Philosophy and Phenomenological Research
Vol. LVIII, No. 4, December 1998

Attitudes Without Propositions[1]

MARK BALAGUER
California State University, Los Angeles

This paper develops a novel version of anti-platonism, called *semantic fictionalism*. The view is a response to the platonist argument that we need to countenance propositions to account for the truth of sentences containing 'that'-clause singular terms, e.g., sentences of the form 'x believes that p' and 'σ means that p'. Briefly, the view is that (a) platonists are right that 'that'-clauses purport to refer to propositions, but (b) there are no such things as propositions, and hence, (c) 'that'-clause-containing sentences of the above sort are not true—they are useful fictions. Semantic fictionalism is an extension of Hartry Field's mathematical fictionalism, but my defense of the view is not analogous to his. One of the many virtues of my defense is its generality: it explains how we can adopt a fictionalist stance towards *all* abstract singular terms, e.g., mathematical singular terms and 'that'-clauses.

1. INTRODUCTION

Most of the traditional arguments for the existence of abstract objects (i.e., non-physical, non-mental, non-spatio-temporal objects) can be understood as inferences to the best explanation. Platonists argue that some phenomenon (e.g., resemblance) can only be explained by appealing to abstract objects of some sort (e.g., universals) and conclude from this that there must actually *be* some abstract objects. One such argument holds that we need to countenance *propositions*[2] to account for the truth of various sentences containing 'that'-clauses, e.g., sentences of the form 'x believes that p'. (Arguments of this kind can be traced back at least to Frege, but the version I will describe here is most closely related to the versions developed recently by George Bealer

[1] This paper was read at the City University of New York Graduate Center in April, 1996, where I received several helpful comments from various members of the audience, most notably Jerrold Katz. I also received very helpful written comments on an earlier draft of the paper from Seth Crook, Russell Dale, Hartry Field, Bob Hanna, and Adam Vinueza. I would like to thank all of these people.

[2] There are various views of the nature of propositions, but it won't matter here which of these views is correct, because the only feature of propositions that will be relevant to my argument is their abstractness, and this is something that all the standard views agree upon.

and Stephen Schiffer.[3]) In this paper, I will respond to all arguments of this general kind. I will do this not by arguing that we can account for the fact in question—i.e., the fact that there are true 'that'-clause-containing sentences—*without* appealing to propositions, but rather, by arguing that we have no good reason to suppose that there really is a fact here at all. Thus, I will be introducing what I think is a fairly novel version of anti-platonism, one which (a) admits that platonists are *right* about the truth conditions of 'that'-clause-containing sentences (i.e., admits that such sentences really are "about"[4] propositions) but nonetheless, (b) maintains that there are no such things as propositions, and thus, (c) concludes that the truth-conditions of 'that'-clause-containing sentences are never *satisfied*—i.e., *that there are no true 'that'-clause-containing sentences* (except for those which are *vacuously* true). I will call this view *semantic fictionalism*.

Now, *prima facie*, semantic fictionalism might seem wildly implausible or even downright crazy. But we can dispense with this *prima facie* worry and lay bare a certain attractiveness to semantic fictionalism by bringing out some of the parallels between it and Hartry Field's *mathematical* fictionalism.[5] I take this up in section 2. I also lay out the Frege-Bealer-Schiffer argument there and say a few words about my response to that argument before giving the meat of the response in section 3. The stance I adopt in sections 2 and 3 requires me to reply to an argument that is closely related to the Frege-Bealer-Schiffer argument, viz., the argument that we need to countenance propositions to account for the meaningfulness of sentences. (This argument also goes back at least to Frege; a contemporary advocate is Jerrold Katz.[6]) I respond to this argument in section 4 by merely extending the position developed in sections 2 and 3.

3 See Gottlob Frege, "Ueber Sinn und Bedeutung," translated by H. Feigl as "On Sense and Nominatum" in *Philosophy of Language*, ed. A.P. Martinich (Oxford: Oxford University Press, 1990); and George Bealer, "Universals," *Journal of Philosophy*, 90 (1993): 5–32; and Stephen Schiffer, "A Paradox of Meaning," *Nous*, 28 (1994): 279–324. Chapters 4 and 5 of Schiffer's *Remnants of Meaning* (Cambridge, Massachusetts: MIT Press, 1987) are also relevant here, although his overall point there is different.

4 On the use of the term 'about' that I adopt in this paper, the claim that a sentence σ is about an object x does *not* entail that x exists. Thus, for instance, 'Oliver Twist was a boy' is about Oliver Twist, even though there was never any such person. In order to remind the reader that I am using 'about' in this way, I will try to put scare quotes around that word whenever I say that a sentence is about an object whose existence is in question.

5 See Hartry Field, *Science Without Numbers* (Princeton: Princeton University Press, 1980).

6 See Jerrold Katz, "Common Sense in Semantics," in *New Directions in Semantics*, ed. E. LePore (London: Academic Press, 1987).

2. MATHEMATICAL FICTIONALISM AND SEMANTIC FICTIONALISM

There is a famous Fregean argument for mathematical platonism that proceeds by arguing that we need to countenance abstract mathematical objects to account for the truth of mathematical sentences.[7] For example, it is claimed if we grant that

(1) 3 is prime

is true, then we also have to grant that there is such a thing as the number 3 (and that it is an abstract object). The best response to this argument, in my opinion, is the one given by mathematical fictionalists. The idea here is to *grant* the central claim of the Fregean argument—that *if* sentences like (1) are true, then there are abstract mathematical objects and platonism is true—but to maintain that sentences like (1) are simply *not* true. The reason such sentences are not true, according to fictionalism, is that there are no such things as mathematical objects. In other words, the problem is that mathematical singular terms, e.g., '3', are *vacuous*, i.e., fail to refer. Thus, (1) is false (or not true[8]) for the same reason that 'Oliver Twist lived in London' is false—because just as there was never any such person as Oliver Twist, so there is no such thing as 3.[9]

(One might worry that by taking this line, we lose the distinction between mathematically sound sentences like (1) and mathematically unsound sentences like '4 is prime'. But as Field has shown, we can block this worry by merely noting that '3 is prime' is true-in-the-story-of-mathematics, whereas '4 is prime' is not—just as 'Oliver lived in London' is true-in-the-story-of-*Oliver-Twist*, whereas 'Oliver lived in Paris' is not.[10] The *real* worry about

7 See Gottlob Frege, *Der Grundlagen die Arithmetic*, translated by J. L. Austin as *The Foundations of Arithmetic* (Oxford: Basil Blackwell, 1953).

8 That sentences like (1) are *false* is not essential to mathematical fictionalism. What is essential to that view is that (a) there are no mathematical objects, and hence, (b) mathematical singular terms are *vacuous*. Whether this means that sentences like (1) are false, or lacking a truth value, or something else, depends upon our theory of vacuity. I will adopt the view that such sentences are *false*, but nothing important will turn on this.

9 Fictionalists allow that *some* mathematical sentences—e.g., 'If 3 is prime, then 3 is prime'—are true, because they are *vacuously* true. I will ignore this complication and speak as if fictionalists believe that *all* mathematical sentences are false.

10 What does it mean to say: "The sentence σ is true-in-the-story-Σ"? The best and most straightforward interpretation is to take this as saying that a certain sentence type (viz., σ) is a member of a certain set of sentence types (viz., Σ). Now, given this, it might seem that the appeal to the predicate '…is-true-in-the-story-of-mathematics' has not provided fictionalists with a way of distinguishing '3 is prime' from '4 is prime'. For since sentence types and sets of sentence types are *abstract objects*, it seems that fictionalists have to maintain that

"'3 is prime' is true-in-the-story-of-mathematics"

and

"'4 is prime' is true-in-the-story-of-mathematics"

fictionalism is that it seems incompatible with the *applicability* of mathematics. I will return to this shortly.)

Semantic fictionalism can be developed in an exactly analogous way. Corresponding to the Fregean argument that we need to endorse platonism to account for the truth of *mathematical* sentences is the Frege-Bealer-Schiffer argument that we need to endorse platonism to account for the truth of *'that'-clause-containing* sentences (or as I will call them from now on, *'that'-sentences*). The Frege-Bealer-Schiffer argument proceeds in two steps: first, it is argued that 'that'-clauses are referential singular terms, and second, it is argued that the only things that could be the referents of 'that'-clauses are propositions. The first step is motivated by appealing to certain valid arguments, e.g.,

Jenny believes that Idgie is a dog

Therefore, Jenny believes something

Platonists claim that the only way to account for the validity of this argument is to treat it as an existential generalization, i.e., to take the logical form of the argument to be:

B(j, the referent of 'that Idgie is a dog')

$\therefore (\exists x)B(j, x)$

where 'j' denotes Jenny and 'B' expresses a two-place belief relation. But if this is right, then it seems that we have no choice but to conclude that 'that Idgie is a dog' is a referential singular term. The second premise of the Frege-Bealer-Schiffer argument—that the only things that could be the referents of 'that'-clauses are propositions—is motivated simply by ruling out all of the competitors, i.e., by arguing that things like facts, public-language sentences, and private-language sentences couldn't be the referents of 'that'-clauses. Several different reasons have been given, by various philosophers, for concluding that such things could not be the referents of 'that'-clauses; I will not discuss any of these reasons here, because I am going to concede this point to platonists.

Now, just as anti-platonists can respond to the Fregean argument for mathematical platonism by endorsing mathematical fictionalism, so too, they can respond to the Frege-Bealer-Schiffer argument by endorsing semantic fictionalism. The idea here is to *grant* the two central premises of the Frege-Bealer-Schiffer argument—that 'that'-clauses are referential singular terms and that the only plausible suggestion about what they might refer to is the platonistic suggestion that they refer to propositions—but to maintain that since there are, in fact, no such things as propositions, 'that'-clauses are vacuous terms. In other words, semantic fictionalists admit that 'that'-clauses *purport* to refer to propositions, but they maintain that, in point of fact, they do not refer at all. And so just as mathematical fictionalists hold that mathematical sentences like (1) are false (or not true), semantic fictionalists hold that 'that'-sentences like

(2) That O. J. is a bachelor entails that O. J. is unmarried

are false (or not true).

(The parallel between semantic fictionalism and mathematical fictionalism is really quite deep. For instance, like mathematical fictionalists, semantic fictionalists acknowledge that *some* 'that'-sentences—e.g., 'If I believe that birds fly, then I believe that birds fly'—are vacuously true (although, again, I will usually ignore this complication and speak as if they hold that *all* 'that'-sentences are false). And semantic fictionalists distinguish sentences like (2) from sentences like 'That O. J. is a bachelor entails that O. J. is a murderer' by pointing out that the former, but not the latter, are true-in-the-story-of-propositions.)

It seems to me, then, that by endorsing semantic fictionalism, anti-platonists succeed in putting the ball back into the platonist court. The question now is what *argument* there is for the truth of 'that'-sentences like (2). The central thesis that I will try to motivate in this paper is that *platonists do not have any good argument here at all.*

Before beginning my argument for this thesis, I would like to make two points. First, one might think that platonists don't *need* an argument here, that it is simply obvious that 'that'-sentences like (2)—and mathematical sentences like (1)—are true. This, I think, is just wrong. If the two central premises of the Frege-Bealer-Schiffer argument are correct—and platonists and fictionalists both think that they are—then sentences like (1) and (2) could *only* be true if there exist abstract objects. But the question of whether there exist abstract objects is controversial and non-obvious. Thus, (1) and (2) are

are on all fours. (In particular, they have to maintain that both of these sentences are, like purely mathematical sentences, fictional—i.e., strictly speaking false.) We can solve this problem by turning our attention to certain *concrete* objects that fictionalists *do* believe in, namely, *tokens* of '3 is prime' and '4 is prime'. Fictionalists maintain that tokens of '3 is prime' have a certain property that tokens of '4 is prime' do not have. We can describe this property in *platonistic* terms as the property of being a token of a type that is true-in-the-story-of-mathematics. But it seems that fictionalists need a *nominalistic* description of this property. The problem here is a special case of the general problem of the *applicability* of mathematics (and other abstract-object talk), for the problem there is precisely that there are features of the physical world that seem describable in platonistic terms only. I will explain how fictionalists can solve this general problem in section 3, and it will be obvious that the special case under discussion here can be solved in the same way.

also controversial and non-obvious.[11] The second point I want to make is that in establishing that platonists have no argument for the truth of 'that'-sentences like (2), I will not be arguing that semantic fictionalism is true, or even that it's superior to platonism. I will merely be defending it against a certain attack (or as I put it above, blocking a certain argument for platonism). In the end, I do not favor semantic fictionalism over platonism, because I do not think there are any good arguments for the *falsity* of 'that'-sentences. Thus, what I think is that the Frege-Bealer-Schiffer argument shows that *either* platonism *or* semantic fictionalism is true but that we don't have any good argument that tells us *which one* is true.

In any event, I begin my discussion by asking how platonists might try to argue that some (non-vacuous) 'that'-sentences are true. The best platonist strategy here—indeed, the only promising strategy—is to construct an argument analogous to the one they have used in the mathematical case, i.e., the argument they have used to motivate the claim that mathematical sentences like (1) are true. The argument I have in mind is the *Quine-Putnam indispensability argument*,[12] which holds (in a nutshell) that we have to allow that at least some mathematical sentences and theories are true, because they are indispensable parts of certain *empirical* theories that we believe to be true. This argument can be used to motivate the truth of various 'that'-sentences as well as mathematical sentences. For while 'that'-clause singular terms are not used as frequently in empirical science as mathematical singular terms are, they do appear is some of our empirical theories, most notably *belief psychology*, which uses sentences like

(3) Floyd believes that Bill Clinton is president

to explain human behavior.

(Some people doubt that folk concepts like 'believes' belong in a mature scientific psychology, but this issue is entirely irrelevant here. It doesn't matter whether sentences like (3) belong in scientific theory. All that matters is that such sentences seem to express *facts* about the belief states of people like Floyd and, indeed, that they seem *indispensable* to the project of characterizing these facts. Whether they are indispensable to *scientific theory* doesn't really matter, although I will couch my discussion in those terms.)

11 Something else which semantic fictionalists reject—but which might have seemed obvious, pre-theoretically—is the inference from 'Fa' to 'That Fa is true'. But again, the invalidity of this inference is forced on us by the platonist's *own* argument; for the Frege-Bealer-Schiffer argument shows that whereas 'Fa' is about a, 'That Fa is true' is about the proposition that Fa.

12 See the last section of W. V. O. Quine, "Two Dogmas of Empiricism," reprinted in *From a Logical Point of View* (New York: Harper and Row, 1961); and chapters V-VIII of Hillary Putnam, *The Philosophy of Logic* (New York: Harper and Row, 1971).

How can fictionalists respond to this indispensability argument? Well, Field has responded to the version of the argument that's directed against *mathematical* fictionalism by arguing that our mathematical theories are, in fact, *not* indispensable to empirical science. He maintains that our empirical theories can be *nominalized*—i.e., reformulated in a way that (a) makes no reference to, or quantification over, mathematical objects and (b) is still theoretically attractive—and that we should only endorse the truth of the nominalized versions of these theories. There have been a number of objections to Field's argument, however, and it is not at all clear that it succeeds.[13] Moreover, even if it succeeds in the mathematical case, it is difficult to see how it could be generalized, so that it would apply to the case of 'that'-sentences as well as to mathematics. But none of this matters, because there is another strategy that fictionalists can employ here: they can *admit* that our empirical theories make indispensable use of mathematics and simply *account* for this in fictionalist terms. I have provided such an explanation elsewhere.[14] In the next section, I will show that this explanation can be generalized, so that it is an account not just of the use that physics makes of mathematical objects, but also the use that belief psychology makes of propositions, and indeed, the use that empirical science makes of abstract objects.

3. A FICTIONALIST ACCOUNT OF BELIEF

I need to provide a fictionalist account of the (dispensable and indispensable) applications of our platonistic theories (e.g., the "theory of propositions") to our empirical theories (e.g., the "theory of belief psychology"). I will assume here that in doing this, I need to maintain some sort of *realism* about empirical science. That is, I will assume that it is not acceptable for fictionalists to claim that the reason fictional platonistic theories are applicable to empirical science is that empirical science is *also* fictional (i.e., that this applicability should seem no more surprising than does the applicability of "Rambo II" to "Rambo III"). I cannot discuss why I think this response is unacceptable, but in a nutshell, the reason is that I think full-blown scientific anti-realism is an untenable view. That is, I think that our scientific theories do express truths about the physical world. Thus, the challenge facing fictionalists is to locate a version of scientific realism that does not simply assert the truth of our empirical theories (because *that* version of realism commits to the existence of abstracta). The challenge is to explain how we can maintain that our

13 Most of these objections are discussed by David Malament in his review of Field's book in *The Journal of Philosophy*, 79 (1982): 523–34. I block one of these objections—viz., the objection that Field's method cannot be extended to cover quantum mechanics—in my "Towards a Nominalization of Quantum Mechanics," *Mind*, 105 (1996): 209–26.

14 See chapter VII of my *Platonism and Anti-Platonism in Mathematics* (New York: Oxford University Press, 1998); or see my "A Fictionalist Account of the Indispensable Applications of Mathematics," *Philosophical Studies*, 83 (1996): 291–314.

empirical theories are *strictly speaking* false without committing to the implausible claim that there are no truths "buried" in these theories.

My proposal is that fictionalists can endorse what I will call *nominalistic scientific realism*, the view that the nominalistic content of empirical science—i.e., what empirical science entails about the physical world—is true (or *mostly* true—there may be some mistakes scattered through it), while its platonistic content—i.e., what it entails "about" a platonic realm of abstract objects—is false. The reason this view is a genuine form of scientific *realism* is that it endorses the "*complete picture*" that empirical science paints of the physical world, *including* the parts about so-called "theoretical entities", e.g., electrons.

There is an immediate worry about nominalistic scientific realism that can be expressed in two different ways. First, one might claim that if *everything* empirical science says about the platonic realm is fictional, then much of what it says about the physical world will come out false, and hence, even if we preserve *some* of what empirical science says about the physical world, we will not preserve it all, i.e., we will not preserve the *complete picture* that empirical science paints of the physical world. Second, one might claim that if everything empirical science entails about the physical world is true, then what it entails about the platonic realm must also be true. Both claims arise from the single worry that it is not possible to *separate* the nominalistic content of empirical science from its platonistic content. I will respond to both sides of this worry by arguing that this *is* possible; more specifically, I will argue that

(NC) Empirical science has a purely nominalistic content that captures its "complete picture" of the physical world,

and

(COH) It is coherent and sensible to maintain that the nominalistic content of empirical science is true and the platonistic content of empirical science is fictional.

(It might seem that this stance commits me to the claim that empirical science can be *nominalized*, but we will see that it does not.) In any event, by arguing for (NC) and (COH), I will essentially be arguing that nominalistic scientific realism is a coherent view. Now, I will also argue that it's a *plausible* view, but I don't need to show that it's *true*, because I'm not trying to show that *fictionalism* is true. All I want to show is that we have no good reason to *reject* these two views.

My argument for (NC) and (COH) is based upon the obvious fact that abstract objects (if there *are* such things) are not causally related to anything in the physical world. Notice, first, that if we assume that (NC) is true, then

the causal inertness of abstract objects suggests that (COH) is *also* true, because it suggests that the truth value of the platonistic content of empirical science is simply *irrelevant* to the truth value of its nominalistic content. We can think of it this way: if all the abstract objects in platonic heaven suddenly *disappeared*, nothing would change in the physical world; thus, if empirical science is true right now, then its nominalistic content would *remain* true, even if the platonic realm disappeared; but this suggests that if there never existed any abstract objects to *begin* with, the nominalistic content of empirical science could nonetheless be true.

But the main point that needs to be made here is that the appeal to causal isolation lends support to (NC) as well as to (COH). To put the argument very *quickly*, it is this. Empirical science *knows*, so to speak, that abstract objects are causally inert. That is, it does not assign a causal role to any abstract entities. Thus, it seems that empirical science *predicts* that the behavior of the physical world is not dependent in any way upon the existence of abstract objects. And this suggests that what empirical science says about the physical world—i.e., its complete picture of the physical world—could be true even if there aren't any abstract objects. That is, it suggests that (NC) and (COH) are *both* true.

Now, as a segue into a more complete and adequate statement of the argument, consider the following objection. "You seem to be assuming that because empirical science doesn't ascribe any *causal* role to abstract objects, it doesn't ascribe any role to them at all. But this is wrong: in giving its picture of the physical world, part of what empirical science tells us is that certain physical systems are related in certain *non-causal* ways to certain abstract objects. Consider, for example, the sentence

(4) The physical system S is forty degrees Celsius.

You are quite right that in making this claim, we do not mean to assign any causal role to the number 40—that we do not mean to suggest that the number 40 is *responsible* in any way for S's having the temperature it has. But nonetheless, we *are* saying something that *involves* the number 40: we are saying that S stands in a certain non-causal relation—viz., the Celsius relation—to that number. Likewise, despite the fact that (3) does not imply that the proposition that Clinton is president is *causally responsible* for Floyd's believing this proposition, it does say that Floyd stands in a certain non-causal relation—viz., the belief relation—to this proposition. Thus, it seems that our empirical theories do not simply express some nominalistic facts and some platonistic facts; rather, they express *mixed facts*. And so it seems that (NC) is false: empirical science does not have a nominalistic content that captures its complete picture of the physical world."

The person who objects in this way fails to appreciate the full significance of the causal inertness of abstract objects. It is no doubt true that (4) says that S stands in the Celsius relation to the number 40. But since 40 isn't causally relevant to S's temperature, it follows that if (4) is true, it is true in virtue of facts about S and 40 that are entirely independent of one another, i.e., that hold or don't hold independently of one another. In other words, if we grant that the number 40 isn't causally related to S—and this is beyond doubt—then we are forced to say that while (4) does express a mixed fact, it does *not* express a *bottom-level* mixed fact, i.e., that the mixed fact that (4) expresses supervenes on more basic facts that are *not* mixed.[15] In particular, it supervenes on a purely physical fact about S and a purely platonistic fact about the number 40. But this suggests that (4) has a nominalistic content that captures its complete picture of S: that content is just that S holds up *its end* of the "(4) bargain", i.e., that S does *its part* in making (4) true.[16] (We might *also* try to say that the nominalistic content of (4) is that the purely physical fact behind (4)—i.e., the purely physical fact about S just mentioned—obtains. But we have to be careful here. The purely physical fact behind (4) is a *particular* fact, presumably having something to do with kinetic energy. But the nominalistic content of (4) is not that this particular fact holds; it couldn't be, because (4) doesn't describe any such fact; e.g., it doesn't even broach the *topic* of kinetic energy. Thus, all we can say here is that the nominalistic content of (4) is that *some* purely physical fact that involves S holding up its end of the "(4) bargain" obtains.)

The same goes for (3): it does say that Floyd stands in the belief relation to the proposition that Clinton is president, but since this proposition isn't causally relevant to Floyd's belief state, it follows that if (3) is true, it is true in virtue of facts about Floyd and the proposition which are entirely independent of one another. And, of course, the fact about *Floyd* on which (3) supervenes is going to be a *purely physical* fact; in particular, it's going to be a fact about his *brain* (or if externalism is true, his brain and his *environment*[17]). Thus, it seems to follow that (3) has a nominalistic content that captures its complete picture of Floyd: that content just says that Floyd holds up *his end* of the "(3) bargain". (That this really captures the *complete* picture that (3) paints of Floyd follows from the fact that (3) doesn't express any *bottom-level* mixed facts; for it follows from this that *all* (3) tells us *about Floyd* is that he holds up his end of the "(3) bargain".[18])

(When I say that the fact about Floyd upon which (3) supervenes is a purely *physical* fact, what I mean is that it is a purely *nominalistic* fact. Thus, even if Cartesian dualism were true, my argument would still hold water. For in that case, (3) would still supervene upon two entirely independent facts, one a purely nominalistic fact about Floyd and the other a purely platonistic fact about the proposition that Clinton is president. The only difference would be that the nominalistic fact would be (at least partially) mentalistic. And this is also why my argument is consistent with externalism. For even if the fact about Floyd upon which (3) supervenes is partially sociological—concerning, say, the conventions prevailing in Floyd's linguistic community—it is still nominalistic. The bottom line is this: even if mentalistic or environmental factors partially determine what beliefs we have, it is still true that causally inert *propositions* (if there are such things) do not determine—even *partially*—what beliefs we have.)

It should be clear that considerations of the above sort will bring us to the same conclusions with regard to *all* of empirical science. For since *no* abstract objects are causally relevant to the physical world, it follows that *none* of our mixed sentences express bottom-level mixed facts and, hence, that empirical science has a nominalistic content that captures its complete picture of the physical world—a nominalistic content that says that the physical world holds up its end of the "empirical-science bargain". Thus, I conclude that (NC) is true. To recapitulate, the argument for this rests on three premises, viz.,

(i) Abstract objects—if there are such things—are not causally relevant to the operation or state of the physical world;

(ii) If (i) is true, then the mixed facts expressed by empirical science supervene on more basic facts that aren't mixed, i.e., that are either purely nominalistic (i.e., purely physical, or neurological, or whatever) or else purely platonistic; and

15 Strictly speaking, I should say: *if (4) is true*, then the mixed fact that it expresses supervenes on more basic facts. For if (4) *isn't* true, then at least one of the facts in question here won't really exist. I leave this proviso out for the sake of rhetorical elegance, and in what follows, I will do the same thing on a few different occasions.

16 One might worry that the sentence "S holds up its end of the '(4) bargain'" is not purely nominalistic on the grounds that when we unpack the expression '(4) bargain', we will encounter the platonistic lingo of (4), in particular, the term 'forty'. But fictionalists can maintain that in talking about the "(4) bargain", we are really just talking about a token of the sentence (4), and so the expressions in (4)—e.g., 'forty'—are being mentioned and not used.

17 Externalism is the view that the contents of our beliefs are determined not just by our internal states but also by our physical and social environments. See Hillary Putnam, "Meaning and Reference," *The Journal of Philosophy*, 70 (1973): 699–711; and Tyler Burge, "Individualism and the Mental," *Midwest Studies*, 4 (1979): 73–121.

18 I suppose that one might claim that (3) tells us something *else* about Floyd, viz., that he stands in the belief relation to the proposition that Clinton is president. But this is just *nit-picking*: the point is that when we move from (3) to its nominalistic content, we do not lose any *important part* of our picture of Floyd.

(iii) If the consequent of (ii) is true, then (NC) is true, i.e., empirical science has a nominalistic content that captures its complete picture of the physical world.

And if what I have argued is correct, then it seems that (COH) is also true, i.e., that it is coherent to believe the nominalistic content of empirical science while maintaining that its platonistic content is purely fictional.

This is all I really need to argue in order to block the Frege-Bealer-Schiffer argument for platonism. But it is worth pointing out that nominalistic scientific realism can be shown to be not just coherent but actually quite *plausible*. Before I do this, however, I would like to address two different worries that people might have about the above argument.

First, one might be worried that a scientific anti-realist could use my argument strategy to motivate a view that endorsed the "macro-level content" of empirical science but rejected its "micro-level content". The worry, of course, is that this view is so implausible, that it undermines my argument strategy. The fact of the matter, though, is that my argument strategy cannot be used to motivate this view. The reason is that micro-level entities are *causally related* to macro-level entities. Indeed, if all the micro-level entities in the world suddenly disappeared, all the macro-level entities would disappear along with them. Moreover, empirical science predicts this, because part of its picture of the macro-level of the world is that it is composed of micro-level entities. Thus, empirical science simply doesn't *have* a purely macro-level content that captures its complete picture of the macro-level of the world. Thus, there is no viable view that endorses the macro-level content of empirical science but not its micro-level content.

Second, one might be worried that the claim that empirical science has a nominalistic content that captures its complete picture of the physical world is much more controversial than I have allowed, because it is essentially equivalent to the claim that empirical science can be *nominalized*. But this worry is just misguided: the claim that empirical science has a nominalistic content that captures its complete picture of the physical world is different from (and much *weaker* than) the claim that empirical science can be nominalized. The easiest way to appreciate this is to notice that empirical theories wear their nominalistic contents on their sleeves. The nominalistic content of a theory T is just that the physical world holds up its end of the "T bargain", i.e., does its part in making T true. Thus, while the claim that empirical science can be nominalized is highly controversial, the claim that it has a nominalistic content that captures its complete picture of the physical world is entirely trivial. Indeed, it is no more controversial than the claim that abstract objects (if there are such things) are causally inert.

These remarks suggest that empirical science could have a nominalistic content that captured its complete picture of the physical world even if it couldn't be nominalized. But it doesn't yet tell us *why* this is so. The reason is this: even if abstract-object talk were indispensable to empirical science, abstract objects (if there are such things) would still be causally inert, and so the truth of empirical science (assuming that it *is* true) would still supervene upon two independent sets of facts, viz., a set of purely physical (or more accurately, nominalistic) facts and a set of purely platonistic facts. What indispensability would imply is that we could never describe all of these purely physical facts in an attractive nominalistic theory. But there would still *be* such facts, and it would still be true that such facts could obtain even if there were no such things as abstract objects. Thus, empirical science would still have a nominalistic content that captured its complete picture of the physical world—a nominalistic content that says that the physical world holds up its end of the "empirical science bargain"—and it would still be coherent and sensible to endorse this nominalistic content while maintaining that the platonistic content of empirical science is fictional. In short, the point here is that it doesn't matter whether our *theories* can be separated into the purely nominalistic and the purely platonistic, because it already follows from the causal inertness of abstract objects that the bottom-level *facts* are separated in this way.

(These considerations provide a strong reason for preferring my response to the Quine-Putnam argument over Field's. On my view, even if empirical science cannot be nominalized, it is still reasonable to believe only its nominalistic content and to treat its platonistic content as fictional. Thus, fictionalists do not have to *replace* our current scientific theories with nominalistic theories. Rather, they can accept the platonistic versions of our empirical theories *as they stand*. The only thing they need to point out is that when they "accept" these theories, they only commit to the truth of their nominalistic contents.)

Let me turn now to the task of showing that nominalistic scientific realism is not just coherent but actually very plausible. To understand why this is so, we need merely to understand the role that abstract-object talk plays in empirical science. We have seen that our empirical theories do not take abstract objects to be causally relevant to the operation or state of the physical world. Why, then, do they contain any platonistic talk at all? The answer is this:

(TA) Empirical theories refer to abstract objects (most notably mathematical objects, but also other kinds of abstract objects, e.g., propositions) in order to construct *theoretical apparatuses* (or *descriptive frameworks*) in which to make assertions about the physical world.

In other words, empirical theories do not make claims of the form: 'physical (or biological, or psychological, or whatever) phenomenon x occurs *because* the platonic realm has nature y'. Rather, they make claims of the form: 'the behavior (or state) of physical (or biological, or psychological, or whatever) system S can be *understood* in terms of the platonistic structure M as follows:...' Thus, abstract-object talk appears in our empirical theories as a mere descriptive aid: by speaking in terms of the real number line, or a Hilbert space, or the network of propositions, we simply make it easier to say what we want to say about the physical world.

(While it is true that abstract-object talk only appears in our empirical *theories* as a descriptive aid, it would be an oversimplification to claim that this is the only role that it plays in empirical *science*. The reason is that there is more to science than the conjunction of its theories, and one of the things that scientists do, in addition to stating theories, is make certain kinds of *inferences*, and when they do this, they often use mathematics. But we can ignore this complication here, because the points that I will make about the *descriptive* role of abstract-object talk apply equally well to its *inferential* role.[19])

It seems to me that (TA) is so obvious that it hardly requires argument. But to say just a few words here, let us consider the two examples we have been discussing, i.e., (3) and (4). It seems very clear that the only reason we refer to the number 40 in (4) is that it provides a convenient way of saying what S's temperature state is. More generally, the point is that the Celsius scale correlates different temperature states with different numbers, so that the numerals serve as *names* of the temperature states, or to use the more common lingo, the numbers *represent* the temperature states. (The reason it is convenient to use numerals here, rather than ordinary names like 'Bob' and

[19] In order to take the same line on the inferential role of abstract-object talk that I take on its descriptive role, I do not need it to be the case that there are nominalistic versions of our platonistically formulated arguments. But I do need it to be the case that if we have a (sound) argument for C that takes P1,...,Pn as premises and that's formulated in platonistic terms, so that at least one member of {P1,...,Pn}—and perhaps also C—refers to, or quantifies over, abstract objects, then whenever the nominalistic content of {P1,...,Pn} is true, the nominalistic content of C is also true. But I think it's pretty obvious that this *is* the case. For if the given argument is really sound, then whenever {P1,...,Pn} is true, C is also true. Thus, whenever {P1,...,Pn} is true, the nominalistic content of C is also true, since it is included in C. But it follows from this that whenever the nominalistic content of {P1,...,Pn} is true, the nominalistic content of C is also true (which, again, is just what I need) because there is nothing in {P1,...,Pn} but not in the nominalistic content of {P1,...,Pn} that's at all relevant to whether the nominalistic content of C is true. This is simply because (a) what's in {P1,...,Pn} but not in the nominalistic content of {P1,...,Pn} is just the *platonistic* content of {P1,...,Pn}, and this is solely about abstract objects, i.e., not about the physical world at all; and (b) the nominalistic content of C is solely about the physical world and not about abstract objects at all. In short, the platonistic content of {P1,...,Pn} is not relevant to the truth value of the nominalistic content of C, because abstract objects (if there are such things) are causally inert.

'Ted', is that the various temperature states are related to one another in a way that is analogous to the way in which the real numbers are related to one another.) Likewise, the reason we refer, in (3), to the proposition that Clinton is president is that this provides an easy way of expressing a certain belief state of Floyd's. And more generally, the point is that just as the empirical structure of temperature states can be represented by the mathematical structure of the real number line, so too, the empirical structure of belief states can be represented by the logico-linguistic structure of propositions.

Assuming, then, that (TA) is true, nominalistic scientific realism becomes very plausible. For if all the platonistic talk appearing in empirical science is a mere descriptive aid—or an aid to our descriptions and our understanding of the physical world—then there doesn't seem to be any good reason to believe that it's *true*, because fictions can aid our descriptions and our understanding as easily as truths can. (As a case in point, consider that the novel *Animal Farm* could very easily serve as a descriptive aid in an historical account of the years surrounding the Russian Revolution. We can say something roughly true about Stalin by uttering the sentence, 'Stalin was like the pig Napoleon,' even though this sentence is, strictly speaking, false. In other words, we can coherently believe the *historical content* of this sentence without believing its *Animal-Farm content*.) And the same is true in empirical science: we could use abstract-object talk to accurately characterize the operation or state of some part of the physical world even if there were no such things as abstract objects.[20] Therefore, the fact that we do use abstract-object talk in this way does not provide any reason whatsoever to think that this talk is true. And this is why I think that nominalistic scientific realism is a plausible view, why I think it is just as plausible as ordinary scientific realism; because none of the reasons for endorsing the nominalistic content of empirical science provides any good reason to endorse its platonistic content. To put the point as starkly as possible, the reason nominalistic scientific realism is a sensible philosophy of science is that the nominalistic content of empirical science is all empirical science is really "*trying to say*" about the world; its platonistic content is something it "*says incidentally*" in its effort to say what it really "*wants to say*". Or to lapse *completely* into metaphor, the nominalistic content of empirical science is its picture of the physical world, whereas its platonistic content is the canvas (or part of the canvas) on which this picture is painted; thus, in order to endorse empirical science's picture of the physical world, we needn't endorse its platonistic content.

I end this section by considering an objection one might raise against the position I've been developing here, an objection that might be put in

[20] One might worry that the presence of fictional material in our empirical theories could "infect" the nominalistic content of those theories. But so long as the fictitious entities are not taken to be causally efficacious, this cannot happen.

something like the following way. "If what you've argued is correct, then whenever I have a belief, i.e., whenever I hold up my end of some belief ascription, it will be because my brain is in some particular state. This means that part of my brain—presumably a neural sequence, or state, or event, or some such thing—will have a *physicalistic content-determining property*, i.e., a physicalistic property which makes it the case that I have the particular belief in question, rather than some *other* belief. But to claim that some neural state in my brain has a content-determining property is just to claim that it *has content*, or meaning. Thus, fictionalists are committed to the thesis that neural states are meaningful, and so they are going to have to *account* for this. But you now face a dilemma. If, as platonists would have it, we need to countenance propositions to account for meaningfulness—the idea being that propositions just *are* sentence meanings—then believing that p will involve being related in a certain way to a proposition after all, and so fictionalism will be false. If, on the other hand, we can account for the meaningfulness of neural states *without* committing to propositions, then the motivation for fictionalism will have evaporated, for we will have stumbled onto an anti-platonist view that enables us to avoid making the wild fictionalist claim that belief ascriptions like (3) are false. In particular, we will be able to say that content-bearing neural states are the referents of 'that'-clauses and the objects of belief. In other words, we will be able to say that *mental representations*, or sentence tokens of the neural language of thought (Mentalese), are the referents of 'that'-'clauses."[21]

First of all, fictionalists are not committed to Mentalese sentences. They are committed to the claim that whenever a person x holds up her end of an 'x believes that p' sentence, there is some purely nominalistic fact about her brain (and perhaps her environment) that makes this the case. But they needn't maintain that in such cases there is a Mentalese token stored in x's brain which (in platonistic terms) means that p. (And even if they allow that in *some* cases, there is such a token stored in x's head, they might very well deny that there is in *all* cases.[22]) But in the next section, I will argue that even if fictionalists *grant* the Mentalese-token view of the physical facts of belief, they can still avoid both horns of the above dilemma. I will begin with the first horn, explaining how fictionalists can respond to the platonist worry that we need to countenance propositions to account for the meaningfulness of Mentalese tokens. Then, in response to the second horn, I will point out that even if fictionalists can and should appeal to Mentalese tokens

21 For a defense of this view, see Jerry Fodor, *The Language of Thought* (Cambridge, Massachusetts: Harvard University Press, 1975).

22 Actually, this some-but-not-all view is probably the strongest version of the Mentalese view that could be correct. For we surely don't want to explain the fact that Madonna believes that 434 > 17 by claiming that there is a Mentalese token in her head that means that 434 > 17.

in explaining how humans have beliefs, there are still good reasons to doubt that Mentalese tokens are the referents of 'that'-clauses and the objects of belief.

4. A FICTIONALIST ACCOUNT OF MEANINGFULNESS

I begin by explaining how fictionalists can respond to the Frege-Katz argument that we need propositions to account for the meaningfulness of *public-language* sentences, and then I extend the story to *Mentalese* sentences. We can see how fictionalists can respond to the Frege-Katz argument by noticing that it is a special case of the Frege-Bealer-Schiffer argument. To claim that we need propositions to account for the meaningfulness of public-language sentences is just to claim that we need them to account for the truth of certain 'that'-clause-containing meaning ascriptions, e.g.,

(5) The sentence token that Floyd just uttered meant that O. J. is a bachelor.

Now, it might seem that we could make the problem for fictionalists worse by appealing not just to sentences like (5), but also to sentences like

(6) The sentence type 'O. J. is a bachelor' means that O. J. is a bachelor.

For it seems that in order to account for the truth of (6), we need to countenance *two* kinds of abstract objects, viz., propositions and sentence types. Platonists might try to buttress this point by arguing that any adequate meaning theory for English would have to be about sentence types, rather than tokens, because—in order to be adequate—it would have to entail, for *every* English sentence σ, a theorem of the form 'σ means that p'. But fictionalists have a response to this. Let MTE be a meaning theory for English of the above sort, i.e., one that makes claims about *all* English sentences and, hence, must be taken as being about sentence types. Theories like MTE and sentences like (6) are *purely platonistic*, rather than mixed; they are, thus, more akin to the sentences and theories of mathematics than to those of physics and belief psychology, and so fictionalists can take the same line with them that they take with mathematics. In other words, fictionalists can *grant* that sentences like (6) and theories like MTE are "about" propositions and types but maintain that since there are no such things as propositions or types, such sentences and theories are completely fictional. Now, in order to block this move, platonists would need to construct an argument for the claim that sentences like (6) and theories like MTE are *true*. It seems to me that the only promising strategy here would be to construct an indispensability argument analogous to the one they use to argue that *mathematical* sen-

tences and theories are true—i.e., an argument that shows that we need to suppose that sentences like (6) and theories like MTE are true in order to account for some class of facts about the *physical world*. But the only facts that platonists might reasonably appeal to here are facts about *actual physical tokens*—e.g., the fact (or alleged fact) expressed by (5). Thus, even if we begin by talking about (6) and MTE, it seems clear that what fictionalists really have to do is respond to the worry that we need propositions to account for the truth of sentences like (5).

Let me turn, then, to this worry. My suggestion is that fictionalists can say the same thing about the meaning ascription (5) that they say about the temperature ascription (4) and the belief ascription (3). Since the proposition that O. J. is a bachelor is causally inert, it follows that the mixed fact expressed by (5) supervenes on two (more basic) facts which *aren't* mixed and which are entirely independent of one another—viz., a purely physical fact about Floyd's token (and the surrounding community) and a purely platonistic fact about the proposition that O. J. is a bachelor. But from this it follows that (5) has a nominalistic content that captures its complete picture of Floyd's token—a nominalistic content that says that Floyd's token holds up its end of the "(5) bargain"—and that it is perfectly reasonable to believe this nominalistic content while maintaining that the platonistic content of (5) is fictional.

Now, in order to make this view plausible, I need to say what *kind* of purely physical facts underlie sentences like (5). To do this, we need to distinguish two different facts that (5) might be taken to express, i.e., that (5) conflates. If Floyd was speaking *literally* when he uttered his token, then these two facts are distinguished by

(5e) The token that Floyd just uttered *meant in English* that O. J. is a bachelor

and

(5u) The token that Floyd just uttered *meant to us* that O. J. is a bachelor.

The purely physical facts underlying these two sentences are different. The physical fact behind (5e) is similar in spirit to the physical fact behind the assertion that Floyd's utterance was a syntactically well-formed English sentence token. That is, it is a fact about the *shape* of Floyd's token. In particular, it is the fact that Floyd's token is shaped in such a way that makes it hold up its end of the "Floyd's-token-is-a-token-of-a-type-that-means-in-English-that-O. J.-is-a-bachelor bargain". And the purely physical (or neurological, or psychological, or whatever) fact behind (5u) is the fact that each of us associates Floyd's token with a "mental representation" of the proposition

that O. J. is a bachelor, where a "mental representation" is a neural token of some sort.[23]

The reason I put scare quotes around 'mental representation' is to emphasize that I am using this term as I have been using 'about' throughout the paper: on my usage, a neural token can be said to "represent" a proposition even if, in point of actual fact, there are no such things as propositions. And, again, the reason it is acceptable (and, indeed, helpful) to speak in this way is that propositions (if there exist such things) are causally inert. For given this, it follows that I could construct "mental representations" and assign them to tokens even if there were no propositions for my so-called "representations" to be representations *of*. This, of course, is just to reiterate that the fact that I associate Floyd's token with a certain "mental representation" is a *purely physical* (or neurological, or psychological, or whatever) fact. And it is this which, in turn, suggests that (5u) has a nominalistic content that captures its complete picture of us and Floyd's token—a nominalistic content that says that (a) all of us, and (b) Floyd's token, hold up *our two ends* of the three-way "(5u) bargain".

Now, of course, this view of (5u) presupposes that we have some anti-platonistic story to tell about the meaningfulness of *Mentalese* tokens. For to say that a neural token "represents" the proposition that p is just to say that it has this proposition as its content—i.e., that it *means* that p. (After all, in order to count as "representing" the proposition that *p*, rather than some *other* proposition, a neural state is going to have to have a content-determining property.) Thus, we are back where we were at the end of section 3, needing a response to the platonist claim that we need propositions to account for the truth of sentences like

(5m) The particular neural token n *means in Mentalese* that O. J. is a bachelor.

[23] Two points. First, on *some* sense of '...means to us...', there are (a) sentences which mean things to us but which *some* of us don't understand (and so it would not be the case that *each* of us associates the sentence with an appropriate mental representation) and (b) sentences which mean things to us but which have never been associated with any "mental representation", because they have never been consciously considered. (E.g., '439.2 > 14.6' might be such a sentence—or, at least, it might have been before I just considered it.) But *this* notion of '...means to us...' is equivalent to '...means in our *language*...', and so it can be handled along the lines of (5e). The notion of '...means to us...' that I have in mind in connection with (5u) applies only when a token is actually cognized and understood to mean something by a particular person or group of persons.

Second, note that a token can mean to us something *other* than what it means in English. For what "mental representation" a person x assigns to a token t is a function of (a) what t means in English and (b) context, i.e., factors such as whether x thinks t was uttered metaphorically, whether x heard t correctly, etc.

But it ought to be very clear by now what fictionalists can say about (5m). Since the proposition that O. J. is a bachelor is not causally related to n, it follows that the mixed fact expressed by (5m) supervenes on two non-mixed facts that are entirely independent of one another, viz., a purely physical fact about n and a purely platonistic fact about the proposition that O. J. is a bachelor. And from this it follows that (5m) has a nominalistic content that captures its complete picture of n—a nominalistic content that says that n holds up its end of the "(5m) bargain"—and that it is perfectly coherent to believe this nominalistic content while maintaining that the platonistic content of (5m) is purely fictional.

Now, one might wonder what kind of purely physical facts underlie sentences like (5m), i.e., what the physicalistic content-determining properties of neural tokens are *like*. Unfortunately, given our current ignorance of neurophysiology, it is impossible to say anything very informative here. But this is not a problem for fictionalists *qua* fictionalists, because (a) platonists also need to solve this problem, and (b) fictionalists can give any solution to it that platonists can give. The reason platonists are on all fours with fictionalists here—why they too owe an account of the physicalistic content-determining properties of brain states, or neural tokens—is simply that they too are committed to the claim that brain states do have such properties, because they too are committed to the claim that we form "mental representations" of propositions. Now, I suppose that one might doubt that platonists are committed here to the existence of *physicalistic* content-determining properties, but it is easy to see that they are. For since propositions (if there are such things) are causally inert, our brains are going to have to form their "representations" *on their own*, so to speak, i.e., without receiving any "help" from any abstract objects.

(It is important to keep in mind here that by 'physicalistic', I mean *anti-platonistic*, rather than *anti-mentalistic*. Thus, platonists cannot help their cause here by claiming that they can avoid having to believe in physicalistic content-determining properties by adopting a mind-brain dualism and claiming that while our *Minds* can construct representations of propositions, our *brains* cannot—or at least *do* not. For, ignoring the fact that this sort of dualism is implausible, fictionalists can make the same move. That is, if platonists could somehow *motivate* dualism, fictionalists could accept the view *with* them, because dualism is consistent with anti-platonism. One can maintain that it is our Minds that construct "mental representations" but still deny that there are any such things as propositions.)

In any event, if what I've argued is correct, then fictionalists can avoid the first horn of the dilemma presented at the end of section 3: it may well be that platonism is the only view that can account for the (alleged) truth of meaning ascriptions like (5) and (6), but there is no good argument against the view which *denies* that such sentences are true, which takes (6) (and

MTE) to be *completely* fictional and (5) (and (5e), (5u), and (5m)) to have true nominalistic contents (that capture everything important that they entail about the physical world, i.e., about tokens and speakers) but fictional platonistic contents.

But what about the *second* horn of the dilemma? One might think that the above arguments simply show that platonism is, in fact, *not* the only view that can account for meaningfulness, or more generally, for the truth of 'that'-sentences. One might think the above arguments show that anti-platonists can account for the truth of 'that'-sentences by taking "mental representations" to be the referents of 'that'-clauses, i.e., the meanings of sentences, the objects of belief, etc.

The fact of the matter, though, is that the above arguments show nothing of the sort. All I've argued is that "mental representations" can be used to explain certain sorts of facts, e.g., the fact that Floyd holds up his end of the "(3) bargain" and the fact that we hold up our end of the "(5u) bargain". But there is a big difference between the claim that "mental representations" can be put to this minimal use and the claim that they are the referents of 'that'-clauses. Indeed, while the former claim seems very plausible, there are numerous well-known arguments for thinking that the latter claim is false—namely, the arguments that have been offered by platonists like Bealer, Schiffer, and Katz. I alluded to these arguments in section 2 in discussing the second premise of the Frege-Bealer-Schiffer argument, i.e., the premise that the only plausible suggestion about what 'that'-clauses might refer to is the platonistic suggestion that they refer to propositions. Unfortunately, I haven't the space to go into these arguments here,[24] but it is worth noting that none of them provides any reason whatsoever to doubt that "mental representations" can be used in the way that *fictionalists* want to use them, i.e., to explain how it is that people can hold up their ends of 'that'-sentences like (3) and (5u).

This last point captures the real beauty of the fictionalist stance: it enables anti-platonists to *ignore* the arguments of people like Bealer, Schiffer, and Katz. We can *admit* that 'that'-sentences are best interpreted as being "about" propositions without admitting that there *are* propositions. More generally, we can admit that our best theories are best interpreted platonistically—either as *purely* platonistic theories or as *mixed* theories—and we can reap all the benefits of interpreting them in this way without committing to the existence of abstract objects. Seen in this light, anti-platonists should not lament having no option but to endorse fictionalism, because it seems to be the most attractive version of anti-platonism we've got, because it enables us to have

[24] Well, let me give one very quick argument. Look at (5m). Its 'that'-clause couldn't refer to a neural token, because if it did, the neural token in question would have *itself* as its meaning.

our cake and eat it too. On the one hand, fictionalists don't have to "watch what they eat" like other anti-platonists do; they can make full use of our seemingly platonistic theories without worrying about whether every entailment of these theories can be given anti-platonistic truth conditions. But on the other hand, they don't have to pay any price for their "reckless eating", as platonists do with their ontological obesity.[25]

[25] Here is an interesting aside. If everything I've said here is correct, then the standard relational view of the metaphysics of belief is wrong. To have a belief is not to be related in a certain way to the referent of a 'that'-clause, because we can have beliefs even if 'that'-clauses fail to refer—i.e., even if there are no such things as objects of belief. For this reason, it seems to me that having a belief is a *one-place property of believers* (although it may be that what beliefs a person has is determined not just by her neural state but also by external factors). Now, it might seem odd that I would accept a one-place metaphysics of belief, because I have already said that I endorse a two-place semantics of 'believes'. But there is really nothing odd about this; semantics and metaphysics come apart all the time, because we very often use "metaphysically irrelevant entities" as descriptive aids to express facts. For instance, the best semantic analysis of ordinary (Celsius) temperature ascriptions holds that such sentences are true if and only if the physical system in question is Celsius-related to the real number in question. But this does not mean that to have a temperature just *is* to be related in a certain way to a real number. Likewise, while 'believes' is a two-place predicate, having a belief is not a two-place relation. And it seems to me that this is true *even if there do exist propositions*, because propositions are not metaphysically relevant to our belief states. But of course, much more would need to be said to defend this wedding of the standard two-place semantics of 'believes' to a one-place metaphysics of belief.