

## Article

# ***Eliminativism and an Argument from Science***

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Eliminative materialism is the metaphysical claim that propositional-attitude concepts, like those of belief and desire, have no genuine application to humans. Barbara Hannan has done an admirable job of presenting a range of arguments against this seductive position. Although, like Hannan, I am an anti-eliminativist, I want to do more here than simply to cheer her on. Rather, I want to try to advance the discussion by organizing my comments around a simple but profound argument that seems to lie at the root of eliminative materialism.

### *An Eliminativist Argument From Science*

- (P1) Propositional-attitude concepts genuinely apply to humans if and only if they are underwritten by the best science of the mind.
  - (P2) The best science of the mind will not underwrite propositional-attitude concepts.
- Therefore,
- (C) Propositional-attitude concepts do not genuinely apply to humans.

For purposes of discussing this Argument from Science, assume that *the best science* of the mind, even if it lies in the distant future, will be continuous (in some unspecified sense) with current natural science. Also, say that the best science of the mind will *underwrite* propositional-attitude concepts if it regards possession of internal states with propositional content as causal powers of objects in its domain. Finally, regard the force

of 'genuinely' in the expression 'genuinely apply' as ensuring that the issue is whether humans really have attitudes, not just whether it is useful to attribute attitudes. The eliminativist may be happy to accord some kind of second-class status to propositional attitudes, while denying that propositional-attitude concepts *genuinely apply* to humans.

Since the Argument from Science is valid, the anti-eliminativist must reject one of its premises, (P1) or (P2). Although (P2) is typically taken by anti-eliminativists to be the controversial premise,<sup>1</sup> I want to shift attention to (P1) as the real culprit. To that end, I shall first examine those of Hannan's arguments that may be deployed against (P2), and then argue that (P1) is the better (and far more interesting) target for anti-eliminativists.

### 1. *The Character of a Science of the Mind*

(P2) is an empirical prediction about the future of scientific psychology. Of the many useful arguments offered by Hannan, I shall begin by focusing on what may be cast as a counter-argument to (P2). Here is a reconstruction of Hannan:<sup>2</sup>

#### *An Anti-Eliminativist Argument from Cognition*

Part I:

- (1) A science of the mind explains cognition (as it really is).
- (2) There are no foreseeable alternatives to our current understanding of the concept of cognition.

Therefore,

- (3) A science of the mind explains cognition (as currently understood).

Part II:

- (4) Cognition (as currently understood) involves rational capacities.
- (5) '[R]ational capacities (qua rational, qua cognitive) cannot be explained . . . except by reference to [internal] states described as possessing . . . propositional content.'

Therefore,

- (6) A science of the mind must posit internal states possessing propositional content.

Thus, if this argument elicited from Hannan is correct, from 'the very concept of cognition (as that concept is currently understood)', we can conclude that if there is a science of the mind at all, it will posit internal

<sup>1</sup> For example, see Horgan and Woodward (1985), and Fodor (1987).

<sup>2</sup> Hannan summarizes this argument in reverse order from my reconstruction; see p. 175.

states possessing propositional content, and hence that a science of the mind will underwrite propositional-attitude concepts in the sense indicated above. In that case, (P2) is false.

How good is the Anti-Eliminativist Argument from Cognition against (P2)? Although I believe that eliminativism is way off the mark, I also believe that the Argument from Cognition has little force against the eliminativist, who may be expected to reject both parts. For both parts make assumptions about concepts that are unacceptable to eliminativists.

One hypothetical reply to Part I is a familiar eliminativist refrain: Even if cognition is the subject matter of a science of the mind, it does not follow from the fact that we now foresee no alternative to our current understanding of cognition that cognition as currently understood is the subject matter of a science of the mind. Who knows what new understanding of cognition a science of the mind might yield? Moreover, Part I does not live up to its pragmatic billing. For a (scientific) pragmatist would deny that one can say *a priori* what the explananda of a science are in advance of development of the science: A science may set out to explain the impetus that keeps things in motion and end up abandoning the notion of impetus altogether.

A hypothetical eliminativist reply to Part II is also familiar: Part II is a wholly *a priori* argument, one not in the spirit of the scientific pragmatism associated with eliminativism at all. Indeed, the premises about the relations between concepts (*e.g.* between the concept of cognition and the concept of rationality) seem to presuppose an untenable analytic/synthetic (or scheme/content) distinction.

So, we should not expect an eliminativist to be moved by the Argument from Cognition. The replies that I have just put in the mouth of the hypothetical eliminativist, of course, may not satisfy the anti-eliminativist at all. One difficulty about the issues surrounding eliminativism is that each party makes assumptions that the other rejects—whence the stout conviction on each side that the other begs the question. However, I want to bring out another difficulty in Part II of the Anti-Eliminativist Argument from Cognition, a non-partisan difficulty of a sort that runs through the whole field of philosophy of mind. The difficulty is that in a single context, a term is used both in its everyday sense, with minimal theoretical commitment, and also in a more technical sense defined by a particular theory.

The argument to the conclusion that a science of the mind will posit internal states possessing propositional content rests on an equivocation on 'rational'. 'Rational' cannot be interpreted so that both (4) and (5) turn out to be unproblematically true. If we take 'rational' in a pre-theoretical sense, so that most everybody would agree on which were rational capacities, then (4) is unproblematically true. But in the sense of 'rational capacities' that would make (4) true, (5) would become just what is at issue: whether explanation of rational capacities, understood in the everyday way, requires reference to internal states possessing propositional content would be the question, and hence (5) would not be available as a premise in the argument.

On the other hand, the only way to make (5) unproblematic is to refuse to accept any explanation of rational capacities without reference to internal states with propositional content. (Since no one has even begun to show how to assign propositional content to internal states one-by-one in any general way, we have no empirical evidence for (5).) But then, if we took 'rational capacities' in this sense, so that (5) is unproblematically true, then (4) would become just what is at issue: whether rational-capacities-whose-explanation-requires-reference-to-internal-states-with-propositional-content are involved in cognition as currently understood would be the question, and hence, (4) would not be available as a premise in the argument. On either interpretation of 'rational capacities', a question is begged.

The equivocation is abetted by Hannan's appeal to the stimulus-independence of rational acts. Hannan cites Pylyshyn's example of someone's running from a burning building as exhibiting 'stimulus-independence' in order to support (4), the premise that cognition involves rational capacities. But stimulus-independence does not seem to suffice for rationality in the sense relevant to (5): a guided missile may exhibit stimulus-independence (at least of a sort): yet it does not follow that rocket science must posit internal states possessing propositional content.

Therefore, I do not think that the Anti-Eliminativism Argument from Cognition against (P2), as I have reconstructed it from Hannan's article, succeeds. Should the anti-eliminativist look for other arguments against (P2)? I think not. (P2) seems to be straightforward empirical prediction (at least once we have specified exactly what counts as underwriting a concept). In light of the recent successes of the connectionist research program, it seems to me imprudent for anti-eliminativists to put all their money on the falsity of (P2). There is too much flux in current research to be at all confident about the character of the science that will emerge. Therefore, in the current situation, agnosticism about (P2) seems to be in order.

## 2. *The Consequences of a Science of the Mind*

Does agnosticism about (P2) lead to agnosticism about eliminativism? Not at all. One reason for setting out the Eliminativist Argument from Science explicitly is to bring (P1) to the forefront. It is only when conjoined with (P1) that (P2) entails eliminativism, but (P1) apparently has seemed too obvious to need defense. ((P1) is of independent interest since many anti-eliminativists share the enthusiasm for it.<sup>3</sup>) Presumably, in the fullness of time, there will be decisive evidence either for or against (P2). But (P1)

<sup>3</sup> For example, see Perebloom and Kornblith (1991).

is not susceptible to such empirical confirmation or disconfirmation. So, what grounds are there for assessing (P1)?<sup>4</sup>

Let us begin with considerations that may be thought to favor (P1). I can think of two: first, (P1) may be thought to be grounded in the thesis that commonsense psychology is a protoscientific theory in competition with mature scientific theories; second, (P1) may be thought to be grounded in an overarching metaphysical thesis. I shall consider each in turn.

(P1) has garnered support from the assumption that commonsense propositional-attitude psychology is a rival of mature scientific theories. For if commonsense propositional-attitude psychology rivals mature theories, then it is liable to be supplanted by them—as Ptolemaic astronomy was supplanted by Copernican astronomy. Hannan has arguments against what she calls the 'folk-theory-theory.' If Hannan is correct—and I think that she is<sup>5</sup>—we must understand the import of her arguments against the 'folk-theory-theory' for (P1). In rejecting the claim that 'commonsense propositional-attitude psychology is a protoscientific empirical theory', she knocks out an important source of support for (P1), but she does not thereby refute (P1). (She does not claim otherwise.)

For suppose that in attributing propositional attitudes, we are not deploying a theory, we are engaging in a kind of play-acting ('If I were in her shoes, I'd . . .'); and suppose that the best science of the mind turns out to explain commonsense psychology in terms of 'simulation theory'.<sup>6</sup> Simulation theory may well posit internal states possessing propositional content, and hence underwrite propositional-attitude concepts in the relevant sense. So, the fact (if it is a fact) that commonsense psychology is not itself a theory would not falsify (P1). If the best science of the mind were a simulation theory that posited internal states possessing content, that outcome would falsify (P2), but would leave (P1) intact.

Arguments against the 'folk theory' conception, then, deprive the proponent of (P1) of one important ground of support. Are there other sources of support for (P1)? I think so. Indeed, I think that (P1) has roots in a comprehensive metaphysical outlook.

<sup>4</sup> For an argument that may be seen as aimed directly against (P1), see Horgan and Graham (1991). Arguments in Chapters 6 and 7 of my (1987) also undermine (P1).

<sup>5</sup> I have offered extended arguments against construing commonsense psychology as a theory in competition with scientific theories in 'The Myth of Folk Psychology' and in 'The Cognitive Status of Commonsense', presented at various university colloquia (Michigan at Ann Arbor, Colorado at Boulder, California at Davis, California at Riverside, Davidson College, McGill, Ohio State, Connecticut at Storrs) in 1989–91. 'The Myth of Folk Psychology' was the invited address at The Creighton Club in 1990, and is printed in its Proceedings.

<sup>6</sup> For example, see Gordon (1986) and Goldman (1992).

### 3. On a Metaphysical Thesis

(P1) is an instance of a very broad thesis, one shared by eliminativists and many anti-eliminativists alike. The general thesis is this:

(GT) A concept has genuine application if and only if it is underwritten by the best science of the relevant domain.

Say that a science *S* *underwrites* a concept *F* if and only if, for any *x* in the domain of *S*, according to *S*, *x*'s being *F* is a causal power of *x*.

Although I have no knock-down argument against (GT), I want to present reasons to reject it. The only argument that I know of in favor of (GT) is an inductive argument from the history of science. I have never seen the argument stated carefully, and I am not confident about how to state it myself. However, here is a stab: 'The history of science is the history of progressive expansion of the domains of science. Time and again, phenomena previously thought beyond the reach of science have been found to have scientific explanations. (e.g. Darwin paved the way for a scientific explanation of human life, Freud for a scientific explanation of the human psyche.) So [the argument goes] we have good inductive reason to think that every phenomenon will ultimately be in the domain of some science, and any putative phenomenon that resists incorporation into science (in the long run) is to be deemed illusory. In that case, a concept genuinely applies to an object if and only if it is underwritten by the best science of the relevant domain.'

My Reply: The conclusion of this argument for (GT) seems far to outstrip what is warranted by the premises. Consider the concept of being a portrait. According to (GT), either nothing has ever been a portrait or some science underwrites the concept of being a portrait. There is no current scientific theory that regards being a portrait as a causal power, as far as I know. (Sociology and economics would be the best candidates, but I do not believe that the property of being a portrait is taxonomic in either.) So, I tentatively conclude, no science underwrites the concept of being a portrait.

However, someone may reason like this: We should liberalize the idea of a concept's being underwritten by a science. Although we have and probably never will have a science of portraits, if there are any portraits, they are physical objects and all physical objects are in the domain of physics. Thus, for any intuitively correct attribution of the property of being a portrait, there are physical properties that (in some sense) underwrite the concept of being a portrait.

This line of reasoning is misguided, for it would allow physics to underwrite any concept whatever that purports to apply to a physical object. Consider, for example, the concept of being a witch, which presumably genuinely applies to nothing. The same line of reasoning just used to show that physics underwrites (in some unspecified sense) the concept

of portraits will also show that physics underwrites (in that same sense) the concept of witches.

Compare: 'Although we do not have and probably never will have a science of witches, if there are any witches, they are physical objects and all physical objects are in the domain of physics. Thus, physics underwrites the concept of being a witch.' Of course, physics does no such thing—for the concept of being a witch or for the concept of being a portrait. The reasoning that would allow physics to underwrite portraits but not witches is circular. For it does not distinguish between being a portrait and being a witch—unless one antecedently assumes that there are portraits and not witches, and that (GT) is true.

Objects in the domain of physics, *e.g.* ordinary observable objects, may have ascribed to them properties about which physics is silent. Some such concepts (*e.g.* that of being a portrait) may have genuine application and others (*e.g.* that of being a witch) may not. What determines whether or not there are portraits is not some underlying mechanism that is discoverable by physics.<sup>7</sup> Genuine applicability of 'portrait' simply does not require approval by any of the sciences. I know of no sense of 'underwrites' in which physics would underwrite the concept of portraits without also underwriting the concept of witches. Hence, I conclude that no current science underwrites the concept of portraits.

If the argument for (GT) were a good one, the premises would provide inductive reason to suspend judgment about whether the concept of being a portrait has ever genuinely applied to anything, about whether there really are any portraits. Ridiculous! The past successes of science provide no reason at all to suspend judgment about the existence of portraits of George Washington.

The multitude of examples like that of being a portrait weakens considerably the inductive argument for (GT). Moreover, there is an inductive counter-argument that goes against (GT): Scientific advances have always taken place against a background of extra-scientific assumptions, the making of which presupposes genuine applicability of concepts that show no sign of ever being underwritten by science—*e.g.* the concept of being an hypothesis, the concept of being nonfraudulent, the concept of performing an experiment. It is difficult to see how science could proceed at all if nothing really were an hypothesis, no results ever nonfraudulent, nobody ever really performed an experiment. The progress of science so far itself presupposes genuine applicability of concepts that are not now or in the foreseeable future underwritten by any science. Thus, we have reason to think that science will always presuppose genuine applicability of concepts not underwritten by the best science in the domain. In that case, we have inductive reason to think that (GT) is false.

<sup>7</sup> Similarly, what determines whether or not there are beliefs is not some underlying mechanism determined by scientific psychology. And this claim about beliefs no more leads to dualism than does the corresponding claim about portraits.

Some may be reluctant to give up (GT) on the grounds that it seems to be part of the contemporary scientific world view. But notice how much of that world view survives the abandonment of (GT)—an industrial-strength thesis if interpreted nontrivially. First, (GT) is much stronger than old-fashioned scientific realism, according to which theoretical entities like quarks are assigned ontological status. The thesis (GT) is not just that *all* concepts underwritten by the best science have genuine application, but also that *only* concepts underwritten by the best science have genuine application. One may be an old-fashioned scientific realist as opposed to an instrumentalist—one may still suppose that there are quarks—without being committed to the thesis. (Putnam, I think, would be in this position.)<sup>8</sup>

Second, (GT) is stronger than a rejection of foundationalism, or rejection of a neutral observation language. For one may deny that there is a comprehensive observation/theory distinction and thus deny that there is a neutral observation language, without being committed to the thesis. (The later Wittgenstein, I believe, would be in this position.)<sup>9</sup> Third, (GT) is stronger than mere materialism. For (GT) concerns not the constitution, but the organization, of reality. One may endorse materialism, in the sense that there is nothing other than matter and the void, or in the sense that everything globally supervenes on the physical, without being committed to (GT). (Davidson, I believe, would be in this position.)<sup>10</sup> So, one may give up (GT) and still be a materialist, an anti-foundationalist, and a scientific realist.

If (GT) is false, what are the conditions under which concepts are nonempty? The question is misguided. It admits of no general nontrivial answer. The general trivial answer is pragmatic: we say that concepts have genuine applicability when they are indispensable for our cognitive, moral, legal, social, artistic and other enterprises. This suggests that there are more routes to reality than the disciplinary sciences, that complex interaction with the world is also likely to illuminate. Therefore, no comprehensive metaphysical thesis for genuine applicability of concepts—such as (GT)—is needed or plausible.

#### 4. Conclusion

The Eliminativist Argument from Science is valid. So, if eliminative materialism is false, then at least one of the premises—(P1) or (P2)—is false.

<sup>8</sup> Putnam has said (1984, p. 141): '[I]f a scientific realist is one who believes, among other things, that all knowledge worthy of the name is part of science, then I am not a scientific realist.'

<sup>9</sup> See Wittgenstein's *Philosophical Investigations* (1953), *passim*.

<sup>10</sup> According to Davidson's 'anomalous monism', mental events, which are physical events described in a certain vocabulary, are not governed by strict laws. See, for example, Davidson (1980).

Typically, anti-eliminativists, including Hannan, take aim at (P2). But (P2) may well be true. Hence, the better target for the anti-eliminativist is (P1). (P1) has been assumed to be true, often on the further assumption that commonsense propositional-attitude psychology is a 'folk-theory' in competition with mature scientific theories.

Although Hannan rebuts the 'folk-theory-theory', there remains another ground for (P1). (P1) is part of a general metaphysical outlook, which I presented schematically as (GT). (GT) is important in its own right inasmuch as it is a fundamental (and usually tacit) assumption underlying much scientific and philosophical theorizing. I tried to show that the inductive argument for (GT) is weak and that there are at least as good inductive grounds for rejecting (GT). Moreover, (GT) can be rejected without giving up other theses like materialism and scientific realism. Without (GT), the Eliminativist Argument from Science—which is perhaps the most basic argument for eliminativism—collapses.<sup>11</sup>

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