Quentin Meillassoux’s *After Finitude* is among the most influential books of philosophy to have appeared in the past decade. It is a masterpiece of lucid prose and speculative daring, as even some of its detractors concede. *After Finitude* has found eager translators in a dozen or so languages, and like many important books it has been subjected to numerous ambivalent reviews (including several authored by myself). One of the most prominent critiques of the book so far can be found in Adrian Johnston’s article, “Hume’s Revenge: À Dieu, Meillassoux?” Johnston is an increasingly important figure in his own right: a prolific author, engaging public speaker, and frequent collaborator with such leading European thinkers as Catherine Malabou and Slavoj Žižek. In “Hume’s Revenge,” Johnston’s attitude towards Meillassoux is unapologetically critical. It is true that the final paragraph of Johnston’s article makes some positive remarks: “*After Finitude* has many striking virtues, especially in terms of its crystalline clarity and ingenious creativeness, and deserves credit for having played a role in inspiring some much-needed discussions in contemporary Continental philosophy […]” (113). Yet these encouraging words come late in the day, devoid of supporting detail, and only in the wake of a twenty-page catalog of Meillassoux’s purported evasions and outright errors. Although I firmly agree with several of Johnston’s complaints, the present article will contend that he fails to do justice to the central point of *After Finitude*, in a manner that leads to serious consequences for Johnston’s own philosophical position.
Johnston displays a friendly skepticism towards the now fragmented speculative realism movement that emerged from London in 2007, and which I myself played a role in launching.\(^6\) By “friendly” I mean that Johnston maintains good personal relations with speculative realist philosophers, treats them as respectable adversaries, and is viewed respectfully in return. By “skepticism” I mean that Johnston has not been visibly influenced by speculative realist arguments. We should also note Johnston’s tendency to conflate Meillassou’s philosophy with speculative realism as a whole, as when he refers to “the entire ‘speculative realism’ movement largely inspired by Meillassoux’s work” (112). This is an exaggeration. It is safe to say that Ray Brassier and Iain Hamilton Grant were fascinated by After Finitude, but neither of these authors changed his basic position as a result of reading the book. I was no less fascinated by the work, but my object-oriented philosophy dates to the late 1990s, a time when even Alain Badiou was little discussed in the United States, and when his student Meillassoux was entirely unknown. It is equally misleading when Johnston describes Brassier as “a thinker profoundly sympathetic to Meillassoux”, since this implies a congruence of doctrine between the two authors that has never existed (96). Brassier’s explicit criticisms of Meillassoux’s philosophy are portrayed by Johnston as reluctant concessions by a Meillassouxian, rather than as fundamental divergences.\(^7\) It would be more accurate simply to say that After Finitude provoked Brassier and I (though Brassier deserves most of the credit) to organize the group that assembled at the April 2007 Goldsmiths workshop.\(^8\) Meillassoux was a catalyst rather than a model, as can be seen more easily today when the four differing positions shaded by the speculative realist umbrella have openly gone their separate ways. The only shared doctrine of the speculative realists was the critique of “correlationism,” a critique that plays too small a role in Johnston’s account.

SIX PILLARS OF JOHNSTON’S MATERIALISM

Meillassoux describes his position as “speculative materialism.” In “Hume’s Revenge,” Johnston’s strategy is to show that Meillassoux fails to live up to the “materialism” part of the term. But since materialism has meant numerous things in the history of philosophy, we should be clear as to what it means for Johnston himself. Limiting ourselves to the content of “Hume’s Revenge,” I find five materialist principles that Johnston openly proclaims, along with an unstated sixth principle that Johnston does not and presumably would not acknowledge.

1. Materialism must be a political Leftism. Though Johnston does not sketch a political philosophy in the pages of his article, he does cite Engels, Lenin, and Mao as honored authorities, although Lenin is criticized in passing for certain philosophical mistakes. Johnston also makes an approving reference to the Maoist inclinations of the early Badiou, who calls materialism “a philosophy of assault,” a phrase carrying obvious political connotations no less than intellectual ones (92).

2. Materialism must be an anti-dualism. We cannot simply posit the existence of a thinking subject standing over against the world, but must examine how this subject emerges from its material
preconditions. Johnston credits Žižek, Brassier, and David Chalmers with taking this problem more seriously than Meillassoux himself, who is said to be haunted by a Cartesian dualism of mind and matter (96).

3. Materialism must be an atheism. According to Johnston, one of materialism's primary enemies is "nebulous spiritualism in its many varied forms and (dis)guises" (92). Here, Meillassoux is accused of a theological relapse due to his theory of a virtual God who does not exist now but might emerge in the future.

4. Materialism must be an anti-idealism. Johnston praises Engels and Lenin for holding that "the main fault line of struggle [...] within the field of philosophy and its history is the irreconcilable split between idealist and materialist orientations" (92). Johnston holds that speculative realism, including Meillassoux, risks getting stuck "in endless philosophical tempests-in-teacups," becoming a de facto idealism insofar as it does not engage with the detailed findings of the sciences (112). This leads us directly to the next point.

5. Materialism must be a scientific empiricism. Johnston holds that Meillassoux's reliance on a priori mathematical speculation avoids the needed dirty work of the empirical sciences, and thereby gets bogged down in an empty rationalism that recalls pre-Kantian dogmatic metaphysics. Some philosophical problems should not be endlessly pursued, but simply avoided as fruitless, since they cannot be resolved in the a priori fashion that Meillassoux attempts.

That brings us to Johnston's unstated sixth principle, which provides the key to my counter-critique of his critique of Meillassoux:

6. Materialism must be a correlationism. This is the one claim of the six whose relevance Johnston would surely deny, given his view that speculative realism is merely a tempest in a teacup. But I will argue that the price of Johnston's dismissal of this point is a fatal relapse into the very correlationism that Meillassoux expertly dissected. For those readers unfamiliar with the term "correlationism," I will define it when we reach the relevant point in the argument.

Of Johnston's five acknowledged pillars of materialism, Meillassoux is spared explicit condemnation only with regards to the first principle: politics. Although Meillassoux's Leftist sympathies are well known, someone might still criticize his philosophy for having no tangible power of liberation in the political sphere. Peter Hallward, for instance, makes precisely this criticism.⁸ For whatever reason, Johnston does not follow suit with specific political complaints.⁹ Though he proclaims that "Marx and Engels must be rolling around in their graves" over recent appeals to theology by certain proclaimed materialists, he does not call our attention to any specific political consequences of Meillassoux's theological turn (93). He does hint that Meillassoux's materialism is insufficiently attentive to "the ideological and institutional stakes of the
practices of politics," but since he does not spell out the details of such failings, this point can safely be assimilated to Johnston's more general objections to Meillassoux's a priori, non-empirical, rationalist style of philosophizing (95). This leaves us with four explicit complaints about Meillassoux: namely, that he fails to secure the anti-dualism, atheism, anti-idealism, and scientific empiricism that all true materialism is said to require. We can deal with Johnston's correlationist problem thereafter.

MEILLASSOUX'S DUALISM

According to Johnston, Meillassoux fails the anti-dualist test that any true materialist must pass. As he complains at some length:

[T]he speculative materialism of After Finitude simply assumes the existence of minds both sentient and sapient, consciousnesses through which mind-independent realities are registered [...], without offering anything by way of an explanation, essential to any really materialist materialism, of what Anglo-American analytic philosophers of mind, following David Chalmers, correctly identify as the thorny 'hard problem': an account of the relationship between mind and matter not just in terms of the former's epistemological access to the absolute being of the latter in itself, but in terms of whether or not mind can be explained as emergent from and/or immanent to matter (and, if so, what such an explanation requires epistemologically, ontologically, and scientifically). (96)

Given that minds did not descend from the sky as pristine angelic beings, materialism must treat them as entities in the world that emerged from that world through an historical process amenable, in principle, to scientific explanation.

In the passage just quoted, Johnston defines the famous "hard problem" as the question of "whether or not mind can be explained as emergent from and/or immanent to matter." The key to this passage is the ambiguous phrase "emergent from and/or immanent to," since the "and/or" signals at least two different options in dealing with the duel of mind and world. If we treat mind as emergent from physical reality, this takes mind to be a relatively rare and late-coming entity that appeared only after numerous complex material conditions had been met. This is the preferred approach not only of Johnston, but of most philosophers of mind who do not eliminate consciousness altogether. But if we treat mind as immanent in the world, this suggests a more bohemian "panpsychist" option in which everything in the cosmos has mind from the outset, thereby reframing human thought as only an especially complex case in a universe more generally laced with psyche. Since Johnston cites Chalmers, let's briefly review the internal ambiguity of Chalmers's own approach. On the one hand, Chalmers (like Galen Strawson) appears to have more serious panpsychist sympathies than the average philosopher of mind: After all, he seriously entertains the notion that a thermostat might be conscious. The problem is that it remains unclear whether anything
like “thermostats” can even exist in Chalmers’s philosophy. The “hard problem,” for Chalmers as for Strawson, lies simply in knowing how mind could ever emerge from matter. Yet they treat the emergence of material things from smaller material things as if this were quite unproblematic. For both authors there is no strictly philosophical problem in knowing how atoms combine into molecules or how lumberyard materials join up to form a table. For this reason it is unclear how a thermostat could be sufficiently real so as to be able to possess consciousness in the first place. Chalmers might have claimed instead, and with greater consistency, that quarks, electrons, fields, or strings are the sole location of consciousness in a “panpsychist” cosmos.14 After all, for a thermostat to be conscious qua thermostat would already imply that a thermostat is an emergent entity beyond the metallic and ultimately subatomic pieces of which it is built, yet this option seems precluded by Chalmers’s lack of interest in purely physical emergence.

My point is that despite the apparently vast canyon between those who are glibly confident in a research program of explaining mind via matter, and those who insist on the hardness of the hard problem, there lies a deeper shared assumption. That assumption, namely, is that only mind presents us with a hard problem. It is simply assumed that whatever is material can easily be reduced to more basic materials, and that science rather than philosophy can be trusted to handle the details for us. The supposed role of philosophers is to shed light on the uniquely challenging point where mind emerges from matter, not on the emergence of molecules from atoms, tables from wood, or friendships from individuals. What I really mean to suggest is that the fixation of Chalmers, Johnston, Strawson, and others on the “hard problem” is not so different from the assumption of Descartes, Meillassoux, and others that mind and matter are ontologically different in kind. For both camps the human (and sometimes animal) mind is a special topic of philosophical fascination, whether they aspire to break it into explanatory fragments or leave it in peace on the throne of post-Cartesian ontology. A third option, which I myself prefer, is that the true “hard problem” occurs whenever two things combine into a more complex thing, even in those cases that might be regarded as purely physical.15 In other words, I question whether Johnston’s research program with respect to mind is really an escape from dualism at all. Insofar as mind is treated taxonomically as a specific kind of entity with properties ontologically different from those of physical beings, there is a built-in dualism in the very formulation of the hard problem.

Let's also note in passing that Meillassoux’s treatment of mind — or rather, “thought” — is not exactly dualistic, since it is part of a four-tiered rather than two-tiered structure. Johnston is aware of this, as indicated by his reference to the “related mystery of the surfacing of sentient life” in Meillassoux’s essay “Potentiality and Virtuality” (96). For Meillassoux, there are three great cases of ex nihilo emergence (or “advent”) that have already occurred: matter from nothing, life from matter, and thought from life. There is also a fourth case that may or may not someday occur: the emergence of justice from thought, by way of the “virtual God” who does not yet exist and has never existed but might exist in the future.16 Meillassoux tells us that each of these sudden advents is dependent on the previous one. Thus there is no emergence of thought directly from matter, but only of thought from life. For this reason alone, Meillassoux’s claim that thought emerges ex nihilo for no reason at all is somewhat compromised from the start: Matter and life
are treated as necessary grounds for thought to appear, despite Meillassoux’s aggressive disavowal of the principle of sufficient reason.17

But let’s forget this critique of Meillassoux and return to Johnston’s own. Johnston finds it “lazy” that Meillassoux pays no attention to the exact natural processes that lead to the emergence of thought. As Johnston complains: “[T]he intellectual laziness of the cheap trick of transubstantiating ignorance into insight (i.e., the lack of a solid scientific solution to the ‘hard problem’ of the emergence of sentient life is itself already a direct insight into a momentous moment of lawless, reasonless genesis out of thin air)” (108). Though I agree with Johnston that there is something deeply unsettling in Meillassoux’s ex nihilo model of the emergence of mind, I cannot agree with the charge of laziness. Of all the phrases that might be used to describe After Finitude, with its strenuous chains of proof and its swarm of fresh ideas, “intellectual laziness” is not among the first that come to mind. It is true that in his own work Johnston invests considerable time in keeping abreast of current research in the philosophy of mind, a subfield now booming with ambitious interdisciplinary research. Yet clock-hours and the amassing of detail are never ends in themselves in philosophy. There is no guarantee that the collective vast labor now underway in neuroscience and the philosophy of mind will bear any philosophical fruit at all, since there is always the risk that the problems themselves are improperly formulated. As Alva Noë bluntly puts it: “After decades of concerted effort on the part of neuroscientists, psychologists, and philosophers, only one proposition about how the brain makes us conscious […] has emerged unchallenged: we don’t have a clue.”18 Now, it is possible that Noë overstates the futility of recent discussions of consciousness; the topic is one of heated dispute. But if Noë is wrong, then this is not because all attempts to pass judgment on the field as a whole are automatically lazy, as if the hard work of brain research must inevitably cash out as philosophically useful. By the same standard Kant’s ethics of the categorical imperative could also be called “lazy,” given that he does not consider the large number of case studies in which it might have been advisable to tell lies. Descartes could also be called “lazy” for ignoring all the subtleties of the Scholastic meditations on substantial forms and simplistically reducing all material things to a single res extensa. One can always claim that a given philosopher badly oversimplifies details by sweeping them away with a single stroke. But these simplifying gestures themselves must be opposed in some detail, not “lazily” refuted by pointing to empirical work already underway on the question. There are times when simplification and the dismissal of pedantic labor are the very business of philosophy.

Instead of accusing Meillassoux of ignoring the empirical work being done by neuroscience and the philosophy of mind, Johnston should have mounted a diligent assault on the point that truly motivates Meillassoux: his rejection of the principle of sufficient reason. Only by showing that Meillassoux is philosophically wrong to think that an entire sphere of reality (such as thought) can emerge without grounds or reasons can we proceed to argue that he is wrong to ignore the available empirical evidence in constructing his philosophy. Otherwise, the best we can do is note the prima facie implausibility that the complex structure of brains and nervous systems should have so little to do with the emergence of a thought that appears ex nihilo. And this would not take us far, since philosophers have often found it
necessary to argue for the implausible. It is by no means a "cheap" trick, but simply one of the basic tricks of philosophy, to dismiss an entire area of research as having no ultimate philosophical merit. Whether or not this is justified in specific cases can only be decided in situ.

Rather than engaging directly with Meillassoux’s rejection of sufficient reason, Johnston confronts the secondary issue of Meillassoux’s use of Cantor against the “frequentialist” argument for the necessity of the laws of nature (as lucidly presented by Jean-René Vernes). Meillassoux employs Cantor’s transfinite mathematics to argue that we cannot call it “highly unlikely” that the world would seem so stable if there were no hidden reason, since probabilities can be calculated only when we know the total number of possible results, and this cannot be done in the case of possible universes given their transfinite number. Here, Johnston retorts that we can indeed establish the relative rarity of contingent universes that would seem stable in comparison with contingent universes that would seem unstable, and thereby finds it extremely improbable that the apparent stability of our universe is purely contingent and without necessary reasons (105).

Let’s assume for the moment that Johnston’s counter-argument works. What would it demonstrate? Only that the principle of sufficient reason is “highly likely,” based on overwhelming evidence that the universe is stable and hence that its stability cannot be contingent but must stem from hidden reasons. What Meillassoux wants to show is that, with all considerations of probability and improbability now fallen by the wayside, we can focus instead on the most important rather than the most likely things that could happen. In sarcastic reference to Meillassoux’s “virtual God to come,” Johnston sighs that “it’s terribly tempting to indulge in a [Richard] Dawkins-style move and joke about a ‘flying spaghetti monster à venir’” (112). When I asked Meillassoux about this remark in an interview, his response was as follows:

Everything is possible, as I have said. But it is senseless to believe in a virtual event (one that does not conform to the laws of our world) in the same fashion in which I await the rise of a potential event (one that does conform to the laws of our world). [...] The question becomes: of what absolutely remarkable event is virtual becoming capable, and how can this event modify my subjectivity once it is regarded as possible? And here it is not unicorns (or spaghetti monsters) that stand in the first rank.

To argue against Meillassoux’s strange vision of global hyperchaos by appealing to the laws of probability simply avoids the question under dispute. Johnston can only raise the specter of the spaghetti monster by the fiat of deeming the virtual God “extremely improbable.” But this is precisely what Meillassoux denies, since he rejects the notion of probability at the level of the basic structure of the cosmos. A spaghetti monster could indeed emerge in Meillassoux’s cosmos; the point is that such a monster would have no implications for his ontology, however jarring its arrival undoubtedly would be.
We can summarize this rather long section of the article as follows: Johnston notes that Meillassoux’s dualism of thought and matter seems incompatible with materialism, which in principle ought to recognize only one kind of reality (the material) rather than two. While this point seems accurate enough as a characterization of materialism, we have made two additional caveats. First, Meillassoux does not just offer a dualism of thought and matter, but a fourfold cosmos marked by three ex nihilo advents: life out of matter, thought out of life, and maybe someday justice (via the virtual God) out of thought. Second, Johnston follows Chalmers and Strawson in seeing a “hard problem” at just one point in reality: the difference between thought and the unthinking. When it comes to mindless matter, physics and chemistry are apparently capable of telling us all that we need to know; philosophy intervenes in nature only where the question of thought arises. But this raises the question of whether Johnston himself is truly committed to a non-dualistic conception of nature. If we start from the assumption that the gulf between thought and matter poses a special kind of problem, it is unclear how any empirical research will ever be able to resolve the gap. No matter how many pages Johnston and Malabou eventually devote to neuroplasticity, it is by no means obvious that their “non-lazy” attention to scientific detail will succeed in answering Noë’s objection that we still don’t have a clue.

MEILASSOUX’S THEISM

The bulk of Meillassoux’s readership can safely be described as atheist, and atheists generally take pride in their remorseless austerity in spiritual matters. Hence, there was considerable dismay upon the publication of Meillassoux’s “Spectral Dilemma” 21 and the even longer reflections on the virtual God in the English-language excerpts from The Divine Inexistence. 22 Johnston embodies this dismay, complaining that Meillassoux is “an anti-Zižek: whereas Zižek tries to smuggle atheism into Christianity [...] Meillassoux, whether knowingly or unknowingly, smuggles idealist religiosity back into materialist atheism [...]” (113). But unlike Meillassoux’s most committed fans, Johnston plausibly claims that he saw it coming all along. Referring to Meillassoux’s use of hyper-chaos to address questions of biology, Johnston asks rhetorically: “If emergence ex nihilo sparked by an omnipotent power isn’t a religious idea, then what is?” (108)? And furthermore: “How could the author of After Finitude, with its polemics against the new fideism of ‘post-secular’ thought [...] simultaneously indulge himself in musings about [...] a divinity fulfilling the expectations of the most fanatical of the faithful” (94)? It is admittedly surprising that someone would call himself a materialist and then indulge in such theology, however unorthodox a theology it might be. But here I would make one objection to Johnston’s reading of Meillassoux, and another to Johnston’s own philosophical commitments.

First, Johnston is unfair when he claims that Meillassoux’s theology opens the door to all manner of other theologies. Johnston claims with polemical wit that “like Jehovah’s Witnesses at the threshold of one’s doorstep, who, with happily smiling aggression, will take a conversational mile if offered the inch of a cracked answered door, those faithful to theologies [...] likely will take heart from several characteristics...
of Meillassoux's speculation, including its rendering of their beliefs seemingly un-falsifiable and apparently not entirely irrational" (97). It is difficult to see how this claim can be defended. After Finitude discounts all possibility of a necessary being, and more or less ridicules every form of fideistic belief in an unknowable deity. "Un-falsifiable" is not part of Meillassoux's lexicon, given the meager role played by experimental falsification in his deeply rationalist philosophy. Yet standard religious belief does not emerge unscathed from After Finitude, and it is safe to say that such belief would count for Meillassoux as "irrational." It may be true, as Johnston claims, that Meillassoux "splits up and distributes the bundle of features attributed by pre-Kantian rationalist metaphysicians to God alone across [...] two entities," by which he means hyper-Chaos and the inexistential virtual God (109). Yet it does not follow that the faithful will be pleased by the menacing hyper-Chaos that indifferently generates angels, demons, spaghetti monsters, and neutrinos. Nor are they likely to find their religion flattered by an infinitely just virtual God who might still remain non-existent during a thousand future Auschwitzes. The fact that some theists could take superficial comfort from the mere occurrence of the word "God" in Meillassoux's text is not our concern, since it is not the job of philosophy to discourage Jehovah's Witnesses. Meillassoux with his inexistential virtual God would be whipped and beheaded in a desert theocracy as quickly as the godless Marx.

This brings us to another point. Johnston's materialist reason for objecting to theism runs as follows: "Religiosity, insofar as part of its essence consists in positing that a being other than physical materiality lies at the base and/or pinnacle of reality, obviously is a primary natural enemy of anti-idealism materialism" (92-93, emphasis added). Johnston is a trained psychoanalyst, and thus he is certainly aware that accusations against others are often revealing of one's own defects. As suggested by the words in italics above, Johnston does not object to the notion that some particular being might lie "at the base and/or pinnacle of reality," as long as that being is "physical." Johnston may not like God very much, but he is perfectly happy with the reduction of the world to a materialistically approved "basis" or "pinnacle." While urging us to "[f]orget Heidegger!" Johnston has already done so himself, since providing reality with a material basis or pinnacle amounts to the crudest form of what Heidegger calls "ontotheology" (110). And this is the side of Heidegger that must not be forgotten. Ontotheology needs no God in the literal sense, but only some supreme entity that explains all the others. We may reach this entity by moving backwards to a first cause in time (God). We may reach it by finding an ultimate physical subcomponent that explains all larger entities as composites built of the smallest stuff (matter). But these causal histories tell us nothing about the ontological status of all the non-primordial entities in the world, since it treats them merely as transient illusions reducible to something more basic. In "Hume's Revenge," Johnston seems to be a reductionist who undermines the world by rooting it in a pampered substratum of material particles, fields, or some other entity approved by the natural sciences. In so doing, Johnston cannot account for the autonomy of individual chemicals, chairs, or cultural entities, which are partially robust to changes in their tiny internal components.23

To summarize, I am in full sympathy with Johnston's complaint that no materialism worthy of the name ought to feature a God of any sort, whether it be a menacing hyper-chaos that already exists, or a benevolent resurrecting deity who might come to exist in the future. Indeed, I agree with Johnston
that Meillassoux (as both hyper-chaos theorist and virtual theologian) should not describe himself as a materialist at all; I assume that he does so mostly to honor the Leftist-critical historic glory of the term. Yet unlike both Johnston and Meillassoux, I myself would take no pride in being called a materialist. Instead, we must avoid all base/pinnacle models of reality, even those in which mighty physical matter stands in for mighty Jehovah.

MEILLASSOUX’S IDEALISM

Johnston proclaims his agreement with Engels and Lenin as to “the irreconcilable split between idealist and materialist orientations” (92). In view of this formula, we can consider Johnston’s negative verdict on Badiou’s recent commitment to materialism: “Badiou himself, in his later work starting in the mid-1980s, arguably has come to defend a specious sort of ‘materialism’ suffused with metaphysical realism, hostility to the empirical sciences, and barely concealed fragments of Christianity appropriated with little to no significant modification” (93). Given the primal opposition Johnston draws between materialism and idealism, to depart from materialism can only mean to drift in the direction of idealism. It is easy to see how “barely concealed fragments of Christianity” might be dismissed as idealist in spirit. The same holds for “metaphysical realism” and “hostility to the empirical sciences,” which amount for Johnston to one and the same failing. As we will see shortly, for Johnston the only way to avoid idealism is through empirical practice. And empirical practice obviously cannot just mean mathematical practice. Johnston expresses solidarity with Brassier’s complaint that Badiou and Meillassoux fetishize mathematics (105-06). The sciences rather than mathematics serve as Johnston’s model for reasons that will soon become clear. To mathematize is to pay homage to the powers of a priori deduction, and at least in “Hume’s Revenge,” such a priori philosophy is not the sort that Johnston admires. Instead, the real is the empirical, and the empirical is explored primarily by natural science rather than pure mathematics.

Let’s briefly consider the status of idealism in Meillassoux’s philosophy, both from Johnston’s point of view and from our own. I have mentioned that Johnston is occasionally critical of Lenin in “Hume’s Revenge,” and one place where this happens is when both Lenin and Meillassoux are accused of oversimplifying the various permutations of realism vs. anti-realism. Johnston tells us that “After Finitude […] employs a tactic repeatedly used by Lenin in Materialism and Empirismo-Criticismo: a reduction of all idealisms (including Kantian transcendental idealism) and fence-straddling agnostic stances between idealism and materialism, no matter how elaborate and intricate, to the absurdity of a Berkeley-style solipsism […]” (95). What Johnston probably has in mind is the following remark by Meillassoux: “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.” By referring to this as a “tactic,” Johnston seems to imply that Meillassoux deliberately obliterates a subtle weave of possible ontological positions for expedient rhetorical purposes. It is actually
not quite that way, but to explain why will require a brief review of what I have called “Meillassoux’s Spectrum.” This will be useful in the next section of the article as well.

Meillassoux’s Spectrum is not a term used by Meillassoux himself, but a pedagogical device invented for my 2011 book Quentin Meillassoux: Philosophy in the Making. It shows five possible positions on the realism question, though in fact we can easily trim it to four without losing anything important. Let’s start with the two extreme positions of the spectrum: naïve realism and full-blown idealism. The naïve realist asserts that there is a real world outside the mind and that we can know it. The full-blown idealist counters that there is absolutely nothing outside the mind; being consists solely in being perceived. Now, the second position seems at first glance to be far more absurd than the first. But continental philosophers have tended to avoid both positions, opting instead for a middle ground position that Meillassoux brilliantly terms “correlationism.” What does the correlationist say? The correlationist says that we cannot assert either the existence or non-existence of reality outside the mind. All we can be sure of is a primordial correlation or rapport between thought and world: the human-world correlate from which correlationism takes its name. Despite Johnston’s pluralistic assertion of a wealth of “[elaborate and intricate] fence-straddling agnostic stances between idealism and materialism,” correlationisms really come in just two basic varieties: the weak and the strong (95). Weak correlationism, most clearly exemplified by Kant, holds that there is a thing-in-itself outside the thought-world correlate, but that we cannot know this world. Thus, weak correlationism is fully compatible with ontological realism, as long as it adds the proviso that we cannot know the real directly. By contrast, strong correlationism is the notion (defended by Kant’s immediate German Idealist successors) that the thing-in-itself is a logical absurdity: We cannot think the thing-in-itself without thinking it, thereby turning it into a thing-for-thought.

Meillassoux’s Spectrum thus runs as follows, moving from most to least classically realist in spirit:

— Naïve Realism
— Weak Correlationism
— Strong Correlationism
— Absolute Idealism

Whatever subtle variations one might attempt on realist vs. anti-realist themes, this spectrum covers the basic possibilities. Now, where does Meillassoux stand in this spectrum, and where does Johnston himself stand? As argued in my 2011 book, Meillassoux favors the Strong Correlationist position, which he then tries to radicalize into his own speculative materialist standpoint. Meillassoux cannot be a Naïve Realist, because he fully accepts Kant’s argument against dogmatic discussions of things-in-themselves. He cannot be a weak correlationist, because he accepts the German Idealist view that we cannot speak of things-in-themselves without turning them into things for us. That leaves Meillassoux with the choice of being either a strong correlationist or a full-blown idealist. He opts against idealism, for an understandable but counterproductive reason. Namely, although it is an absurd contradiction to try to think of something...
outside thought, it does not follow that there is nothing outside thought. For this reason Meillassoux opts for strong correlationism over absolute idealism, and it is strong correlationism that he famously inverts into his philosophy of radical contingency. But as I argued in my book on Meillassoux, he cannot defensibly take this step. For he is able to dismiss weak correlationism only by portraying the thing-in-itself as a self-defeating absurdity, given that we are thinking about that which supposedly lies outside thought. But later, in order to escape idealism, he relies on the possibility that something might exist outside thought anyway — the very something that he already dismissed as a self-defeating absurdity. In short, I argued in my book that the strong correlationist position is simply impossible, and that Meillassoux’s speculative materialism therefore never gets off the ground.

Johnston remarks critically in passing that “neither Lenin nor Meillassoux possesses open-and-shut, ironclad debunking refutations of a strictly logical-rationalist sort of Berkeley and his solipsistic ilk (as Hume would predict, radical idealism is dismissed by Lenin and Meillassoux as obviously preposterous, rather than rationally disproven for good through the proofs of philosophical logic)” (95). Johnston’s reason for making this remark is his agreement with Hume that no rational-logical disproof of Berkeley is possible at all. Berkeley can only be refuted practically: by kicking stones with Dr. Johnson, by doing laboratory experiments, and more generally by the “default inertia of practical doings beyond the artificial cocoon of the armchair of contrived speculative game playing” (98). Though I am not entirely sure whether it is possible to refute solipsism on rational grounds alone, Meillassoux at least tries to do so by claiming that we cannot be sure whether there are things-in-themselves outside thought, and that therefore the certainty of idealism is unjustifiable. I would certainly not call this proof “ironclad”; indeed, I find it self-contradictory, and on my reading Meillassoux never escapes full-blown idealism. But Johnston is wrong to imply that Meillassoux simply waves his arms and dismisses Berkeley as preposterous without argument. Johnston is even more wrong to claim that Meillassoux prefers strong to weak correlationism on the basis of “a sheer preference, perhaps guided by the aesthetics of a certain philosophical taste” (98-99). Far from it. Meillassoux could hardly be clearer in stating his argument for strong correlationism: namely, his agreement with German Idealism that we cannot think the thing-in-itself without turning it into a thought, and that therefore the thing-in-itself is a contradiction. Though I agree with Johnston that the weak correlationist option is better, it is unfair to hold that Meillassoux is guided by nothing more than personal preference. He gives arguments for his choice, and they must be addressed as such.

I will close this section by criticizing the claim of Johnston (joined here by Engels and Lenin) that the key philosophical fault line is that between idealism and materialism. There is a sleight of hand underway here, since the more general opposition is between idealism and realism. To replace “realism” with “materialism,” as Johnston does, is to make a prior decision about what the nature of the real must be: physical matter. But in fact, the real will always retain a certain degree of mystery since by definition it is a surplus, something more than any attempt to grasp it or relate to it. To put a premature end to this mystery by polemically asserting certain features that must belong to the real (mass, inertia, extendedness, and so forth) is to replace the real by our own model of the real. There is no better name for this strategy.
than idealism, as Bruno Latour has argued effectively enough. We can see Meillassoux’s idealism not only in his failed attempt to distinguish between absolute idealism and strong correlationism, but also in his view that the primary qualities of things are those that can be mathematized: as if the things-in-themselves were fully translatable into our knowledge of them. To some extent, Johnston is my brother in these claims: he too critiques both the fetishization of mathematics and the futility of trying to mathematize primary qualities in a priori fashion, and Johnston like me is open to surprises emanating from the never fully thematized realm of nature (101). But by opting specifically for materialism rather than realism more generally, Johnston makes an unjustified preliminary decision as to what can count as real, as in his undefended implication that physical matter can be treated as the base and/or pinnacle of reality.

MEILASSOUX’S RATIONALISM

This brings us to what is probably Johnston’s least favorite aspect of Meillassoux: his very French form of a priori philosophical rationalism, so opposed to Johnston’s Baconian preference for wait-and-see experimentation. As Johnston puts it, “Meillassoux’s idiosyncratic rationalism is utterly untenable” (99). The word “idiosyncratic” here seems to be meant as an intensifier rather than a qualifier, since Johnston is obviously opposed not just to “idiosyncratic” rationalism, but to any kind of rationalism at all. In Meillassoux’s pages he fears a return of the sort of swashbuckling pre-Kantian rationalism found in Leibniz. And, “[a]s intellectually entertaining as it might be to follow along with Leibniz’s incredibly clever conceptual acrobatics and contortions, does one really want to go back to philosophizing in this pre-Kantian style, even if the philosophical content is post-Kantian” (109)? Despite Meillassoux’s proclamation of allegiance to Kant’s post-dogmatic advance, his a priori rationalism seems to recall a dark and dogmatic era. For Johnston, the only proper safeguard against dogmatism is an essentially skeptical, Hume-inspired position. By contrast, “Meillassoux, unlike his teacher Badiou, avoids taking any real risks at the level of his philosophy’s rapport with science” (111).

We will consider this question of “risk” later in the final section of this article. But the nature of Johnston’s complaint is already clear. Philosophy must not be an armchair rationalism, but must leave itself open to contingent findings not only in the sciences, but in other fields as well: just as Meillassoux himself seems to recognize when claiming that Badiou’s a priori mathematism is exposed to possible revolutions in mathematics that might transform the status of set theory, Badiou’s intellectual pet. By closing off their rationalist philosophies from empirical breakthrough, Badiou and Meillassoux are said to relapse into a neo-Heideggerian distinction between “ontological” and “ontic,” with discoveries at the ontic level of beings having no impact on purely philosophical considerations. I would agree with Johnston that this is one of the inherent pitfalls of rationalist philosophy, and on this point he and I are weak correlationist brothers once more. Yet I must disagree with Johnston’s related claim that Meillassoux is inconsistent given that he supposedly “cherry-picks from the empirical realms of the experiential (seizing upon Hume’s problem of induction) and the experimental (extracting the arche-fossil from certain physical sciences and
also dabbling in speculations superimposed upon biology)" (102). Each of these examples is irrelevant for a different reason. First, Hume’s problem of induction is not “experiential” at all, since by definition it cannot be solved empirically. When Johnston speaks of “experience, the preponderance of which speaks in one loud voice against the truth of hyper-Chaos,” he tells us only that hyper-Chaos is highly improbable, though the relevance of probability is precisely what is under dispute by Meillassoux (102). Second, in no way does Meillassoux “extract” the arche-fossil from the sciences, as if he were trusting in carbon dating and radio astronomy to establish the truth of realism. The arche-fossil is not intended as a “proof” of any sort, but simply as the index of an aporetic conflict between correlationist agnosticism about a world outside thought and science’s literal commitment to that world. Meillassoux’s attempt proof of the thing-in-itself comes much later in the book than the pages on the arche-fossil and is far more circuitous than a direct appeal to science. Though I happen to think his proof of realism fails, it fails due to internal problems rather than through insufficient attention to empirical detail. And finally, Meillassoux’s attempt to invoke ex nihilo emergence in the realm of biology is in no way a “cherry-picking” from the findings of biology. Instead, it is a flat-out denial that the details of biology matter philosophically at all, much like his “lazy” avoidance of detail from neuroscience when considering the ontology of thought. While Johnston is right to note that Meillassoux’s rationalist ontology leaves little room for philosophical admiration of the neural sciences, he is wrong to claim that Meillassoux selectively transgresses this stricture and bases his philosophy on a handful of convenient scientific results. In fact, there is no cherry-picking of the sciences in Meillassoux at all, but simply occasional illustrative examples drawn from science. His philosophy is nothing if not consistently non-empirical.

Allow me to make one final comment here. Johnston complains that Meillassouxian hyper-Chaos would lead to absurdity in the practice of physics: “On the basis of Meillassoux’s philosophy, what would prevent someone from claiming that [a scientific revolution or paradigm shift] wasn’t a result of past physics having been wrong about the mind-independent material universe, but, instead, a consequence of a contingent change in the real patterns of the physical universe [...]” (100)? For example, how could we know that Einstein really falsified Newton’s theory of gravitation? Maybe the laws of nature actually changed in Einstein’s time. In some ways this is an interesting question, and may even present Meillassoux with the “awkward embarrassment” that Johnston claims (101). But I am not aware of Meillassoux ever claiming that sudden changes in the laws of nature could be verified. This is a purely epistemological issue. The fact that physics must presuppose a basically stable universe whose laws endure over time is no disproof of hyper-Chaos, and hence Johnston simply repeats the charge of “improbability” that he has directed against Meillassoux’s ontology all along.

JOHNSTON’S CORRELATIONISM

This finally brings us to the core of Johnston’s quarrel with Meillassoux. In our earlier discussion of Meillassoux’s Spectrum, I noted that all the subtle philosophical positions that one might adopt towards
the real world boil down to just a handful of basic permutations. One can take the Naïve Realist approach to science, saying that there is a world outside the mind and we can know it. Or one can take the Absolute Idealist approach to science (à la Berkeley) and say that there are no real physical things, but just patterns of phenomena in the mind, correlated with apparent regularity by God. The latter option generally seems too absurd to be adopted (Meillassoux does attempt a rational disproof of it, though I would agree with Johnston that it is not “ironclad”). So, does this leave us with no option other than naïve scientific realism?

Clearly not, since we also have the intermediate correlationist options: the weak and the strong. We have seen that Kant is a typical weak correlationist, holding that there are things-in-themselves that can be thought but not known. Meillassoux rejects this position. Its flaw, he holds, is the logical contradiction of claiming to think that which is outside thought. Its damaging consequence, he fears, is our present era of finitude, in which all knowledge of the absolute is foreclosed and an arbitrary relativism and fideism prevail. For Meillassoux, the way to escape correlationism is to regain the absolute. He does this by trying to radicalize strong correlationism’s uncertainty as to whether laws might be different into the absolute certainty of speculative materialism that laws might change suddenly without reason. And he does this by claiming that there is nothing “hidden” in the world, lying beyond the pale of the correlational circle of human and world. In turn, this allows him to make a priori rationalistic claims about the mathematizability of the primary qualities of things. Johnston objects both to the anti-scientific caprice of the ex nihilo emergence of life, thought, and justice, and to the rationalism that fetishizes mathematics and avoids the risky surprises of scientific empiricism. For my own part, I hold that Meillassoux’s denial of sufficient reason and mathematization of the absolute amounts to a form of full-blown idealism, since the supposed independence of the in-itself only amounts to the ability of things to outlast the lifespan of the human race, not to withdraw from accessibility to our knowledge (which is what the in-itself means for Kant). To this extent, Johnston and I agree.

But my own object-oriented approach sees a different problem with Kant. What is harmful in Kant is not the finitude of his position, which I take to be unavoidable. Instead of Meillassoux’s impossible attempt to radicalize strong correlationism, I argue that we must radicalize weak correlationism. How can we do this? Not by a hopeless attempt to eliminate its finitude, but by eliminating its fetishization of the human-world correlate. In other words, why confine finitude to the human inability to know the in-itself? Finitude is not a special problem pertaining to the knowledge of rational beings, but something that haunts all relations, including inanimate ones. Fire and cotton, or raindrops and roofs, do not make direct contact with each other any more than humans do with these entities. Just like human knowledge, causal relation per se can only lead to indirect, mediated, or vicarious contact between one entity and another. On this basis, finitude does not just close off dogmatic metaphysics of the old style, but opens up the possibility for a new brand of metaphysics that exits the purely human realm by giving a cosmological scope to Kant’s critical turn. Objects withdraw from relations, whether humans are part of the picture or not. This is my recommendation for how to escape the Kantian deadlock: through a Weird Realism as opposed to the human-centered German Idealism that haunts the positions of Badiou,
Meillasoux, and Žižek among others (including Johnston himself in his books, where it is Hegel rather than Hume who provides him with a model).  

If Meillasoux wants to radicalize strong correlationism and I want to radicalize the weak version, where does Johnston fit into this picture? It looks to me as though he has no wish to radicalize correlationism at all. Johnston is quite comfortable with the position of Hume, who is a weak correlationist every bit as much as Kant. Johnston’s long passage on this topic is worth quoting in full. Hume gives us a choice, he says, between:

one, a rational but unreasonable hyperbolic/extreme skepticism (including solipsism qua absolute idealism, with its irreputable refutations of “ naïve realism”); or, two, an irrational (as not decisively demonstrable by pure philosophical-logical-reason alone) but reasonable realist faith (i.e., a “belief” in Hume’s precise sense) that, as Hume himself insists, the mind is (naturally and instinctively) attuned to the world — albeit attuned in modes such that an attenuated skepticism equivalent to a non-dogmatic openness to the perpetual possibility of needing to revise one’s ideationally mediated knowledge of extra-ideational reality (in the form of conceptual structures of cause-and-effect patterns) ought to be embraced as eminently reasonable and realistic. (99)

In simpler terms, solipsism (or “extreme skepticism”) is irreputable but also unreasonable. Thus, we should adopt a milder form of skepticism that knows it can never be sure of how the world really is, but which is also “more likely” than the more extreme standpoint (99). Ockham’s Razor does not favor a world with nothing outside the given, but rather “the presumption that observed anomalies deviating from prior anticipations/expectations regarding cause-and-effect patterns appear as anomalous due to a deficit of past knowledge and not a surplus of anarchic being” (101). Although Meillasoux is not exactly a solipsist, it is easy to see how he might fit into the Humean schema of extreme vs. mild skepticism that Johnston proposes. His rejection of hidden grounds, coupled with his exclusive faith in logical deduction at the expense of messy experiment, are enough to place Meillasoux in the enemy camp for Johnston. His claims to absolute knowledge notwithstanding, Meillasoux remains radically skeptical about the causal depth of the world. Instead, he trusts only in the rational deduction of a relatively skeletal array of demonstrable ontological features, or “figures” as he calls them.

Throughout his article, Johnston shows admiration for the “existentialist” side of Badiou, for whom thinking is so often a matter of bets and wagers. Johnston sees a similar principle at work in Hume: “[P]hilosophically drawing upon the sciences [...] amounts to risks, to bets or gambles that lack any promises or guarantees of final correctness in a future that can and will retroactively pass judgment on these present wagers. But, as with Pascal’s wager, there’s no honest and true way to avoid these risks” (112). By contrast, Johnston holds that Meillasoux “risks nothing,” since his philosophy is “impervious to being delivered any scientifically backed death blows” (111). This is reminiscent of Popper’s critique of the
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unfalsifiability that characterizes pseudo-science. Johnston asks, in Popperian fashion: “What conceivable experiment might prove Meillassoux’s hyper-Chaos false?” The problem is that Johnston concedes the same point for his own position as well: “Although a materialist philosophy cannot be literally falsifiable as are Popperian sciences, it should be contestable qua receptive, responsive, and responsible vis-à-vis the sciences” (110). This statement is not as harmless as it seems. Johnston is not just giving the banal advice that philosophers should take science seriously, but is expressing his dismissive attitude towards all philosophical speculation untethered to experimental findings. Referring to pre-Kantian philosophers, but alluding to more than just pre-Kantian philosophers, Johnston dismisses all speculation about reality-in-itself as “no more worth taking philosophically seriously than silly squabbles between sci-fi writers about whose concocted fantasy-world is truer or somehow more ‘superior’ than the others; such quarrels are nothing more than vain comparisons between equally hallucinatory apples and oranges, again resembling the sad spectacle of a bunch of pulp fiction novelists bickering over the correctness-without-criteria of each others’ fabricated imaginings and illusions” (109-10).

A jolly critical romp! While the point would be well taken if it were merely a cautionary note about dogmatic attempts to gain direct access to things-in-themselves, Johnston seems to mean much more than this. What he means is that all a priori philosophical speculation is a waste of time. Philosophers should be comfortable within a mild skeptical framework and simply await the results of the sciences to awaken our wonder. Materialism must be a correlationism, because it displays the two chief features of correlationism: 1) an inability to gain risk-free access to the world in itself, and 2) an inability to speculate about anything beyond the bounds of human access to the world. Johnston makes no attempt to radicalize either of these features, because he is fully comfortable with both. In contrast with the efforts of speculative realism, Johnston is neither speculative nor a realist. He closes off speculation by slowing philosophy to the pace of experimental science, and closes off realism by replacing the always problematic real with a dogmatic, admittedly unfalsifiable demand that the real must be the material.


6. As is now well known, the inaugural speculative realism workshop was held at Goldsmiths College, University of London, and featured Ray Brassier, Iain Hamilton Grant, Meillassoux, and myself. A transcript of the event can be found in Ray Brassier, et al., “Speculative Realism,” *Collapse III* (2007), 306-449.


8. For a brief history of the speculative realism movement, see Harman, *Quentin Meillassoux: Philosophy in the Making*, 77-80.

9. See the final page of Peter Hallward, “Anything is Possible: A Reading of Quentin Meillassoux’s *After Finitude*,” in *The Speculative Turn: Continental Materialism and Realism*, 130-41. For an animated defense of Meillassoux against Hallward’s critique, see Nathan Brown, “The Speculative and the Specific: On Hallward and Meillassoux,” in the same volume, 142-63.

10. In recent years Hallward has come under fire for making similar objections to the insufficient tools for political liberation found in the philosophy of Gilles Deleuze. See Hallward, *Out of This World: Deleuze and the Philosophy of Creation* (London: Verso, 2006). For one example of the numerous counter-critiques of Hallward’s political reservations about Deleuze, see John Protevi’s review of *Our of this World* in *Notre Dame Philosophical Reviews* (August 3, 2007).

11. David Skrbina has done much work to rehabilitate panpsychism as a serious contem-


16. See the excerpts from Meillassoux’s *The Divine Inexistence* in the appendix to Harman, Quentin Meillassoux: *Philosophy in the Making*.

17. As I argued in my book on Meillassoux, this disavowal is also undercut elsewhere by Meillassoux’s assertion that there are laws of nature, which means that sufficient reason is already operative within any given set of natural laws. He simply holds that the laws of nature themselves can change for no reason. This leaves it unclear as to whether radical changes in the details of such laws would be events of the same order of magnitude as the emergence of life or thought as autonomous ontological spheres. For example, if nature were to change suddenly so that gravitational force would vary inversely as the cube rather than the square of the distance, would this be an ontological change of the same cataclysmic magnitude as the ex nihilo emergence of life and thought, or just a second-rate event circumscribed within the broader unchanging framework of material reality? If life were suddenly able to exist at the atomic level rather than that of organic compounds, would this event be just as ex nihilo as the appearance of the virtual God, or would it be merely a local mind-blowing event within the already established sphere of life? Meillassoux does not enlighten us here.


22. These excerpts can be found in Harman, Quentin Meillassoux: Philosophy in the Making, 175-238.


26. Anyone in doubt on this point need only consult Meillassoux’s ardently pro-Fichteian remarks in his lecture at the inaugural 2007 speculative realism workshop, found in Brassier et al., “Speculative Realism,” 408-35.

