenomenon of limerence, however more detail into trying to pin down conditions for optimal intimacy and why it does tend to happen in certain instances more than others. For example, the motivation of an existential readiness for intimacy generally comes from a desire to escape from emotional lethargy and stagnation of a previous condition, ie: the person must have been starved of some facet of intimate connection that has now become an essential need usurping any previous emotional indifference. It is only when certain conditions are met such as this 'existential readiness for Eros' that the sentimental and sexual fetishisisation of the other can come into effect. This fetishisation causes each person to positively value every detail of his or her intimate encounter and to feel privileged and fortunate that he or she is willing to expose such vulnerabilities. It is in this shared space of availability where a continued intimacy can develop. Thus if two people in the condition of emotional readiness meet and share a certain affinity of lifestyle dispositions and emotional style there will be a strong tendency for such an intimacy to develop.

Whether an attempt at intimacy is pursued through gifting, fetishes, or fighting, intimacy, whether

6 Lauer (p.136)
7 Lauer (p.15)
8 May (1983)
9 Ellis (1996, p.69)

successful or unsuccessful, often hinges on the idea of how accessible the other person is or should be. It follows that the tendency for people to fall into a continued intimate situation calls for reciprocation. The reciprocal requirement can be attributed to the fact that one person's condition of emotional readiness would not be able to flourish without the partner allowing this to occur in a shared space of empathy. One would not generally be motivated to exposure vulnerabilities unless their partner fell into this same tempo. This mismatch in readiness, seems to be the thing that blights contemporary western relationships, everything is both hurried and takes too long, conditions right for one, wrong for the other (and also known that at some other point they would have matched up perfectly). Another condition that must be met in establishing a space of intimacy requires alone time. The intimate partners must be alone together even though this aloneness may occur in public. The alone time in this sense means that the authentically motivated direction of their attention progression cannot be blocked or deflected either by each other or by others who are present. However this alone-ness part is intruded upon relentlessly, social media, work and general societal atmospheric confusion. And in the midst of this is the struggle for the atemporal. Almost like the couple have to find moments out of time to discover that cocoon.

To the extent that one-person fetishises every aspect of the other's being in this way the other can correspondingly trust that they will not judge or condemn any feeling that is expressed. This fetishisisation of the other tends to lend intimacy its atemporal quality. To experience intimacy is akin to being taken out of the everyday realm. In conjunction with this sense of time standing still in such instances there often may be almost a feeling of unreality as time and space appear warped. An hour encounter can be enough to transport the partner to an elevated state for a few days. And space becomes warped as the intimate other is often seen in tunnel vision. These examples illustrate the way the space of intimacy creates a sense of immediate presence and for this reason being in the others proximity induces a 'high'.

One of the most common arenas we enter in the thematics of intimacy is conflict and Lauer devotes an entire chapter to it, outlining how closeness does not depend on unwavering consent and can thrive even when there is dissent. In fact, it would be the exception rather than the rule to find a couple that never fights or one that would call their relationship into question based on an argument. The chapter on Conflict starts with *The Dismissal* and proceeds to the following subchapters: *Dispute*, *Violence*, *Withdrawal*, ending with *The Debate*. Though Lauer is not advocating any therapeutic consequences that result from the above sequence, he does show how periodic rejection in relationships *can* bring people closer together. Barthes famous musings in *A Lover's Discourse a*re brought to contribution here where he tells how there is no point to withdrawing if the other party is not aware of it: "The hiding must be seen, I want you to know that I am hiding something from you, that is the active paradox I must resolve".

Although each chapter starts with the promise of achieving intimacy, all ultimately disintegrate under their own ambiguities. The existential despair of *chagrin d'amour* is also plausibly explained, when intimacy dies, our very project of authenticity also falls apart, leaving us clinging to the past in the hope of finding either reconnection or a replacement. When one has exposure to continued intimacy, the painful absence of this accompanying *feeling of being connected* to another person is immense. However, when one is involved in intimacy one is also tortured by its potential demise. Whether we are involved in intimate affairs or not, we are social beings and are therefore inevitably disposed to a constant striving towards intimate connections. The book then is a rich reservoir that will be a highly useful resource for conceptual distinctions and new arguments that can be employed in many contemporary philosophical debates that involve the idea of intimacy.

Lauer seems to reject biochemical reductionism but offers no clear alternative. I am highly suspicious of the idea that we will ever find an answer for the formula for intimacy in literal biochemistry - it can't just be the release of oxytocin, for instance - but I also do not believe it is purely a phenomenological question. The feeling of intimacy could hardly be facilitated merely by the action of sexual hormones; rather, it is facilitated by the attitude of being in a place, which is bounded and protected. The intimate space becomes a cocoon sheltering the lovers from the troubles of life. Even things like 'The Melee' become trivialised and do not disturb the continuing tranquility of the overall situation. Instead such hiccups are treated as deviations, the goal to recalibrate as quickly as possible.

It is always awkward to try and express the impossibility of what justifies the massive value you place

on the object of your feelings. It may well turn out to be the case that we only spend a lot of effort pursuing intimacy with those we share 'chemistry,' but I do not think we have to assume that to understand how the dialectic of intimacy works. It is enough merely to ride the wave while trying to make sense of it and suspending this need to make sense of it. As Lauer explains 'indeed, our lives are richer when we learn to suspend reason even as we reserve a central place for it in our lives.[10]' So perhaps there are some things in life we shouldn't question too much such as the deep metaphysics of interpersonal - chemistry.

Lauer keeps as many balls in the air as possible whilst still remaining reasonably responsive to the differences between the projects of the many thinkers he engages with. He never tries to live within a single theoretical framework out of some ill-defined sense of philosophical loyalty and fluidly moves across contexts resulting in a call to action for readers to think about intimacy for themselves. The book culminates by reiterating that its task was never to provide a distinct perspective on intimacy, but rather to develop a dialectical project on it by documenting its various meltdowns. Though Lauer soberly acknowledges the many ways intimacy can cave in despair, *Intimacy, A Dialectical Study* still paints a fairly attractive picture of how we cultivate it.

A niggling worry I got from reading this book is that by intellectualising intimacy, I may also look at it in a more systematic detached way. However for anyone interested in love, intimacy, and its understanding, Lauer's dialectics help uncover contradictions that we all have but rarely consider. It adds wisdom to a field where the irrational often reigns, and it undoubtedly adds a very relevant chapter to the total sum of literature about intimacy. Even if the text cannot, as the author admits, completely provide adequate and accurate answers to the question of intimacy, the result is not a sense of disenchantment, but rather an account of intimacy in its inner mystery.

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Research Article **Open Access**

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The Verisimilitudinarian approach to 'the Truth'

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Abstract: The Verisimilitudinarian approach to scientific progress (VS, for short) is traditionally considered a realist-correspondist model to explain the proximity of our best scientific theories to the way things really are in the world out there ('the Truth', with the capital 't'). However, VS is based on notions, such as 'estimated verisimilitude' or 'approximate truth', that dilute the model in a *functionalist-like* theory. My thesis, then, is that VS tries to incorporate notions, such as 'progress', in a pre-constituted metaphysical conception of the world, but fails in providing a fitting framework. The main argument that I will develop to support this claim is that the notions that they use to explain scientific progress ('estimated verisimilitude' or 'approximate truth') have nothing to do with 'the Truth'. After presenting Cevolani and Tambolo's answer (2013) to Bird's arguments (2007), I will claim that VS sacrifices the realist-correspondist truth in favor of an epistemic notion of truth, which can obviously be compatible with certain kinds of realism but *not* with the one the authors have in mind (the correspondence between our theories and the way things really are).

Keywords: Realism, Verisimilitudinarian Approach, Approximate truth, Epistemic truth

1. Introduction and structure of the paper

The history of verisimilitude started in 1960, with Karl Popper's qualitative definition of 'truthlikeness.' As a realist and admirer of [author's first name] Tarski's conception of truth, Popper was looking for a notion of truth that could bear the idea that as our scientific theories are continuously rebutted by other scientific theories, perhaps there was more there than just the notion of falsity at work. The last abandoned theories were false, but in a certain sense 'closer to the truth' than the former. Popper attempted to model his theory of 'truthlikeness' on Tarski's concept of truth: for every language L, the actual world divides its sentences into true sentences and false sentences (Tarski 1969). Popper's idea, then, was that scientific theories should have bivalent truth values in the correspondence sense: if A and B are closed classes of statements in L (scientific theories), B is closer to T (the set of all true sentences) if implies more truths and fewer falsities than A.

In 1974 two independent milestone papers by [author's first name] Tichý (1974) and [author's first name] Miller (1974) exposed severe problems for this approach, especially when it comes to explain false theories being 'more truthlike' than other theories (either true or false). After these papers, much work has been done to provide a notion of 'likeness' and to improve the semantics and the formalization of the intuition first conceived by Popper. [Author's first name] Niiniluoto (1984, 1999), [author's first name] Miller (1978), [author's first name] Oddie (1986), and [author's first name] Kuipers (1987, 2000) developed post-Popperian theories of verisimilitude. Though the supporters of VS do not constitute a philosophical school characterized by absolute unanimity[10], these points of view revolve around the general idea that scientific progress can be explained in terms of increasing verisimilitude of scientific theories, avoiding the logical problems of the original definition. Two key tenets of VS are that:

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- 1) a false theory can constitute a genuine instance of progress when it replaces a less verisimilar theory;
- 2) a method is fixed to assess which, among two competing theories, is closer to the truth.

These tenets "form the hardcore of a full-blown realist and fallibilist theory of scientific progress" (Cevolani & Tambolo 2013, p. 923).

In order to provide a clear formulation of my thesis, in the next paragraph I will clarify what kind of 'realism' the notion of Verisimilitude is meant to capture. Obviously enough, other conceptions of realism are possible, and some are even presented here, but it is crucial to have in mind that my claims are oriented exclusively towards the particular correspondence sense that [author's first name] Cevolani, [author's first name] Tambolo, and [author's first name] Bird (as Tarski and Popper before them) seem to have in mind. That is, the idea that our scientific theories should try to correspond to 'the way things really are in the world out there', or 'the Truth', as I will call it in what follows. With that in mind, I will argue that the notion of 'estimated progress', which is crucial for VS, is unfitting for the work it is supposed to do in the model. In other words, the model doesn't reach its declared goal.

In 2007 Alexander Bird published a paper entitled "What Is Scientific Progress?" This paper re-proposed a vision of scientific progress as accumulation of knowledge as well as discussing both the 'semantic approach' and the 'functional-internalist approach'. Focusing on his critique of the semantic approach (as he calls VS) and the replies, in the third paragraph I will discuss some interesting consequences. I present Bird's challenges to VS, along with Cevolani and Tambolo's distinction between 'real' and 'estimated' progress. I go on to expand the claim concerning the connection between real progress and VS, in order to make it clearer where my arguments are heading.

In the fourth section, I analyze the procedures to estimate the truth and point out deep similarities between VS and some functionalist theories. As I have already admitted, epistemic notions of truth can be compatible with certain kinds of realism, but my arguments are directed towards the realist models, not realism in general. Both VS and Bird's model are conceived to clearly distance themselves from such functionalist theories, but I argue fail to do so.

In the fifth section, I will extend the remarks regarding Bird's 'accumulating model' and show the similar problems that the notion of 'approximate truth' shares with VS's 'estimated truth'. I finish by arguing that the specific kind of correspondist realism that these authors have in mind entails that reality is constitutively unknown, and that this fact is the source of the difficulty encountered in characterizing the models as realist correspondist tools. Some concluding remarks will follow.

2. The target: realist-correspondist models

A preliminary clarification is needed. Both Bird and VS supporters have in mind something that the word 'realism' alone could hide: the intuition of an independent and determined reality which our knowledge could correspond to, i.e. the Tarskian concept that Popper was thinking of when he first conceived the notion of verisimilitude; there is a genuine problem here, since other philosophers intend 'realism' differently. Let me be clear: a disquisition about what realism is – or what it should be – is beyond the purposes of this paper. What is aimed at here is solely specific realist models held by VS. However, I must underline that there is a distinction between two patently different uses of the word 'realism'. The Spanish philosopher Zamora Bonilla proposed (1992; 2000) a 'methodological version' of VS, within which verisimilitude is fully understood in an epistemic fashion., In his model, there is no space for the duality between objective and apparent closeness to 'the Truth'. It is crucial to notice the difference: "my own approach is 'realistic' because I do want to explain just what it means our supposition that the objects investigated by science are 'real and objective'" (Zamora Bonilla 1992, p. 365). He is convinced, though, that "truth as absolute correspondence with transcendental facts cannot take place in any way" (*ibid*., p. 366). Therefore, 'truthlikeness' in his view "must not be understood as a combination of information and Tarskian truth, as Popper and Niiniluoto maintain" (*ibid*., p. 367).

Much could be said about this ambiguous usage[2], but as I said above, this is not my concern here. I just want to discuss the Tarskian, correspondist side of VS – which remains overwhelmingly predominant in the field. My arguments, then, are specifically oriented towards the realist-correspondist models that use VS to handle notions such as 'progress', 'knowledge', etc.

3. Bird's critique of the verisimilitudinarian approach

Let me take a step back. It is useful to introduce, at this point in the paper Bird's critique of the traditional verisimilitudinarian approach. This is important because the latest versions of VS, formulated – among others – by Niiniluoto (1987; 1998) and Cevolani & Tambolo (2013), are at least partially an answer to arguments very similar to those elaborated by Bird (2007). In this way, we will be in a privileged position to understand the direction taken by the recent realist-correspondist models that make use of VS: particularly, we will see that they have been forced in a certain (undesirable for them, as I claim) direction.

Bird's aim is to rehabilitate the conception of progress as accumulation of knowledge (the 'cumulative conception'). He complains that verisimilitude has become in the last years the privileged weapon against anti-realists' relativisms. Even Popper, he believes, "somewhat forlornly, hoped that his adherence to verisimilitude would differentiate him from his anti-realist contemporaries" (Bird 2007, p. 66). Bird is convinced, on the contrary, that 'increasing knowledge' is a more fitting candidate to defend realists' claims. Consider the following thought experiment, part of one of his arguments against VS (which he calls 'the semantic view'):

> Imagine a scientific community that has formed its beliefs using some very weak or even irrational method M, such as astrology. But by fluke this sequence of beliefs is a sequence of true beliefs. These true beliefs are believed solely because they are generated by M and they do not have independent confirmation. Now imagine that at time t an Archimedes-like scientist in this society realises and comes to know that M is weak. This scientist persuades (using different, reliable methods) her colleagues that M is unreliable. [...] The scientific community now rejects its earlier beliefs as unsound, realising that they were formed solely on the basis of a poor method. On the semantic view this community was making progress until time t (it was accumulating true beliefs) and then regressed (it gave up those beliefs). (Bird 2007, p. 67)

This clearly does not adhere to our intuition: scientific progress is not merely an acquisition of beliefs, even if they are by chance true. VS reconstruction lacks of interest in the issue of the grounding of scientific beliefs in the evidence. Cevolani and Tambolo's answer is accurate in showing how VS survives this objection. Bird's example is directed at accounts of progress as accumulation of true beliefs: but this is not the case with VS. Consider this passage by Cevolani and Tambolo:

Let us recall the distinction between real and estimated progress. Such a distinction is motivated by the fact that there is no way to ascertain whether a given belief exhibits a genuine correspondence to 'the real world': progress, construed as real progress, is something to which we have limited epistemic access. [...] within VS the step from a theory T to a theory T' is considered as progressive if and only if the verisimilitude of T' is estimated higher than the verisimilitude of T on the basis of the available evidence: progress, construed as estimated progress, is something to which we do have epistemic access.

(Cevolani & Tambolo 2013, p. 928).

> The move is clear: in Bird's example, even if real progress is achieved, there is no estimated progress. VS sticks to our intuitions when it claims that progress begins with the acknowledgment of the unreliability of the theory M. The price to pay to escape the criticism, however, is steep: "real progress and estimated progress do not necessarily go hand in hand" (Cevolani & Tambolo 2013, p. 929). However, having avoided this difficulty anther one arises: what is the relation between estimated progress and real progress?

The answer we are given is not entirely convincing: Cevolani and Tambolo, in order to emphasize the role of informativeness in VS, underline that verisimilitude is understood as a combination of accuracy and content. Bird's attack, they claim, is directed at an account of progress as accumulation of approximate truths (accuracy) and adds to the recipe another ingredient; informativeness (content). For example, if

we want to determine the height of Monte Bianco (h=4810m) to learn how long will it take for us to climb it, theory A which claims that 'h' is between 2000 and 8000 m is accurate, but very uninformative for us; whereas theory B which claims that 'h' is between 4600 and 4800 m – though less accurate (because technically wrong), is much more informative for us. On Bird's view this would be considered progress in our knowledge because B's verisimilitude is higher. All true theories are maximally approximately true, but they could have different degrees of verisimilitude, depending on their informativeness. In other words, there is a difference between accumulating truths (or approximate truths) and approaching 'the Truth': "verisimilitude [...] is closeness to the whole truth" (Cevolani & Tambolo 2013, p. 930).

This, however, is convincing only if we think strictly of the internal coherence of the theory: but what happens when we want the model to tell us something about the world? Of course, knowing from the beginning the height of Monte Bianco, it is easy to see which theory is more 'approximate' to the truth. But this is a fiction: if we know that the height is 4810 m, we don't need to discuss the verisimilitude of A and B! The real question, the one we are confronted with, is another one: what happens when we do not know the height?

4. Estimating the truth

The question is simple: how can we establish the verisimilitude of two competing theories without knowing 'the Truth'? If verisimilitude is a combination of accuracy and content, and we do not know the level of accuracy of the two competing theories, it seems that we can't measure verisimilitude in a meaningful way.; All we are given is 'estimated progress.' Scientific inquiry is thus seen as "an endeavour aimed at the search for theories which, given the available evidence, can reasonably be considered, at least for the time being, the most verisimilar among the alternatives". The estimated verisimilitude is then "a fallible but reliable indicator of genuine progress towards the truth" (Cevolani & Tambolo 2013, p. 927). How could estimated verisimilitude be a reliable indicator of *genuine progress* if we never get to know if the progress is real or not? It seems there is a genuine problem here.

Niiniluoto himself admits that "for a true Popperian, concepts like expected verisimilitude and probable approximate truth are of course not very appealing" (Niiniluoto 1998, p. 20). Nevertheless, VS is considered by supporters and non-supporters as a theory which handles notions such as 'progress' or 'knowledge' in a realist-correspondist manner. What we have seen so far indicates that this doesn't seem true. Of course, 'the Truth' is the constant reference of VS supporters, but this realist-correspondist notion does not have even a small role in the model. My claim is that VS is a model that *can be used* by such realists, but not only: the metaphysical commitment comes from the outside. Consider this sentence by Niiniluoto:

> a key feature of the similarity approach is that the concept of truthlikeness is always relative to a target: distance from 'the truth' depends on where your goal is located, and likeness to the goal depends on the respects of comparison that are taken to be relevant. (Niiniluoto 1998, p. 14)

How is that related to 'the way things really are out there'? The logical structure of VS proposed by Niiniluoto shows that even more clearly: Niiniluoto, with his 'critical scientific realism', defines a quantitative notion of expected verisimilitude in Bayesian terms: $EVS(T \mid e) = \Sigma_i VS(T, C_i)\, P(C_i \mid e)$ (expected verisimilitude of theory T given the evidence e is the sum of the verisimilitude of T in every state of affairs C multiplied by the probability P of every state of affairs given the evidence e). Even if others tried to define the notion of estimated verisimilitude in non-quantitative ways, it is clear that 'the Truth' is for them something like the Beckettian Godot: they always speak about it but it never shows up.

I maintain that Niiniluoto's formula could be accepted even by the so-called 'functional internalists'. Saying that the goal is near to 'the Truth' is just an additional, unverifiable and vague condition. Essentially, all VS says is that we have progress when we adopt a better theory. it is only a supplementary bias – with no grounds – adding that, being better, it is now closer to 'the Truth': there's nothing telling them that.

Cevolani and Tambolo write that expected verisimilitude is "construed as the relevant 'epistemic

utility' guiding the acceptance of scientific hypotheses" (Cevolani & Tambolo 2013, p. 925): how can this be, as they say before in the same paper, a "full-blown realist theory of scientific progress" (ibidem, p. 923)? Kuipers, with his 'constructive realism', asserts that "choosing the most successful theory (for the time being) is 'functional for approaching the truth'" (Kuipers 2000, p. 32). "Psillos", claims Bird, "wants to salvage the notion of verisimilitude since he regards it as being a key implement in the realist's toolbox" (Bird 2007, p. 88). Niiniluoto conceives VS as part of his critical realism[3] and as a "logical, epistemological, and methodological tool for a fallibilist realist" (Niiniluoto 1998, p. 25). My claim is that the structure of VS does not characterize the theory as realist-correspondist: it does not have to do with the way objects really are in the world.

At this point, one could wonder why the theory must be realist-*correspondist*: could it not be just a realist theory, broadly intended? After all, not only real progress has something to do with realism. As I have already specified, even an epistemic notion of truth can be compatible with certain kinds of realism. Are we sure that the correspondence of our scientific theories with the real world out there is what Niiniluoto, Cevolani and Tambolo have in mind when they claim that the theory is full-blown realism? I argue that it is.

When Zamora Bonilla published 'Truthlikeness without truth', the reactions by supports of VS were eloquent. "I will contend", wrote Bonilla, "that the (epistemological) notion of 'estimated truthlikeness' is more important than the concept of 'closeness to the absolute truth'; even more: that this last concept can be perfectly excluded from our philosophical perspective" (Zamora Bonilla 1992, p. 345). Instead of having methodological consequences for the theory, the procedure is overturned: it is the success of the theory (with respect to the empirical evidence) that guarantees 'closeness to the truth'. In fact, the 'estimated closeness to the truth' "seems to be reduced to the more instrumentalist concept of 'adequacy to the empirical data'" (*ibid*., p. 346). Zamora Bonilla has his proper 'methodological' version of VS: verisimilitude is fully understood as an epistemic concept, and the duality between objective and apparent closeness to 'the Truth' has no space in it.

Ilkka Kiema (before known as Kieseppä) critically evaluates Zamora Bonilla's methodological approach. He estimates the metaphysical commitment in the standard interpretation of VS, stating that "when developing this theory, one should rest content with the more modest aim of conceptual analysis, or of providing explications for the relational concept of being closer to the truth" (Kieseppä 1996, p. 421). He is convinced that VS can be seen as a theory providing us with an explanation of an ordinary-language expression (closer to the truth): "the modest aim of giving a more precise meaning to this unclear way of speaking is quite sufficient for [...] the defense of a realist account of scientific progress" (*ibid*., p. 432). Moreover, Kiema doubts that providing practicable algorithms for comparing competing scientific theories is a realistic aim for VS. This theory, he writes, does not have to yield methodological recommendations. It could be used instead "in a logical reconstruction of the methodology of science: [...] it would suffice to show somehow that scientists actually have, when choosing between competing hypotheses, preferred ones for which the value of ver is large. It would be irrelevant from this perspective to observe that proving this is difficult" (*ibid*., p. 424). Cevolani and Tambolo follow the same route: "the logical problem of verisimilitude amounts to the preliminary definition of an appropriate notion of verisimilitude, allowing for a comparison of any two theories with regard to their closeness to the, supposedly known, truth. The epistemic problem of verisimilitude, on the other hand, amounts to the definition of an appropriate notion of estimated verisimilitude by which the estimated closeness to the unknown truth of any two theories could be compared on the basis of the available evidence" (Cevolani, Tambolo 2013, p.5).

But how can we be satisfied by a mere logical explanation and formalization of the model? If the reference to 'the Truth' has no role whatsoever in the model, how is VS a translation of Tarski and Popper's first realist-correspondist intuition? If VS is to be taken seriously, we should also think of the model operating within (?)actual scientific theories. We must illustrate what being 'closer to the truth' entails.; We must illustrate if truth (?) is possible; if in our practice this concept is useful; etc. It seems that the metaphysical commitment is just an external, supplementary addition; nothing seems to prove or even indicate that "the theory of truthlikeness might be used for showing that science has progressed towards the truth" (Kieseppä 1996, p. 425), as Kiema and other VS supporters hold. For example, Oddie openly admits (1986) that 'the Truth' (something stronger that the empirically discernible one) is the aim of inquiry. Niiniluoto,

who too stresses the role of 'estimated verisimilitude', considers VS as part of his critical realism, in which the correspondence with 'the Truth' has a key role. Notwithstanding their intentions, however, it seems that their realist-correspondist intuition never succeeded in having a role in the conception of progress. As they describe it, not only is VS not a realist-correspondist model: it is not even a realist one. Niiniluoto's quantitative formula to estimate the verisimilitude of a theory can also function as a useful anti-realist tool to decide which theory is more useful. In VS (?) the role of 'the Truth' is so secondary that I doubt there is a clear sense in which the theory is realist at all.

5. Accumulating knowledge

Despite his criticism of the concept of verisimilitude, Alexander Bird – who has himself a realist-correspondist intuition[4] – proposes a conception of progress as accumulation of knowledge which shares with the former the idea of 'approximate truth'. This notion incurs the same problem ('non-sequitur' of the metaphysical commitment) of VS. This is relevant because it shows how difficult it is to handle notions such as 'progress' or 'knowledge' in reference to 'the Truth'.

Bird asks us to imagine an objection to his conception of progress as accumulation of knowledge: "theories are very often at best only approximately true; they rarely attain full truth. Since knowledge entails full truth, theories cannot be the objects of knowledge" (Bird 2007, p. 83). If so, we obviously cannot accumulate knowledge. To counter this objection Bird has a strategy. The plan is to define a notion of approximate truth, thanks to which certain propositions, as 'approximately p', will be fully true:

> If p is approximately true, then the proposition q, that p is approximately true, is itself true, not merely close to the truth. [...] Even if p is not true and so not knowable, q (q = approximately p) might well be knowable. (*ibid*., p. 84)

On Bird's view we can say 'p' is not true, but 'approximately p' is fully true. However, I doubt that this line of reasoning is acceptable. If knowledge must entail full truth, we cannot turn an approximate truth – which cannot be an object of knowledge – into a 'full truth' by moving the adjective backwards. The problem (?) is obviously still there. Even supposing, for the sake of argument, that 'approximately p is fully true' is more than a pun, still that adverb makes that truth ambiguous. Instead of a 'real-but-approximate' truth, we would have a 'full-but-vague' truth. I am not sure this is a step forward, but I am positive that it is not what Bird means when he says that 'knowledge must entail full truth'. Being satisfied with such a notion of 'knowledge' is perfectly legitimate however it is not a realist view in the Tarskian sense.

The problem is analogous to the one encountered before. Bird has in mind 'the Truth' as the way things are out in the world. Either our beliefs are true or not but when it comes to show how the independent truth has a role in his conception of progress, we start to encounter adverbs such as 'approximately.' The problem is that there is never a real answer to the question "how approximate"? In the end, the reference is always to our knowledge, and *not* the world out there. On this view it is always us deciding on pragmatic bases where we expect 'the Truth' to be. No wonder that Bird and VS supporters' conclusions are similar: the reference of their theories do not aim to the 'True world', but must deviate toward an approximate version of it established with methods that are acceptable by functional-internalists or even anti-realists. My point, then, is that *nothing in these procedures really distinguishes them as realists*; to do so, the definitions "must help us to affirm that the 'correct' interpretation of scientific theories is the 'realist' one" (Zamora Bonilla 1992, p. 358). It looks like 'the Truth' is always behind the next corner, then we go around it, and there is another corner behind which it is waiting; and so on...

6. Corresponding to the truth

Cevolani and Tambolo admit:

> [The] obvious fact that in most interesting cases 'the truth' is simply unknown, so that the estimated verisimilitude of competing theories, not their verisimilitude, is the crucial point of interest for an account of scientific progress. (Cevolani & Tambolo 2013, p. 925)

We have seen how this fact entails so many problems when it uses the notion of 'approximate truth' in defense of metaphysical conceptions about the world. Bird himself recognizes it: "this milder, realist scepticism that although truth is unobtainable, truthlikeness is achievable, would, if correct, rule out both the cumulative knowledge view of progress and the cumulative truth version of the semantic view" (Bird 2007, pp. 78-79). Bird does have in mind a way out of this problem., On his view "philosophers of science, [...] have been all too ready to accept the premises and indeed conclusion of the pessimistic induction. They have no reason to do so" (*ibid*., pp. 79-80). His strategy is clear:

> why should we think that our theories are not strictly correct? The reason is that even many realists accept a weak form of the pessimistic induction, inferring from the premise that all past theories have been falsified to the conclusion that all current and future theories will be falsified also. [...] For the time being it is worth challenging the premise. There are many venerable scientific propositions that have never been falsified and which we have no reason to suppose ever will be, and which do not state approximations. Here is a sample: blood circulates pumped by the heart, chemical substances are constituted by atoms, water is a compound of hydrogen and oxygen, light is electromagnetic radiation, electrons are negatively charged, the speed of light is constant for inertial observers, [...]. (*ibid*., p. 79)

There are many problems here. The most obvious is that we rarely have 'reasons to suppose that our beliefs will be falsified', but it happens all the same. At the end of the Nineteenth century, Newton's theory had not been falsified, and there was no reason to suppose it ever would be. (It is a well-known and curious fact that Max Planck was told not to study physics, since everything that there was to discover had already been discovered). Having no reason to suppose a belief will be falsified is not a guarantee it will not be. Another problem, and Bird is aware of this, is that science investigates what we don't know. Therefore, it is unclear how that strategy will help. It is Bird himself who felt the need to introduce the notion of 'approximate truth'. A third problem is that these sentences could indeed, from a realist point of view, state approximations. It is not certain that everything that there is to discover on electrons' charge has been discovered. It is conceivable that in 3015 our 'venerable scientific proposition' will be 'electrons are negatively and x charged', or even 'electrons are *not* negatively charged'. Of course, in our everyday life we consider these sentences fully true; but in a philosophical and rigorous perspective the scenario is different. It is precisely in Bird's metaphysical perspective that we are never justified saying what he is saying. Scientific theories such as Newton's, Einstein's, 'water-is-a-compound-of-hydrogen-and-oxygen', could be near 'the Truth', but we will never be able to say that they are definitively true. It is our hypothesis as corrispondentists: the 'Truth' is independent of our knowledge. The final, and most(?) general, problem which is related to the latter is that the metaphysical question of the independence of reality has been misunderstood. What is at stake here is not only 'pessimistic induction'. Intending the truth as a correspondence with 'the Real and independent world' is legitimate, but negate on principle our participation to it[5], even as spectators. Our knowledge of black holes and circulatory system are different only in degree of confidence and success: we believe (and that's not a detail) that the latter is much more accurate, more approximate to 'the Truth'. The principle, though, is the same: what and how they *really* are has nothing to do with our finite instruments to explore the external world.

To answer Bird's question: the matter is not that 'we think that our theories are not strictly correct.' Rather, from a realist-correspondist point of view, we can never say if they are. That's why 'philosophers of science' say that "there is no way to ascertain whether a given belief exhibits a genuine correspondence to 'the real world'" (Cevolani & Tambolo 2013, p. 928).

7. Conclusions

In the first paragraph I have introduced the notions of truthlikeness and verisimilitude; in the second, I have clarified the 'reality' that such notions were meant to capture; in the third, I have presented Bird's challenges to VS and Cevolani and Tambolo's distinction between 'real' and 'estimated' progress; in the fourth, I have analyzed the procedures to estimate 'the truth' and pointed out deep similarities with functionalist theories; in the fifth, I have presented Bird's 'accumulating model' and the similar problems

that the notion of 'approximate truth' shares with VS's 'estimated truth'; in the sixth, I have argued that the specific kind of correspondist realism that these authors have in mind entails that reality is constitutively unknown.

In conclusion, the two theories considered (VS and Bird's cumulative conception) do not represent a defense of the realist intuition that they are born to defend (the correspondence to 'the Truth'). These theories are attempts to incorporate notions as 'progress' in a pre-constituted metaphysical conception of the world, but fail in providing a framework capable of bonding the model and the metaphysics.

NOTES

1 Within VS some distinguish a 'consequence approach', a 'content approach' and a 'similarity approach', to summarize the positions of several authors, such as – in addition to the above mentioned – Schurz, Weingartner, Tichý and Hilpinen. In the contest we are discussing this is not relevant, and we will speak of VS referring to its more general and shared views.
2 In contemporary literature 'realism' is used as it was just an opposition to 'anti-realism': but that is thorny. Are neo-Kantian authors, such as Cassirer realist or anti-realist? Not anti-realist of course, because he recognize the importance of concepts such as 'reality', 'objectivity': but calling him a realist is very problematic if we think to the post-kantian distinction between 'critical idealism' and
'critical realism' (see Neuber [2014]). Probably, it would be better to leave the word 'realist' to those who believe in an independent reality, and think of something else for authors like Cassirer or Zamora Bonilla.
3 Originally this view is a revisionist approach toward the original Kantian doctrine – contemporary and alternative to the more fortunate 'critical idealism' – which consider relations as knowable 'things-in-themselves'. See Neuber [2014].
4 I presented his thought experiment in which humanity has true beliefs without knowing it above. The reference to a Tarskian truth is, in my opinion, the obvious intuition behind it.
5 Niiniluoto is a 'critical realist', which means he consider 'things-in-themselves' knowable. However, we can see the difference between a logical setting for a metaphysical conception and its disappointing fulfillment. Niiniluoto's best formula to reach 'the Things' is put in Bayesian terms.

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