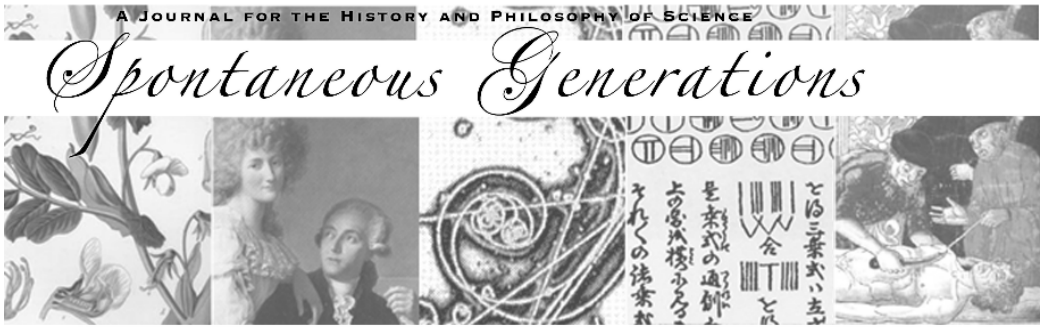

Realism for Realistic People

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Focused Discussion Invited Paper

Realism for Realistic People*

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Why should anyone care about the seemingly interminable philosophical debate concerning scientific realism? Shouldn't we simply let go of it, in the spirit of Arthur Fine's "natural ontological attitude" (NOA) (Fine 1986, chs. 7-8)? To a large extent I follow Fine, especially in relation to the endless arguments surrounding realist attempts to show that the impossible is *somehow* possible, that empirical science can really attain assured knowledge about what goes beyond experience. It is time to face the fact that we cannot know whether we have got the objective Truth about the World (even if such a formulation is meaningful). Realists go astray by persisting in trying to find a way around this fact, as do anti-realists in engaging with that obsession.

I cannot do better than Fine. Yet I find it difficult to let go of the "realist" label. I feel that it has been hijacked by the most unrealistic of people. I would like to rescue the notion of realism from the so-called realists, and re-conceive it as something useful for scientists and others who are actually engaged in empirical inquiries. If that fails, we will still have NOA.

I do not take scientific realism as a descriptive thesis. Like Bas van Fraassen, I take it as a statement about the aims of science (Van Fraassen 1980, 8). More actively, I take it as a policy, or even an ideology. "Active realism," as I have termed it, is a commitment to do our utmost to learn as much as possible about reality (Chang 2012, section 4.2).

One might ask: who would possibly object to such a commitment—and is a position worth defending if no one would object to it? But there are in fact a great number of people who go against active realism. Against active realism, anti-realism can take any of the following forms: seeking the comfort of affirming what we already believe, instead of subjecting our beliefs to the most informative tests; preferring the simplicity or elegance of theories for its own sake (rather than for the possible side-effect of facilitating further

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inquiry); insisting that having a consensus is more valuable than allowing all perspectives that can lead to new learning; making only fictional or idealized models to do a particular job at hand, rather than finding a theory that can also work in other circumstances. All of these things happen with depressing regularity in science as well as religion, politics, and everyday life. In that context, Charles Sanders Peirce's motto takes on fresh urgency: "do not block the way of inquiry."

There is, however, a significant gap in the conception of active realism as stated above. In my previous exposition, I took "reality" as mind-independent nature, something that can resist our attempts to deal with it in some particular way that we might prefer (Chang 2012, 220). But "reality" in this sense is like the Kantian thing-in-itself, about which we can and should say nothing; it is nonsense to think that we can learn anything expressible about it. So some other notion must be worked out as to what empirical knowledge is *about*. This recognition prompts a new and productive train of thought.

The objects of empirical knowledge must be placed in the operable realm. Such objects are not "given," but identified through an effortful process of inquiry, through which we learn how to parse things out at the same time as learning about the parsed-out objects. This is one clear sense in which ontology is empirical.[1] My position here is consonant with Ian Hacking's "entity realism," which takes our ability for successful intervention as the sign of the reality of the putative objects involved in the intervention (Hacking 1983, esp. ch. 16). And I seek to generalize Hacking's position further into a *coherence theory of reality*: a putative entity should be considered real if it is employed in a coherent epistemic activity that relies on its existence and its basic properties (by which we identify it).[2]

The key notion in the definition of "reality" just given is *coherence*, by which I mean a harmonious fitting-together of actions that leads to the successful achievement of one's aims, rather than mere logical consistency or any other inferential relation holding among a set of propositions. Coherence may be exhibited in something as simple as the correct coordination of bodily movements and material conditions needed in lighting a match or walking up the stairs, or something as complex as the successful integration of a range of material technologies and various abstract theories in the operation of the global positioning system (GPS). Coherence comes in degrees, with a specific scope, and it is defeasible. The same is the case for reality, if we base the notion of reality on the notion of coherence. Such a perspective exposes a deep problem with the binary thinking in Larry Laudan's pessimistic induction,

[1] This is in line with the thoroughgoing empiricism expressed in Dewey (1938).

[2] For an explanation of what I mean by an "epistemic activity," see Chang (2014).

and of course also in the realist arguments that he was trying to counter (Laudan 1981). Caloric, phlogiston, ether, or what have you, isn't simply either-real-or-unreal (or referring/non-referring). Caloric had a high degree of reality in Lavoisierian chemical practices, and it still is real to anyone who engages in similar practices. It is pointless and meaningless bravado to declare "but it doesn't really exist!" By that count, what does? (Laudan's main lesson stands.)

I would like to go beyond Hacking in another way, too. He places great emphasis on the existence/reality of entities, but that is not enough. We also need to think about what else we can credibly know and say about the entities. So we need to have a notion of truth, a usable one in the operable realm, to underpin our practice of making, assessing, and accepting various statements.[3] I would like to propose a *pragmatist coherence theory of truth*, according to which a statement is true if (belief in) it is needed in a coherent epistemic activity (or system of practice). This notion of truth, like the notion of reality given above, is a matter of degrees and circumstances.

These remarks are only preliminary sketches pointing to a full-fledged account, which will be published in a book titled *Realism for Realistic People*.[4] It will be framed, most of all, within a revitalized pragmatism, deploying a pragmatist (or, operational) notion of coherence to its full potential within a conception of knowledge as ability rather than as information. Rejecting traditional notions of scientific realism does not mean abandoning the pursuit of truth and reality, but revising the philosophical concepts of truth and reality to make them meaningful in scientific and everyday practice.

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References

[3] For a classic discussion in this direction, see Austin [1950] (1979).

[4] There is some affinity between my line of thought and what Kosso (1998, ch. 8) has called "realistic realism". I cannot recall whether I owe the "realistic" trope to Kosso, but I would be happy for that to be the case. The same phrase is also used by Mäki (2009), with a rather different intention.

Austin, J. L. 1979. Truth. In *Philosophical Papers*, 3rd ed., eds. J. O. Urmson and G. J. Warnock, 117-133. Oxford: Oxford University Press. Originally published in the *Proceedings of the Aristotelian Society, Supplementary Volume XXIV* (1950).

Chang, Hasok. 2012. *Is Water H_2O? Evidence, Realism and Pluralism*. Dordrecht: Springer.

Chang, Hasok. 2014. Epistemic Activities and Systems of Practice: Units of Analysis in Philosophy of Science After the Practice Turn. In *Science After the Practice Turn in the Philosophy, History and Social Studies of Science*, eds. L na Soler et al., 67-79. London and Abingdon: Routledge.

Dewey, John. 1938. *Logic: The Theory of Inquiry*. New York: Henry Holt and Company.

Fine, Arthur. 1986. *The Shaky Game: Einstein, Realism and the Quantum Theory*. Chicago: University of Chicago Press.

Hacking, Ian. 1983. *Representing and Intervening*. Cambridge: Cambridge University Press.

Kosso, Peter. 1998. *Appearance and Reality: An Introduction to the Philosophy of Physics*. New York and Oxford: Oxford University Press.

Laudan, Larry. 1981. A Confutation of Convergent Realism. *Philosophy of Science* 48(1): 19-49.

Mäki, Uskali. 2009. Realistic Realism about Unrealistic Models. In *The Oxford Handbook of Philosophy of Economics*, eds. Don Ross and Harold Kincaid, 68-98. Oxford: Oxford University Press.

Van Fraassen, Bas. 1980. *The Scientific Image*. Oxford: Clarendon Press.