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The Paradox of the Arche-fossil
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In his influential *After Finitude. An Essay on the Necessity of Contingency* (2008), Quentin Meillassoux argues that *Correlationism* (an umbrella-term encompassing most varieties of Idealism) gives rise to an irresolvable paradox, called "the Paradox of the Arche-fossil," which is essentially a clash between philosophical principles and scientific findings. This irresolvable paradox of Correlationism then paves the way for the "Speculative Turn" and the ensuing rise of burgeoning "speculative realism" in Continental Philosophy: noumenal reality, as-it-is-in-and-of-itself, "the Great Outdoors," is back on the Continental stage, open for speculative thought and even metaphysical knowledge. We attempt to provide a thorough and charitable analysis of the Paradox of the Arche-fossil. Our analyses lead us to conclude that Meillassoux's argument fails, due to an ambiguity with regard to the concept of being that cannot be repaired. We end by directing attention to another ominous threat to Correlationism, ignored by Meillassoux and all "speculative realists" alike, which is still breathing.

1 Correlationism

In his influential monograph *After Finitude. An Essay on the Necessity of Contingency* (2008), Quentin Meillassoux argues that "Correlationism" gives rise to a paradox, "The Paradox of the Arche-fossil" (2008).[1] This criticism paves the way for the "Speculative Turn," and the ensuing rise of burgeoning

1 Correlationism was further considered by Meillassoux in his 2012 lecture "Iteration, Reiteration, Repetition: A Speculative Analysis of the Sign Devoid of Meaning," given at Freie Universität Berlin, Germany and published in Meillassoux (2016), and in his London lecture of 2008, published as *Time Without Becoming* (2014).

"speculative realism" in Continental Philosophy.[2] In this opening section, we explain what "Correlationism" is; in the subsequent Section 2, we make our acquaintance with the Paradox of the Arche-fossil, and near the end of that section we provide an overview of what is to come in this paper after these two sections.

Meillassoux (2008, 16):

> By *correlation* we mean the idea that we only ever have access to the correlation between thinking and being, and never to either term considered apart from the other. We shall henceforth call *Correlationism* any current of thought that maintains the unsurpassable character of the correlation so defined. Consequently, it becomes possible to say that every philosophy which disavows naive realism has become a variant of Correlationism.[3]

On Meillassoux's most recent terminology, only four (major types of) metaphysical views are possible. We extend and refine his list, characterise these views as generally as possible (while remaining informative) below, and make ten elucidatory remarks.[4]

2 Brassier (2007), Bryant, Srnicek, and Harman (2011), Harman (2007, 2011, 2018, 2019), Bryant (2011), Ennis (2011), Roffe (2012), Shaviro (2014), Toadvine (2014), Gijsbers (2015), Wiltsche (2017).

3 Slightly corrected English translation of the French of Meillassoux (2006, 18):

> Par "corrélation" nous entendons l'idée suivant laquelle nous n'avons accès qu'à la corrélation de la pensée et de l'être, et jamais à l'un de ces termes pris isolément. Nous appellerons *corrélationisme* tout courant de pensée qui soutiendra le caractère indépassable de la corrélation ainsi entendue. Dès lors, il devient possible de dire que toute philosophie qui ne se veut pas un réalisme naïf est devenue une variante du corrélationisme.

Presumably Meillassoux means we have only access to *correlates* of being (thoughts, senses, words), rather than to the *correlation*; these correlates are "unsurpassable."

4 Meillassoux's most recent terminology is that of his 2012 lecture (2016). He introduced another neologism for what is usually called "Absolute Idealism": "Subjectalism," also called (by a terminologically wavering Meillassoux) "subjectivist metaphysics," "Subjective Idealism" and "metaphysical subjectivism"; previously, he had classified Absolute Idealism as a variety of Correlationism. The conception of Correlationism of 2008 made every metaphysical view "a variant of Correlationism" save "naive realism," and thereby turned every contemporary philosopher into a correlationist; this made the term too broad for interesting philosophical use; the new conception of 2012 makes the one of 2008 subdivide into "2012-Correlationism" and Absolute Idealism.

(α) Direct Realism (naive realism; dogmatic metaphysics in Kant's sense, as opposed to Kant's "critical" metaphysics). Every human being, every subject (S), can directly access "the absolute," Being, reality as-it-is-in-and-of-itself (henceforth: $\mathcal{R}$); by directly accessing $\mathcal{R}$, S can and does obtain knowledge about, and understanding of $\mathcal{R}$.[5] For the Direct Realist, objectivity resides in the direct access that we have to $\mathcal{R}$. Some correspondence theory of truth is part and parcel of Direct Realism: true propositions (or sentences, or assertions, or beliefs) are *made true* by features of $\mathcal{R}$; those features have come to be called "truth-makers."

The pejorative adjective "naive" indicates that it is naive to believe that we can compare our sense data, concepts, thoughts, propositions, principles, models, theories, etc., "directly" with $\mathcal{R}$, as we can compare a face with a portrait by holding the portrait next to the face and looking at both. To say that to know or to understand $\mathcal{R}$ directly and unmediatedly is to utter a "performative contradiction," as Meillassoux (2014, 10) puts it, "through which you refute what you say or think by your very act of saying it or thinking it."

(β) Correlationism Every human being, every subject (S), cannot access $\mathcal{R}$ directly, but only some correlate of it, some re-presentation of it, which we symbolically abbreviate as: $\Phi[\mathcal{R}]$. This $\Phi[\mathcal{R}]$ is the joint result of $\mathcal{R}$ and the means and modes of cognition of S (Φ).[6] Everything that S knows is knowledge about $\Phi[\mathcal{R}]$, everything S understands is understanding of $\Phi[\mathcal{R}]$, and everything S perceives is perception of $\Phi[\mathcal{R}]$. Thus we codify Correlationism schematically and symbolically as follows:[7]

$$\Phi : \mathcal{R} \rightsquigarrow \Phi[\mathcal{R}].$$

The world $\Phi[\mathcal{R}]$ depends on reality ($\mathcal{R}$) and on us (Φ), and "$\rightsquigarrow$" is this dependency relation. (One might be tempted to replace the dependency relation "$\rightsquigarrow$" with a mapping relation "$\mapsto$"; but then we would be saying that $\Phi[\mathcal{R}]$ *supervenes* on $\mathcal{R}$, and this would presuppose that we can speak meaning-

5 The phrase "to access" is an umbrella-term for: to observe, to experience, to talk and to think about, to become aware of, to understand, to know about, and perhaps more.

6 The word "cognition" is an umbrella-term for our capacities for thought, talk and perception.

7 Harman (2011, 4) characterises Correlation as the conjunction of two theses (in our terminology): (a) the "correlation" between $\mathcal{R}$ and $\Phi[\mathcal{R}]$ via Φ is central; and $\mathcal{R}$ cannot be accessed without $\Phi[\mathcal{R}]$; and (b) $\mathcal{R}$ cannot be known and cannot be understood. Close enough.

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fully *about* $\mathcal{R}$, which would make us already occupy a philosophical position, whereas we are still in the business of describing the possible philosophical positions.[8])

(β.1) Weak Correlationism Subject S can mention and posit $\mathcal{R}$ meaningfully, and can think and talk meaningfully about $\mathcal{R}$, but cannot obtain any knowledge about $\mathcal{R}$ or acquire any understanding of $\mathcal{R}$. Reality ($\mathcal{R}$) is epistemically inaccessible for S.

(β.2) Strong Type Correlationism Subject S can only mention and posit $\mathcal{R}$ meaningfully, but cannot further think or talk meaningfully *about* $\mathcal{R}$, let alone obtain knowledge about $\mathcal{R}$ or acquire understanding of $\mathcal{R}$. Reality ($\mathcal{R}$) is epistemically and linguistically inaccessible for S. Features of Φ are sought that are characteristic of the type, or species, of S, i.e. *homo sapiens*. For living organisms different from us, a different world obtains, say $\Phi_X[\mathcal{R}]$ for species X.

For Correlationists (β.1) and (β.2), objectivity resides in the agreement among subjects ("intersubjective agreement") about $\Phi[\mathcal{R}]$; a correspondence theory of truth can only be an intra-world correspondence, internal to $\Phi[\mathcal{R}]$, between true propositions and other features of $\Phi[\mathcal{R}]$, rather than of $\mathcal{R}$ as Direct Realism (α) would have it.

(β.3) Strong Token Correlationism As (β.2), with the difference that no specific features of Φ characteristic of the type, or species, to which subjects belong are sought for; every token S, or some comparatively small group $\mathcal{G}$ of tokens, has "its own world": $\Phi_S[\mathcal{R}]$ and $\Phi_{\mathcal{G}}[\mathcal{R}]$, respectively.[9] Objectivity can be buried in the graveyard of philosophically useless concepts.

(γ) Absolute Idealism Human beings, subjects (S), have only access to what is presented to S by the means and modes of cognition of S. This is all there is, and we codify it symbolically and schematically by: $\Phi[\cdot]$. There is no reality ($\mathcal{R}$) separate and distinct from $\Phi[\cdot]$; we can neither mention nor posit $\mathcal{R}$ meaningfully let alone truthfully; the proper meaning of "reality" is

8 Roughly, $\Phi[\mathcal{R}]$ supervenes on $\mathcal{R}$ iff differences in $\Phi[\mathcal{R}]$ imply differences in $\mathcal{R}$; to speak of differences in $\mathcal{R}$ is to speak *about* $\mathcal{R}$.

9 Harman (2011, 14) calls strong type Correlationism (β.2) just "strong correlationism," and strong token correlationism (β.3) "very strong correlationism."

$\Phi[\cdot]$. The distinction between reality and the world collapses, which suggest "the absolute-idealist identity": $\mathcal{R} = \Phi[\cdot]$. As Meillassoux (2008, 28) puts it, with an allusion to Quine: "To be is to be a correlate."[10] Objectivity is as in Correlationism ($\beta.1$) and ($\beta.2$). Often $\Phi[\cdot]$ is identified with Descartes' *res cogitans* and is "purely mental," which makes Absolute Idealism a form of substance monism.

(δ) Metaphysical Realism Human beings, subjects (S), can mention and posit $\mathcal{R}$ meaningfully, can think and talk meaningfully about $\mathcal{R}$, can and do access $\mathcal{R}$, *by means of* Φ; they can obtain, and perhaps even do obtain knowledge about $\mathcal{R}$, and they can and perhaps even do acquire understanding of $\mathcal{R}$, *by means of* representation $\Phi[\mathcal{R}]$, never directly. The metaphysical realist rejects *ab ovo* the distinction between unknowable reality ($\mathcal{R}$) and knowable world ($\Phi[\mathcal{R}]$). Reality ($\mathcal{R}$) has a specific structure, a specific composition of specific types of entities, which is all independent of (the existence of) S. Reality ($\mathcal{R}$) is cognitively and linguistically accessible for S, notably by the means and methods of science.[11] Objectivity resides in some correspondence theory of truth, which makes true propositions expressed in $\Phi[\mathcal{R}]$ correspond to features of $\mathcal{R}$.

Some versions of Metaphysical Realism have idealist elements, and thus become realist-idealist hybrids (β–δ), such as Koch's (2006) view that the existence of embodied subjects necessitates that spacetime be a feature of $\mathcal{R}$.

(ε) Pragmatism Human beings, subjects (S), have only access to what is presented to S by the means and modes of cognition of S. This is all there is, and we codify it symbolically and schematically by: $\Phi[\cdot]$. The question whether there is a reality ($\mathcal{R}$) separate and distinct from $\Phi[\cdot]$ is not worth thinking about: a redundant and useless issue, devoid of any consequences for our lives. Objectivity is as in Correlationism ($\beta.1$) and ($\beta.2$); and truth is warranted assertibility or what experts agree on in the limit of inquiry.

Pragmatism resembles (γ) Absolute Idealism, but is never accompanied by the claim that $\Phi[\cdot]$ is identified with Descartes' *res cogitans* and is "purely men-

10 Quine (1948, 15): "To be is the value of a bound variable." French original in Meillassoux (2006, 39): *"être, c'est être un corrélat"*.

11 See Sebold (2014, 13–50), Chapter II "Metaphysical Realism and its Discontents," for a brief contemporary statement of Metaphysical Realism. For spatio-temporal reasons, we must gloss over the concept of "subject-independence," aka "mind-independence."

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tal." Pragmatism is not a form substance monism; it rebuffs such pragmatically meaningless metaphysical classifications.

A number of terminological remarks follow next, mainly in order to prevent confusion.

First, the traditional term "(metaphysical) Idealism" encompasses both Correlationism (β) and Absolute Idealism (γ).[12]

Secondly, Meillassoux (2016) also uses "materialism" for Direct Realism (α), "objective Idealism" for strong type Correlationism ($\beta.2$), "subjective Idealism" for both weak Correlationism ($\beta.1$) and strong token Correlationism ($\beta.3$), and "subjectivist materialism" for Metaphysical Realism (δ). We shan't. Further, Meillassoux (2016) calls ($\beta.1$) and ($\beta.2$) transcendental versions of Correlationism, and ($\beta.3$) the post-modern version.

Thirdly, Meillassoux's "Speculative Realism" falls under Metaphysical Realism (δ), because Meillassoux claims to know things about $\mathcal{R}$, such as the necessity of contingency, the falsehood of Leibniz's venerable Principle of Sufficient Reason, mathematics as a means to access $\mathcal{R}$ epistemically, the existence of arche-fossils in $\mathcal{R}$, and the coming into being of subjects in $\mathcal{R}$ (see next section). Thus Speculative Realism *opposes* Correlationism (β).

Fourthly, the adjective "speculative" in Speculative Realism should not be understood as indicating that only epistemically void guesswork is on the philosophical agenda when entering the transcendental level (as is clear from what we mentioned in the previous remark), but arguably better understood in Hegelian fashion. Hegel puts speculation opposite to reflection; reason encompasses both. Reflection is what we do when we gather knowledge of the world: "objectify" it, carve it up, structure it, assign properties and relations, as if the understanding and knowing subject is not there, is at no place specifically. Compare an eye looking at the world and never encountering itself. Speculation is what happens when the subject turns reflection on itself, on its "subjectivity," and becomes conscious of itself as an understanding and knowing subject. Compare to the eye looking in the mirror. Then knowl-

12 Russell (1912, 16) defines Idealism as "the doctrine that whatever exists, or at any rate whatever can be known to exist, must be in some sense mental." This is only Absolute Idealism (γ) and therefore somewhat restrictive. The Lemma on Idealism of the Stanford Encyclopedia of Philosophy makes the same mistake (cf. Guyer and Horstmann 2020).

edge about this subjectivity is not out of reach, which makes thought at the transcendental level not epistemically void.[13]

Fifthly, the ubiquitous term "Transcendental Idealism" (as opposed to Subjective, or Absolute, Idealism) seems co-extensive with Correlationism: all philosophers who call themselves Transcendental Idealists, or are classified as such by others, notably by historians of philosophy, turn out to fit the description of Correlationism (β), and conversely. But it may be that some Correlationists would resist being classified as "Transcendental Idealists," if only because the term "transcendental" has different meanings.

Sixthly, the fashionable terminology of "mediation" relates as follows: saying that our access to $\mathcal{R}$ is *mediated* is the same as saying that we can only access the correlate $\Phi[\mathcal{R}]$, rather than $\mathcal{R}$ directly; we can access $\mathcal{R}$ only indirectly, mediated by Φ. In the 20th century, "two principal 'media' of the correlation were consciousness and language," elucidates Meillassoux (2008, 6), consciousness being prominent in varieties of Phenomenology in the Continental Tradition, language being prominent in the Analytic Tradition.[14]

Seventhly, and confusingly, according to every metaphysical view in the taxonomy, something is real, be it $\mathcal{R}$, or $\Phi[\mathcal{R}]$, or the means and modes of mediation (Φ). So when we call Correlationism (β) and Absolute Idealism (γ) varieties of *Anti-Realism*, this does not imply that nothing is real according to these views, let alone that everything is somehow "an illusion."

Eightly, Eddington's two tables (the solid, brown wooden thing we sit, work and eat at, and the material object mereologically composed of zillions of atomic nuclei of protons and neutrons, and electrons somehow zooming around them, obeying the laws of quantum mechanics), and Sellars' two images (manifest and scientific) amount to the same distinction *within* $\Phi[\mathcal{R}]$, rather than *between* $\Phi[\mathcal{R}]$ and $\mathcal{R}$.[15]

Ninethly, (α) Direct Realism may be a straw man, which makes the criticism of stating it is performing a contradiction an act of burning a straw man. Perhaps the only form of realism is what we have called here Metaphysical

13 See Verene (2007, 7–9, 11) for an elaboration. For other speculative realists, such as G. Harman, "speculative" means indeed guesswork when it comes to $\mathcal{R}$; Harman (2019) follows Whitehead in claiming that it is folly to claim that we know anything about $\mathcal{R}$.

14 See the Appendix for examples. The use of "mediation" is not the same as in the vernacular. As one referee points out: "If I can reach you only via the phone, it would be false to say that I cannot reach you." In this sense, only the metaphysical realist can use "mediation": we reach $\mathcal{R}$ mediated by Φ; the (β) Correlationist is stuck with $\Phi[\mathcal{R}]$.

15 Christias (2016) has however argued that Meillassoux's "correlationist circle" echoes W.F. Sellar's "myth of the given."

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Realism (δ). For in all honesty, which philosopher would claim we have knowledge of $\mathcal{R}$ *without* being aware and acknowledging that this knowledge is expressed in language, employs concepts, and depends on our specific sensory organs? Nothing in our analysis of Meillassoux's paradox of the arche-fossil depends on whether one maintains or dismisses that there is a difference between (α) Direct Realism and (δ) Metaphysical Realism.

Tenthly, and related to the previous remark: having *direct* epistemic access to $\mathcal{R}$ *perceptually*, via our sensory organs, is less controversial than having direct epistemic access to $\mathcal{R}$ *conceptually*, as (α) Direct Realism claims. Direct perceptual access to $\mathcal{R}$ is part of (α) Direct Realism, but cannot be dismissed as stating it being a performative contradiction.[16]

For a number of illustrations of correlationists from the history of philosophy, we refer to the Appendix. Needless to emphasize that nothing about Meillassoux's arguments depends on exactly who falls in which category, or even whether it is undecidable whether some token philosopher belongs to which type. That several if not all reputed philosophers fit into one of the delineated categories (α–γ) is sufficient to convince us that Meillassoux is not talking to himself. Below we shall occasionally mention a correlationist philosopher, notably Kant, for the sake of illustration, or sometimes as a foil.

Now we are, at last, ready to turn to the central argument of Meillassoux.

2 The Paradox of the Arche-fossil

The "Paradox of the Arche-fossil" is the contradiction that Meillassoux infers from two propositions ("W" alludes to World, "A" to Arche-fossil):

(W) Without subjects, there is no world.

(A) Subjects have come into being in the world.

Skimpily, the argument for the contradiction goes as follows.

If there were no subjects, there would be no means and modes of cognition either (Φ), and consequently there would not be a world $\Phi[\mathcal{R}]$. Hence Correlationism (β) implies (W). Proposition (A) is a well-established piece of scientific knowledge about certain entities, subjects, in a presupposed world $\Phi[\mathcal{R}]$: they came into an existing world (A) whilst that world did not exist

16 Meillassoux (2008, 2014, 2016) never talks about perception when talking about direct/naive realism.

before they came into it (W). Faced with this conflict between (W) and (A), the choice for Meillassoux is easy: farewell to Correlationism (W), because rejecting such a well-established scientific truth as (A) is irrational. Reason commands us to reject Correlationism (β).

Notice that Metaphysical Realists (δ) are not in trouble, because no contradiction ensues from their understanding of propositions (W) and (A):

(W*) Without subjects, there is no $\Phi[\mathcal{R}]$—but there always is $\mathcal{R}$.

(A*) Subjects have come into being in $\mathcal{R}$, equipped with their means and modes of cognition (Φ).

This understanding is pretty standard in science; natural scientists generically hold that they find out things about reality ("A new species has been discovered"; "The existence of the Higgs boson has been established"; "This area is poisoned by radio-active radiation"; "The existence of gravitational waves has been confirmed"). Metaphysical Realism (δ) is the default philosophical view of the natural scientist.

The purpose of the current paper is to analyse Meillassoux's deceptively simple argument in detail and to find out: whether the argument is deductively valid; and if it is, whether it is as lethal for Correlationism as Meillassoux claims it to be.

The metaphysical dispute between Idealism and Realism has always been taken to be a quintessential *philosophical* debate, one on which *science* cannot have any bearing. But if Meillassoux is correct, then science does bear on this debate: Idealism would have been slain by a contemporary continental philosopher crucially using science. Surely this would be one of the greatest ironies in the history of Western Thought, in the light of both the detached relations between science and Continental Philosophy generally and the pervasive anti-realism in Continental Philosophy (Sebold 2014; Braver 2007 *passim*). Another irony is that the argument strikingly resembles the legendary dispute in 1951, in a Parisian café, between A.J. Ayer, G. Bataille, M. Merleau-Ponty and G. Abrosina about whether the sun existed before there were human beings, which is often seen as the historical event where the Analytic-Continental Divide was first noticed.[17] Is Meillassoux finally settling this

17 Sebold (2014, 1–3), Vrahimis (2012).

(A^0) Without subjects, there is no sun.

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dispute, going back to the cradle of the Great Divide in philosophy, in favour of the analytic philosopher Ayer, and against his continental colleagues Bataille and Merleau-Ponty?

Parenthetically, Merleau-Ponty is nowhere mentioned by Meillassoux (2008). Yet witness how close Merleau-Ponty was to the Paradox of the Arche-fossil, and how he hinted at a resolution of sorts (the sentence italicised by this author points to a rejection of (W)):

> For what precisely is meant by saying that the world existed before any human consciousness? An example of what is meant is that the earth originally issued from a primitive nebula from which the combination of conditions necessary to life was absent. But every one of these words, like every equation in physics, presupposes our pre-scientific experience of the world, and this reference to the world in which we live goes to make up the proposition's valid meaning. [...] Laplace's nebula is not behind us, at our remote beginnings, but in front of us in the cultural world. What in fact do we mean when we say that there is no world without a being in the world? *Not indeed that the world is constituted by consciousness*, but on the contrary that consciousness always finds itself already at work in the world. (Merleau-Ponty 2002, 502)

To repeat, the purpose of this paper is to analyse Meillassoux's argument that leads to this paradox for Correlationism (β), in order to find out whether the argument is valid, beginning in the next section (Section 3). For the sake of brevity, we shall call this argument for the Paradox of the Arche-fossil "the *archument*." By considering responses by Meillassoux to two criticisms of the archument, we provide more rigorous and precise presentations of the archument (Section 4, Section 5). We then argue, on the basis of our analyses, that the archument is invalid (Section 6). Then we present another analysis of the archument with a so-called tenseless concept of being, and reach the same conclusion (Section 7). Subsequently, we drill deeper by addressing the pivotal question that gave rise to the Paradox of the Arche-fossil in the first place (the paradox implies that the correlationist is unable to answer this

(W^0) The sun has come into the world before there were subjects in the world.

The Great Divide between Continental and Analytical Philosophy thus began, if only partly, as a divide between Correlationism (β) and Metaphysical Realism (δ).

question); we argue that Kant's Correlationism can provide an answer to this pivotal question (Section 8).

Before we continue, one caveat concerning Meillassoux's criticism of Correlationism (and thus of Idealism) consists essentially of pointing out a clash between Correlationism and science: the premises of the various rational reconstructions of his argument we shall provide in the course of this paper are either premises that Correlationism is committed to (W) or morsels of well-established scientific knowledge (A). Meillassoux wholeheartedly accepts science, and does not accept, endorse or defend the Correlationist premises; he only accepts, endorses and sometimes defends *that* they are premises that Correlationism is committed to. A Correlationist accepts, endorses and defends these premises, which means that pointing out that Meillassoux does not accept, endorse or defend these premises is irrelevant. Needless to say that whether these premises *are* Correlationist will be a topic of unremitting concern throughout this paper.

3 The Archument

Meillassoux (2008, 9) lists the following morsels of scientific knowledge, truths established by empirical inquiry beyond reasonable doubt.[18]

(A1) The universe is about 13.5 billion years old.

(A2) The accretion of planet Earth began about 4.6 billion years ago.

(A3) Life emerged on planet Earth about 3.5 billion years ago.

(A4) Human life, *homo habilis*, arose about 2 million years ago.

(A5) *Homo sapiens* came into being about 0.5 million years ago.

Of course (A3) and (A5) jointly imply premise (A) of the previous section, because human beings are subjects, and because Meillassoux tacitly assumes that there were no other subjects elsewhere in the universe at earlier times—a tacit assumption we shall, for the sake of argument, subscribe to throughout

18 We have added proposition (A5), because it is doubtful whether *homo habilis* already mastered reasoning with the Kantian epistemic categories, say, and understood the world in these terms; for that we need *homo sapiens*. French original in Meillassoux (2006, 24).

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this paper. Meillassoux calls *ancestral* propositions like (A1)–(A5) and (A), which are about the universe, Earth notably included, at times when no life had emerged yet on Earth; and he calls currently existing objects that carry proof of this ancestry *arche-fossils* (2008, 10); we call them *present arche-fossils*, and objects that are or carry proof of this ancestry but no longer exists, *past arche-fossils*, such as dinosaurs and entirely degenerated skeletons of dinosaurs. Present arche-fossils are part of the empirical evidence that has turned the ancestral propositions into morsels of well-established scientific knowledge.

In Chapter 1, "Ancestrality," Meillassoux (2008, 10–11) addresses the following aporia:

(Q) How is Correlationism able to think meaningfully, and to understand and to know ancestral propositions?

Meillassoux argues that Correlationism (β) is unable to understand and to know ancestral propositions: it can understand and know them only on pain of contradiction, and this contradiction is the "Paradox of the Arche-fossil." Again, the archument for this paradox runs as follows.

We, subjects, human beings, *make* reality ($\mathcal{R}$) knowable and understandable, by our means and modes of cognition, enabled by our sensory organs and brains (Φ), which form a necessary condition for the possibility of human knowledge and understanding. The moulding and grinding of $\mathcal{R}$ results in the world: $\Phi[\mathcal{R}]$. The world is a *re-presentation* via Φ of what is *presented* to us ($\mathcal{R}$). Without human beings, our means and modes of cognition (Φ) are also absent, and there is not and cannot be world $\Phi[\mathcal{R}]$ either (W). Before there were human beings, there was no world $\Phi[\mathcal{R}]$. Yet subjects have come into being in the world (A). For a long time, there were no human beings in the world; they evolved from other organisms, which in turn somehow evolved from lifeless chemical substances. So once there was $\Phi[\mathcal{R}]$ while there could not be and therefore was not $\Phi[\mathcal{R}]$, which is a contradiction.

This was the archument once again. Meillassoux (2008, 17–18):[19]

19 French original in Meillassoux (2006, 35–36):

> Il n'y a pas de compromis possible entre le corrélat et l'archifossile: l'un des deux étant admis, l'autre est de ce fait disqualifié. [...] Face à l'archifossile, *tous les idéalismes convergent et deviennent également extraordinaires*—tous les corrélationismes se révèlent comme des idéalismes extrêmes, incapables de se résoudre à admettre que *ces évènements d'une matière sans homme* dont nous parle la science

Correlationists are essentially Creationists. *Take that!*

Should we conclude that the Paradox of the Arche-fossil is the silver bullet for Correlationism (β) and by implication for metaphysical Idealism? Or has something gone awry?[20] What, then, exactly has gone awry? First we consider two objections to the archument and Meillassoux's defence (Section 4, Section 5), for this will yield ingredients for a clarified and manifestly deductive valid version of the archument further on.

4 A Subterfuge of Lacunae

The first objection that Meillassoux (2008, 18) considers targets the alleged privilege of the temporal *ancient* over the spatial *distant*. If the Correlationist

> ont effectivement pu se produire tels que la science en parle. Et notre corrélationiste se trouve alors dangereusement proche de ces créationistes contemporains: de ces croyants pittoresques qui affirment aujourd'hui, selon une lecture "littérale" de la Bible, que la Terre n'aurait pas plus de 6000 ans, et qui, se voyant objecter les datations plus anciennes de la science, répondent, impavides, que Dieu a créé il y a 6000 ans, en même temps que la Terre, des composés radioactifs indiquant un âge de la Terre beaucoup plus anciens—cela pour éprouver la foi des physiciens. Le sens de l'archifossile serait-il pareillement d'éprouver la foi du philosophe dans les corrélats, même en présence de données qui indiquent un écart abyssal entre ce qui existe et ce qui apparaît?
>
> There is no possible compromise between the correlation and the arche-fossil: once one has acknowledged one, one has thereby disqualified the other. […] Confronted with the arche-fossil, *every variety of idealism converges and becomes equally extraordinary*—every variety of correlationism is exposed as an extreme idealism, one that is incapable of admitting that what science tells us about these occurrences of matter independent of humanity effectively occurred as described by science. And our correlationist then finds himself dangerously close to contemporary creationists: those quaint believers who assert today, in accordance with a "literal" reading of the Bible, that the earth is no more than 6,000 years old, and who, when confronted with the much older dates arrived at by science, reply unperturbed that God also created at the same time as the earth 6,000 years ago those radioactive compounds that seem to indicate that the earth is much older than it is—in order to test the physicist's faith. Similarly, might the arche-fossil not be meant be to test the philosopher's faith in correlation, even when confronted with data which seem to point to an abyssal divide between what exists and what appears?

20 In contrast, Toadvine (2014) suggests we swallow that the world did not exist before *homo sapiens* came into being, which means that Toadvine accepts the archument and rejects premise (A). Toadvine is in the company of the Creationists who believe that God created the world about 6,000 years ago, including planet Earth filled with *apparent* arche-fossils—to test us.

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cannot understand and cannot know ancestral propositions like (A1)–(A5), then the Correlationist also cannot understand and cannot know "distant propositions," that is, propositions about locations in the world, in the universe, where there are no subjects, never have been subjects and never will be subjects. Think of space-time regions outside the light-cone of the history of all terrestrial subjects: there *cannot* be a causal connection between such regions and any region occupied by some actual terrestrial subject.[21] For this is impossible according to well-established scientific knowledge, specifically Einstein's Theory of Relativity.

One might very well think that invoking the spatial distant next to the temporal ancient makes things worse for the Correlationist, for now we also seem to have a "Paradox of the Distant Location" within arm's length. Meillassoux sees it otherwise, and judges that this invocation of the spatially distant is meant to transform the archument into a trivial one, by "identifying it with a familiar and inconsequential anti-Idealist argument" (2008, 18). For the same can be said about craters on the far side of the moon, and, we might add, about locations deep inside Earth, where no man has ever gone and presumably never will go. The problem is however not the actual absence or physical impossibility of the presence of *human witnesses to events* in the world, or of *observers of past ancestral objects*. Meillassoux (2008, 19) holds that a Correlationist can understand and accept subjunctive conditionals like: If some subject had been then and there, that subject would have witnessed events that occurred then and there. And if the physical *possibility* of the existence of witnesses at certain spacetime regions is sufficient for understanding and knowing propositions about events occurring in those regions, or about objects that exist in those regions, then we are done. Correlationism would perhaps stand tall. The ancestral propositions (A1)–(A5) could be understood and known after all.

But when subjunctive conditionals with perhaps conceptually impossible antecedents, and certainly physically impossible antecedents are false, then the ones mentioned above with ancestral antecedents are false, because there is no conceptually possible world in which subjects witness the coming into being of $\Phi[\mathcal{R}]$. In fact, it seems conceptually, and therefore physically, impossible for there to be a world in which humans supposedly witness how the species to which they belong comes into being. But note that Meillassoux's

21 We gloss over travelling through stable wormholes, which seems impossible; see Cuyubamba, Konoplya, and Zhidenko (2018).

talk about *witnesses* and their *possible* presence is not the issue. The issue is whether ancestral propositions have truth-conditions in $\Phi[\mathcal{R}]$ that Correlationism can accept. As long as these truth-conditions in $\Phi[\mathcal{R}]$ do not involve human witnesses, the issue of witnesses is a red herring.[22]

The response of Meillassoux raises the following question: if, for the Correlationist, there is no such thing as the Paradox of the Spatial Distant, and the Correlationist can understand and know modal propositions, specifically subjunctive conditionals, about distant locations in the world, then why can the Correlationist not do so with the temporal ancient? Why does the Paradox of the Arche-fossil, the Paradox of the Temporal Ancient, arise at all?

The problem, Meillassoux contends, is the possibility of understanding there being a world at all, of understanding how $\Phi[\mathcal{R}]$ could have come into being. The relevant relation under investigation is one between subjects and the world, as in proposition (W), which is not *spatio-temporal* but *logical-conceptual*: without subjects, the coming into being of the world, of the givenness of being, of $\Phi[\mathcal{R}]$, cannot be understood, because when it happened, the necessary cognitive conditions and capacities were not realised to understand and to know that subjects had come into being. Meillassoux (2008, 22):[23]

> So the challenge is therefore the following: to understand how science can think a world wherein spatio-temporal givenness itself came into being at a time and in a space which preceded every variety of givenness.
>
> We now see that the sophisticated nature of this first rejoinder consists in trying to occlude one lacuna by another, in trying to mask the non-being of the given by a given of non-being, as though the former could be reduced to the latter. But this switching of absences, this subterfuge of lacunae, cannot disguise the fundamental difference between our two voids, and thereby the difference between the two arguments: the trivial argument from the unperceived and the valid argument from the ancestral.

22 Truth-conditions in $\Phi[\mathcal{R}]$, because truth-conditions in $\mathcal{R}$ are Correlationist impossibilities, let alone knowledge conditions. We remark that humans are of course needed to ascertain whether truth-conditions obtain.

23 The part on p. 18 starting with *** and ending again with *** on p. 26 of the translation, Meillassoux (2008), is not present in the original French (2006). This absence is nowhere mentioned by the translator, R. Bassier.

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We gloss over unpacking this response in detail, although we do want to point out that the first sentence in this quotation is anathema to Correlationism, and even smacks of nonsense: givenness, re-presented reality $\Phi[\mathcal{R}]$, the spatio-temporal world as a whole with every actually existing concrete entity in it conceptualised by us, cannot possibly *come into being in that same world* $\Phi[\mathcal{R}]$, because if this were possible, then $\Phi[\mathcal{R}]$ had to be there already; and if $\Phi[\mathcal{R}]$ was already there, it need not come into being anymore. What we shall attempt to do next is to present "the valid argument from the ancestral."

Let us begin again with propositions (W) and (A), using our correlationist relation $\mathcal{R} \rightsquigarrow \Phi[\mathcal{R}]$:

(W) If there are no subjects in $\Phi[\mathcal{R}]$, then there is no $\Phi[\mathcal{R}]$ ("non-being of the given").

(A) Subjects have come into being in $\Phi[\mathcal{R}]$ ("givenness of being").

Can we rigorously deduce a contradiction from these propositions?

Proposition (W) *seems* to have the following consequence:

(W0) For every time t, if there are no subjects in $\Phi[\mathcal{R}]$ at time t, then there is no $\Phi[\mathcal{R}]$ at that time t ("non-being of the given" at time t).

Proposition (A) says that at some time in $\Phi[\mathcal{R}]$, about 2 million years ago (A3), subjects (human beings) *came into* $\Phi[\mathcal{R}]$. Then at some time, in fact at any time much earlier, there were no subjects in $\Phi[\mathcal{R}]$, there was $\Phi[\mathcal{R}]$ without subjects in it, viz. the ancestral propositions (A1)–(A5). Then $\Phi[\mathcal{R}]$ was ancestral. In other words:

(A6) For some moment in time t_0 in $\Phi[\mathcal{R}]$, there are no subjects in $\Phi[\mathcal{R}]$ at t_0.

Clearly (A6), which is a consequence of (A), presupposes that there is $\Phi[\mathcal{R}]$, in which we are considering a particular moment in time, t_0, when there are no subjects. Then by *modus ponendo ponens* via (W0)—seemingly implied by (W)—we have that at t_0 there is no $\Phi[\mathcal{R}]$, which flatly contradicts the presupposition of (A6). This means that (A) and (W) are inconsistent, which is the Paradox of the Arche-fossil again.

In this reconstruction of the archument, we have taken (W0) as a consequence, or proper replacement, of (W). Wrongly, of course, for time is part of what subjects bring to the table with Φ; time is a constitutive component

of $\Phi[\mathcal{R}]$, rather than a feature of $\mathcal{R}$. For example, for Kant, time is the inner form of *Anschauung*, knowable by introspection, which form is a cognitive capacity of subjects, constitutive of the Kantian phenomenal world $\Phi[\mathcal{R}]$, rather then a feature of $\mathcal{R}$ (1787, B50–B51). Speaking about there being, or not being, $\Phi[\mathcal{R}]$ is speaking at a level, call it the *transcendental level*, where there is no time. Whereas the concept of existence (or being) that is expressed in the consequent of (W0) must by conceptual necessity be *tenseless*, the concept of existence (or being) expressed in ancestral propositions (A2)–(A5) obviously is *tensed*, and applies to everything in $\Phi[\mathcal{R}]$, at the *phenomenal level*. Well, what holds for Kant, holds for every Correlationist (β): time and tense do not apply to $\mathcal{R}$; they only apply to $\Phi[\mathcal{R}]$. Nothing can come into being in $\mathcal{R}$, full stop.

We want to mention that the distinction between tensed being (and existence) and tenseless being (and existence) was first sharply drawn by the Idealist McTaggart (1908). In this famous paper on "The Unreality of Time," McTaggart distinguished the *A-Theory*, the *B-Theory* and the *C-Theory* of time and being. In both the B- and the C-Theory, the concept of being is timeless and tenseless, and therefore, according to McTaggart, incapable of capturing the essence of being, whereas existence in the A-Theory is temporal and tensed, capable of capturing the essence of time.[24] According to the A-Theory, the conjugation of verbs in tenses in language reflects the ontic categories of past, present and future; time is the change in ontic status of events from past via present to future. According to the B- and C-Theory, events *be* or *not be*; the English language does not have a tenseless conjugation of verbs to express this—metaphysics outruns language, whence putting the infinitive in italics as a means of expressing the tenseless mode. Mulder (2014, sec.6.2) demonstrates that the A-Theory and the B-Theory belong to distinct clusters of concepts, which defy inter-translation; the A-Theory comes with tensed being, tensed predication and endurantism (objects have no temporal parts), whereas the B-Theory (and C-Theory) comes with tenseless being, tenseless predication and perdurantism (objects have temporal parts).

We return to the archument. To repeat, at the transcendental-level (shortly: τ-level), when we want to talk about $\mathcal{R}$, only the tenseless conception of existence is available. Time is entirely absent at the τ-level. As soon as one wants to apply time to $\mathcal{R}$, as soon as one wants "to interpret time realistically"

24 But leads to trouble, which makes McTaggart Idealistically, as well as controversially, conclude that time is not real, by which is meant: not a feature of $\mathcal{R}$.

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(rather than "idealistically"), then one has left the Correlationist building (β) and entered the Metaphysical-Realist building (δ).

Proposition (W) we now express as follows:

(W1) If there *be* no subjects in $\mathcal{R}$, then there *be* no world $\Phi[\mathcal{R}]$ either ("non-being of the given").

To summarise, the deduction of a contradiction from (W) and (A) was achieved by the wrong phrasing of (W), as (W0) rather than as (W1); and when the different concepts of existence (and being) that figure in (W) and (A) are expressed (correctly and) differently, we obtain (W1); and from (W1) and (A) no contradiction ensues. Who claims it does follow, commits the fallacy of equivocation. The Paradox of the Arche-fossil no longer arises.

The first objection against the archument concerned the unequal treatment of space and time, and was addressed by its propounder Meillassoux. Although we did not expound Meillassoux's defence in its entirety (due to some poignant unclarities), we did clarify the crucial role of time in the argument, which has resulted in the analysis of the archument above. Correlationism is still standing because the archument against Correlationism fails on our analysis. We next move to the second objection addressed by Meillassoux.

5 An Amphiboly

Meillassoux (2008, 22–23) envisions a critic of his archument charging him with having confused the phenomenal level (φ-level) and the transcendental level (τ-level). At the φ-level, we talk and think about what's going on in the world, what there is in the world, how it all hangs together, etc.; this forms the subject-matter of science. At the τ-level, we talk and think about the knowing and understanding subject, about the necessary conditions for the possibility of knowledge and understanding, about what is beyond all possible experience, about $\mathcal{R}$ and its relation to $\Phi[\mathcal{R}]$, about the being of $\mathcal{R}$ and the being of $\Phi[\mathcal{R}]$, etc. The connection to the previous section is that the tenseless *be* is the concept of being (and existence) at the τ-level, whereas tensed being is the standard concept of being (and existence) at the φ-level. Meillassoux (2008, 22) compares:[25]

25 This cited part belongs to the added text in the translation, absent from the original French, Meillassoux (2006). See footnote 23.

> Now, these two levels of thought—the phenomenal and the transcendental—are like the two sides of a flat sheet of paper: they are absolutely inseparable but they never intersect. But your mistake [= Meillassoux's mistake, according to an imaginary critic of the archument, FAM] consists precisely in allowing them to intersect—you have turned a structure, which should have remained flat, into a Möbius strip.

The virtual critic of Meillassoux (2008, 23) continues by saying:

> Consequently, your conception of a "time of science", in which both bodies and the manifestation of bodies arose, is "amphibolous"—it conflates the objective being of bodies, which do in fact emerge and perish in time, with the conditions for the objective knowledge of the objective being of bodies, which have nothing to do with any sort of time.

Meillassoux goes on to explain—*contra* Kant it seems—that there is no such thing at the τ-level called a *transcendental subject*; there are only *objects* (material beings) and embodied *subjects* (a particular type of material beings) at the φ-level, in the world, $\Phi[\mathcal{R}]$: human beings. Let's adopt the following criterion (enter Meillassoux's "the temporality of the conditions of instantiation"):

> *Subject Criterion.* Concrete entity S is a *subject* at time t in the world, $\Phi[\mathcal{R}]$, iff at time t in the world, $\Phi[\mathcal{R}]$, S is a living embodied being that possesses the following familiar capacities: sensory (seeing, smelling, touching, hearing, etc.), cognitive (remembering, reasoning, comparing, understanding, knowing), cogitative (thinking, believing, accepting, imagining), affective (feeling), and connative (wanting, desiring).

The further defence against this charge of "amphiboly" that Meillassoux propounds is as follows (2008, 25, his emphasis):[26]

> that the transcendental subject remains indissociable from its incarnation in a body; in other words, *it is indissociable from a determinate object in the world*. [...] when we raise the question of the emergence of thinking bodies in time, we are also raising

26 Same as in footnote 25.

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> the question of *the temporality of the conditions of instantiation, and hence of the taking place of the transcendental as such*.

The last emphasised phrase we take to mean that at a certain time (however vaguely delineated this time is in our evolutionary chronology), a certain kind of object comes into the world that meets the Subject Criterion displayed above. Meillassoux (2008, 25) further rejects the existence of a transcendental subject as an uninstantiated universal, akin to a Platonic form ("indissociable from a determinate object" in the world): there are only instantiated "transcendental" subjects, that is, things in $\Phi[\mathcal{R}]$ that meet the Subject Criterion displayed above.

What makes subjects transcendental is that they can engage in transcendental thought, at the τ-level (see above).[27] Little if anything in the archument hinges on the transcendentality of the subject. Presumably therefore Meillassoux does not elaborate on the meaning of "transcendentality," apart from what we just have reported—which seems quite sufficient for his archument. We need not be detained further by it, and move to present a rigorous and clarified expression of premise (W).

6 Correlationism Reclaimed

To recapitulate, we began in our analysis of the archument with (W) and (A), and deduced a contradiction from incorrect (W0) and correct consequence (A6) of (A). In order to avoid committing the fallacy of equivocation with regard to being and existence, we invoked the distinction between a tensed and a tenseless conception of being, which resulted in (W1), a τ-level proposition, rather than (W0), from which no paradox arose for Correlationism (end of Section 4). Keeping (W) and (A) *both* entirely at the φ-level can be done, but that does not lead to a paradox either: this is the way of Absolute Idealism (γ), as Meillassoux (2008, 14, 27) admits.[28] Absolute Idealism was never in the target area of the archument. (Parenthetically it is also the way of Metaphysical Realism (δ), as we pointed out in Section 2, with (W*) and (A*).) Since a version entirely at the φ-level does not give rise to a paradox, and a version

27 For Kant, it means that the subject has the capacity to think at the τ-level, of having thoughts that *transcend* all possible sensory experience and imagination, of knowing *a priori* about necessary conditions of the possibility of having sensory experiences ($\Phi[\mathcal{R}]$). For Hegel, it means that the subject has the capacity for speculative thought (see Section 1 and the *fourth* terminological remark)

28 Harman (2011, 15–16) agrees.

entirely at the τ-level is not in the cards to begin with (subjects definitely do not evolve into being at the τ-level, which makes τ-version of A conceptually impossible), we next present a version of the archument of which one of the premises explicitly connects the τ- and the φ-level.

The first premise is the following φ-level ancestral proposition:

(A6) For some moment of time t_0, there are no subjects in $\Phi[\mathcal{R}]$ at t_0.

In fact, a stronger ancestral position is licensed by science, which also implies (A):

(A7) For every moment of time before 3.500 billion years ago, there were no subjects in $\Phi[\mathcal{R}]$.

Next, a version of (W), which connects φ-level (antecedent) to τ-level (consequent) explicitly:

(W2) If, for every time t, there is no subject in $\Phi[\mathcal{R}]$ at t, then $\Phi[\mathcal{R}]$ *not be*.

Logically equivalent to (W2) is the contraposed proposition:

> If $\Phi[\mathcal{R}]$ *be*, then for some moment in time t_0, there is some subject in $\Phi[\mathcal{R}]$ at t_0.

The converse of this last version of (W2) also seems to provide the weakest sufficient condition for there *be* $\Phi[\mathcal{R}]$; when we combine this with (W2), and move from "moments in time" to "spacetime regions," we obtain the following crisp and clear criterion, which explicitly connects the φ-level to the τ-level:

(W3) $\Phi[\mathcal{R}]$ *be* iff for some spacetime region, there is some subject in $\Phi[\mathcal{R}]$ in the region.

Obviously criterion (W3) is compatible with every ancestral proposition, (A1)–(A7). Since the ancestral propositions are true, and they presuppose there *be* $\Phi[\mathcal{R}]$, it is also true that there *be* $\Phi[\mathcal{R}]$. Then both conditions of the biconditional (W3) are also true, which makes (W3) and (W4) true. Then any of (A1)–(A7) and (W3) are consistent. Thus the Paradox of the Arche-fossil no longer obtains. Correlationism can be reclaimed.

By way of a closing remark of the current section, we point that there is a version of premise (W), connecting the φ- and the τ-level, that does lead to a contradiction with premise (A):

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(W4) If $\Phi[\mathcal{R}]$ *be*, then at every moment of time t, there are subjects in $\Phi[\mathcal{R}]$.

But Correlationism is not committed to such a strong necessary condition for there *be* the world $\Phi[\mathcal{R}]$ as in (W4). Correlationism remains reclaimed.

7 Sub Specie Aeternitatis

So far we have argued that: (i) at the τ-level, only the concept of tenseless being (and existence) is applicable, whereas at the φ-level, the concept of tensed being (and existence) is applicable; (ii) the archument, which led to the Paradox of the Arche-fossil for Correlationism (β), committed the fallacy of equivocation by confusing these concepts; the archument turned out to be amphibolous; and (iii) if these concepts of being (and existence) are properly distinguished in more precise rephrasings of (A) and (W), no Paradox of the Arche-fossil arises. We have employed the tensed conception of being (and existence) for $\Phi[\mathcal{R}]$. But in metaphysics the A-Theory of tensed being is not the only view on time and being. In fact, a sizeable number of philosophers defend that a tenseless conception of being (and the B-Theory of time) is *better* than the rival tensed conception. This raises the question whether the archument is possible when it only employs the concept of tenseless existence, also for ancestral premise (A), at the φ-level. Let's see.

We now look at the world, including its spacetime, $\Phi[\mathcal{R}]$, *sub specie aeternitatis*, all of whose events *be*. The crucial ancestral proposition expressed in accordance with the tenseless conception (and the B-Theory of time) is the following, where time is an ordering relation between events that *be*:

(B) There *be* no subjects earlier than some time t_0.

In the language of Relativity Theory, the ancestral proposition reads:

(B*) There *be* no subjects below some 3-dimensional space-like hypersurface in 3+1-dimensional spacetime in $\Phi[\mathcal{R}]$.

The appropriate version of (W), which should be acceptable for every Correlationist, is:

(W5) $\Phi[\mathcal{R}]$ *be* iff in some space-time region in $\Phi[\mathcal{R}]$ there *be* at least one subject.

Obviously propositions (B) and (W5), and (B*) and (W5), are perfectly compatible. When we add that above the hypersurface mentioned in (B*) there are spacetime regions where subjects *be*, like the terrestrial regions that we, human beings, inhabit, then we deduce with (W5) that $\Phi[\mathcal{R}]$ *be*. Correlationism still remains reclaimed.

We have now exhausted all possible versions of the archument, with different concepts of being, either tensed, tenseless, or both but then explicitly connected by a premise acceptable by Correlationist lights. Every version of the archument does not give rise to a paradox, and the only valid archument we could muster needed a premise to which no Correlationist will subscribe to. We conclude that Meillassoux's paradox of the arche-fossil collapses.

8 An Aporia

Meillassoux has declared to present the Paradox of the Arche-fossil not as a silver bullet for Correlationism (β), but as raising an *aporia* for Correlationism, i.e. the following aporia (which we mentioned earlier):

(Q) *How is Correlationism able to think meaningfully, and to understand and to know ancestral propositions?*

Meillassoux argued that Correlationism can do so only on pain of being caught in a contradiction, the Paradox of the Arche-fossil. Careful analysis has however led us to conclude that no such paradox arises. But if our analyses are correct, then how *should* the Correlationist answer aporia (Q)?

Well, that is going to depend on which variety of Correlationism one considers, on how Φ is construed and understood. For example, Wiltsche (2017) has provided the answer on behalf of Husserlian Phenomenology (by curiously injecting it with a constructive-empiricist serum). Let us sketch, for the sake of concreteness, answer to Q on behalf of Kant's Transcendental Idealism, which we have classified as Strong Type Correlationism ($\beta.2$) in Section 1.

Kant has provided one of the most refined and elaborate views about the correlation $\mathcal{R} \rightsquigarrow \Phi[\mathcal{R}]$. Kant's two forms of sensible intuition (*Anschauung*), space (outer) and time (inner), do not come with *restrictions* on the values that spatial and temporal variables may assume, notably not with the temporal restriction such that events that happened earlier than about 2 million years ago are un-intuitive for us. The same holds for our synthetic knowledge *a priori* of these two forms of sensible intuition. (As a matter of fact, obviously

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these events are not un-intuitive, as Meillassoux emphasizes.) Every subject can in principle understand every proposition about any space-time region in the world when expressed in terms of the Kantian categories—or different, non-Kantian categories for that matter. When space and time are "given to us," when these forms of sensible intuition are hard-wired in our minds during the nine months we float around in the amniotic fluid of our mother's womb, then every single spatial point and region in space, and every moment and interval in time, are in principle "given to us" in one fell swoop. There are no exempted spatio-temporal regions in the world such that propositions about *these* regions cannot be thought, understood or known by subjects, including propositions about times long before we ourselves appeared on the terrestrial scene. Recall that our synthetic knowledge *a priori* of these forms of sensible intuition are Euclidean geometry (for space) and pure chronometry: both include *all* spatial points and regions, and *all* moments and temporal intervals; they are sensible-intuition-wise all on a par. A few citations from Kant's *Kritik*:[29]

> We present space as an *infinite* given magnitude. (1787, B39) Geometry is a science that determines the properties of space synthetically and yet *a priori*. (1787, B40) To say that time is *infinite* means nothing more than that any determinate magnitude of time is possible only through limitations [put] on a single underlying time. Hence the original presentation time must be given as *unlimited*. (1787, B48) We present the time sequence by a line progressing *ad infinitum*, a line in which the manifold constitutes a series of only one dimension. (1787, B50)

This is, roughly, the Kantian answer to Meillassoux's aporia (Q). Meillassoux's claim that Kantian correlationists cannot answer (Q) is not credible. They can answer it. The transition *from* an ancestral world (i.e. a spatio-temporal "part"

29 References to Kant's *Kritik* in standard fashion. Translations from Kant (1996). Originals in Kant (1787, our italics): "Der Raum wird als eine *unendliche* gegebene Grösse vorgestellt" (B39–40); "Geometrie ist eine Wissenschaft, welche die Eigenschaften des Raumes synthetisch und doch a priori bestimmt" (B40); "Die *Unendlichkeit* der Zeit bedeutet nichts weiter, als dass alle bestimmte Grösse der Zeit nur durch Einschränkungen einer einigen zum Grunde liegenden Zeit möglich sei. Daher muss die ursprüngliche Vorstellung Zeit als *uneingeschränkt* gegeben sein" (B48); "Und, eben weil diese innere Anschauung keine Gestalt gibt, suchen wir auch diesen Mangel durch Analogien zu ersetzen, und stellen die Zeitfolge durch eine ins *Unendliche* fortgehende Linie vor, in welcher das Mannigfaltige eine Reihe ausmacht, die nur von einer Dimension ist" (B50).

of $\Phi[\mathcal{R}]$) without human beings, even without animal beings, *to* a world full of them (i.e. another spatio-temporal "part" of $\Phi[\mathcal{R}]$) can be understood and known by means of the theory of evolution, which theory does not scandalise the Kantian forms of sensible intuition and epistemic categories one scintilla. At the transcendental level, we can think "speculatively" about $\mathcal{R}$, that $\mathcal{R}$ exists tenselessly, but at that level there is neither time nor coming-into-being of transcendental subjects. These subjects came into being in $\Phi[\mathcal{R}]$, and their capacity of reason enables them to think about themselves as thinking, observing, knowing and understanding subjects, which is what it means to say that they are *transcendental* subjects.

So much on behalf of the Kantian Correlationist.

When the "Speculative Turn" is based on Meillassoux's allegedly successful criticism of Correlationism (β) whilst Correlationism is, in fact, still standing, must we then conclude that the "speculative" realists have taken a turn without a reason? No, we should not. Metaphysical Realism (δ) is, has been, and presumably will be, a respectable metaphysical view. The speculative realists have joined the ranks. After all, there are no knockdown arguments in philosophy, as D.K. Lewis (1983, x) once remarked, certainly not when it comes to such general metaphysical theses as the varieties of Correlationism (β) and Metaphysical Realism (δ). All we can conclude is that Meillassoux's attempt to knock down Correlationism by confronting it with an allegedly irresolvable paradox has crumbled. Notwithstanding the fact that no silver bullets have been fired, Continental Speculative Realism can steam ahead.

Unless Donald Davidson is right, who posed a threat for Correlationism (β) as well as for Metaphysical Realism (δ). The final section briefly considers this more ominous threat.

9 Collapse

In our schematic and symbolic expression of the correlation

$$\mathcal{R} \rightsquigarrow \Phi[\mathcal{R}]$$

we have attempted to say as little as possible about the correlation ($\rightsquigarrow$) between reality ($\mathcal{R}$) and the experienced and conceptualised world ($\Phi[\mathcal{R}]$). Deliberately so, for as soon as one begins to assert things about this relation, one lands in a specific version of Correlationism (β) or Metaphysical Realism (δ), which all rely on the correlation. In his sensational paper "On the Very Idea of

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a Conceptual Scheme," Davidson (1973) essentially argued, in our current terminology, that to speak of "the conceptual part" of $\Phi[\mathcal{R}]$ (our "conceptual scheme") is *unintelligible*.

In a nutshell, besides arguing that all attempts to elucidate the correlation between $\mathcal{R}$ and $\Phi[\mathcal{R}]$ metaphorically fail miserably (as e.g. the Strong Correlationists ($\beta.2$) and ($\beta.3$) will applaud), Davidson's central argument runs as follows.

If the correlation $\mathcal{R} \rightsquigarrow \Phi[\mathcal{R}]$ is intelligible (Premise), then the possibility of there being a distinct correlation, say $\mathcal{R} \rightsquigarrow \Psi[\mathcal{R}]$, is also intelligible. For the conceptual schemes of $\Phi[\mathcal{R}]$ and $\Psi[\mathcal{R}]$ to be genuinely distinct, it is impossible to translate them into each other (or the two distinct languages that express these conceptual schemes). For if it were possible to translate them, they would not be genuinely distinct. But earlier Davidson had argued, on the basis of his truth-conditional theory of meaning and his idea of radical interpretation (inspired by Quine's idea of radical translation), that untranslatable languages are not possible. (Which implies that conceptual relativism is impossible too.) Davidson (1973, 20):

> For we have found no intelligible basis on which it can be said that schemes are different. It would be equally wrong to announce the glorious news that all mankind—all speakers of a language, at least—share a common scheme and ontology. For if we cannot intellibly say that schemes are different, neither can we say that they are one.

Thus Premise leads to an untenable impossibility claim, and therefore must be repudiated: the correlation is *not* intelligible.

The ramifications of repudiating the intelligibility of the correlation are too ominous not to be mentioned here. Remarkable is that no continental philosopher in the speculative realism movement pays attention to it.

Davidson suggested that the intelligibility of the conceptual part of the correlation is a "third dogma" of "empiricism," which, after Quine's identification of two other untenable dogmas of empiricism, has to be abandoned too. But if Davidson is right, and the correlation is unintelligible, then not only empiricism must go, but every version of Correlationism (β) and Metaphysical Realism (δ) must go too, speculative realism not excluded. Since Direct Realism (α) is incoherent because to state it is to perform a contradiction, the only two metaphysical views that remain standing are Absolute Idealism (γ) and Pragmatism (ε).

Against Absolute Idealism (γ), a Wittgensteinian line of argument can be employed. When Absolute Idealists use the words "matter," "material object," "mental" etc. in the same manner as everybody else (which they must, otherwise they could not communicate with anybody else), and when usage is constitutive for meaning, then to claim that matter is mental (or ideal) and that everything is mental (or ideal) is simply incoherent. If such a Wittgensteinian line of argument is successful, then Pragmatism (ε) is the last man standing. All rival philosophical views (α–δ) will then have collapsed. A knock down argument after all?

Presumably not. Whether the criticism that Davidson's argument has received amounts to a definitive refutation, I dare not say.[30] I dare say that a critical analysis of Meillassoux's archument has appeared that threatens to refute it.

10 Appendix: Correlationists

We provide a few examples to illustrate that Meillassoux's terminology, including our extension and refinements, fits philosophy (these illustrations are necessarily brief and sketchy, and are *stricto sensu* otiose for the audience of this journal).

Berkeley was an Absolute Idealist (Subjectalist, γ). In his *Treatise concerning the Principles of Human Knowledge* (1710, pt. I.VI), we read:

> VI. Some Truths there are so near and obvious to the Mind, that a Man need only open his Eyes to see them. Such I take this Important one to be, to wit, that all the Choir of Heaven and Furniture of the Earth, in a word all those Bodies which compose the mighty Frame of the World, have not any Subsistence without a Mind, that their Being is to be perceived or known; that consequently so long as they are not actually perceived by me, or do not exist in my Mind or that of any other created Spirit, they must either have no Existence at all, or else subsist in the Mind of some eternal Spirit.

30 Some critical attempts: Quine (1981), McGinn (1982), Larson (1987), Child (1994), Hacker (1996), Baghramian (1998), Forster (1998), Ayers (2004), Coll Mármol (2007), McDowell (2009), Wang (2009), Coleman (2010).

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According to Berkeley, reality ($\mathcal{R}$) is identified to the whole of all and only human minds, $\Phi_S[\mathcal{R}]$ for every subject S, and God.

Meillassoux says that Absolute Idealism "absolutizes" $\Phi[\mathcal{R}]$, makes do with only $\Phi[\mathcal{R}]$, and renounces $\mathcal{R}$, hence better denoted as: $\Phi[\cdot]$. Solipsism is a variety of absolute Idealism. Besides Berkeley, Fichte's rejection of $\mathcal{R}$ makes him an absolute idealist too, Meillassoux (2016) claims, and lists more absolute idealists:

> Sensation was absolutized (Maupertius' and Diderot's hylozoism), as was reason (Hegelian idealism), freedom (the Schelling of 1809), perception (Bergson and the image in itself, in the first Chapter of *Matter and Memory*), will (Schopenhauer), wills in their mutual conflict (Nietzsche's will to power), the self in its initial germ state (Deleuze's "larval selves" in *Difference and Repetition*), etc.

Hume was a Correlationist: $\Phi_S[\mathcal{R}]$ is the passing show, the stream of consciousness (ideas and impressions, which include sensations, desires, passions, sentiments) of subject S. Recall Hume's view about causality: there are no necessary connections in nature; everything our sensory experience tells us is that there are regularities between impressions, one event of a certain type followed by an event of another type, a "constant conjunction in temporal order." Clearly Hume speculated about $\mathcal{R}$, and claimed that we do not and cannot know about (necessary connections in) $\mathcal{R}$. Concerning perception, the prime candidate of (α) Direct Realism for direct access to $\mathcal{R}$, Hume was sceptical; from *An Enquiry concerning Human Understanding* (1758, 153):

> It is a question of fact, whether the perceptions of the senses be produced by external objects, resembling them: how shall this question be determined? By experience surely; as all other questions of a like nature. But here experience is, and must be entirely silent. The mind has never anything present to it but the perceptions, and cannot possibly reach any experience of their connexion with objects. The supposition of such a connexion is, therefore, without any foundation in reasoning.

We have not and cannot have a clue whether $\Phi[\mathcal{R}]$ represents $\mathcal{R}$; $\mathcal{R}$ is epistemically inaccessible for us. This makes Hume a Correlationist (β), arguably of the weak variety ($\beta.1$)

In Kant's transcendental objective (i.e. intersubjective) Idealism, $\Phi[\mathcal{R}]$ is the perceivable, knowable and understandable phenomenal world, *die Welt für uns*, brought about by $\mathcal{R}$ and Φ; Φ is constituted by the twelve epistemic categories (causality, quantity, etc.) and the two forms of *Anschauung* (time, space); and $\mathcal{R}$ is the hardly knowable noumenal reality, reality as-it-is-in-and-of-itself, *die Welt an sich*. Meillassoux (2014, 11) emphasizes that according to Kant, subjects can know four things about noumenal reality ($\mathcal{R}$): (i) the thing-in-itself exists independently of us (there are not only phenomena); (ii) it affects us and produces representations of it in us; (iii) it is not contradictory; and (iv) it is not spatio-temporal, because space and time are forms of *Anschauung* and pertain to its phenomenal representation. These are indisputably traces of the Metaphysical Realism (δ). But since our knowledge of $\mathcal{R}$ seems to be exhausted by these rather trivial items, which pale in comparison to the amount of gathered scientific knowledge about $\Phi[\mathcal{R}]$, even in Kant's day, Kant seems more appropriately classified as a strong type Correlationist ($\beta.2$).

In Schopenhauer's subjective Idealism, $\Phi_S[\mathcal{R}]$ is *my* active representation, *meine Vorstellung, die Welt für mich*, and $\mathcal{R}$ is *die Wille*, and is knowable, but only subjectively (from a "1st-person perspective") as wanting, desiring, longing, craving, hoping, intending, yearning. Schopenhauer (1958, vols. II, 197): "I call the Will the thing-in-itself." Schopenhauer (1958, vols. I, 3):[31]

> Therefore no truth is more certain, more independent of all others, and less in need of proof than this, namely that everything that exists to know, and hence the whole of this world, is only object in relation to the subject, perception of the perceiver, in a word, *representation*. [...] Everything that in any way belongs and can belong to the world is inevitably associated with this being-conditioned by the subject, and it exists only for the subject. The World is representation.

Since the Will, i.e. $\mathcal{R}$, can be known subjectively, Schopenhauer seems to fall somewhere between metaphysical Realism (δ) and strong token Correlationism ($\beta.3$).

31 Original German, in Schopenhauer (1844, Zweiter Band, Kapitel 18): "[...] nenne den Willen das Ding an sich"; and (1844, Erster Band, Erstes Buch, §1): "Keine Wahrheit is also gewisser, von allen anderen unabhängiger und eines Beweises weniger bedürftig, als diese, dass Alles, was für Erkentniss da ist, also die ganze Welt, nur Object in Beziehung auf das Subjekt ist, Anschauung des Anschauenden, mit Einem Wort, Vorstellung."

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In Husserl's Phenomenology, $\Phi[\mathcal{R}]$ is consciousness and $\mathcal{R}$ is reality. Husserl (2003, 156): "Transcendental Idealism says: a nature without co-existing subjects of possible experience regarding it is unthinkable; possible subjects of experience are not sufficient."[32] For Heidegger's Existential Phenomenology, roughly, $\Phi[\mathcal{R}]$ is *Dasein* and $\mathcal{R}$ is *Sein*, and their "essential togetherness," their *Ereignis*, is the correlation, as Meillassoux (2008, 8) declares. Both Husserl and Heidegger are weak Correlationists ($\beta.1$).

In Russell's empiricist Phenomenalism, $\Phi_S[\mathcal{R}]$ are the sense data, the sensations, of subject S, with which S is intimately acquainted, and $\mathcal{R}$ comprises the entities that cause $\Phi_S[\mathcal{R}]$, or are the entities that S constructs out of his sensations. Similar posits hold for every other subject, and the whole of all events ($\mathcal{R}$) is justified abductively as the best explanation of every $\Phi_S[\mathcal{R}]$ and their similarities. Russell further assumes that the structure between the sense data mirrors relations between the causes in $\mathcal{R}$ of these sense data. This makes Russell move in the direction of Metaphysical Realism (δ).[33]

Wittgenstein's *Tractatus Logico-Philosophicus* (1922), which expounds a metaphysical theory of meaning, is based on a (δ) metaphysical realist theory of $\mathcal{R}$. Wittgenstein (1922) deemed *facts* to be truth-makers:

> 1.1 The world is the totality of facts, not of things.
>
> 4.01 The proposition is a picture of reality.
>
> 4.022 The proposition *shows* its meaning. The proposition *shows* how the facts are, *if* true.

This also smells of (α) Direct Realism. (Facts still are the most popular truth-makers, but may ultimately be redundant, as Betti 2015 *passim* has argued).

In the realism debate in philosophy of science, realists are Metaphysical Realists (δ), who take $\Phi[\mathcal{R}]$ to include prominently the theories and models that constitute our current scientific knowledge; they take $\mathcal{R}$ to be very knowable. Van Fraassen's (1980) famous constructive empiricism is an interesting combination: with respect to observable part of $\mathcal{R}$, the view is a metaphysical realist one (δ), and with respect to unobservable part of $\mathcal{R}$, the view is weak

32 Original German: "Der transzendentale Idealismus sagt: Eine Natur ist nicht denkbar ohne mit existierende Subjekte möglicher Erfahrung von ihr; es genügen nicht mögliche Erfahrungssubjekte."

33 See for example, Russell's Lecture III, "Our Knowledge of the External World," in the book bearing the same title (1914).

Correlationist (β.1). All scientific knowledge is about the observable part of $\mathcal{R}$; the unobservable part is epistemically inaccessible by us. (To find out where to draw the line in $\mathcal{R}$ between what is observable and what is unobservable is according to Van Fraassen a subject-matter of scientific inquiry rather than philosophical analysis.)

Anti-realists in Analytic Philosophy, like Putnam (1981) (after having denounced Metaphysical Realism), Dummett (1975), Rorty (1979), and Brandom (2008), fall under Pragmatism (ε) as characterised here.

So much for this hodge-podge of illustrations of Meillassoux's taxonomy. These should suffice to convince us that Meillassoux is not talking to himself but about many renowned philosophers, whose views indisputably fit in the category of Correlationism (β).*

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