

Can We Get Our Materialism Back, Please?

*By Bruno Latour**

ABSTRACT

Technology is epistemology's poor relative. It still carries the baggage of a definition of matter handed down to it by another odd definition of scientific activity. The consequence is that many descriptions of "things" have nothing "thingly" about them. They are simply "objects" mistaken for things. Hence the necessity of a new descriptive style that circumvents the limits of the materialist (in effect idealist) definition of material existence. This is what has been achieved in the group of essays on "Thick Things" for which this note serves as an afterword.

SOMETHING HAS HAPPENED to materialism. In many ways, it seems that we have come full circle from the early modern controversies over the various abilities of material entities. For a short while, materialism seemed to be a foolproof appeal to a type of agency and a set of entities and forces that allowed analysts to explain, dismiss, or see through other types of agencies. Typically, for instance, it was possible to explain conceptual superstructures by means of material infrastructures. Thus an appeal to a sound, table-thumping materialism seemed an ideal way to shatter the pretensions of those who tried to hide their brutal interests behind notions like morality, culture, religion, politics, or art. But that's precisely the point: it was an *ideal* and not a *material* way of making a point. Materialism, in the short period in which it could be used as a discussion-closing trope, implied what now appears in retrospect as a rather idealist definition of matter and its various agencies. I am not enough of a historian to put dates on this short period where the materialistic *explanans* had its greatest force, but it might not be totally off the mark to say that it persisted from the era of post-Marxism (Marx's own definition of material explanation being infinitely more subtle than what his successors made of it) all the way to the end-of-the-century sociobiologists (who tried without much success to insert their own simplistic mechanisms into the glorious lineage of Darwin).

Why does this materialism appear to us in retrospect as much too idealist? The reason has been worked out only recently in various commentaries on Alfred North Whitehead's

* Sciences-Po Paris, CSO-10 rue de la Chaise, 75.007 Paris, France.

philosophy.¹ Under the rubric of “matter,” two totally different types of movement had been conflated: first, the way we move knowledge forward in order to access things that are far away or otherwise inaccessible; and, second, the way things move to keep themselves in existence. We can identify matter with one or the other, but not with the two together without absurdity. Of course, we might marvel at the miracle of a “correspondence” between the geometrization of the ways we know and the geometrization of the things that are known, but this is because we commit, wittingly or unwittingly, a little sleight of hand and explain this spurious correspondence by the fact that the “primary qualities” of the objects known are themselves geometrical. That is easy to do when all the other qualities—those that will become the “secondary qualities”—have been carefully eliminated, one after the other.

The application of this point to *technical entities* is rather straightforward, but it is well worth insisting on, since the history of technology has for so long been a bastion of the idealist materialism I’ve just mentioned. We can still understand James Watt’s beautifully drawn designs of his steam engine without any difficulty, even though steam engines themselves have all but vanished. For any piece of machinery, to be drawn to specs by an engineer, on one hand, or to remain functional without rusting and rotting away, on the other, requires us to accept two very different types of existence. To exist as a part *inter partes* inside the isotopic space invented by the long history of geometry, still-life painting, and technical drawing is not at all the same as existing as an entity that has to resist decay and corruption. Obvious? Yes, of course—but then why do we so often act as if matter itself were made of parts that behave just like those of technical drawings, which live on indefinitely in a timeless, unchanging realm of geometry? Why, in the name of “mechanical philosophy” (itself an exceedingly complex affair, as historians of science have shown), do we still take this view of technical artifacts so seriously—as if the ontological qualities of matter itself were the same as the ontological qualities of drawing and moving parts around in geometrical space?

This is why the materialism of the recent past now looks so idealistic: it takes the idea of what things in themselves should be—that is, primary qualities—and then never stops gawking at the miracle that makes them “resemble” their geometrical reproduction in drawings. . . . And this miracle is idealist a second time because it ignores entirely the difficulty of producing drawings and the whole network of engineering practices necessary to identify the features, follow the lines, and assemble the whole institution necessary for any mechanism to function. Technical drawing is an extremely difficult activity to sustain and calibrate. The whole notion of *mechanism* is a twice-idealized definition of the way we know and of the behavior of what we know. No wonder, then, that when it is transported to the fields of economics or genetics or used to supply biological or social “explanations” it creates so much trouble.

The problems with this idealized materialism can be clearly seen in Damián Ortega’s fascinating installation *Cosmic Thing*, which John Tresch discusses in his essay. This piece, which presents what is in effect the “exploded view” (in French, “*écorché*”) of a VW Beetle, offers a deceptive transparency that the following essays refuse to accept. Of course, the great irony of the installation is that if the exploded view—rendered familiar to us by the invention of technical drawing, projective geometry, and innovations all the

¹ Isabelle Stengers, *Penser avec Whitehead: Une libre et sauvage création de concepts* (Paris: Gallimard, 2002).

way to computer-aided design—is a great way to draw parts, order their fabrication, stabilize specifications, verify standards, maintain inventories, and render all these operations traceable and accountable, it is nevertheless decidedly not what defines the “thingness” or the “cosmicity” of techniques. The visual imaginary space in which an exploded view is made possible is infinitely distant from the way any VW Beetle inhabits the world—or, rather, the cosmos.

In other words, whereas *res extensa* is a way to draw technical parts side by side, those parts themselves do not assemble or gather or survive as if they were “in” *res extensa* or “made of” matter. Or, rather, we are now faced with two different definitions of “matter”: one (the idealist one) in which the reproduction of the parts through geometry is confused with the reproduction of the parts themselves, and another in which those two pathways are clearly distinct. The first gives way to *objects*, the description of which is always *thin*; the second gives way to *things*, which are the topics, as Ken Alder says in his introduction, of *thick* description. Thin objects, on one hand, with an *ideal* definition of matter; thick things, on the other, with a *material* definition of matter: this seems to me the choice offered to the reader of the pieces in this Focus section.

This does not mean that reproduction through geometry is “abstract,” “cold,” and “dead” while reproduction through steel, brass, or wood is “concrete,” “warm,” and “alive,” but simply that geometry is what allows engineers to draw and know the parts, while the parts themselves go their own ways and follow, so to speak, their own directions. . . . If Ortega had really wanted to provide a view of the VW Beetle that would do justice to his title—*Cosmic Thing*—he would have to redo his installation entirely and do for the Beetle what Gabrielle Hecht and Wiebe Bijker and Ken Alder have done here for “their” uranium rocks, dams, and lie detectors: that is, first prodigiously *extend* the number of parts necessary for the gathering of the Beetle and then *multiply* the number of assembling principles that gather them together in a functioning whole. The suspension of the parts side by side with nylon thread is a nice way of reminding us of the gathering aspect of every technical “whole,” but it is much too restricted a census of which parts are necessary and of the process through which they might coalesce together. To the *assemblage* of parts, Ortega should have added an *assembly* of entities that would have made his installation really worthy of the name *Cosmic Thing*.

This is why I always find it baffling that people would take Heidegger’s “philosophy of technology” seriously. Not only would Heidegger see no difference whatsoever between an atomic bomb, a dam, a lie detector, and a staple—all being mere examples of the same “enframing”—but when he finally gives some respect to a shoe or a hammer it is only to see it as the assembly of *four* elements—his “fourfold.” To be sure, such tools may be beautifully made, and it is much better to call on the gods and the mortals, heaven and earth, to account for their emergence than to dismiss them as the thinnest of “mere” objects. But look again at the VW Beetle: just four elements, really? That’s a very small list indeed. . . . According to Hecht, there are many more than four existing deities, or dimensions, or factors, brought simultaneously into play in order to define what it is for “uranium” to be “nuclear.” Any technical imbroglia forces us to count *way* beyond four. But it is true—and here Heidegger sends the inquiry in the right direction—that any artifact is a form of assembling, of gathering, of “thinging” entities together and that it is absurd to forget the mortals and the gods when describing a piece of hardware, even the most hypermodern ones. But I am sure that Heidegger would refuse to comment on Ortega’s exploded view. And Ortega himself, by offering, as I have just said, such a limited number of parts and

types of assembling, betrays the title he gave to his piece—or else he is enjoying himself with a very modernist irony that follows the same pattern as Heidegger’s spite for modernity.

What is so promising about extricating material materialism from its idealist counterpart—of which the concept of “enframing” is a typical example—is that it accounts for the surprise and opacity that are so typical of techniques-as-things and that techniques-as-objects, drawn in the *res extensa* mode, completely hide. The exploded-view principle of description makes it possible to overcome one of the main aspects of bringing an artifact into existence: opacity. In other words, it draws the object as if it were open to inspection and mastery while it hides the elementary mode of existence of technical artifacts—to take up Gilbert Simondon’s title.² Parts hide one another; and when the artifact is completed the activity that fit them together disappears entirely. Mastery, prediction, clarity, and functionality are very local and tentative achievements that are not themselves obtained inside the idealized digital or paper world of *res extensa*—even though it would be impossible to carry them forward without working upon and with technical drawings and models. But, again, it is not the same thing to work *upon* a model—mathematical, analogical, digital—as it is for a technical assemblage to *be* a model. As every engineer knows, scaling up (or scaling down, in the case of miniaturization and industrialization) is a tough, surprising adventure filled with twists and detours. As soon as one assimilates mechanisms to the *res extensa* mode, one is no longer prepared to encounter any of the tricky, clever innovations that go with every technical gathering. Nor is there any room left for a Dædalus or a Viktor Frankenstein, though aspects of these mythological figures abound in the tales recounted in these essays: the demiurgic ambitions of Brazilian positivists; the monstrous and protean power of “nuclearity”; the rivalries, twists, and disappointments involved in powering and watering the Indian subcontinent; the labyrinths of bluff and double bluff that come to define both lie detection and the arms race.

Finally, what one is no longer prepared to encounter either are the various meddlers, known in an earlier period of our disciplines as the “social context” that surrounded artifacts that were otherwise essentially imperturbable. After having remained for so long rather politely at a safe distance *around* the techniques, now meddlers of all sorts—not only engineers, of course, but also “members of the public,” those who suffer various “unwanted consequences” of technology, militants, dreamers, activists, lawyers—are part and parcel of the gathering of techniques. Each of the essays in this Focus section shows this major shift in our understanding of technological things; it was also strikingly revealed in 2003 when, after the explosion of the shuttle *Columbia*, hundreds of hitherto-unknown actors had to be drawn into the discussion—a legal dispute, a “thing” in the etymological sense.³ Suddenly, everyone discovered that the shuttle was actually encased in an organization, NASA, and that many “parts” of *Columbia* could not be seen in an Ortega-style exploded view of the shuttle. And yet those parts were indeed elements of the process of assembly necessary for the final assemblage of parts to function safely. But no more than the stakeholders in so many of the projects reviewed by Bijker did they have any way to be literally “drawn together” within the conventions of technical representation now entrenched into CAD digital files.

² Gilbert Simondon, *Du mode d’existence des objets techniques* (Paris: Aubier, 1958).

³ Graham Harman, *Tool Being: Heidegger and the Metaphysics of Objects* (Chicago: Open Court, 2002); and Bruno Latour and Peter Weibel, eds., *Making Things Public: Atmospheres of Democracy* (Cambridge, Mass.: MIT Press, 2005).

Perhaps this is where we meet the limit of the “thick description of things.” We know how to provide a “thin description” of an entity’s idealized material aspects; as these essays show, we are finally starting to learn how to give a *post hoc* narrative thick description of what should have been visible in the gathering that brings a thing together (similarly, after the shuttle’s explosion a tough inquiry was pursued). And yet we still don’t know how to assemble, in a single, visually coherent space, all the entities necessary for a thing to become an object—Ortega’s installation notwithstanding. When we have learned how to do that, we might finally get our (material) materialism back—and our cosmic things to boot. That’s when the plot will really thicken.