

## BACK TO THE GREAT OUTDOORS: SPECULATIVE REALISM AS PHILOSOPHY OF SCIENCE

Arun Saldanha

**ABSTRACT:** This is an essay on Quentin Meillassoux' recent book *After Finitude: An Essay on the Necessity of Contingency*, placing it within recent discussions of the relationship between science, philosophy and the humanities. The book presents a strong critique of the linguistic turn in continental and analytic philosophy and argues for a retrieval of a realist notion of the power of reason. There are nonetheless a few remaining ontological problems identified towards the end of this review essay.

**KEYWORDS:** philosophy of science; speculative realism; the linguistic turn

Review essay on Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, translated by Ray Brassier. London, Continuum, 2008

### REASON VS. DOGMA ROUND 2

What can still be believed? What would be the form of such belief, and what its substance? Kant inaugurated philosophical modernity by fully locating the formal and substantial construction of belief fully within the powers of the human subject. His "critical" project was to ground reason entirely upon itself and thereby to break forever with both the skepticism of the British empiricists and the dogmatic tendency of metaphysics. While in empiricism reason lost itself in a maelstrom of impressions which could not stumble up to the coherence of an acting and thinking ego, in metaphysical systems such as Christian theology and ancient atomism reason was subordinated to entities like God, the Order of Being, and the cosmic Good. The discovery of a foundational feedback loop in self-legislating reason was what Kant himself called a "Copernican turn" in philosophy. Most radically, Kant placed the conditions for knowledge negatively within the purview of thought: central to his system was that the ultimate justification for reason's existence did not itself exist.

This was a vigorous call for rationality sounded right at the beginning of European imperial struggles and bourgeois democracy. Yet as philosophers as different as Foucault

(especially his interviews), Derrida (especially his later political work) and Badiou have tirelessly insisted, humanity is still troubled by powerful metaphysical systems. These systems sometimes “clash” (the almost self-fulfilling prophecy of rightwing intellectuals like Samuel Huntington), but more often collude and interpenetrate. Today’s global metaphysical scene encompasses a continuing faith in the invisible hand of the market and technology, after centuries of evidence against it; fundamentalist streaks in every institutional religion; reactionary fears of the scientific consensus on evolution, reproduction and climate change; the xenophobic exaltation of national identity as homogeneous and timeless; while on the anti-metaphysical side there is a cynical and mostly unquestioned form of positivism financed by forces bent on controlling and exploiting, not emancipating. Clearly Kant’s noble appeal to reason did not succeed in globalizing itself in the same measure as did the dogmas of Science, Profit, Nation and Law. The time seems right for a new rationalist attack on metaphysical dogma, one equally formidable and universalist as Kant’s, but one which does not repeat the mistakes which allowed for metaphysics to nonetheless flourish.

It is this enormous task that I see Quentin Meillassoux setting himself. Readers need not place Meillassoux in such overtly political context as I do, but one cannot help wonder how his post-Maoist mentor Badiou might appreciate the possibilities of this emerging ontological project. What is bound to become but a pillar in a larger system, Meillassoux’ first book *After Finitude: An Essay on the Necessity of Contingency* radicalizes the search for the principles of knowledge by returning to nothing less than the absolute, against what he sees as a generalized relativism in academia, which is proving itself defenseless in the face of the dogmatisms of today: “by destroying metaphysics, one has effectively rendered it impossible for a particular religion to use a pseudo-rational argumentation against every other religion. But in doing so—and this is the decisive point—one has inadvertently justified belief’s claim to be the *only* access to the absolute”.<sup>1</sup> By re-grounding reason not against but *in* the absolute, Meillassoux faces up to the challenge posed by today’s fundamentalisms and neoliberal nationalisms. He demonstrates that to *believe* in the radical openness of what can be is not merely to affirm the capacities of reason, like Kant supposed, but to affirm the way the cosmos is. Meillassoux is a realist above anything else. Belief is not an epistemological but an ontological problem, which requires a stringent demonstrative method, not an examination of how humans think, talk or write. If Kant brought the world to the scope of the human, Meillassoux wants to smash it open once again, toward what he will call the Great Outdoors.

## FRENCH PHILOSOPHY AND SCIENCE

There is a growing number of exciting efforts at overcoming the linguistic turn and representationalism in post-Saussurian continental philosophy and post-Wittgensteinian analytical philosophy. In continental philosophy, much inspiration has come from

1. Quentin Meillassoux, *Après la finitude: essai sur la nécessité de la contingence*, Paris, Seuil, 2006; Quentin Meillassoux, *After Finitude: Essay on the Necessity of Contingency*, trans. R. Brassier, London, Continuum, 2008, hereafter cited as *AF*.

Deleuze, a revival of Spinoza, and the more materialist tenets of phenomenology. In analytical philosophy of science, thorough engagements with evolutionary biology and cognitive science have been eroding the once-regal status of human consciousness and “our” capacity for language. In cultural theory too, as in the work of Brian Massumi and Manuel DeLanda, new concepts of emergence, affect and becoming are derived from science and pitted before, or underneath, the grand modern categories of Being, History and Consciousness. In science studies there are Bruno Latour, Isabel Stengers, and Donna Haraway. In feminist theory, there is the science-friendly work of Elizabeth Grosz, Dorothea Olkowski and Elizabeth Wilson. The popular science of Antonio Damasio, George Lakoff, Francisco Varela, and others have even turned public discourse against the idealism of Kant and Descartes.

So after the postmodern forays into the infinite sumptuousness of representation of the 1980s and 1990s, there seems to be a general impetus towards philosophical realism again. It is noteworthy that this anti-Kantian drive is fuelled by a newly found enthusiasm for exchanges between science and the humanities. What is lacking in most of this work, however, is a systematic philosophical *demonstration* in the old-fashioned sense of why exactly the ontological structure of representation cannot logically hold itself up. The antirepresentationalism tends to be subordinated to more local theoretical concerns such as politics, the entanglements of scientific practice, or the particularities of human embodiment. This is where the speculative critique of relativism of Meillassoux can be of considerable help, even if he himself does not engage the wide variety and profundity of these critiques of representation. The target that antirepresentationalism should contend with is despite what many think not Cartesian dualism, but the Kantian critique. More than merely describing what scientists do, more than a materialist revaluation of everyday life and a turn to “the body”, and before making any propositions regarding what should be done, speculative realism wants to re-inject the infinite and the abstract resolutely back into philosophical realism.

Speculative realism is like all realism closely allied to science, though it remains decidedly autonomous from it. While science has been considered quite systematically if dryly by the Anglo-American analytic tradition, in continental philosophy the worries of Heidegger, Sartre and Adorno about the alienating effects of quantification and planning on modernity drove most philosophers to literature and experience instead. Bachelard and Canguilhem, the most influential figures of French epistemology, showed deep respect for scientific reasoning, but only to follow its undercurrents in psychoanalytic and ideological terms. In their wake, Althusser tried to resuscitate the critical project of the sciences against bourgeois positivism, and Foucault’s archeology provided a new analytics of the unspoken historical conditions of scientific knowledge. Derrida’s deconstructive method recast science as a force of writing whose presuppositions refracted deep oppositions underpinning Western culture. Deleuze and Guattari are almost alone in retrieving science from the anti-metaphysical dustbin. Serres does comprehend and embrace what physics and biology tell us about the world, but amalgamates them a little too easily with literary, seemingly equivalent imaginations of matter. Latour, finally,

though he opens the theater of science for general enchantment, when it comes to building philosophical realism, has had the most pernicious effect of all.<sup>2</sup> In the end, Latour concludes that the materiality of scientific labour irrevocably contaminates the pursuit of truth, a naivité he is all too happy to exploit for sociology.

The physical realities that science presents are in continental philosophy (and *a fortiori* science studies) by and large understood ultimately *from the perspective of* history, power and meaning. Philosophy frames science, while science is not allowed to demand that philosophy redefine Being, Truth, Form, Substance, God, Man or other metaphysical fundamentals. Existentialism and poststructuralism have no doubt been crucial for a critique of science's positivist or totalitarian tendencies, but the result was that the ancient commitment of philosophy to eternal *truth* has been almost abandoned in the twentieth century. Except for the borrowing of certain scientific terms ("topology", "entropic", "singularity", "rhizome", "fractals", etc.) mainly for conceptualizing human society, few systematic reconstructions of ontology took place that actually respected the realistic force of these terms.

There had to be a backlash against this literary attitude towards mind-independent reality and the physical sciences, and it culminated in the infamous Sokal affair.<sup>3</sup> In 1996, quantum physicist Alan Sokal parodied French philosophy and its American reception in an article published in *Social Text*, then wrote a triumphant book about the hoax with fellow leftwing physicist Jean Bricmont, *Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science*.<sup>4</sup> While their political impatience with poststructuralism can be understood, Bricmont and Sokal's policing of which stylistic, metaphorical and conceptual exchanges are to take place between philosophy and science is petty. Moreover, it joins the rampant anti-intellectualism amongst the populist right. Realism will not be reconstituted through simple denigration.

The authors most misunderstood by Sokal and Bricmont and, ironically, least consistently defended in what came to be known pointedly as the "science wars" are Deleuze and Guattari. Deleuze's richly ontological philosophy and Guattari's activist flirtations with cognitive science, biosemiotics, chaos theory and chemistry are not only systematic and original, fitting nicely with the scientific turn towards complexity over the 1970s and 1980s.<sup>5</sup> As philosophers, Deleuze and Guattari also *go further* than science—a necessity severely misunderstood by Sokal and Bricmont—by revisiting the non-positivist ontologies of Bergson, Spinoza, and the atomists. In this vein it needs to be added that even the instigator of modern skepticism, Nietzsche, can be read as a friend not enemy of scientific truths, if a moody one.<sup>6</sup> In the end, however, we have to

2. Graham Harman, *Prince of Networks: Bruno Latour and Metaphysics*, Melbourne, re:press, 2009.

3. Alan Sokal, *Beyond the Hoax: Science, Philosophy and Culture*, Oxford, Oxford University Press, 2008.

4. Jean Bricmont and Alan Sokal, *Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science*, New York, Picador, 1999.

5. Manuel DeLanda, *Intensive Science and Virtual Philosophy*, London, Continuum, 2002; Simon Duffy (ed.) *Virtual Mathematics: The Logic of Difference*, Bolton, UK, Clinamen, 2006; Félix Guattari, *Chaosmosis: An Ethico-Aesthetic Paradigm*, trans. Julian Prefanis, Bloomington, IN, Indiana University Press, 1995 [1992].

6. Keith Ansell Pearson, *Viroid Life: Nietzsche and the Transhuman Condition*, London, Routledge, 1997.

admit that poststructuralism's flair for idiosyncratic style and its celebration of flux and uncertainty has never sat too well with the rigour and care that is central to scientific reasoning. This is why dialogue with both scientists and analytical philosophers of science has been so difficult. The Sokal affair lay bare a huge impasse in which the accused—Nietzsche, all French postwar philosophy, and all their avatars in Anglophone cultural studies and literary theory—were to prove they could do *more* with science than raid its terms for metaphor. The very relationship between continental philosophy and rational knowledge was threatened.

### RESTORING GALILEO

For those accustomed to equating recent French philosophy with postmodern skepticism and relativism, Meillassoux' book will arrive as a bomb. Going back to the Renaissance split between religion and science, he defends an anti-humanism in which not the pathos of literature but the pure rationalism of mathematics pushes truth steadily forward: Copernicus decentered the earth and the human species in the cosmos, while Galileo's "mathematization of the world bore within it the possibility of uncovering knowledge of a world more indifferent than ever to human existence" (*AF*, 116). Instead of awe for Creation and Order, this radical decentering should on Meillassoux' avowedly modernist reading proceed by rigorous and formal scrutiny. The great rationalist systems of Descartes, Spinoza and Leibniz consolidated various aspects of an early modern certitude about the possibility of truth, in which divinity is at the least an ambivalent presence.

But then came Kant. It is an immense irony that his self-proclaimed "Copernican Revolution" in philosophy was in fact a reactionary, anti-Copernican counterrevolution, at least according to Meillassoux. Instead of drawing philosophical conclusions from the bold astro-mathematical estrangement of the Copernican-Galilean event, Kant retreated into the safety of the terrestrial subject. As mentioned, the revolution Kant brought about in Western thought consisted in overcoming both Humean skepticism and the dogmatism in Christian theology and classical metaphysics.<sup>7</sup> For Kant, we can know objects not because there is some mysterious endowment in them that reveals their essences to us, but because our mind is structured in a certain way that allows for knowledge to accrue. After Kant, philosophy was to assume and explore the *correlation between* consciousness and the physical world, between what would henceforth be called "the subject" and "the object". This broad consensus Meillassoux calls correlationism: consciousness "always-already" brings to the encounter with the thing its own mental representations, which cannot be shaken off without dissolving consciousness itself. The thing in-itself (*Ding an sich*) was for Kant certainly thinkable, but only negatively, as the limit of the knowable and the sensible which, as Slavoj Žižek's work argues forcefully, constantly pulls the subject into being. Kant's critique of metaphysics was meant to con-

7. Quentin Meillassoux, 'Potentiality and virtuality', trans. Robin Mackay, in Robin Mackay with Damian Veal and Ray Brassier (eds.) *Collapse II: 'Speculative Realism'*, Oxford, Urbanomic, 2007, 55-82.

solidate the ground for modern scientific rationality as well as democratic morality, but this consolidation occurred via the analysis not of the real world but of the *a priori* ordering of the consciousness that is to inhabit it.

The conjunction “speculative realism” does not appear as such in Meillassoux’ book (he speaks of “speculative materialism” a couple of times), but there is good reason to adopt it with his translator Ray Brassier and others to describe his system.<sup>8</sup> Meillassoux himself uses the term “speculative” profusely, and it is clear throughout that his critique of correlationism is meant first and foremost to restore realist philosophy after the phenomenological, linguistic and epistemological developments in continental thought. He defines as speculative all thinking that claims to be able to access the absolute without the principle of sufficient reason, i.e. speculative thinking is anti-metaphysical (*AF*, page 34). Meillassoux thereby retrieves a pre-critical adventure of thought almost forgotten since World War II. Judging from the philosophical blogosphere he is not alone in feeling the need for a return to Grand Philosophy. Speculative realism has in less than a year become a veritable call to arms after Brassier invited him and two like-minded thinkers, Ian Hamilton Grant and Graham Harman, to discuss what the term could stand for.<sup>9</sup>

To the Anglophone world, Meillassoux is therefore already willy-nilly part of a circle of young philosophers reinventing realism while sidestepping the dogmatic pitfalls of the positivist, Marxist and utilitarian traditions. Though they will probably not declare allegiance to the new program, DeLanda, Miguel de Beistegui, Christopher Norris, Alberto Toscano and James Williams share at least some of the concerns.<sup>10</sup> In the intermingling wakes of Heidegger, Deleuze, Derrida, Kripke and Badiou, these men differ vastly in philosophical background and style, but they agree that a renewal of realism in continental philosophy is overdue. As Harman says, the discovery of a new realism is “about the strangeness in reality that is not projected onto reality by us. It is already

8. Ray Brassier, ‘The enigma of realism: on Quentin Meillassoux’ *After Finitude*, in Robin Mackay with Damian Veal and Ray Brassier (eds.) *Collapse II: ‘Speculative Realism’*. Oxford, Urbanomic, 2007, 15-54; Robert S. Lehman, ‘Toward a speculative realism’, *Theory and Event*, 2008, 11(1), online.

9. Ray Brassier, Iain Hamilton Grant, Graham Harman and Quentin Meillassoux, ‘Speculative realism’, in Robin Mackay (ed.) *Collapse III: ‘Unknown Deleuze’*, Oxford, Urbanomic, 2007, 307-450.

10. Miguel de Bestegui *Truth and Genesis: Philosophy as Differential Ontology*, Bloomington, IN, Indiana University Press, 2004; Iain Hamilton Grant, *Philosophies of Nature After Schelling*, London, Continuum, 2006; Graham Harman, *Tool-Being: Heidegger and the Metaphysics of Objects*, Chicago, Open Court, 2002; *Guerrilla Metaphysics: Phenomenology and the Carpentry of Things*, Chicago, Open Court, 2005; ‘Quentin Meillassoux: a new French philosopher’, *Philosophy Today*, April 2007, 104-117; and *Prince of Networks*; Christopher Norris, *Philosophy of Language and the Challenge to Scientific Realism*, London, Routledge, 2003; *On Truth and Meaning: Language, Logic and the Grounds of Belief*, London, Continuum, 2006; and *Against Relativism: Philosophy of Science, Deconstruction, and Critical Theory*, Oxford, Blackwell, 2007; Alberto Toscano, *The Theatre of Production: Philosophy and Individuation Between Kant and Deleuze*, Basingstoke, UK, Palgrave Macmillan, 2006; James Williams, *Gilles Deleuze’s Difference and Repetition: A Critical Introduction and Guide*, Edinburgh, Edinburgh University Press, 2002; *Encounters and Influences: The Transversal Thought of Gilles Deleuze*, Manchester, UK, Clinamen, 2005; *Gilles Deleuze’s Logic of Sense: A Critical Introduction and Guide*, Edinburgh, Edinburgh University Press, 2008.

there by dint of being real. And so it's a kind of realism without common sense." <sup>11</sup> The recovery of philosophy's original Galilean relationship to the physical and mathematical sciences is especially urgent, after the linguistic turn, the fad of postmodernism, and the ensuing science wars have put such great stress on this relationship. At the very least, then, speculative realism is not just good news for science, but a possible platform for new ecumenical experiments across the debilitating fissures between continental and analytic philosophy.

### ABSOLUTE CONTINGENCY

Like his mentor Badiou, Meillassoux detects in all recent philosophy a false modesty. On the one hand, philosophy claims agnosticism when it comes to scientific *truth*, leaving the matter for scientists to decide. But this modesty is false, because on the other hand, and regardless of its playful style, philosophy claims to be able to unearth a structure or meaning *deeper* than that of scientific findings. Meillassoux detects this false modesty most clearly when it comes to what he calls "ancestral" statements about the state of the earth and universe before there were humans. If science proves that the Earth is 4.56 billion years old, philosophy is according to Meillassoux likely to understand this fact not as a truth with enormous ontological and ethical implications, but as a statement binding a language-community (Wittgenstein), as part of the thrownness of existence (Heidegger), as enabling the power of a neo-obscurantist episteme of earth scientists (Foucault), etc. Meillassoux claims philosophers thereby loose access to the Great Outdoors, *viz.* space-time absolutely indifferent to humanity and even to animal life. It seems that insofar as it is modern, philosophy quibbles about the *ways in which* humans construct their discourse about the great outdoors, but has firmly decided it itself cannot ever venture Outside.

Meillassoux lays the blame for this dead-end epistemology squarely with Kant, who, as explained, heroically but in hindsight entirely wrongly posited the physical world as always just beyond what humans can grasp. Kantian philosophy, the first and weaker version of correlationism, is content to think but never know the thing as it "really" is, untouched by human perception. In contrast to Kant, what Meillassoux calls "strong" correlationism in someone like Wittgenstein or Derrida goes even further in denouncing metaphysics, and does not even allow for the thinkability of an in-itself. The horizon of philosophical debate then becomes meaning, statements, and the history of the discipline of philosophy, even if—or especially if—nonhuman realms such atoms, infinity, unicorns and gods are indexed therein. A profound "vicious circle" (*AF*, page 5) has thereby been created in which an essentially anti-realist philosophy continues reaffirming itself. For Kant the production of meaning intrinsically strives to encompass all of humanity, but this is not truly an infinite project, conditioned as it is in every step by external limitations. As conceived by Heidegger, the finitude of human life or being-toward-death is inescapable, corresponding to the finitude (formalisable particularity)

11. Brassier et al., 'Speculative realism', 367.

of human thought as theorized by Kant. This post-Kantian wallowing in finitude and relativity is what Meillassoux' book seeks to escape.

It is true that some in the phenomenological tradition, especially Levinas, have invoked a kind of infinity that is in some senses primary, a nonhuman or divine background that frames subjectivity. But the "piety" Meillassoux finds in such quasi-theological conceptions of the Infinite and Absolutely Other is a paradoxical return to dogmatism—paradoxical because it ultimately descends from Kant's initial project of denouncing dogma (*AF*, page 46). This time the dogmatism lies in refusing thought access to a reality which would guarantee its solidity. These declarations of constitutive unknowability and the finiteness of all human knowing are complicit with today's religious reactions against the European Enlightenment. Being "against finitude" is formulating and exercising a laic kind of infinity with nothing mysterious about it. The absoluteness of such a program is fully immanent, deriving from the rigour and economy of demonstration, not from on high or from deep within.

If in Kant's critiques there was still talk of some moral and logical absolutes, phenomenology, analytic philosophy and poststructuralism by and large went a far more radical route by seeking to abolish, as mentioned, even the thinkability of the absolute. These post-Kantian discourses proclaim that nothing is certain or absolute, everything is contingent. Meillassoux now observes that what is not relativized in these discourses is the correlation itself between contingency and discourse. To the post-Kantians, everything is contingent because everything *appears as* contingent, because consciousness (or language) always slides off the slippery surface of the real. One explicit version of this notion of contingency can be found in Richard Rorty, who follows the American pragmatist tradition in arguing that the end of metaphysics and the end of necessity are the beginning of the plurality of liberal discourse (compare the pluralism of Laclau and Mouffe). Meillassoux disagrees fundamentally with this relativist notion of contingency, and he does so precisely *by absolutizing* contingency:

imagine an extra-terrestrial which was Rortian—what would he say? He would say the same as the terrestrial Rortian, he would say, 'Maybe all discourses are contingent, maybe there could be other possible discourses, etc.' So contingency is a common property of all relativisms of all times, on all planets. That's why I made contingency the real ground, the universal and eternal ground, of every relativism in the universe—I'm sure of that.<sup>12</sup>

In other words, contingency for Meillassoux does not pertain to knowledge, to an epoch, or a particular kind of conscious life, as it does for the relativist and pluralist. Contingency is absolutely necessary, the starting point for all ontology regardless of what it means politically or ethically.

Now, how can contingency be thought as absolutely necessary? If it is a universal law—and the only universal law—that nothing, not even laws, are necessary, how does Meillassoux not tumble into monumental tautology?

---

<sup>12</sup>. *Ibid.*, 330.

## THE PRINCIPLE OF UNREASON

To achieve a return to the absolute without tautology and without abandoning Kant's commendable secularization of philosophy, Meillassoux has to both historicize correlationism as a misstep in the trajectory of philosophy and turn the critical impetus of correlationist reasoning against itself. The following paragraph presents his argument in a nutshell:

Leibniz founded metaphysical rationality upon two principles whose scope was considered to be absolute: the principle of non-contradiction and the principle of sufficient reason. Hegel saw that the absolutization of the principle of sufficient reason (which marked the culmination of the belief in the necessity of what is) required the devaluation of the principle of non-contradiction. Strong (Wittgensteinian-Heideggerian) correlationism insisted upon de-absolutizing both the principle of reason and the principle of non-contradiction. But the principle of unreason teaches us that *it is because the principle of reason is absolutely false that the principle of non-contradiction is absolutely true.* (AF, page 71)

The paragraph is typical of the book's density and I can only unpack the minimum of a multifaceted argument here. Because of its meticulousness and breadth, Meillassoux's project can be recast in many ways. One way to appreciate it is as an anti-phenomenological answer to Leibniz's famous retrieval of the ancient philosophical question "why is there something rather than nothing?"<sup>13</sup> Heidegger's phenomenology analyzed this question through the concept of *facticity*. According to Meillassoux (AF, chapter 3), facticity is fundamental to correlationist philosophy and it is the precise place where he will undertake its demolition from within. As he explains Heidegger's concept, "What I experience with facticity is not an objective reality, but rather the unsurpassable limits of objectivity confronted with the fact *that there is a world*; a world that is describable and perceptible, and structured by determinate invariants. It is the sheer fact of the world's logicity, of its givenness in a representation, which evades the structures of logical and representational reason" (AF, 40). If facts are mere objects for consciousness that are stipulated, accumulated and disputed, facticity is the "foundational fact" of being-in-the-world that humans partake in, so that they are able to inhabit and study a world at all.

For Heidegger, as for everyone after Kant, this facticity—this automatic correlation between humans and the way Being is given with/to them—amounts to the in-itself lying forever out of the reach of reason, in a way reintroducing the trope of transcendence. Meillassoux proposes instead "*to put back into the thing itself what we mistakenly took to be an incapacity of thought*" (AF, page 53). In a startling twist, Meillassoux proposes that facticity reveals not the deficiency of human reason, but the absolute unreasonableness of the universe. Such rationalism holds that nothing has a reason to exist and therefore also goes against Leibniz's belief that the world's rationality is fully given, if only to God.

---

<sup>13</sup> Leszek Kolakowski, *Why Is There Something Rather Than Nothing?* 23 *Questions from Great Philosophers*, New York, Basic Books, 2007.

To demonstrate this “principle of unreason” Meillassoux needs to revisit the question of contradiction. Aristotle’s principle of non-contradiction requires that if something exists, it cannot contain a contradiction (e.g. the sun cannot both orbit the earth and be the center of the solar system). Leibniz’ Principle of Sufficient Reason states that insofar as it is divinely given, thought can theoretically uncover the chain of causes that led to the existence of any thing, to it being *this* and not something else. This is why scientific and mathematical truths are for Leibniz eternally true and absolutely necessary.

Meillassoux’ system retains the principle of non-contradiction (see below) but rejects the principle of reason, claiming he can “think an absolute necessity without thinking that anything *is* absolutely necessary” (*AF*, 34). Neither God, nor Life, Consciousness, Being are necessary as cause or chain of causes. Not even Becoming is necessary, since “[t]o affirm the metaphysical primacy of becoming is to claim that it is impossible for things not to change; impossible for things to stay the same; and ergo to claim that it is necessary for things to keep changing,” as Brassier explains.<sup>14</sup> Since for Meillassoux the laws of physics are contingent (here some physicists would actually agree), the only eternal truth is that everything *can* be otherwise, and at each moment (*AF*, 91-92). Hume said that it was out of human habit that we infer the billiard ball will knock against the other; now Meillassoux asserts it pertains to the reality of the billiard balls *themselves* that they might first melt, fuse, or hatch. Far from radicalizing skepticism, this demands we absolutize the power of reason, by putting it to the final test: can causality be conceived not just in-itself, but in-itself and eternally contingent?

As realist and rationalist, Meillassoux needs to demonstrate that the inherent unreason of the world does not entail absurdity. If biophysical laws are contingent why don’t I ever turn into an eggplant? It is quite possible to grant that all the laws pertaining to life and matter are contingent upon an unimaginably singular history of the universe since the Big Bang, and may not exist in the same way in other possible universes. Still, most physicists and biologists would call the event of billiard balls hatching or me turning into an eggplant immensely *improbable* as pitched against the observed and calculated regularities of the world. As Meillassoux wants to attain *absolute* contingency and not merely contingency according to some statistical law, this probabilistic or “aleatory” argument does not satisfy him (*AF*, pages 94-99). Following the footsteps of Badiou he draws on Cantor’s mathematical theory of transfinities: since there is no “largest” infinity, there is also no totality of possibilities that the event of me turning into an eggplant could select itself in (*AF*, 103-107).<sup>15</sup> Hence a sharp distinction between chance, which is calculable, and contingency, which is not, because it pertains even to the laws that preside over chance.<sup>16</sup>

The argument is extreme because it flies in the face of pretty much all of applied mathematics. Meillassoux holds that post-Cantorian set theory prohibits even the conception of probability, as “aleatory reasoning—which is to say, the very idea of chance

14. Ray Brassier, *Nihil Unbound: Enlightenment and Extinction*. London, Palgrave Macmillan, 2007, 68.

15. Alain Badiou, *Being and Event*, trans. Oliver Feltham, London, Continuum, 2005 [1988].

16. Meillassoux, ‘Potentiality and virtuality’, 63 ff.

insofar as the latter is subject to a calculus of frequency—presupposes the notion of numerical totality”, and since the latter does not exist, neither can probability (*AF*, 103). The celebrated Epicurean tradition and its echoes in the theory of the dice-throw in Nietzsche and Deleuze are therefore of limited use for Meillassoux: “it is clear that the *clinamen*, the tiny aleatory deviation in the trajectory of atoms, presupposes the immutability of physical laws [...] [none of which] can ever be modified by the *clinamen* itself, since they provide the conditions of its effectuation” (*AF*, 99). For Meillassoux’ ultra-pure version of materialism, emergence is creation out of the void without the need of any quasi-spiritual *clinamen*.<sup>17</sup> The universe can therefore be entirely different *every instant*. This ontology is as far from common sense as it gets, but its claim to realism then becomes as puzzling as it is fascinating.

### AGAINST DIALECTICS

If the linguistic turn, empiricism and phenomenology are some of Meillassoux’ main philosophical targets, what will be an even more contentious one is the dialectic. At first sight Hegel would seem a speculative, anti-Kantian ally. In Hegel’s all-encompassing system the in-itself, the object, is both thinkable and knowable, since the subject already partakes in the essence of the object by virtue of the very relationality that brought them together. The object is for Hegel not passively “out there”, but a quasi-subject with its own intrinsic (sufficient) rationality. The point of disagreement between Hegel and Meillassoux is contradiction. To obtain a philosophical system of endless becoming and relating, Hegel sacrificed the Aristotelian principle of non-contradiction, so that anything *objectively* contains its dialectical opposite which makes it develop further, from inside as it were. Contradiction’s diffusion across all beings immediately turns Being into Becoming. And objective, real contradiction was the principle that made from Hegelianism a radical tradition, from Marx to Mao to Marcuse.

For Meillassoux, however, the concept of contradiction entails a form of necessity which he will not allow.<sup>18</sup> For if there were an entity that was contradictory, it would have to give up absolute contingency, being “tied” to its non-being or its opposite and hampered in its development by this link (here Deleuze would concur). More abstractly, if non-existence and otherness are already attributes of the contradictory entity (it is and it is also not; it is its own other), it cannot *really* move between what it is and something else: “a contradictory entity could never become other than it is now, for it is already ‘other than itself’ as it exists now,” as Brassier clarifies about Meillassoux’ position. “Since it remains self-identical in being-other than itself, it cannot pass into or out of existence. Thus it exists necessarily, since it is impossible to conceive of it as not existing”.<sup>19</sup>

Interestingly, Meillassoux needs to radically inflate the concept of contradiction to an eternal and total contradictoriness in order to falsify its necessity. There is for him

17. Quentin Meillassoux, ‘Temps et surgissement ex nihilo’, talk at the École Normale Supérieure, 24 April 2006, available at <http://www.diffusion.ens.fr>.

18. See also Brassier et al., ‘Speculative realism’, 330-31.

19. Brassier, *Nihil Unbound*, 70.

no degree or particular quality of otherness that the contradictory entity could bargain for: “As contradictory, this entity is always-already *whatever* it is not” (AF, 70, emphasis added). But such conflation may not be required for a critique of Hegel. If something is contradictory, it has to contain at least a minimum of negativity singular to itself. Rather like dark matter, even this tiny bit of negativity makes the contradictory entity unsustainable. In forcing the entity to fuse being and non-being into ostensible contradictoriness, such minimal negativity would have to restlessly traverse and become coextensive with the entire entity, making the latter inexistent. This existence-inexistence can certainly be thought and embraced, as is done by the likes of Derrida and Nancy, but it cannot be logically demonstrated. Negativity may therefore be more profoundly erroneous a concept than Meillassoux allows for.

The harsh lesson Meillassoux draws (harsh for the dialectical tradition) is that contradiction makes reality totally static instead of dynamic. Hegel confuses temporal succession with spatial coexistence: “real contradiction can in no way be identified with the thesis of universal becoming, for in becoming, things must be this, *then* other than this; they are, *then* they are not. This does not involve *any* contradiction, since the entity is never simultaneously this and its opposite, existent and non-existent” (AF, 70). In Hegel, Becoming is the only “something” that has no outside, that is absolutely unlimited, not linked to something else, and is in effect God. Interestingly, though Deleuze’s project is a radical attempt at evading Hegel, he similarly conceives Becoming in crypto-theological terms.<sup>20</sup> “The Absolute” is as necessary for Hegel’s concrete contradictions and processes to take place as inorganic “Life” is for differentiation in Deleuze.<sup>21</sup> To avoid any such metaphysical necessity, both dialectics and vitalism are excised in *After Finitude* with the ruthlessness of the principle of unreason: “Contingency is such that anything might happen, even nothing at all” (AF, 63). Not even Becoming is necessary. Furthermore, after Cantor’s proof of a hierarchy of infinities without an upper limit, there can be no Absolute-Oneness or Plane of Immanence encompassing and inflaming everything at once.

## THE TRANSCENDENTAL METHOD

It is to the great credit of Kant and Descartes that they are methodologically explicit. The sheer force of assuming a radically disembodied subject is for Descartes what propels his system. Every system must encompass such methodological decisions, even if unstated and unjustified. Meillassoux’ is pretty much alone in continental philosophy in returning to logical demonstration as philosophical style. As he says: “I try to demonstrate that contingency has properties, fixed properties. And why do I have to demonstrate it? Because contingency is necessary, and a discourse about something neces-

20. Peter Hallward, *Out Of This World: Deleuze and the Philosophy of Creation*, London, Verso, 2006.

21. For nevertheless sympathetic reconstructions of Deleuzian ontology see Quentin Meillassoux, “Deuil à venir, dieu à venir”, *Critique. Revue générale des publications françaises et étrangères*, 2006, 62(704-705):105-115; and ‘Subtraction and contraction: Deleuze’s remarks on *Matter and Memory*’, trans. Robert Mackay, in Robert Mackay (ed.) *Collapse III: ‘Unknown Deleuze’*, Oxford, Urbanomic, 63-107.

sary must be a demonstration”.<sup>22</sup> Like the decision not to use Platonic dialogue, formal logic, textual commentary or poetry, many of Meillassoux’ methodological decisions are either self-evident or meticulously spelled out. One that he does not justify, however, is his decision to reverse the Kantian empirical/transcendental hierarchy, and this may invite refutation from followers of the famous transcendental method.

Meillassoux wants to break sharply with the transcendental method insofar as it claims to reveal the absolute conditions for subjectivity without any fundamental consideration of the emergence of the conditions for the taking place of “the transcendental” on this planet. The latter is in the end an empirical question, whereas Kant’s transcendental method concerns the supra- or pre-empirical realm, and inquires philosophically, not scientifically, what the ultimate conditions need to be for any perception and cognition to happen. Transcendental conditions are not bound by space or time; on the contrary, space and time are given a priori *to* and *in* thought. Kant would say that Meillassoux’ philosophical appeal to ancestrality confuses the inquiry into the transcendental subject—how does thinking relate to the faculties, what is judgment, what is inborn, etc. *in general*—with the empirical fact that humans are bodies on earth where life has existed some 3.5 billion years. Conceiving the transcendental subject for Kant fundamentally should not and cannot be a question of studying and generalizing from concrete bodies, their evolution, location, and perishability. This does not mean that the subject is *transcendent*, eternal and nonlocalisable like God or angels; it is per definition finite by virtue of its conditionedness. But this conditionedness itself cannot be dated and has to be assumed prior to any inquiry into consciousness, human or otherwise.

Meillassoux retorts with a familiar materialist argument. He follows the Kantian critique up to a point: the transcendental subject, insofar as it is a subject, has to occupy some transcendental *place* in relation to its conditions and environment.

The subject is transcendental only insofar as it is positioned *in* the world, of which it can only ever discover a finite aspect, and which it can never recollect in its totality. [...] That the transcendental subject has *this* or that body is an empirical matter, but that *it has* [stronger still, *it is*] a body is a non-empirical condition of its taking place—the body, one could say, is the ‘retro-transcendental’ condition for the subject of knowledge.” (AF, 25)

Meillassoux asks whether this very finitude, the non-God’s-eye nature of subjectivity, still not requires explanation. Though Kant takes the first step of “finitizing” human consciousness, he does not take the next, which is to conceive this finiteness itself as finite, with a certain beginning and an end. If one accepts with Kantians and the phenomenological tradition that the incarnation of subjectivity necessitates a body in which it is housed, this in turn requires that matter has evolved over billions of years so that there are bodies in the first place. We saw that Meillassoux attacks empiricism on the grounds that it poses the problem of perception—how can causality be experienced—in the wrong way. Nonetheless, he does strongly side with the *empirical* evidence of “the

22. In Brassier et al, ‘Speculative realism’, 391.

arch-fossil” against Kant’s transcendental method.

No realist can have a major problem with this reproach of Kant, but the “Copernican revolution” in the discovery of the transcendental conditionality of philosophy may be a more massive contender than Meillassoux allows for. In a broad sense, the transcendental does not only name the locatedness or sheer possibility of thought, but a reflexive arrangement of thought by itself. To argue that this arrangement is erroneous because it denies ancestry is too one-sided and misses the methodological self-framing that any rational system requires. Deleuze’s “transcendental empiricism” for example succeeds in inquiring into the abstract conditions of thought before there are arche-fossils. He is thereby indebted to both the transcendental method of Kant, and to an empiricism of virtual relations without naive belief in reality’s transparency to thought, thereby circumventing Kant’s correlationist conclusions.<sup>23</sup> Deleuze’s ontology is realistic about the transcendental constitution of itself in a way that the system in *After Finitude* cannot be because the latter anchors itself explicitly only in the actually empirical and demonstrable.

To choose between the empirical or the transcendental is a decisive methodological starting-point for any philosopher, logically preceding regional problematics such as knowledge, spacetime, sensuousness, givenness, etc. The choice brings one into either the realist or the idealist camp. But could we then not consider Meillassoux’ decision for the mathematical-empirical over the transcendental as itself part of a transcendental gesture, i.e. as an assumption on how *all* thinking operates and ought to operate and not whimsically based on a mere rhetorical positionality that has to be justified logically, physiologically, or anthropologically? If “transcendental” names the decision to clear conceptual ground within existing philosophical discourse for claiming to access the absolute—either the absolutely human for Kant or the absolutely real for Meillassoux—then no ontology or metaphysics can escape some form of transcendental methodology. In short, the attack on Kant in *After Finitude* may have to be reconsidered in the light the question of whether the transcendental is necessarily a correlationist plane.

## THE MATTER OF MATHEMATICS

Meillassoux is perhaps the first secular philosopher since Hegel to call resolutely for a return to thinking the absolute. Contrary to Hegel and all metaphysics, however, “the absolute” for Meillassoux (with small a) is not a thing, realm, essence, process or goal, but can perhaps be best defined as method of thought in the Cartesian tradition. Meillassoux’ absolute is a strict adherence to the principle that “nothing can exist that cannot but exist” (*AF*, 66). If the necessity of contingency in the title of his book would seem to make all knowledge impossible, Meillassoux argues with Descartes that “*whatever is mathematically conceivable is absolutely possible*” (*AF*, 117). That is, mathematics is the only discourse that can securely lay bare the contingency of the world, and this irrespective

23. Levi R. Bryant, *Difference and Givenness: Deleuze’s Transcendental Empiricism and the Ontology of Immanence*, Evanston, IL, Northwestern University Press, 2008.

of what materiality it may pertain to or what intelligence enacts it. True thinking can gain access to the absolute, a reality without subject, but this does not mean that being is itself mathematical in a Pythagorean way. Meillassoux simply posits, like Descartes, that the consistency of thought is guaranteed by its mathematical and logical methods, which, however, derives from the power of reason, not from God.

There are some potential difficulties here. Like it does for Descartes, the assertion of the immediate communication between thought and reality begs the question as to not just what supports such communication but how thought gains the “right” at all to separate itself a priori from the real, which then becomes a

‘not-all’ because the thought that ‘everything is necessarily contingent’ is an ideality which exempts itself from the reality which it designates. But then not only does this very exemption become *necessary for* the intelligible ideality of the thought that ‘everything is necessarily contingent’, but the intelligibility of reality understood as the necessary existence of contingency becomes dependent upon the coherence of a thought whose exemption from reality is necessary in order for reality to be thought as necessarily contingent.<sup>24</sup>

Brassier finds similar logical conundrums in Badiou’s recourse to the dualist grounding of Cartesian mathematicism.<sup>25</sup> What the exact status is of the ideality of mathematical discourse within the purported materialism, respectively realism, in Badiou and Meillassoux is a complicated problem that both will no doubt be continually urged to explain.

The central “enigma” (Brassier) concerning the language of realism is for Meillassoux “mathematics’ ability to discourse about the great outdoors; to discourse about a past where both humanity and life are absent” (*AF*, 26). This appeal towards the mathematical comes abruptly after the refutation of a transcendental defense of Kantianism, and delivers a rectification of mathematical Cartesianism after Kant’s critique of it. Like in Badiou, the possibility, perhaps ironically even necessity, of an intrinsic affirmation of reality by mathematical discourse is simply posited. That mathematics *can* describe, predict, and formalize and is internally constricted by its self-generated rules is logically and empirically apparent. *Demonstrating* this ontological power of mathematics, on the other hand, is incumbent upon the realist who bases ontology upon it.

We have seen that Meillassoux’ anti-probabilistic solution to the Leibnizian problem of what is, is purely formal. His realism requires mathematics (not proof in symbolic form but the idea of mathematical discourse as such) strictly not for description of reality, but for thinking a realm *before* the discourse of existence. As Meillassoux says, “I don’t want to demonstrate that there is a necessary relation between mathematics and reality. My problem is a problem of *possibility*.”<sup>26</sup> The “realism” in statements such as  $2+2=4$  or  $F=ma$  is simply that addition, pairing, fourness, force, multiplication, mass, acceleration,

24. Brassier, *After Finitude*, 90, emphasis added.

25. *Ibid.*, 108-109.

26. Brassier et al., ‘Speculative realism’, 328.

etc. *can exist*: insofar as it declares itself “pure”, mathematics does not measure chance or quantity but posits singular contingency. Meillassoux will not say anything about how, why, and with which results. This makes his realism strangely anti-empirical and in fact reintroduces a Wittgensteinian modesty: “What is strange in my philosophy is that it’s an ontology that never speaks about what is but only about what can be. Never about what there is, because this I have no right to speak about”.<sup>27</sup> Admittedly, and against Wittgenstein, such modesty is just what allows for consistent speculation.

But can realism survive without the empirical, without experience? Can a philosopher say anything more about the real emergence of—and not simply the implications of—the arche-fossil? Meillassoux does not deny the (experience of the) existence of physical laws and processes, he only argues for their incalculable and bottomless contingency. If what he repeatedly calls the “manifest stability” of the world is based neither on laws nor on probability, it is a major weakness that Meillassoux cannot tell us *what* then ontologically explains it. He only appeals briefly and rather feebly to a “hyper-Chaos” (*AF*, 64). He also mentions the possibility, entirely logical within his schema, that laws change extremely rarely or slowly *vis à vis* our experience of them (*AF*, 106). Given the robustness of Anglo-American philosophy of science and mathematics, especially after complexity theory, there needs to be a fuller development of how this hyper-Chaos freezes into things. In practice, Cantor’s abstract proof of non-totality does somehow allow for calculus and statistics to describe and conceive the *thisness* of the world. The unfathomable rareness (or slowness) of me turning into an eggplant seems inexplicable without some notion of differential likelihood.

Meillassoux’ decision to enroll cosmology is refreshing but odd. It is not clear why ancestry should be what “nudges” speculative responsibility towards the in-itself. Why not particle decay, climate change, mitochondria, or artificial life? Why should it be the ultra-*longue durée* or the hominid past that confronts thought with its imprisonment in itself? As Brassier writes: “instances of spatiotemporal extremity are no different in kind from other banal instances of un-witnessed or un-perceived phenomena, such as the fact that we are never aware of everything going on inside our own bodies”.<sup>28</sup> In fact, privileging ancestry concedes to correlationism a certain kind of anthropo- and geocentric starting point for wonder. If Meillassoux relies too easily on the hyper-exotic to demonstrate mind-independent reality, to which intelligence, to which subject is this exotic, if not the ambitious (and male) French continental philosopher who has time to only dabble in science? Geophysics and mathematics no doubt yield great rhetorical power for antihumanism, but to accord them privilege brings in necessity through the backdoor. The in-itself, the great outdoors, is all around and within. As Harman’s brand of phenomenology understands well, there is a forever-exotic remainder that *all* perception and conception skirts around, whether of music, finance, or supernovae, and whether mathematisable or not.

Another fundamental problem with Meillassoux’ version of the “ancestral” impera-

27. *Ibid.*, 393

28. Brassier, *Nihil Unbound*, 54.

tive against Kantianism is that he equates science with quantitative and formal discourse. As Brassier notes, “There’s very little mathematical about what we know about brontosaurus”.<sup>29</sup> Paleontology, astronomy, geology are based on calibration and generalization. Present-day biologists have multifarious ideas about what “laws” are and what the utility of mathematics is in naming them. Most science cannot do without the induction, translation and aleatory reasoning that are so austere denied by Meillassoux. He insistently collapses the logical-positivist distinction between formal/theoretical and empirical/experimental science, so that the messy extra-mathematical work of scientists sinks to the bottom of philosophy’s attention. Philosophy has a right to formalize science for its own purposes, of course, but the question is what resources for thought are thereby lost. What was the Galilean event without the telescope? This is not to argue for Latourian bafflement about the role of technology in blurring the boundary between human and world, but for the significance for ontology of the intrinsic *excess* of reality over the mathematicizable and representable. Even more than in logical positivism, this excess remains irredeemably under-analyzed in Meillassoux’s system.

One such reality-excess over formal discourse is, as Foucault taught us, the power relations that knowledge practices always participate in, and perhaps especially those that aim at abstraction. The logical positivists knew better than most of today’s philosophers of science that scientists cannot avoid being embroiled in highly politicized social fields. In its effort at unifying knowledge and building international cooperation, logical positivists embraced social science for analyzing the inequalities they themselves were tacitly part of (hence their respect for Marx and Weber). The desire for mathematics and the denunciation of the social sciences that Meillassoux inherits from Badiou is certainly a striking rejoinder to cultural studies’ turn to scientific metaphor and the Bergsonian-Deleuzian vitalism we find flourishing today, but it inherently risks abstracting from physical and social reality, becoming quasi-esoteric at worst, reductive at best. If Meillassoux’s speculative system is to become a realist ontology of and for all the sciences, including those that expose power, the unconscious and social difference, its reliance on mathematical reductionism will have to give way to a rigorous appreciation of the *richness* of contemporary scientific knowledge, particularly perhaps of biology. Fortunately the general aims of the system are more than worthy enough to guide such elaboration.

## CONCLUSION

*After Finitude: An Essay on the Necessity of Contingency* is a finely crafted argument and a joy to read. Written in quasi-dialogic form and translated capably by Ray Brassier this book already invites interlocution in the very best tradition of philosophy. For as Meillassoux writes courageously, “Far from seeing in criticism a threat to its own consistency, the examination of the determinate conditions for absolute unreason should strive to multiply objections, the better to reinforce the binding texture of its argumentative fabric” (*AF*,

29. Brassier et al., ‘Speculative realism’, 332.

77). Philosophy's ridiculous specialization has brought the need for such ambitiousness to breaking point. If according to Badiou's definition an "event" is the invention of a new way of formalizing a particular discursive practice, Meillassoux' assertive recuperation of Cartesian and logical-positivist dryness is going to turn out to be another stylistic event in continental philosophy. Where Badiou re-introduced mathematical logic and Platonism into the heart of post-Heideggerian ontological discourse, Meillassoux does with step-by-step ancient argumentation what has for many decades not been possible: write reality *itself*.<sup>30</sup> Concentrating on speculative realism's relevance to anti-epistemological philosophy of science, as was done in this review, is not at all to suggest the new realist doctrine is to be limited to this application. True to the speculative motive, Meillassoux himself has since *After Finitude* been teaching and writing on quasi-theological matters, arguing that a consistently atheistic ontology should accept the possibility that though dead (as Nietzsche declared), God could in the future exist again.<sup>31</sup> This work is to soon appear in a second monograph. In the mean time, the reinvigorating force of the first book will be spreading through Anglophone philosophy.

Assistant Professor  
Department of Geography  
University of Minnesota  
414 Social Sciences  
267—19<sup>th</sup> Avenue South  
Minneapolis MN 55455  
United States  
+ 1 612 625 9660  
saldanha@umn.edu

---

30. For Meillassoux' relationship to Badiou see 'La décision et l'indécidable dans *L'Être et l'événement I et II*, 24 November 2006, available at <http://www.diffusion.ens.fr>; and 'Histoire et événement chez Alain Badiou', paper in the seminar 'Marx au XXI<sup>e</sup> siècle: l'esprit et la lettre', Paris, 2 February 2008, available at <http://semimarx.free.fr>.

31. Quentin Meillassoux, 'Spectral dilemma', trans. Robin Mackay, in Robert Mackay and Damian Veal, eds. *Collapse IV: Concept-Horror*. Oxford, Urbanomic, 261-276.