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The Poverty of Philosophy: Realism and Post-Fordism

Alexander R. Galloway

This essay begins from another. In a recent examination of the ideological conceits of current conceptions of the brain, Catherine Malabou asks: “*What should we do so that consciousness of the brain does not purely and simply coincide with the spirit of capitalism?*”¹

Such is the conundrum, in its essence, that I want to explore. While Malabou’s query is chiefly about the brain, it resonates far and wide because it goes straight to what is wrong with some philosophical thinking appearing these days. Why, within the current renaissance of research in continental philosophy, is there a coincidence between the structure of ontological systems and the structure of the most highly evolved technologies of post-Fordist capitalism? I am speaking, on the one hand, of computer networks in general and object-oriented computer languages (such as Java or C++) in particular and, on the other hand, of certain realist philosophers such as Bruno Latour, but also more pointedly Quentin Meillassoux, Graham Harman, and their associated school known as speculative realism. Why do these philosophers, when holding up a mirror to nature, see the mode of production reflected back at them? Why, in short, is there a coincidence between today’s ontologies and the software of big business?

This essay was given as a lecture in the literature program at Duke University on 27 April 2011. I appreciate the feedback I received there, particularly from Katherine Hayles, Barbara Herrnstein Smith, and Michael Hardt. David Golumbia also read the essay and gave important feedback.

1. Catherine Malabou, *What Should We Do with Our Brain?* trans. Sebastian Rand (New York, 2009), p. 12.

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Yet such a coincidence has yet to be demonstrated, and certainly it will be my burden to show this congruity. Nevertheless if it can be demonstrated that such a congruity exists, two further questions follow, one concerning the validity of the theoretical writing at hand and the other concerning its political utility. (1) If recent realist philosophy mimics the infrastructure of contemporary capitalism, should we not show it the door based on this fact alone, the assumption being that any mere repackaging of contemporary ideology is, by definition, antiscientific and therefore suspect on epistemological grounds? And (2) even if one overlooks the epistemological shortcomings, should we not critique it on purely political grounds, the argument being that any philosophical project that seeks to ventriloquize the current industrial arrangement is, for this very reason, politically retrograde?

Such questions open the flood gates for a second wave of inquiries, subtending the first ones. These include questions concerning the nature of critical thought. They include an analysis of the old distinctions between object and thing, object and word, object and idea. They suggest that we must return to the classical debate between realism and materialism. Phenomenology will also have a role to play, as such questions must necessarily invoke the ghost of that dusty profession. Perhaps in the end we will be allowed to rediscover a special kind of materialism, one that seeks the historical facts of things such as they are, all the while attentive to the ethical gravity of presence in the world and the kind of attention that ought to be paid to it.

1. Badiou and Java

Before addressing these provocations directly, and in order to feel the full power of Malabou's challenge, one must first step backward and investigate the nature of the contemporary world and the kind of philosophical research being performed within it. So what kind of discourse is at play here, what is the spirit of contemporary capitalism, and how might the two be correlated?

Alain Badiou, for one, has had a profound influence within contemporary continental philosophy, particularly over the last decade or so as his

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works have appeared in English. He has mentored and influenced a number of those involved in speculative realism, including Meillassoux. Badiou's "return to truth," while not identical to Meillassoux's return to the real, is certainly cut from the same cloth, with both figures unapologetically pursuing the absolute while abandoning the social constructivism of postmodernity. In Badiou's work, I have discovered a parallel between set theory and the design of certain computer languages. His work shares much more with software and algorithmic systems than he might realize. An uncanny homology exists between key concepts in Badiou's ontology, influenced directly by set theory, and key concepts in the design of object-oriented computer languages. Indeed as computer historians attest, object-oriented computer languages were originally designed using principles gleaned from systems theory and set theory.² This is not unimportant, given the fact that object-oriented computer languages inhabit an important niche in today's global industrial infrastructure: as software they control the new robotic automobile plants, fluidly synchronize corporate headquarters with call centers in other countries, and allow companies like Google and Facebook to process millions of requests efficiently. Is there a secret cybercapitalist core underpinning Badiou's *Being and Event*? Probably not. Is there a similarity between how Badiou and Java or C++ speak about the world? I think so, and I want to begin this essay by outlining such a homology.

Let us start with two key concepts in Badiou, *belonging* and *inclusion*, which he borrows from set theory. In the language of formal definition Badiou explains the two terms thus: "Set theory distinguishes two possible relations between multiples. There is the ordinary relation, *belonging* . . . which indicates that a multiple is counted as an element in the presentation of another multiple. But there is also the relation of *inclusion* . . . which indicates that a multiple is a sub-multiple of another multiple."³ Something labeled *x* belongs to a situation *y* if it is presented within that situation and is counted within it. By contrast, something *x* is included in something else *y* if all of the elements of *x* are also elements in *y*. Inclusion can thus be understood as a parent-child relationship, in which all the elements of the parent are represented in the child. Since the child can exceed what was present in the parent, the parent is referred to as the subset

2. See, for example, Bjørn Kirkerud, *Programming Language Semantics: Imperative and Object Oriented Languages* (Boston, 1997). David Golumbia also provides some historical background to object-oriented programming; see David Golumbia, *The Cultural Logic of Computation* (Cambridge, Mass., 2009), pp. 209–11.

3. Alain Badiou, *Being and Event*, trans. Oliver Feltham (London, 2005), p. 81; see also pp. 44, 501, and 511.

of the child (despite it having logical precedence before or above the child), in that its elements represent a subset (or, alternately, an identical set) of those existing in the child. Hence the subset is logically prior to the set when it is included in it.

Note that the language of presentation and representation given here is not coincidental. Badiou specifies that belonging is a matter of presentation, while inclusion is a matter of representation.⁴ Again: x is presented in y when it belongs there; x is represented in y when it is included there. The reason for this is that belonging is a question of how things appear within situations (that is, how they are presented within situations), while inclusion is a question of how parent entities replicate themselves as subsets within their own child entities (that is, how they are represented in their children).

These two basic concepts are the fuel for much of what Badiou has to say mathematically in *Being and Event*. Indeed they are the raw materials that define the power-set axiom, the concept of the state of the situation, the singleton and the law of forming-into-one, and ultimately Badiou's signature concepts of the event, fidelity, the generic, and forcing.

A close reading of *Being and Event* or *Logics of Worlds* is not the concern here. I wish instead to compare Badiou's two basic terms to a related set of concepts found in the specifications for Java, a popular object-oriented language developed as one of the first platform-independent programming languages. While one should acknowledge the many differences between the scores of object-oriented languages in use today such as Ruby, C++, Objective-C, or Lisp, for purposes of practical illustration I will allow Java to stand in for the object-oriented paradigm as a whole.

The Java specifications describe a number of important aspects of the language, two of which pertain to the present discussion. The first is *membership*. Object-oriented languages are organized around the concept of a *class* or an abstract description of a module of code, which can be instantiated into an actually existing class instance known as an *object*. Membership refers to the data structure that composes the object. An object's members can include variables, methods, and other declarations. The

4. "Once counted as one in a situation [that is, belonging], a multiple finds itself *presented* therein. If it is also counted as one by the metastructure [that is, inclusion], or state of the situation, then it is appropriate to say that it is *represented*" (ibid., p. 99). The combinatorial relationships between presentation and representation allow Badiou to posit a number of interesting scenarios: things that are presented but not represented, things that are both presented and represented, and so on.

members can be declared directly within the class, or they can come from members of a parent class for which the object is a child.⁵

Such parent-child relationships designate the second aspect of Java pertinent to the present discussion: *inheritance*. Through a process known as extension, classes can extend other classes, meaning they inherit all (or some) of the qualities of that class. In common parlance the class being inherited is called the parent class or superclass, and the class doing the inheriting is called the child or subclass.⁶ Thus consider the following hypothetical relationship of nested classes and superclasses: a class defined as red apple also could be defined as an extension of a superclass apple, inheriting all the qualities of the superclass, and the superclass itself could be defined as an extension of a still higher class, say piece of fruit, and thus both apple and red apple would inherit the qualities of piece of fruit, both being downstream from it.

The similarity between Badiou and Java is clear. What Badiou calls belonging, Java calls membership. And what Badiou calls inclusion, Java calls inheritance. When Badiou discusses how multiples can belong to another multiple, he is using the same logic used by a computer programmer who discusses how a member variable can be defined within the membership of a class. Alternately when Badiou discusses how a multiple can be a submultiple to another multiple, thereby including all the elements of the parent inside the child, he is using the same logic used by a computer programmer who discusses how a newly defined class can extend a preexisting class and in so doing inherit all (or some, depending on how the parent class is defined) of the member variables and methods of the preexisting class. In short the logics of belonging and inclusion that structure Badiou's ontology are identical to the logics of membership and inheritance that structure today's object-oriented computer languages.

As I have already hinted, the conclusions to be drawn from all of this are somewhat disconcerting. Such object-oriented computer languages are themselves the heart and soul of the information economy, which if it is not synonymous with today's mode of production is certainly intimately intertwined with it. Many of the most highly capitalized companies on the planet are software companies reliant on object-oriented infrastructures

5. See James Gosling et al., *The Java Language Specification* (New York, 2005); see in particular secs. 4.4, 8.1, and 8.2. Much more attention can and should be given to a critical theory of Java, not to mention computer languages in general. One valuable book that begins this conversation is Adrian Mackenzie, *Cutting Code: Software and Sociality* (New York, 2006), in particular chapter five, "Java: Practical Virtuality."

6. Note however a possible point of confusion: computer scientists call the parent class the *superclass* while Badiou calls the parent multiple the *subset*. Thus, while one discourse says *sub* and the other says *super*, they should be understood as equivalent.

(Google, Cisco Systems, IBM, Facebook); many of the richest individuals are moguls from the information technology sector (Michael Bloomberg's estimated worth is \$22 billion, Bill Gates, \$56 billion); almost every aspect of industry has today been restructured to accommodate the affordances and vicissitudes of software (algorithmic trading in finance, bioinformatics); and the vast majority of this software is written in object-oriented languages, be they C++, Ruby, or Java. Furthermore, object-oriented computer languages not only structure business but also influence the logic of identifying, capturing, and mediating bodies and objects more generally. Phil Agre's work is instrumental in this regard, particularly his analysis of the logic of capture and the various grammars of action articulated by bodies and objects within information networks.⁷ Thus it is not too much of a stretch to say that the contemporary mode of production has a very special relationship with object-oriented computer languages, just as one might have said fifty years ago that it has a special relationship with assembly line manufacturing or a hundred years ago with the steam engine. In short, Java and other languages are the tools par excellence of the contemporary postindustrial infrastructure. One should have no illusions about it.

A disconcerting conclusion to be sure, that a congruity exists between how Badiou talks about ontology and how capitalism structures its world of business objects.⁸ Granted, merely identifying a formal congruity is not damning in itself. There are any number of structures that "look like" other structures. And we must be vigilant not to fetishize form as some kind of divination—just as numerology fetishizes number. Nevertheless are we not obligated to interrogate such a congruity? Is such a mimetic relationship cause for concern? Meillassoux and others have recently mounted powerful critiques of correlationism, so why a blindness toward this more elemental correlation? Surely the correlation between Badiou and Java cannot be explained away as mere coincidence. *What should we do so that our understanding of the world does not purely and simply coincide with the spirit of capitalism?*

7. See Phil Agre, "Surveillance and Capture: Two Models of Privacy," in *The New Media Reader*, ed. Noah Wardrip-Fruin and Nick Montfort (Cambridge, 2003), pp. 737–60.

8. By opening the essay with a discussion of Badiou I am suggesting neither that he is a so-called speculative realist per se (he is not) nor suggesting that he falls prey to the same sorts of political pitfalls suffered by contemporary philosophical realism in general (he does not). Badiou's solution to the realist morass is to connect his ontology with an equally rigorous political theory.

2. The Return of Realism

In order to address these important questions I will expand the field of view and make some observations about philosophical realism.⁹ In this context, *realism* means quite simply that an external world exists independent of ourselves and our languages, thoughts, and beliefs—although it is often also taken to entail the less simple epistemological thesis that we have direct and verifiable access to knowledge about that external world. In the wake of Kantianism and subsequent to phenomenology and structuralism, realism had essentially gone extinct in the continental tradition, despite having healthy offshoots in Anglo-American analytic philosophy, especially philosophy of science. But things began to change around 2002. In that year Manuel De Landa published a book on Gilles Deleuze, *Intensive Science and Virtual Philosophy*, stating in no uncertain terms “I am a realist”; in the same year Harman published his first book, which proposed a realism around a so-called object-oriented philosophy.¹⁰

9. Some of the interest in realism was sparked by the philosophical movement known as speculative realism, a complex of authors developing ideas at an April 2007 conference at Goldsmiths College comprising Harman, Iain Hamilton Grant, Ray Brassier, and Meillassoux; see also issues of the journal *Collapse* devoted to the theme. See in particular all of *Collapse* 2 (Mar. 2007), as well as Ray Brassier et al., “Speculative Realism,” *Collapse* 3 (Nov. 2007): 307–449. Levi Bryant underscores that this movement, if it is such a thing, is itself internally diverse:

If, as Graham [Harman] argues, there is some unity among the Speculative Realists, this is not to be found among their shared positions but rather in what they are *against*. That is, the common thread linking the Speculative Realists is a dissatisfaction with correlationist and anti-realist paradigms of thought. In this respect, it wouldn't be inaccurate to claim that there are a number of “Speculative Realists” that don't refer to themselves as Speculative Realists. For example, Deleuze, under one reading, could be classified as a Speculative Realist. De Landa certainly fits the bill, as does Alfred North Whitehead. Harman argues that [Bruno] Latour fits the bill, and I would add [Isabelle] Stengers to this list as well. [Levi Bryant, “Object-Oriented Philosophy: What Is It Good For?” 5 Feb. 2009, bit.ly/5wxSS1]

10. See Manuel De Landa, *Intensive Science and Virtual Philosophy* (London, 2002), and Graham Harman, *Tool-Being: Heidegger and the Metaphysics of Objects* (Chicago, 2002). See also Lee Braver's assessment of continental philosophy's long rejection of realism in Lee Braver, *A Thing of This World: A History of Continental Anti-Realism* (Evanston, Ill., 2007), and Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, N.C., 2010).

Harman's interest in objects synchronizes with a more general interest in the humanities around objects and things. See in particular Daniel Miller's work on shopping and things, Bill Brown's work on the objects of consumer culture, Bruno Latour's interest in the autonomous agency of object networks, as well as two edited collections *Evocative Objects: Things We Think With*, ed. Sherry Turkle (Cambridge, Mass., 2007), and *The Object Reader*, ed. Fiona Candlin and Raiford Guins (New York, 2009).

A second, related movement has also emerged around the relative autonomy of the aesthetic realm. This is evidenced in Deleuze's aesthetic period during the 1980s, particularly his books on cinema and painting in which he explores the externalization of affect into the machinic processes of the world, or in Jacques Rancière's work on the aesthetic regime, which he characterizes through its relative autonomy. Compare also Slavoj Žižek's theory of the objectification of belief, which appears in a number of his books, as well as W. J. T. Mitchell,

Perhaps the most influential of the recent realist texts has been Meillassoux's book *After Finitude*, which advocates that one move beyond what Meillassoux calls correlationism and reconcile thought with the absolute. For Meillassoux correlationism means that knowledge of the world is always the result of a correlation between subject and object. "By 'correlation' we mean the idea according to which we only ever have access to the correlation between thinking and being, and never to either term considered apart from the other," Meillassoux writes.¹¹ Under the system of correlationism, subjectivity and objectivity are forever bound together. Thus, one might naturally put figures like Immanuel Kant in this camp with his highly mediated model of subject and object. Phenomenology is also a key entry in the history of correlationism, as well as much of the French philosophical movements of the 1960s and 1970s, obsessed as they were with the inability for man to move beyond the prison house of language. Postmodernism is considered to be a high water mark for correlationism, particularly the notion, often attributed rightly or wrongly to postmodern thinkers, that the subject is ultimately at the mercy of ideology and spectacle, behind which there exists no absolute truth or reality. For correlationism human subjectivity always has a crucial role to play; the real world doesn't exist, or if it does we cannot have direct access to it.

Meillassoux pits himself firmly against the long tradition of correlationism in continental philosophy. For Meillassoux the real world exists, and it can be known. He endorses a so-called Copernican revolution wherein the anthropocentrism of correlationism is displaced in favor of a system in which reality is at the center, and the human is but one element in the network of the real. Levi Bryant and others have called this a flat ontology comprising a single plane, the real, within which exists human thought and culture as one element within a larger network of the real.¹²

What Do Pictures Want? The Lives and Loves of Images (Chicago, 2006); Barbara Stafford, *Echo Objects: The Cognitive Work of Images* (Chicago, 2007); and Jonathan Beller, *The Cinematic Mode of Production: Attention Economy and the Society of the Spectacle* (Lebanon, N.H., 2006).

11. Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, trans. Brassier (London, 2008), p. 5; hereafter abbreviated *AF*.

12. Bryant, for his part, characterizes himself as both a Marxist and a materialist, while still contributing to the discourse on speculative realism and object-oriented ontology. For Bryant, realism requires an attention to material infrastructure, over and above the realm of culture or, for that matter, the realm of being. He is therefore right to call his approach an "onticology" rather than an ontology. In this way Bryant emerges more from the Deleuzean tradition, whereas Harman from the Latourian. For further elaboration, see Bryant, *The Democracy of Objects* (Ann Arbor, Mich., 2011), esp. chaps. 4 and 5.

In the opening chapter of *After Finitude*, titled “Ancestrality,” Meillassoux lays out the basic stakes of what a noncorrelationist position might look like by making reference to the Kantian trap that has gripped Western philosophy for some time: “Thought cannot get *outside itself* in order to compare the world as it is ‘in itself’ to the world as it is ‘for us’. . . . We cannot represent the ‘in itself’ without it becoming ‘for us’, or as Hegel amusingly put it, we cannot ‘creep up on’ the object ‘from behind’ so as to find out what it is in itself” (AF, pp. 3–4). Meillassoux does not so much creep up on the object but posit a historical time scale outside the cognition of the human, a historical time prior to humanity altogether. Thus he speaks of the “ancestral realm” and the “arche-fossil”: “ancestral” claims are claims about things before the existence of man and therefore prior to what the phenomenologists call the “givenness” of human experience; the “arche-fossil” is the trace that allows someone to make ancestral claims. For example, radiological decay is an “arche-fossil” that allows a scientist to date prehistoric fossils. Meillassoux culminates these provocations by asking what if anything correlationism can say about such “ancestral” claims; the facts in question technically would fall prior to the subject-object relation as such and hence prior to the model proposed by correlationism. If human thought had a beginning, what to think of history prior to human thought? Science emerges as something of a trump card, as Meillassoux poses the following question to his correlationist opponents: “how are we to conceive of the empirical sciences’ capacity to yield knowledge of the ancestral realm?” (AF, p. 26; emphasis removed).

The opening section of the book also stresses the importance of mathematics. He describes an enigma in which mathematics is granted the ability to speak about the historical past in which humanity was absent: “how is mathematical discourse able to describe a world where humanity is absent. . . . This is the enigma which we must confront: mathematics’ ability to discourse about the great outdoors; to discourse about a past where both humanity and life are absent” (AF, p. 26); but also earlier Meillassoux brings in mathematics during his discussion of primary qualities: “all those aspects of the object that can be formulated in mathematical terms can be meaningfully conceived as properties of the object in itself” (AF, p. 3; emphasis removed). (I will return to the question of mathematics in a moment, but it is worth identifying it explicitly here.)

Meillassoux’s use of the “ancestral realm” thus allows him to open up a space for a purely real world, a world that has never had a human eye gaze upon it or a human mind think about it. “To think ancestrality is to think a world without thought,” he writes, “a world without the givenness of the world” (AF, p. 28).

The phrase “givenness of the world” is a reference to how phenomenology talks about presence. It refers to the way in which the world is given into perception by a thinking being. “Our task, by way of contrast,” writes Meillassoux, “consists in trying to understand how thought is able to access the uncorrelated, which is to say, a world capable of subsisting without being given.” The holy grail for Meillassoux is therefore existence without givenness. He understands the absolute as something “capable of existing whether we exist or not” (AF, p. 28).

How should we evaluate Meillassoux and his intervention into contemporary philosophy?¹³ A few issues spring to mind, all concerning Meillassoux’s relationship to politics and history. I will address two criticisms first in relatively vague terms, then move to a third, more pointed critique.

First is the question of metaphysical necessity itself, be it in the form of essentialism, the absolute, a natural reality, or universal truths. All of these things were at some time or another the antagonist of what one calls critical theory in the broadest sense, that is to say the practice of sociocultural critique invented by Karl Marx in the middle of the nineteenth century and practiced in various ways by the Frankfurt school, structuralism and post-structuralism, semiotics, cultural studies, and certain kinds of queer theory, feminism, and critical race theory up through the end of the twentieth century. In much of this work, essence and truth themselves are the antagonists, to be replaced by constructed identities and contingent worlds. (Recall how Marx and Friedrich Engels, in part two of the *Communist Manifesto*, promised to do away with truth!) With the new speculative realism, and perhaps also in a different way with Harman’s object-oriented philosophy, one risks switching from a system of subjective essentialism (patriarchy, logocentrism, ideological apparatuses) to a system of “objective” essentialism (an unmediated real, infinity, being as mathematics, the absolute, the bubbling of chaos). Is it time to trot out the old antiessentialist arguments from our Marxist, feminist, and postcolonial forebears? Isn’t Meillassoux’s metaphysical essentialism—his support of the universality of contingency (which in its impotent universality becomes meaningless),

13. In the United States, Simon Critchley was one of the first to respond to Meillassoux’s book, and the two leading figures working on continental philosophy today in Britain, Alberto Toscano and Peter Hallward, have also written responses to Meillassoux, with Hallward’s essay itself eliciting an interesting follow-up by Nathan Brown. See Simon Critchley, “Back to the Great Outdoors,” *Times Literary Supplement*, 28 Feb. 2009, p. 28; Alberto Toscano, “Against Speculation, or, A Critique of the Critique of Critique: A Remark on Quentin Meillassoux’s *After Finitude* (After Colletti)”; Peter Hallward, “Anything Is Possible: A Reading of Quentin Meillassoux’s *After Finitude*”; and Nathan Brown, “The Speculative and the Specific: On Hallward and Meillassoux,” in *The Speculative Turn: Continental Materialism and Realism*, ed. Bryant, Nick Srnicek, and Harman (Melbourne, 2010), pp. 84–91, 130–41, and 142–63.

his pursuit of the absolute, his endorsement of a pure real—just as repugnant as other brands of metaphysical essentialism?

Thus we must confront directly the fundamental provocation of the new philosophical realism. For, contra the tradition of materialist critical theory since Marx, much of today's realism claims that ontologies should not be political; it claims that ontological speculations must be separated from political ones. Such choruses are being heard more and more frequently today. I have no doubt that many of the figures associated with today's philosophical realism would view themselves as politicized souls of some caliber. And the argument is often heard that the uncoupling of the ontological from the political is a neutral act in and of itself and in so doing casts no aspersion as such on the political project. One simply can do metaphysics over here, while doing politics over there. Furthermore, promulgators of such arguments often laud the uncoupling as a feature of realism, not a liability, because it allows the political to persist inside its own autonomous sphere, unsullied by the nitty-gritty questions of Being and appearing.

Yet the uncoupling of the ontological realm from the political realm is not entirely neutral, for it arrives less as an innocuous attempt to tidy up the cluttered landscape of philosophical discourse (so that one's talk of Being will not be tainted by one's talk of politics) than as an ideological strategy bent unwittingly or not on the elimination of competing discourses. Recall what must be discarded when overturning correlationism. One must discard phenomenology certainly, but one must also throw out social constructivism and the various fields that rely on a social-constructivist methodology including much of second- and third-wave feminism, certain kinds of critical race theory, the project of identity politics in general, theories of postmodernity, and much of cultural studies. Phenomenology has a politics, to be sure: beyond the ravages of modern life, the return to a more poetic state of being guided by care and solicitude. Social constructivism has one too: throw out the violence of patriarchy, logocentrism, and all the rest. Have no illusions, this is what is at stake with the recent return to the absolute evident in theoretical discourse from Meillassoux to Badiou, and even evident in other authors such as Žižek and Susan Buck-Morss.¹⁴ To be sure, certain of these theorists understand the stakes and therefore scaffold their newfound universalism with a robust and often militant political theory—Badiou and Žižek, one shall re-

14. Žižek defends universal truth against postmodernism in a number of texts, including Slavoj Žižek, *In Defense of Lost Causes* (New York, 2008). Susan Buck-Morss, *Hegel, Haiti, and Universal History* (Pittsburgh, 2009), writes of a theory of the subject bound not by fragmentary subjectivities but grounded in the universality of truth.

member, are in no uncertain terms advocating communism, and Buck-Morss herself has a robust political consciousness. Fading violets they are not. The question becomes more pressing however when a philosopher uncouples Being from politics in order to withdraw from the project of political critique altogether.

3. The Math of History

Now consider a more pointed critique of Meillassoux's position, one that hinges on the question of mathematics and the problem of history.

One will doubtless recall the grand metaphysical assessments of generations past. In the age of clockwork, God is a clockmaker and the universe turns according to the music of the spheres. In the age of the steam engine, man is a dynamo and society a vast machine that may be tamed or exploited. And now in the age of the algorithm, pure math makes claims about the world and extracts value from it.¹⁵

What is the infrastructure of today's mode of production? It includes all the classical categories, such as fixed and variable capital. But there is something that makes today's mode of production distinctive from all the others, the prevalence of software. The economy today is not only driven by software (symbolic machines); in many cases the economy is software, in that it consists of the extraction of value based on the encoding and processing of mathematical information. Monsanto, Equifax, or Google—they are all software companies at some basic level. As one of the leading industrial giants, Google uses the pure math of graph theory for monetary valorization. Monsanto translates living organisms into bioinformatic gene sequences, thereby subjecting them to information processing. Equifax, in the sphere of consumer credit, leverages complex algorithms to extract value from databases. But what is software? Software consists of symbolic tokens that are combined using mathematical functions (such as addition, subtraction, and true-false logic) and logical control structures (such as "if x then y "). Simply put, software is math. Computer science is a division of mathematics.

What is the experience of real life today in postindustrial societies? Again, it is no secret: one's experience today is that of mathematical rou-

15. To be clear, such a claim does not contradict the labor theory of value. While mathematical algorithms may assist in the extraction of value, the surplus-value being extracted is itself first produced by human labor. A good example would be Google. Much of the labor happening in Google's server farms is performed by clustering algorithms running on massive fleets of machines. Nevertheless, the value being extracted is gleaned from the large reservoirs of micro labor performed by web users around the planet. Users perform micro labor whenever they send email, post messages online, or update websites. Hence Google is merely skimming value from information networks that ultimately have their origins in human laboring activity.

tine, the Taylorization of behavior according to mathematical efficiency charts, data-mining software designed to extract value from networks, the monetization of social networks using graph theory (originally a branch of geometry), and the introduction of security protocols based on topological analysis of exploits and threats.¹⁶

One cannot wish away the fact that the mode of production today favors software so greatly and that software is math. A simple syllogism reveals the conclusion that the mode of production today has a special relationship to mathematics. Software is thus the thorn in the side of contemporary philosophy.

As the opening remarks on Badiou and Java illustrated, there exists today a convergence between the logic of mathematical disciplines (such as computer science) and the logic of the mode of production.¹⁷ Let this serve as a grand dividing line between two schools of thought, those who consider today that symbolic logic, geometry, linear analysis, set theory, algorithms, information processing, and so on are outside of ontic history, that is, outside the history of instances (but not necessarily the history of essences), and those who recognize that such mathematization exists today at the very heart of the mode of production and therefore, not only drives history, but in some basic way is history itself. One approach will answer to the name realism, the other, materialism.¹⁸

Of course there is a long debate in philosophy around the origin of math. Does number come from the world, as in the case of one's ten fingers; or is it a pure concept, as in the case of the notion of trianguleness? Immanuel Kant argued that all mathematical judgements are synthetic (while still being *a priori*). According to Kant, in stating that five plus seven is twelve, one has *added* something in twelveness that was not yet present in

16. For an analysis of how this transformation has affected texts and textual mark-up, see Alan Liu, "Transcendental Data: Toward a Cultural History and Aesthetics of the New Encoded Discourse," *Critical Inquiry* 31 (Autumn 2004): 49–84.

17. A deeper question, much more difficult to demonstrate, is whether or not this has always been the case, not simply during the period of digital capitalism. For example, a case could be made that the period of Taylorization illustrated a special kind of mathematization of production, or even earlier with the basic concepts of exchange-value and accumulation in the work of Marx.

18. Terminological precision is crucial at this juncture. In this essay *materialism* is taken to mean historical materialism, that is, the materialist philosophy of history found in Marx and subsequent Marxist theory. It should not be confused with the definition of materialism used in certain scientific and philosophical circles, for example that used by Harman, which defines materialism essentially as a form of atomism through which small elements of matter are the foundations and ultimate arbiters of everything that exists. So for Harman materialism is a philosophical position that claims that "all macro-sized entities can ultimately be reduced to a final layer of tiny pampered physical elements that are more real than everything else" (Harman, *Prince of Networks: Bruno Latour and Metaphysics* [Melbourne, 2009], p. 6).

five-plus-sevenness. It is a welcome provocation to demonstrate, as Kant does in the first *Critique* and the *Prolegomena*, that mathematical judgements require the input of “some concrete image” and are not merely expressible via “pure Understanding and pure Reason.”¹⁹ I do not wish to enter this sophisticated debate. On the contrary, I want to make a claim less ambitious in scope but better suited to the present situation; mathematical judgements today are not simply synthetic but are also historical. Instead of analyzing the possibility of making a mathematical judgement (as Kant does), I want to analyze what making such a judgement—and industrializing it, and deploying it, and monetizing it—entails. One might therefore label this the *post-Fordist response* to philosophical realism in general and Meillassoux in particular: *after software has entered history, math cannot and should not be understood ahistorically*. This is true for industrial modernity at large, but particularly true under post-Fordism, due to the increased intimacy between software and the mode of production.

So when Meillassoux suggests that math is outside of history, one should not be convinced. Again recall his description of the so-called primary qualities of objects, that is, those properties that belong to a thing outside of our ability to apprehend them: “all those aspects of the object that can be formulated in mathematical terms can be meaningfully conceived as properties of the object in itself.” Mustn’t formulations like this be historicized? Isn’t there a historical specificity to “the formulation of aspects of an object in mathematical terms”? Isn’t there a historical specificity to “mathematics’ ability to discourse about the great outdoors”? The answer is an emphatic yes; one may label such historical specificity industrial modernity in general and post-Fordist (that is, software-based) modernity in particular. Yes, perhaps there was a time when math was sufficiently outside human sensation and experience that it allowed a window into the absolute, or the realm of primary qualities, as Meillassoux would wish. But today calculation, math, algorithms, and programming are precisely coterminous with quotidian human experience. (In fact I am merely vocalizing the soft position. The hard position, the Derridean one, would suggest that this aspect, the logos, has always lingered in the hearts of man.) Thus if we are forced to retain the primary/secondary terminology—and it is not clear that we should—under post-Fordism, qualities derived from math would most certainly be socially and subjectively determined, thus putting their status as primary in question.

The point is thus not to scold Meillassoux for forgetting the cardinal rule that one must always historicize. Hence the complaint against realism

19. Immanuel Kant, *Prolegomena*, trans. Paul Carus (Chicago, 1902), pp. 17, 14.

is not simply to reenact that age-old mannerism of the Left: historicize x , where x equals anything whatsoever. (And in this way my complaint is not so much about the history of math as it is about the math of history.) Rather, the point is to identify correctly what counts as the material for historicization today. The point is to show that mathematics can no longer exist neutrally as a mere explanatory tool for understanding our existence, since history itself has been, if you will, infected by industrial-mathematical processes.²⁰

Edmund Husserl was sensitive to such a world-historical shift during an earlier moment in the twentieth century when he wrote about the “crisis of European sciences” and the way in which the life-world is sidelined at the hands of the positivistic sciences of modernity: “We must note something of the highest importance that occurred even as early as Galileo: the surreptitious substitution of the mathematically [constructed ideal world] for the only real world, [that is,] the one that is actually given through perception, that is ever experienced and experienceable—our everyday life-world.”²¹ Likewise Martin Heidegger made a similar point when he lamented the advent of the “age of the world picture”: “World picture, when understood essentially, does not mean a picture of the world but the world conceived and grasped as picture. What *is*, in its entirety, is now taken in such a way that it first *is* in being and only *is* in being to the extent that it is set up *by man*, who *represents* and *sets forth*.”²² One should remember that phenomenology emerged in reaction to how the positivistic sciences were trying to redefine the human form. The stakes for Husserl, and Heidegger, too, were quite high, and they were always articulated in normative, even moral, terms; the positivistic cognitive sciences morally threaten the phenomenological subject. Phenomenology is a subspecies of romanticism, after all, and is therefore highly suspicious of positivistic pursuits, whether they spring originally from science or philosophy. For phenomenology, the

20. Recall the revealing anecdote from Alfred North Whitehead on the centrality of mathematics within the history of thought. “I will not go so far as to say that to construct a history of thought without profound study of the mathematical ideas of successive epochs is like omitting Hamlet from the play which is named after him. That would be claiming too much. But it is certainly analogous to cutting out the part of Ophelia. This simile is singularly exact. For Ophelia is quite essential to the play, she is very charming—and a little mad” (Alfred North Whitehead, *Science and the Modern World* [1925; New York, 1970], p. 20).

21. Edmund Husserl, *The Crisis of European Sciences and Transcendental Phenomenology: An Introduction to Phenomenological Philosophy*, trans. David Carr (Evanston, Ill., 1970), pp. 48–49.

22. Martin Heidegger, “The Age of the World Picture,” *The Question Concerning Technology* and *Other Essays*, trans. William Lovitt (New York, 1977), pp. 129–30; emphasis added.

solution to any problem is always found in the irreducible authenticity of the feeling subject, never the dry calculations of math and science.

The point is not that math is unable to discourse about reality. Obviously it can. Rather the point is that one cannot be *neutral* on the question of math's ability to discourse about reality, precisely because in the era of computerized capitalism math itself, as algorithm, has become a historical actor.

I cite again Meillassoux's dilemma: "This is the enigma which we must confront: mathematics' ability to discourse about the great outdoors; to discourse about a past where both humanity and life are absent." Yet after cybernetics, after the mathematization of the genome, after Google's page rank algorithm, after the industrialization of the social graph, after the growing chasm of the digital divide, any talk of math's unmediated discourse with reality comes off as disingenuous or in poor taste.

Philosophy and computer science are not unconnected. In fact they share an intimate connection and have for some time. For example, set theory, topology, graph theory, cybernetics, and general systems theory are part of the intellectual lineage of both object-oriented computer languages, which inherit the principles of these scientific fields with great fidelity, and for recent continental philosophy including figures like Deleuze, Badiou, Niklas Luhmann, or Latour. Where does Deleuze's control society come from if not from Norbert Wiener's definition of cybernetics?²³ Where do Latour's actants come from if not from systems theory? Where does Levi Bryant's "difference that makes a difference" come from if not from Gregory Bateson's theory of information?

Given such a correlation, I may now reiterate the two points of contention posed at the outset. First, the problem of ideology critique: if the new realism mirrors contemporary capitalism, is it not merely a repackaging of contemporary ideology and therefore suspect by virtue of being antiscientific? Second, the problem of the *political*: bracketing ideology entirely, should one not also be skeptical purely on political grounds, owing to the fact that any project ventriloquizing the current capitalist arrangement is, for this very reason, politically retrograde?

"What would an *object-oriented* democracy look like?" Such is Latour's realist provocation, a question posed in the mammoth catalog for the exhibition "Making Things Public" staged in 2005 at the Zentrum für

23. Deleuze credits his adoption of the term *control* to William Burroughs—Deleuze participated in the influential "Schizo Culture" conference held at Columbia University in 1975 where Burroughs gave a talk titled "The Impasses of Control"—but the true source for control is no mystery: cybernetics, systems theory, cellular automata, graph theory, and related fields.

Kunst und Medientechnologie (ZKM) in Karlsruhe.²⁴ But these democracies already exist. Their ugly sheen covers our beaches and deltas. Their object-oriented infrastructure skims off unpaid surplus-value from living networks. They provide the communications channels in and out of the *maquiladoras*. Their democracy has little relation to the rule of the people, only the rule of the market. Their so-called realism has no relation to real material history, only the unfeeling logic of exclusion and competition. As Nina Power put it so well in her dismissal of philosophical realism: “what use is it if it simply becomes a race to the bottom to prove that every entity is as meaningless as every other (besides, the Atomists did it better).”²⁵

4. An Aligned Politics

It helps to recall the 1946–47 encounter between Jean-Paul Sartre and Heidegger around the question of engagement and the nature of human existence. Sartre made his position clear: political engagement means engagement by and for human *beings*.

Man simply is. . . . Man is nothing else but that which he makes of himself. This is the first principle of existentialism. . . . I do not know where the Russian revolution will lead. I can admire it and take it as an example in so far as it is evident, today, that the proletariat plays a part in Russia which it has attained in no other nation. But I cannot affirm that this will necessarily lead to the triumph of the proletariat: I must confine myself to what I can see. . . . What people reproach us with is not, after all, our pessimism, but the sternness of our optimism.²⁶

In his response, Heidegger modified Sartre’s language ever so slightly; engagement means engagement by and for the truth of Being. It is not simply entities as such that must be noted during the constitution of one’s politics but the larger truth of their presence. Even through its elusiveness, Being must be sought out so that man can gain some sort of solicitous orientation toward it.

The most stunning passage in the exchange is probably Heidegger’s description of Being as being both the nearest and the farthest from man:

24. See Latour, “From Realpolitik to Dingpolitik or How to Make Things Public,” in *Making Things Public: Atmospheres of Democracy*, ed. Latour and Peter Weibel (Cambridge, Mass., 2005), pp. 14–43.

25. Nina Power, “The Dialectics of Nature,” bit.ly/Pn6i5o. To their credit, proponents of object-oriented philosophy such as Bogost or Bryant would likely invert the valence of Power’s question, asking instead whether every entity might not be as meaningful as every other.

26. Jean-Paul Sartre, “Existentialism Is a Humanism” (1946), in *Existentialism from Dostoevsky to Sartre*, trans. Joan Stambaugh, ed. Walter Kaufman (New York, 1989), pp. 290–91, 299, 301.

“Being’—that is not God and not a cosmic ground. Being is farther than all beings and is yet nearer to man than every being, be it a rock, a beast, a work of art, a machine, be it an angel or God. Being is the nearest. Yet the near remains farthest from man.”²⁷

On the one hand Heidegger and, on the other, Sartre. On the one hand Being (the onto-theological absolute) and, on the other, beings (material entities with constructed histories). Let this be a kind of primordial litmus test: Is a philosopher following an ontological absolute or following material history? Do real networks of object relations produce history, or does history produce real networks of objects relations? The answer to the question will indicate how any given person stands in today’s debate. Either one prizes pure ontology in the form of the absolute, the One, the infinite, what one used to call God. Or one prizes the historicity of worlds, saturated as they are with all the details of material life. In short, the “real” in philosophical realism means the absolute. Whereas for a materialist, the “real” means history.²⁸

So the larger question still remains to be answered: Do movements like object-oriented philosophy and speculative realism have a politics and, if so, what is it? And, even more important, Malabou’s opening challenge, slightly rephrased: What should we do so that thinking does not purely and simply coincide with the spirit of capitalism?

Left unchecked, there is little to differentiate the new philosophical realism from the most austere forms of capitalist realism.²⁹ What kind of world is it in which humans are on equal footing with garbage?³⁰ What kind of world is it in which the landscape is a chaotic nothing-world,

27. See Heidegger, “Letter on Humanism,” trans. Frank Capuzzi and J. Glenn Gray (1947), *Basic Writings*, ed. David Farrell Krell (New York, 1977), written as a response to Jean Beaufret but in regard to Sartre’s “Existentialism Is a Humanism.” This section is also notable because it contains one of Heidegger’s infrequent references to Marx, whose view of history he considers “superior” (p. 243).

28. Framing the options thus invites a misunderstanding. So to clarify, the decision is not between humanism and nonhumanism, parlayed by many of the thinkers discussed here as a choice between Kantianism and realism. My argument is not an elegy to humanism, Sartrean or otherwise, at the expense of the nonhuman. This debate is a false debate. As I argue here, the debate is not between realism and Kantianism but between realism and materialism. In other words, the issue is not objects versus humans but rather the real versus history. For, as we know, objects have histories just like we do.

29. I borrow this expression from Mark Fisher’s appealing book *Capitalist Realism: Is There No Alternative?* (London, 2009).

30. While the principle of “equal footing” appears across a number of contemporary realist philosophers, Harman is probably the most avid in reiterating the “equal footing” claim. The possible citations are many, but see for instance the opening pages of his recent book on Latour: “What exists is only actants: cars, subways, canoe-varnish, quarreling spouses, celestial bodies, and scientists, all on the same metaphysical footing.” The garbage comment comes a bit later in the same text: “We have seen that Latour insists on an absolute democracy of objects: a

unfounded at its core and motivated by no necessary logic (Meillassoux) or by the logic of the market (Latour)? What kind of world is it in which the only absolute law remaining is the absolute law of a barren, totalizing nihilism?

There are two basic options when it comes to the task of the political. One is an aligned politics and the other an unaligned politics. An aligned politics is a politics tethered to a moral yardstick and equipped with an ethical mechanic able to pursue it. The moral sphere refers to a law or goal that must be attained, while the ethical sphere refers to a set of practices governing action that, when observed and put into play, may tend toward certain ends (moral or not). One may inhabit an ethos, therefore, without having a morality; likewise one may be linked to a morality, but fail in ethical practice. Thus, an aligned politics is the name given when the vectors of ethical action aim directly at a specific moral outcome. By contrast, an unaligned politics is the name given to those projects unencumbered by the moral law. Guided solely by the force vectors of the ethical sphere, unaligned political projects may still gain formidable inertia, territorializing and deterritorializing entire domains. Unaligned, they exist as mercenaries, often jumping the gap between friend and enemy. If Badiou's project is the quintessential aligned political project, his moral truths scaffolded by a precise ethical mechanic, then Deleuze's is the quintessential unaligned political project, an absent moral superstructure overshadowed by a massive vector field of physical forces.³¹

Realism is an unaligned politics. The issue thus is not that realism is good or bad but that realism is dangerous. In its very unalignment, realism ultimately lacks a true relationship with the absolute because it abdicates the political decision.³²

mosquito is just as real as Napoleon, and plastic in a garbage dump is no less an actant than a nuclear warhead" (Harman, *Prince of Networks*, pp. 22, 34).

31. Of course this is not entirely true, as Deleuze's writings were often aggressively mounted against all the perversions of power that saturate daily life: the ego, the father, repression, the state, even the dialectic. Nevertheless Deleuzianism has become unaligned in recent decades, adrift from its original political goals (or perhaps as a consequence of these goals having been achieved).

32. The most inspired contemporary articulation of this arrangement is Badiou's theory of points, in which one is induced to depart from the neutralizing depravity of flat, atonal worlds and align oneself trenchantly along a binary axis of decision. See Badiou, *Logics of Worlds: Being and Event*, 2, trans. Toscano (London, 2009). "A point is a transcendental testing-ground for the appearing of a truth. . . . A point is the crystallization of the infinite in a figure—which Kierkegaard called 'the Alternative'—of the 'either/or', what can also be called a choice or a decision" (pp. 399, 400). Or as Hallward puts it, "A point is a place in which participation in a world may polarize into a simple yes or no, for or against, backwards or forwards and so on"

By contrast, materialism is an aligned politics because it identifies something like an absolute moral sphere (history, the social totality), and buttresses such an absolute with the necessary tactics governing practice (demystification of the commodity, ideology critique, the dialectic, and so on).

What does materialism ultimately espouse? That everything should be rooted in material life and history, not in abstraction, logical necessity, universality, essence, pure form, spirit, or idea. Thus the true poverty of the new realism is not so much its naïve trust in mathematical reasoning and object-oriented architectures but its inability to recognize that the highest order of the absolute, the totality itself, is found in the material history of mankind. To touch the absolute is precisely to think this correlation, not so much to explain it away, but to show that thought itself is the correlation as such, and thus to think the material is to spread one's thoughts across the mind of history.

(Peter Hallward, "Order and Event: On Badiou's Logics of Worlds," *New Left Review* 53 (Sept.–Oct. 2008): 106–7. The name that Badiou gives to such flat, atonal worlds is "democratic materialism." Given how I have been using terminology here in this essay, the more accurate name for the Latourian-Harmanian parliament of objects—and here Badiou would likely not disagree—would be democratic realism. For more on Badiou's distinction between democratic materialism and dialectical materialism, see Badiou, *Logics of Worlds*, pp. 1–4.