

Metaphysical Problems of Physics

Lecture 10: Ontology

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1 Fine’s “The Natural Ontological Attitude”

Although I think it’s an interesting and rich paper in many ways, and it contains much I am sympathetic to, I’ll keep the discussion brief, primarily using it as a foil for my own views discussed below (§2).

1. The paper is divided into 2 parts: the first part argues that standard arguments in favor of realism beg the question in (so far) irremediable ways; the second argues for a quietist attitude towards realism in general, and ontology in particular.

2. Fine nicely sums up the traditional problem (p. 86):

Notice that the issue over realism is precisely the issue as to whether we should believe in the reality of those individuals, properties, relations, processes, and so forth, used in well-supported explanatory hypotheses.

3. against realism:

- a. IBE can’t be used to argue for realism, in so far as it itself is a form of argument used in scientific practice; to argue for meta-theoretic principles such as realism one cannot employ the same forms of argument as in science, for that would be to assume from the

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start that the form of argument at issue is not only such as to lead to success but to further assume illegitimately that it does so in virtue of conducing to and preserving truth—which is what was to be demonstrated in the first place in its role in science; therefore, one needs a stronger form of argument to support meta-theoretic principles such as realism

- b. the same problem carries over to any other form of argument used in favor of realism that is also used in science itself
 - c. the parenthetical ‘so far’ in my statement above gestures at the thought that it still lies open to the realist to produce completely novel forms of argument, stronger than those used in science—but so far this has not been accomplished
 - d. question: can the realist save her arguments by claiming that a form of argument (*e.g.*, IBE) conduces to and preserves truth in one sphere of inquiry (metaphysics) but not another (science)? that in principle would block Fine’s critique, but it would then be incumbent on her to *show* that it is conducive to and preserving of truth in the relevant sphere, and that seems at least as daunting as arguing for realism itself
4. in order to develop his own position, that we should so believe, but we should do so only in a deflationary sense, Fine diagnoses the root of the realistic urge as lying in what he calls the “homely line” (p. 95, emphasizes his):

[I]t is possible to accept the evidence of one’s senses and to accept, *in the same way*, the confirmed results of science only for a realist; hence, I should be one (and so should you!).

5. thence, he extracts the “core position” (p. 96): one “accept[s] the results of scientific investigation as ‘true’, on par with more homely truths,” *i.e.*, *in the same way* as one accepts the evidence of one’s senses
6. thus results his quietism and the Natural Ontological Attitude (‘NOA’):
 - a. accept the core position, *and nothing else* (in contradistinction to anti-realists and realists who each adds something unsupportable or unnecessary to it)—which is his quietism (p. 101, emphasizes his):

If pressed to answer the question of what, then, does it *mean* to say that something is true (or to what does the truth of so-and-so commit one), NOA will reply by pointing out the logical relations engendered by the specific claim and by focusing, then, on the concrete historical circumstances that ground that particular judgment of truth. For, after all, there *is* nothing more to say. rather than “shut up and calculate!” it advises us to “shut up and produce only arguments a physicist would accept!”
 - b. in so far as Fine’s position seems to push one towards the denial of the possible fruitfulness of contemplating foundational issues akin to traditionally metaphysical ones in physics, and so a form of pessimism, possibly even nihilism, with regard to certain kinds of philosophy, I must resist it¹

1. Stein (1995, p. 27 unpublished version, emphasis his) says it better than I could:

- c. in so far as it relies on the idea that “*those* individuals, properties, relations, processes” is an unambiguously referring phrase, I must reject it; as he says (p. 98):

When NOA counsels us to accept the results of science as true, I take it that we are to treat truth in the usual referential way, so that a sentence (or statement) is true just in case the entities referred to stand in the referred-to relations. Thus, NOA sanctions ordinary referential semantics and commits us, via truth, to the existence of the individuals, properties, relations, processes, and so forth referred to by the scientific statements that we accept as true.

- d. I can sum up a large part of my problem with NOA in one simple observation: we never disagree over what (*e.g.*) ‘Natron’ (‘baking soda’ for non-German speakers) refers to in the way we disagree in science over what ‘electron’ does²
- e. I also reject its quasi-Quinean assimilation of the epistemology appropriate to science to “homely” epistemology, which is certainly *not* a “minimal” (p. 101) philosophical position, and the concomitant idea that human perception plays an epistemically fundamental role in science; but this is not the time and place to discuss those issues

2 My “How Can Physics Bear on Ontology?”

See Curiel (2021b), the link to the slides for this lecture.

[T]here is *no* reason to believe that the importance of continued reflection *on the position attained in knowledge* [in physics and in philosophy] will itself terminate.

Happily, we will discuss this paper next week. (That is to say, it is a happy state of affairs that we will do so, and we will do it in a manner characteristic of the state of happiness.)

2. Of course one can always confabulate a story about how—the philosopher, as Philippa Foot observed, can always arrange it such that—there is doubt and dispute in everyday life about a sample of white powder, over whether or not it is sodium bicarbonate and the only recourse, the only way to resolve the dispute, is to send it to lab for spectroscopy, and so on. First, a question: when is the last time you witnessed such a thing happen *in real life*? Probably never. That leads to the most important point: the only reason anyone—a philosopher—thinks such contrived and esoteric “counter-examples” are relevant when analyzing the concept of knowledge and its conditions is because they have been corrupted by Descartes’ pathological phobia of uncertainty and its poisonous legacy: they believe that knowledge requires *certainty*, an inhuman form of certainty beyond not just all reasonable doubt but beyond the *metaphysical possibility* of doubt. (Peirce 1905a trenchantly characterizes the forms of doubt and certainty relevant to an analysis of the knowledge of real humans, not those contemplated by philosophers in their gruesome fantasies.) That inhuman, indeed incoherent, form of certainty has nothing to do with a cognitive, an epistemic state a human can achieve. Knowledge is grounded in understanding, not Cartesian certainty. And understanding may demand under rare and pathological conditions that a sample of white powder one purchased from the grocery store in a box labeled ‘Natron’ be sent to a laboratory for spectroscopy to ascertain whether or not it is sodium bicarbonate, but that does not entail that such externalized comportment is a *characteristic* form of evidential inquiry and confirmation in everyday life, as it is in science. “*Externalized*” is part of the point here—that the evidential inquiry be undertaken by means independent of one’s narrow subjective capacities and interests.

3 Invitation to a Short Essay

I invite you to write me a short discussion (no more than 2 pages, *i.e.*, no more than 1000 words) on any issue discussed in any of this week's three readings. You can raise further questions, propose answers or interpretations, or whatever seems of most interest to you. If you get it to me by the start of next lecture (13. Jul), then I will return it to you with my comments the following week.

References

- Curiel, Erik. 2021a. "How Can Physics Bear on Ontology?" Unpublished manuscript.
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- . 1905b. "What Pragmatism Is". *The Monist* xv (2): 161–181. doi:10.5840/monist190515230.
- Stein, Howard. 1995. "How Does Physics Bear Upon Metaphysics; and Why Did Plato Hold that Philosophy Cannot Be Written Down?" *Studies in History and Philosophy of Modern Physics* 72:152–161. Published in 2020. The paper was delivered by Stein as a talk at a faculty colloquium (an informal affair) of the Department of Philosophy at the University of Chicago in November 1995. A scan of Stein's original typed manuscript can be found at <<http://strangebeautiful.com/other-texts/stein-physics-and-metaphysics-original.pdf>>, doi:10.1016/j.shpsb.2020.06.004.