Grounding in the Philosophy of Mind: A Defense

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1. Introduction

One of the major trends in metaphysics in recent years has been in the development and application of novel conceptual frameworks for representing facts about realism, fundamentality, and metaphysical priority. Of particular interest have been the concepts of *grounding* (proposed by Paul Audi (2012), Kit Fine (2001), Gideon Rosen (2010), and Jonathan Schaffer (2009) among others)[1], the concept of *the real* (proposed by Fine (2001)), and that of *metaphysical structure* (proposed by Ted Sider (2011)). All of these have been proposed as new primitive concepts, and often their introduction is motivated by the argument that other notions metaphysicians use in order to frame their positions are inadequate for the task of characterizing the important metaphysical issues. Formulations of metaphysical problems and views in terms of existence, quantification, and modal notions should be replaced (Fine, Schaffer) or supplemented (Audi, Rosen, Sider) with formulations in terms of these new distinctively metaphysical notions.

Schaffer is especially direct. He complains that "contemporary metaphysics, insofar as it has been inspired by the Quinean task [of determining what exists], has confused itself with trivialities" (2009, p. 361). This confusion about what the important issues are is tied to not having the conceptual tools to represent the issues that matter. The deep questions are "not *whether* there are such things, but *how*." We want to know not what exists, but what is grounded in what. Sider, in his *Writing the Book of the World*,

[1] Witmer, Butchard, and Trogdon (2005) defend a related "in virtue of" notion. Bennett (2001) speaks of "building."

does not dismiss the importance and challenge of settling existence questions, but similarly emphasizes that this is not what metaphysics at bottom is about. It is instead about finding out "how the world *fundamentally* is, as opposed to how we ordinarily speak or think about it" (2011, p. 1, my emphasis). Fine (2001, 2009, 2012) and Rosen (2010) too argue that the important metaphysical questions cannot be formulated using only those representational tools accepted as legitimate by most contemporary metaphysicians: physical, logical (including quantificational), mereological, and modal concepts.[2] Part of the remedy, the prescribed metaphysical fix, is to embrace the use of new primitive metaphysical concepts such as that of the real, grounding, or metaphysical structure.

These suggestions have been met with mixed reactions in philosophical circles. Some of those working on first-order metaphysical problems were quick to see the utility of these notions. For example, Jamie Dreier noted soon after the publication of Fine's 2001 defense of unanalyzed grounding and reality concepts that these were precisely the concepts needed to clarify longstanding disputes between noncognitivists and realists in meta-ethics in the face of "creeping minimalism." However, in the philosophy of mind, these proposals have been met with skepticism. A commonly voiced complaint over the past decade, one heard frequently in conversation if not so often in print (though see Jessica Wilson's (2014)), is that these metaphysical concepts are philosophically superfluous; they add nothing to the concepts philosophers of mind have already had in their toolboxes for years. Even if Fine, Schaffer, and the others are correct that some metaphysicians have neglected issues of ontological priority and fundamentality, this is

[2] Why have metaphysicians limited themselves to physical, logical, mereological, and modal notions? Daniel Nolan discusses this issue in his (2014).

far from the case in the philosophy of mind where the central issue, the mind-body problem, is not one about existence, but rather ontological dependence. Philosophers of mind rarely debate whether we have minds or mental states, whether many claims in psychology are true. Rather, the primary issue concerns the mind's relation to a more fundamental physical reality. Over the past several decades, philosophers of mind and science have worked hard to distinguish and make precise many notions (of reduction, supervenience, realization, and emergence), positions (such as reductive and nonreductive versions of physicalism, functionalism, and various versions of emergentism), even principles governing what is real (such as Alexander's Dictum[3]) that serve to characterize the relevant notions of ontological priority and fundamentality. To say that we need to introduce new concepts, new primitive notions of fundamentality or grounding, in order to characterize these issues, one must somehow be ignorant of these developments, or worse, willfully neglecting this important work.

Now I believe this reaction to the proponents of primitive grounding and fundamentality notions is natural and to be expected, especially given the rhetorical choices of those who defend grounding. However my goal here is to demonstrate some important uses for these metaphysical notions in the philosophy of mind and why I believe they add something extremely useful to the discussion.[4]

Confusions about the proper use of fundamentality and grounding notions in metaphysics in general and the metaphysics of mind in particular come from several sources. One is, as I have already suggested, the way that proponents of grounding have

[3] This is a principle frequently appealed to by Jaegwon Kim and others in the metaphysics of mind. It says that for something to be real it must possess causal powers.
[4] In other work, I apply these resources to debates in the philosophy of causation and mental causation.

sometimes chosen to characterize what is motivating the introduction of these concepts. These metaphysical revisionists emphasize the distinctive virtues of using these notions over the concepts of supervenience, necessitation, reduction via conceptual analysis, and so on. This has (quite naturally) led philosophers of mind to believe that grounding is being proposed as a replacement for not only these, but also all of the other notions that are often appealed to in the philosophy of mind such as identity and realization. This, I will show, is not necessarily the case. The grounding framework gives us more resources not fewer and it has room to incorporate those that have already been developed (even if this is not usually acknowledged).

Second, different philosophers have proposed different concepts using the common term 'grounding.' Since the differences between these proposals are subtle, the nuances are often neglected and a vague or obscure notion of grounding is quickly rejected without attention to the individual virtues of the different proposals. I will argue that Fine's framework has distinctive advantages but to see this it needs to be carefully teased apart from the others. As I hope to show, Fine's framework may be useful as a foundation for developing an approach to the mind-body problem that can resolve and clarify debates. I hope to show that by utilizing Fine's distinctions, we are able to offer novel, conciliatory positions allowing us to move past some debates that have been carrying on in the philosophy of mind for decades.

2. Grounding and Anti-Realism

In order to see what may be added by an appeal to grounding, let's start by noting something about the metaphysical relations that are typically discussed in the philosophy

of mind such as type- or token-identity, constitution, and property- or event-realization.[5] We are apt to talk about the obtaining of one of these relations when we have some entities (or types or ways of conceiving some entities or types) that are already assumed to exist. Our interest isn't in whether or not these entities or types exist, but rather in characterizing the metaphysical relationship of one to the other.

A common view about grounding is that it is some kind of primitive relation among entities that is something like identity, constitution, or realization but more abstract, a sort of generalized ontological dependence or priority relation.[6] This is true on some conceptions of grounding, e.g. Jonathan Schaffer's and the related "building-relations" discussed by Karen Bennett (2011), but this is not so for all proposals. For example, Fine introduces grounding (and his notion of reality) not so that we may better understand cases in which we have some entities each of which is antecedently assumed to exist. Rather, he introduces grounding to deal with situations in metaphysics in which one wants to *deny* the existence of a class of entities. The central topic of Fine's 2001 paper introducing grounding was how philosophers who wish to endorse anti-realist positions about various domains can have overall consistent views. This emphasis is continued in his more recent work:

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[5] Of course, there exists a diverse variety of ways of understanding the constitution and realization relations. The differences among them will not matter for what follows. Note that I will not discuss supervenience and necessitation as these notions have been widely recognized for years in the philosophy of mind to be insufficient to characterize the sense in which mental phenomena may be ontologically dependent on physical phenomena. See Kim (1984) and Wilson (2005).

[6] Here I am using 'dependence' to indicate a relation that when it obtains, need not imply that one of the relata is more fundamental than the other. (Ontological dependence is not an asymmetric relation.) When I speak of the obtaining of an ontological priority relation, what is prior is thereby implied to be more fundamental than what it is prior to.

> If [the anti-realist] wishes to **deny** the reality of the mental, for example, then he must explain or explain away the appearance of the mental…The question now is: how is this explanatory challenge to be construed? What is it to explain the appearance of a world with minds in terms of a mindless world or the appearance of a world with value in terms of a purely naturalistic world? My own view is that what is required is that we somehow *ground* all of the facts which appear to presuppose the reality of the mental or of value in terms of facts which do not presuppose their reality. (2012, p. 41, my emphasis in bold)

Here is one of the main examples Fine's paper takes up. Suppose some philosopher is a nominalist about abstract entities. Then it looks like she will hold, as one of her main philosophical claims:

(1) Numbers do not exist.

And yet, even if she is a nominalist, it seems clear that she should not want to deny something all of us accept, the simple mathematical fact expressed by

(2) There is a prime number between 2 and 5.

That is to say, she won't want to be a skeptic about mathematical truth. But of course (2) trivially entails:

(3) There are numbers. (Numbers exist.)

And so, if the nominalist does not wish to be a skeptic about mathematical truth, it looks as if she is faced with an inconsistent set of beliefs. Fine notes that this isn't a distinctive problem for nominalism but is a general problem for various species of metaphysical anti-realism. The moral noncognitivist will find her position in tension with the basic moral truths she holds; the presentist will find her position in tension with mundane past-

tensed truths (that the North won the U.S. Civil War, that dinosaurs existed before humans); and so on.

Fine (2001) considers various resolutions to this problem, but for our purposes it will only be necessary to present his favored solution which gives the anti-realist who is not skeptical about mathematical truth a way to have an overall consistent view. First, the non-skeptical nominalist will not deny (2) since it states a basic mathematical fact and is a mathematical truth if anything is. Nonetheless it is just this, a mathematical truth. That is to say, when the mathematician or student of mathematics states such a fact, that there is a prime number between 2 and 5, we should recognize that she is not intending to assert something that is a particularly deep metaphysical truth, a fact about what the metaphysical structure of the world is and what kinds of entities are real or not real. And yet we (who think metaphysics is a worthy task, who sometimes assert views about such matters) sometimes make claims that do concern the deep metaphysical structure of the world. Fine thus proposes the introduction of a primitive operator on sentences or propositions: *In reality*. This operator is a component of sentences or propositions[7] that are intended to state claims reflecting fundamental metaphysics. And of course, this is the sort of claim the nominalist intends. Recognizing this, we can say that really there is no tension between the nominalist's main claim and (2) (or even (3)). For what the nominalist intends to assert is not (1) that numbers do not exist, but rather that *in reality*,

[7] Fine's official view is that this operator (and the grounding operator to be described shortly) should be taken to apply to sentences (2012, p. 46), but he sometimes speaks of propositions grounding other propositions. I will sometimes speak loosely as well of facts grounding other facts. This should be understood as indicating the grounding of a sentence describing one fact in some sentences describing some other facts.

numbers do not exist.[8] And as long as we do not conflate this reality locution with quantificational idioms like 'there exists,' we can see that there is no contradiction between:

(4) In reality, numbers do not exist,

and

(3) There are numbers. (Numbers exist.)

Thus, the tension introduced by non-skeptical anti-realism is resolved.

To this, some have objected that they don't have a grip on what Fine means by 'in reality.'[9] As noted, the reality operator is officially introduced as a primitive, but this shouldn't lead one to worry we have no grip on what it adds to a sentence. Fine gives a positive characterization of it as follows:

> One might think of the world and of the propositions by which the world is described as each having its own intrinsic structure; and a proposition will then describe how things are in themselves when its structure corresponds to the structure of the world. Thus it is this positive idea of the intrinsic structure of reality… that should be taken to inform the relevant conception of what is fundamental or real. (2001, p. 25)

The real propositions are those that describe the intrinsic structure of reality. This isn't to say that propositions that do not describe the intrinsic structure of reality may not be true. They of course may be. But it is the goal of the metaphysician (at least some of the time)

[8] See Fine (2009) for an explanation of the distinction.
[9] This is a critique raised by Thomas Hofweber (2009), Chris Daly (2012), and (preemptively) Carnap (1950).

to make claims that are not just true but also real, that do describe the intrinsic structure of reality.

Some will complain that this positive characterization of the reality operator doesn't address the concern since it relies on a further esoteric notion, "the intrinsic structure of reality." Since it is difficult or impossible to provide a definition of these metaphysical notions, perhaps it is worth providing a simple example to try to better capture what a non-skeptical anti-realism is supposed to look like. If one can understand how a non-skeptical anti-realism looks when applied to a mundane case in which we philosophers don't already have theoretical commitments, perhaps it will be clearer how the framework may be implemented to state new and coherent positions in the philosophy of mathematics or mind-body debate.

Consider any ordinary situation in which some person sincerely and with good (external) reasons asserts:

(5) There is a mess in the kitchen.

In that situation, must we assume the speaker intends to make a deep metaphysical claim? A claim that there are in reality such things as "messes" and that one of these messes is located in the kitchen? Of course not.[10] And yet even if the claim is not intended to track metaphysical structure, it can still be perfectly true. I've asked you after all to imagine such a situation, one in which the claim is true. I submit this isn't very puzzling. A non-skeptical anti-realist could give many alternative accounts of mess-talk, ways for (5) to be reasonable to assert, indeed true, while there are no such things in reality as messes. Here

[10] One indication of this is that one could have expressed the same thing by saying instead of 'There is a mess in the kitchen,' 'The kitchen is a mess.' If she was trying to express something about the deep metaphysics of the situation, these would not be equivalent.

are three such accounts. First, perhaps "There is a mess" is just an idiomatic way of saying that things are arranged in a way someone does not like, so that the word 'mess' is somewhat like the word 'sake,' a noun that contributes meaning to a sentence while always lacking denotation. Another possibility is that there are messes, but whether something is a mess is a subjective matter. Messes aren't objective existents. Rather what is a mess depends on what most normal people are apt to consider a mess. So although a speaker of (5) may say something true, it will not be something that describes how things are in reality. When we say that there is something in reality, we mean after all that there is something that exists in the mind-independent world, not merely from the point of view of one perspective or another. But even if there are objective facts about when 'There is a mess' is true, this still wouldn't entail that a speaker of (5) expresses the claim that in reality, there are such things as messes and one of them is in the kitchen. Let's pause a moment to see a third account according to which (5) may express an objective truth and yet still not be real.[11]

On a functionalist understanding of "mess," a claim like (5) is true when there are some things or other in the kitchen capable of playing a certain causal role, whatever is the causal role associated with our concept, mess. I'll tentatively work with: being a collection of things that persists in a location without good reason that is apt in the circumstances to cause obstruction and annoyance. Suppose in our imagined situation what plays that role is a pile of dirty dishes in the sink. Functionalists may take different

[11] In outlining this third way for how it may be that a sentence is true, yet not true in reality, I am departing from Fine's official view. Fine's descriptions of cases involving sentences that are *not true in reality* generally involve subjectivity such as we find in the first two accounts above. However, as I will now argue, this third way also constitutes a way in which a sentence may be true while not correctly describing the intrinsic structure of a given situation.

approaches when they consider (5)'s connection to reality in this situation. One approach would be to adopt a *functionalist realism* about messes. Then one will say that in reality there are messes, one such mess is the pile of dishes in the sink, and since the sink is in the kitchen, the sentence expresses a truth about what there is in reality.[12] However, one might be concerned about this approach for several reasons. One is that the concept of mess permits multiple realization and so it seems wrong to think that messes just are piles of dishes in sinks. I'll however focus on another reason for rejecting this functionalist realism about messes. This is that a pile of dishes in a sink is only properly counted as a mess in a particular context, namely one in which the dishes are there without good reason and apt to cause annoyance and obstruction. In other circumstances, such as when one places a pile of dishes in a sink in order to promptly clean them, a pile of dishes doesn't count as a mess but a means to an end. So it isn't right to think of the pile of dishes itself as the mess. Piles of dishes aren't the right kinds of things on their own to be messes. Nor would it be correct to think of the larger mereological sum consisting of the pile of dishes, the sink, and all of the things apt to be annoyed or obstructed in the situation as the mess. That's not a mess either. (Anyway, if that were the right account, it would make (5) false, since that object is too big to be in the kitchen.) Better, one sympathetic to a functionalist approach to (5) should deny that (5)'s truth depends on the existence of any one kind of thing, a mess, but rather depends on a particular kind of situation being instantiated.[13] There being a mess amounts to a situation that may involve dishes but also a variety of other kinds of objects, but only in the larger circumstance in

[12] This would be to endorse what is usually called an occupant or realizer functionalism about messes. Messes are the things that occupy the mess-role.
[13] A good predecessor to what I am suggesting here is Ryle's (1949) discussion of category mistakes.

which the objects play the causal role associated with the concept of mess. This is an account in which the truth of the sentence (5) is objective in the sense that its truth does not depend in any way on someone's perspective. It depends merely on what kinds of things there are in the world and how they are arranged. But the sentence is still not true in reality because interpreted as a claim about what there is in reality, it would make a false claim that in reality there are such things as messes that are located in kitchens. According to this *anti-realist functionalist* account, sentences like (5) latch onto the world in a more complicated way, by referring to a more spatially extended situation, a causal network. Is there a mess in the kitchen? Yes, but not because in reality there are messes and one of them is located in the kitchen. Rather, there is a mess in the kitchen because there are in reality many kinds of things, dishes and sinks and people, interacting in the right way to make this sentence true.

So there are many ways it could turn out that when someone asserts (5), they are not making a claim accurately tracking the kinds of things there are in reality. This isn't to say that one is thereby speaking figuratively or not expressing a fact or saying something that isn't true, interesting, or justified. Not all assertions, not even all true, justified, and interesting assertions need to mark out the kinds of things there are in reality in a way that would interest a metaphysician. I hope I've indicated some ways this could work out for the everyday case in which one says someone has made a mess.

We can now see where the notion of grounding enters in Fine's framework. It is precisely here, to show how those sentences that are not tracking the intrinsic structure of reality may yet be true. Formally, grounding is a two-place sentential operator acting on a sequence of sentences <Q, R, …> (the grounds) and a target sentence P (the grounded)

where: <Q, R, …> *grounds* P. Although again Fine does not analyze this notion, offering it rather as an ideological primitive, he clarifies the notion thus:

> If the truth that P is grounded in other truths, then they *account* for its truth; P's being the case holds *in virtue of* the other truths' being the case. (2001, p. 15)

To say that some true sentences may not themselves be real, yet nonetheless be grounded in the real is to say that while these truths do not themselves track metaphysical structure, they have an explanatory basis in truths that do. The details of this basis might itself be complicated (involving facts about individual perspectives or, as I've argued, causal networks). But ultimately a true statement will have a set of facts that explains its connection to reality. Once these are provided, there is no longer any explanatory gap left over regarding why the grounded sentence is true, or why the fact it describes obtains.

In addition to the primitive notions of reality and ground, Fine also introduces a third notion that is defined in terms of the notions of the real and ground. This will be useful in what follows. It is the notion of reduction:

> The true proposition P *reduces* to the propositions Q, R, … iff (i) P is not real; (ii) P is grounded in Q, R, …; and (iii) each of Q, R,… is either real or grounded in what is real. (2001, p. 26)

Fine argues that this definition of reduction is superior to those that have been proposed previously. In particular, it is superior to accounts of reduction in terms of supervenience or other modal notions in that it is explicit in this account that what is reduced is not real (2001, p. 11).

Here, it is worth emphasizing again that Fine is interested in a notion of reduction that will be useful for formulating anti-realist positions. I started this section by

acknowledging that in many debates in the philosophy of mind, the assumption is that we do not want to be anti-realists or eliminativists about the mental. Mental phenomena are assumed to be real, the question is rather what relation they bear to physical phenomena. For example, in a situation in which Tom is in pain, the reductionist, nonreductive physicalist, and emergentist will typically all agree the mental state is real. Their debate concerns rather whether Tom's being in pain is identical to a physical state, is realized by, but not identical to a physical state, or is instead caused by rather than constituted by a physical state of Tom's. In a debate that has this form, we may note that Fine's notion of reduction will not be particularly useful since it doesn't capture any of these three options. As one might already guess, I do not agree that the debate should be understood in this way, as limited to a choice between these three options. One of the main points I want to make is that the grounding framework gives us a way of framing views on the mind-body problem that are (in at least some domains) more reasonable than those that have previously been articulated. We will come back to this when we examine the case of phenomenal and other psychological states in more detail momentarily.

As a final exegetical point, note that this framework and all that has been said up until now leaves open the possibility that a sentence may be true, grounded in other sentences, and yet itself be real. This would be a case of grounding without reduction, where what is grounded reflects metaphysical structure as well as its grounds. The distinction between the case of grounding with reduction and grounding without reduction will play a role in the applications below.

3. Grounding With or Without Reduction

Although Fine's framework makes room for cases of grounding without reduction, where the grounded is real just as the ground, this situation is treated in his work as something of an obscurity, brought up mainly to solve a puzzle that might arise in cases of infinite mereological (or otherwise explanatory) descent. Indeed, Fine is explicit that with grounding there is a presumption that the grounded is not real (2001, p. 27). This is a place where we can see a clear difference between Fine's (as well as Rosen's) grounding framework and those of others, for example of Audi (2012) and Schaffer (2009).

Suppose again we are discussing the status of the fact that Tom is in pain. In Audi's framework, if this fact is grounded in some fact about physical states (say that Tom's C-fibers are firing), this is to say that there is a kind of noncausal determination relation obtaining between these facts, one that arises due to an essential connection between the properties that constitute these facts. In this way of thinking about grounding, grounding isn't even compatible with reduction in Fine's sense. Pain has to be real for there to be an essential connection between it and the physical property figuring in the grounding claim. In Schaffer's framework as well, we find that where a grounding relation obtains, there is no presumption that the grounded is not real. Instead for Schaffer, quite the opposite, anything that is grounded must be real. Grounding is a relation that obtains, not like for Audi between facts or for Fine between sentences, but instead between entities of any ontological category. So Schaffer might speak of Tom's pain being grounded in some physical feature of Tom's brain or body. To say for some entity that it is grounded is just to say that it has the status of a derivative entity (2009, p. 373), which entails that it is an entity and hence real. I propose that it is an advantage of

the Finean framework that it does not have this consequence of Audi and Schaffer's frameworks that what is grounded is automatically real or an element of one's ontology.

But why? Why should it be an advantage of the account rather than a cost that it permits this flexibility? Wilson (2014, pp. 244-248) has argued this is a liability for grounding approaches – there is what she calls the metaphysical underdetermination problem for theories of grounding. This is that knowing a grounding fact obtains leaves completely open all of the interesting questions we care about when we raise questions of existence, ontological dependence, priority, and fundamentality. This is a problem because if the argument for introducing a new grounding primitive was that the logical, mereological, and modal relations metaphysicians were previously using were inadequate to capture the metaphysical relations between (say) mental phenomena and physical phenomena or mathematical phenomena and observable phenomena, then an appeal to grounding doesn't offer an improvement in this respect and so is unmotivated.

This is an important worry. To respond, we may start by noting that nothing in the framework I have discussed here suggests that a bare appeal to grounding can answer the question of the precise nature of the metaphysical relation between (for example) mental and physical phenomena by itself, nor even questions about their existence. When we just say a truth is grounded, we do not say what its grounds are. But although simply saying a truth is grounded won't answer all of the metaphysical questions that interest us (and so close the explanatory gaps a grounding claim is supposed to close, according to Fine), stating what those grounds are will. To see this return to:

(7) Tom is in pain.

Here are four proposals for the grounds of (7):

(8) Tom's C-fibers are firing.

(9) Tom's C-fibers are firing. The firing of one's C-fibers is typically caused by tissue damage and typically causes withdrawal behavior. One is in pain if one is in the kind of state that in the relevant circumstances is typically caused by tissue damage and typically causes withdrawal behavior.

(10) Tom is in an internal state of the kind that in the circumstances is typically caused by tissue damage and typically causes withdrawal behavior. One is in pain if one is in the kind of state that in the relevant circumstances is typically caused by tissue damage and typically causes withdrawal behavior.

(11) Tom believes he is in pain.

We may also consider a fifth possibility that while (7) is true and real, the event it describes is caused by the event described by (8), but (7) is not grounded in anything.[14]

What we see here are different candidate grounds for (7) (or the denial of a ground altogether) that correspond to different ways of answering the question of the relation between pain facts and physical facts. These correspond to five canonical views in the metaphysics of mind: (brute, i.e. non-functionalist) type identity theory, occupant functionalism, causal role functionalism, a subjectivist theory, and emergentist dualism. This of course by no means exhausts the range of available options. But it suffices to demonstrate how even though merely saying that something is grounded does nothing to eliminate metaphysical underdetermination, saying in what it is grounded will.

[14] A complication arises here in that (7) refers to Tom, a human being, and that we should not think of facts about human beings as generally ungrounded. Let's postpone this issue and just ask the question of whether (7) is grounded *relative to its ascription of pain*.

The question that next naturally arises and is indeed pressed by Wilson is then why the concept of grounding is needed when we already have at our disposal these concepts of identity, realization, causation, as well as mereological notions.[15] Can't we accommodate all of the options mentioned above without also using the notion of ground? We may first remark that what we have in effect shown is how (using the grounding framework), we may bypass any explicit mention of identity, realization, etc. while still seeing a diversity of metaphysical options via the variety of grounds possible for (7). But the more important point is again to insist on being careful about which grounding framework we are considering.

For some frameworks (e.g. Schaffer's), Wilson's concern would be justified. We may dispense with the grounding notion in favor of identity, realization, and the like (assuming we also have available a way of saying which entities are real or fundamental). Grounding is just a less specific way of describing the ontological dependence of some entities on some other entities. But Fine is interested as we have seen in accommodating a form of non-skeptical anti-realism. In the Tom case, this would amount to a view according to which (7) is true, but not real. The view is anti-realist in the sense that its proponent is denying the reality of mental states without claiming that sentences like (7) are false. A view like that cannot be accommodated using the frameworks of identity, realization, or emergence. The view rejects the existence of identity, realization, causal, and mereological relations between pain and physical phenomena, because it rejects the reality of mental phenomena. Yet, it is not the eliminativism of Paul or Patricia Churchland (1981, 1986) either. According to their eliminativism, it is not just that

[15] There is a question about whether we need the concept of real as well. Wilson allows that we need at least something like this, a concept of fundamentality.

mental states are not real, but that all psychological claims that would appear to be about them are false as well. Using the grounding framework we can say that many psychological statements are true even though they are not real, so long as they are grounded in what is real. This is accommodated because grounding is not a relation between entities that must exist (like identity, realization, mereological relations, etc.) but rather an operator acting on sentences, sentences that may or may not have constituents corresponding to features of the world. The next sections will show why accommodating this as a coherent position will be useful for resolving longstanding debates.

We can now answer the question raised at the beginning of this section: why is it a good thing that the grounding framework permits different accounts, some according to which what is grounded is real and some according to which what is grounded is not real (cases of Finean reduction)? The reason is because psychological and other statements vary in the way they track metaphysical structure. When we see the grounds, we can see in virtue of what a given sentence is true. And then by examining these particular grounds, we can tell whether or not what is grounded is real or not.

We have now introduced enough of the framework to be able to see how those who worry that grounding (at least in Fine's sense) is just a vague way of getting at the ontological dependence relations philosophers of mind have been discussing for decades are misunderstanding the proposal. Because ground is an operator on entire sentences, not individual entities, it plays a different role than most of these notions (certainly identity, realization, and causation, which link an entity or entities). It allows us to discuss cases in which the target sentence uses noun phrases that do not correspond to genuine ontology.

This opens up an expanded range of positions about a topic of discourse. In the next sections, we will focus on the case of psychology.

4. The "Special Sciences" Debate

What I want to suggest is that some debates in the philosophy of mind can be resolved (not merely clarified) by appeal to this framework. The debate I will discuss is the one that has essentially determined the main divide we now see in the field between on the one hand, reductive physicalists (reductionists), and on the other, nonreductive physicalists, particularly functionalists. In his paper, "Special Sciences: Or, the Disunity of Science as a Working Hypothesis," Jerry Fodor argued that the special sciences (psychology, biology, economics, etc.) were in an important sense autonomous from fundamental physics. Although the subject matter of the special sciences consists entirely of physical things of one sort or another, the explanations provided by the special sciences cite distinctive properties not reducible to physical properties (1974, p. 103). If we consider any special science law – Fodor's example in the paper was Gresham's law, the law that "good money drives out bad money" – it will be capable of covering a physically diverse and heterogeneous variety of objects: silver or copper coins, strings of wampum, someone's writing a check. Fodor draws on Putnam's earlier (1967) point about multiple realization. Although each instantiation of a special science law will involve the instantiation of a physical type, this type will vary from one instantiation to another. This shows, according to Fodor that "[n]ot all natural kinds (not all the classes of things and events about which there are important, counterfactual-supporting generalizations to make) are, or correspond to, physical natural kinds" (1974, p. 113).

Applying this point to the case of pain, Fodor's claim is that when there are true, justified, and important psychological laws involving psychological predicates like 'pain,' since these laws may be instantiated by creatures possessing a heterogeneous variety of physiologies, we cannot identify this psychological kind with any particular physical kind.[16] At best we might try to say that pain is identical to some wild disjunction of physical kinds. But such a "heterogeneous and unsystematic disjunction" (1974, p. 108) would not be the sort of kind that would appear in our scientific theories and so is not the sort of kind in which we should believe.

One influential critique of Fodor's position was given by Jaegwon Kim who argued that Putnam and Fodor's claims about the heterogeneous multiple realization of special science kinds actually undermines the possibility of our possessing genuine laws in the special sciences. Kim asked the following question:

> If pain is nomically equivalent to [the property of possessing one of the physical realizers of pain], the property claimed to be wildly disjunctive and obviously non-nomic, *why isn't pain itself equally heterogeneous and nonnomic as a kind?* (1992, p. 323)

Kim presents this concern as an issue about the projectibility of these irreducible special science kinds. As Kim points out, for concepts to be useful in science, they should denote kinds whose instantiations lead to stable behavior. For any scientific kind K, we should expect the existence of some true generalizations saying that if K is instantiated, then some particular kind of behavior will follow. This is what it means to say that K is

[16] And recall Putnam (1967) on pain: "Consider what the brain-state theorist has to do to make good his claims. He has to specify a physical-chemical state such that *any* organism (not just a mammal) is in pain if and only if (a) it possesses a brain of a suitable physical –chemical structure; and (b) its brain is in that physical-chemical state."

projectible. Kim raises the point that if special science kinds are not realized by fairly univocal physical kinds but instead may be realized on different occasions by varied and heterogeneous sorts of underlying physical processes (and so are nomically equivalent to wildly disjunctive physical kinds), then this threatens their projectibility. For then we cannot expect all instantiations of the kind to lead to similar behavior. What behavior will result will depend on the specific realization we find on that occasion. And if this is right, it threatens the putative special science law's ability to support counterfactuals. Kim thus argues that we should believe that in any science, fundamental or otherwise, the concepts that are employed should be such as to pick out univocal physical kinds. This raises a skeptical worry about the physically irreducible kinds Fodor says that psychology and the other special sciences describe.

Another worry Kim famously raised for Fodor's position is a metaphysical worry concerning causal overdetermination. In *Mind in a Physical World* and elsewhere, Kim suggests that the irreducible special science kinds posited by Fodor would at best be epiphenomena since on any given occasion (assuming physicalism, a position Fodor explicitly endorses) there will always be a complete physical causal explanation for any occurrence. There doesn't seem to be room then for Fodor's irreducible special science kinds to have any causal impact on what happens, and so positing them seems explanatorily superfluous. This is of course what is commonly known as the causal exclusion problem for nonreductive physicalism.

Kim's proposal in the end is not to reject that we may use psychological predicates like 'pain' to refer to genuine kinds. Rather, he simply insists that we must be using these terms to refer to physical kinds with univocal causal profiles. If what we call

pain in humans is quite different physiologically from what we call pain in mollusks so that we can't speak of a common physical type between them, then humans and mollusks will not instantiate any common psychological kind and the psychological laws for humans will differ from the psychological laws for mollusks.

What resulted and has continued to this day is a disagreement between reductionists like Kim and nonreductive physicalists like Fodor. My claim is that the grounding framework can let us state a view that lets both sides have at least most of what they want (and all of what was reasonable in the two positions). We start by assuming what neither party here denies (since both are physicalists): that there are some fundamental physical features and so a set of real claims about the instantiation of these features. The solution comes when we are able to recognize that the two parties are arguing past each other because they aim to capture different sort of facts. On the one side (Kim's) are those who are predominantly interested in issues of metaphysics - what kinds of entities are real, what kinds of properties do they have, are there causal relations and if so between which entities do these relations obtain? On the other side are those (like Fodor) who are predominantly interested in something else – establishing certain claims as true or explanatory in a given scientific context. If we allow the possibility of a non-skeptical anti-realism of the kind outlined above, then we do not need to reinterpret psychological claims that appear to be tracking diverse realizations as claims about physical kinds to make sense of how they may be true. But nor need we see them as referring to irreducible special science kinds. We may adopt a view that is *metaphysically* reductionist, one denying the reality of special science kinds, while allowing the truth of special science claims.

So first let's be explicit how this gets Fodor what he wants. We can immediately concede as he insists that many claims in psychology and (perhaps) economics are true and factual, justified and important. This being so, we must also say they are grounded in what is real. So to understand what it is in virtue of which they are true (in the metaphysical sense), we have to understand these grounds. But given Fodor's interest in capturing special science laws in the sense they are intended, there is no reason to say that these special science claims will themselves be real, to say that they correspond directly to the intrinsic structure of reality. To use one of Fodor's own cases, to make a financial claim is not to attribute an intrinsic feature to some piece of metal or paper, but instead to capture a complex web of causal relations. Although some special science claims may be intended to track the intrinsic structure of reality (as I'll discuss below), the point of emphasizing the autonomy of the special sciences from fundamental physics in Fodor's work seems precisely to emphasize that many psychological claims are not intended as claims of fundamental metaphysics, about what kinds of things there are, but rather intend to track causal patterns that may be instantiated by a broad variety of things. Fine's framework allows us to say that even if this is so, the special science claims in which Fodor is interested may be true. And this seems to be precisely what Fodor most wants. Gresham's law, good money drives out bad money, can be true. But for this to be so, the world need not be carved up into little things that are money.[17] As in the third account of mess talk above, the truth of such claims may be explained by facts that do

[17] It is clear that many who have followed Fodor in adopting nonreductive physicalism want more, want to say that many special sciences claims aren't just true and justified but also that they refer to "additional" higher level special science kinds. However, there does not seem to be any justification for this further ontological claim and there are reasons (those noted by Kim) against it.

track reality, but not what is suggested by the grammar of the financial claim. If functionalism is correct, we may see monetary truths as grounded not in facts about a particular ontic kind that is instantiated in wallets and banks, but rather truths about a complex web of causal facts. Then we should give up the claim that money is a kind of thing altogether. But again, this doesn't undermine the truth of the claim, just its success at reflecting metaphysical structure.

Seeing things this way also gives Kim most of what he wants. To say that a special science claim is true and justified does not require saying its predicates refer to real kinds. So it does not require we posit the existence of additional higher level kinds any more than the truth of 'There is a number between 2 and 5' (in any normal mathematical context) requires the existence of numbers. As such, there is no threat of overdetermination or epiphenomena. Special science claims, when true, will be grounded in real claims (seeing how is an important first order project in the metaphysics of science in which the various conceptual tools of realization and constitution may be brought to bear), but to be so grounded does not require the existence of potentially overdetermining higher order kinds.

Kim's point about projectibility, on the other hand, is trickier. It is not clear to me (and I don't think it has been clear to many) why projectibility should require that a special science concept denote a kind with a univocal physical causal profile. One way to ensure that a claim be projectible is for it to track a physical kind, but it is not clear why this is a necessary condition. Scientists may succeed in tracking consistent behavior, capturing interesting patterns, even where no underlying metaphysical unity in the objects

can be found and we should allow for that.[18] What we seem to have in such cases are disunity in the kinds of objects there are and unity in broader causal patterns. Thus, while the framework I am proposing eschews realism about psychological kinds that may appear to be the denotations of psychological predicates, it finds a way to ground the truth (and projectibility) of claims involving these predicates in real facts about causal patterns.

Just as it appears questionable whether Kim is correct that psychological claims that are projectible and support counterfactuals must refer to univocal kinds, it is similarly doubtful whether Fodor is correct that psychological laws *always* make claims that track physically heterogeneous sets of circumstances. As philosophers of neuroscience have been keen to emphasize (Bechtel and Mundale 1999), psychological claims are diverse. It is a virtue of the framework I am developing here that it has room to distinguish the variety of psychological claims in a perspicuous way.

Let me say a bit more about what I mean. The reductionism/nonreductive physicalism debate is most of the time presented as if it is all or nothing. One must either be a reductionist about all of psychology or a nonreductive physicalist tout court. But psychological statements vary in their connection to underlying neurophysiology and so functionalism (and nonreductive physicalism) may be more plausible in some cases than in others. Recognizing this, some are content to be functionalists about propositional attitudes like beliefs and desires, but reductionists about phenomenal states (e.g. Ned Block). In the present framework, this would amount to adopting an anti-realism about propositional attitude ascriptions, but a realism about phenomenal ascriptions. Since there

[18] See Loewer (2009) for a discussion of this issue.

is nothing incoherent in this combination of positions, we see another virtue of having an approach to the mind-body problem that does not presuppose an answer yes or no to the question of whether a sentence that is true and grounded must therefore be automatically real (or not real). And even when we look more closely within the realm of phenomenal or intentional phenomena, the metaphysical connection of psychological statements to neurophysiology may vary.

Finally, to close, let's come back to the example of 'Tom is in pain' and see how the variety of grounds for

(7) Tom is in pain,

may suggest a form of realism or anti-realism along the lines defended here. Above I presented four options for how one might understand the grounds of (7).[19] We may set aside (8) as both Fodor and Kim (and most others) would deny that this suffices to close the explanatory gap between the mental and physical. We may also set aside (11) for our purposes. Although it is an interesting and important reductive option, typically reductive and nonreductive physicalists are not happy to ground claims about phenomenal states in claims merely about our beliefs.[20] The disagreement, if there is one, rather would be between (9) and (10):

(9) Tom's C-fibers are firing. The firing of one's C-fibers is typically caused by tissue damage and typically causes withdrawal behavior. One is in pain if one is

[19] Here, I am considering proposals for the full, as opposed to partial, grounds for (7). See the distinction in Fine (2012).

[20] This represents a position in the ballpark of what is proposed in Dennett (1991). The fact that this view shows how Dennett's position is able to accommodate true phenomenal claims is also a virtue of the account, but one I do not have the space to explore here.

in the kind of state that in the relevant circumstances is typically caused by tissue damage and typically causes withdrawal behavior.

(10) Tom is in an internal state of the kind that in the circumstances is typically caused by tissue damage and typically causes withdrawal behavior. One is in pain if one is in the kind of state that in the relevant circumstances is typically caused by tissue damage and typically causes withdrawal behavior.

We may allow that (9) and (10) are both real and also that either may in principle explain the truth of (7). But there is a question of which of (9) or (10) gives the best explanation of (7) as it is asserted in a given context. Which is the correct grounding explanation for (7) has ramifications for whether one should take a realist or anti-realist position about "pain". (9) does, while (10) does not, explain the truth of (7) in terms of the existence of a particular kind of state that is a pain state.[21] (10) reveals pain talk to be metaphysically grounded not in the instantiation of a particular kind of state, but rather a broad causal nexus. Those who take (10) to be the correct view about what grounds (7) will thus (on the picture I have sketched here) adopt a non-skeptical anti-realism about pain. This is what I have argued is the reasonable position to take if one accepts with Fodor (and Putnam and the very many other nonreductive physicalists) that psychological states using the concept pain do not refer to a homogenous physical kind, but accepts the metaphysical points of Kim (and Lewis and other reductionists).

5. A Comment on 'Reality'

[21] Recall the discussion of various views about mess talk.

As a sidebar, it is worth acknowledging a bit of awkwardness in Fine's terminological framework as applied to the mind-body debate. In the framework I am proposing, only psychological statements that are tracking univocal physical kinds make claims about reality. Those that do not may be true, justified, and important, but not real. Some have asked whether we really want to say that in all cases in which functionalism is motivated, i.e. all attitude ascriptions or (if Fodor is right about 'pain') pain ascriptions, these claims are not 'real.' In every sense of 'real' that matters to us for most but the most esoteric purposes, one can see how this is really not very helpful. The use of 'not real' here is too easily confused with a way of rejecting a statement. After all, does a metaphysician really want to offer the diagnosis that someone's pain is not real?

One response would be to note that the claim of non-reality is made as a point about metaphysical structure only, nothing else. But here we might try to avoid such confusions by seeking out alternative terminology. One option would be to replace the word 'real' with 'fundamental.' However, I can imagine similar complaints brought to bear. 'Fundamental' is a technical term used by metaphysicians, but it also has connotations to the general public of relative importance and do we want to imply that statements about pain are somehow less important than statements of neurophysiology? It is better if we can sidestep that confusion. Anyway, if 'fundamental' means *has no further explanation* or *brute*, then this isn't the word we are looking for. As already noted, to say a sentence is real does not entail it is not grounded. To cite a simple example, conjunctions have grounding explanations in terms of their conjuncts, but many would allow that a conjunction tracks reality no worse than its conjuncts taken together.

Another option would be to replace 'real' with 'intrinsic.' Making this move from 'real' to 'intrinsic', we would remove the implication that a pain ascription fails to be correct, or grounded in reality, or important. But I am not sure if using 'intrinsic' does any better at removing confusion than 'real.' We wouldn't want to imply a claim that is intrinsic in this sense may not be a claim about relations, e.g. 'The mass of the proton is greater than the mass of the electron' does appear to express a claim about reality. But we would have to be clear that the intrinsic/real statements are those that make a claim about the properties or relations instantiated by the entities referred to by the sentence, rather than describing how they are with respect to other things or individual perspectives or nothing at all. So in describing a relation between two objects (as in 'The mass of the proton is greater than the mass of the electron') we are thereby attributing an intrinsic feature to the pair (cf. Lewis 1986).

Perhaps a more technical-sounding term like 'ontological' would be best. But we could raise further concerns about that too, since 'ontological' fails to track all kinds of metaphysical distinctions there might be in nature. In lieu of finding more satisfactory terminology, I'll continue to use Fine's 'real' in the remainder of this paper.

6. Other Frameworks

After all of this, one might still be wondering why we need to use this new framework of grounding to make the distinctions I've wanted to make in this paper, in particular in order to introduce the conciliatory position I discussed in Section 4. Several have asked why we can't simply say that we should analyze psychological statements in terms of statements about causal networks and leave it at that. Talk of analysis is something

metaphysicians (and philosophers of mind) have long been comfortable with and doesn't require introducing new terminology like 'real' and 'ground.'

This is prima facie a reasonable point, but there are many problems with this approach that metaphysicians are by now well familiar with. First, it is not possible in many cases to provide the relevant analyses. But more generally, even if we had them, analyses don't tell us in virtue of what in the world a claim is true, what our ontological commitments ought to be if we accept that claim, only in what circumstances it is true. This point was articulated years ago by William Alston in a paper critical of Quinean approaches to ontological commitment (Alston 1958). Suppose a nominalist about universals wishes to allow that sentences like 'Patience is a virtue' may be true while denying the existence of universals. She may then analyze 'Patience is a virtue' in terms of some sentence that doesn't quantify over universals, something like 'Patient people are virtuous people.' The trouble Alston noted is that the result of the analysis is simply the claim that these two sentences mean the same thing. But agreeing the sentences are semantically equivalent doesn't entail anything about the reality or unreality of universals. Rather we then see the sentences assert the existence of patience as much as they assert the existence of patient people. What Alston argued, and what Fine and Rosen and I are pressing, is that if one wants to say that Xs are not real, but Ys are, and that the X-truths that are grounded in Y-truths, then one should just come out and say this and use this language, since such metaphysical claims cannot be replaced by talk of analyses.

One interesting view in many ways similar to what I am proposing here but formulated without a grounding framework was developed in 2007 by Carl Gillett. This view, which he calls compositional reductionism, also aims to reconcile the different

insights of reductionism and nonreductive physicalism. The central idea of compositional reductionism is that for reasons of ontological parsimony we should reject the existence of psychological kinds that are not identical to causally univocal physical kinds, but we should also allow that the claims made by psychologists are not intended to track physically univocal kinds. Gillett's compositional reductionist accommodates these points by saying that a sentence like my 'Tom is in pain,' may have associated with it two sets of truth conditions:

> 'Tom is in pain' is true iff Tom instantiates a particular physical type (say, his C-fibers are firing).
>
> 'Tom is in pain' is true iff Tom instantiates the higher order property of instantiating a physical type that in the circumstances plays the pain-role.

Psychological statements like 'Tom is in pain' may be true because they satisfy something like the first set of truth conditions. They cannot satisfy the second set of truth conditions according to the compositional reductionist, because there are no such things as higher order properties. This in many ways looks very similar to the non-skeptical anti-realism I have proposed here. But there are problems.

The first problem with Gillett's strategy is similar to what was just noted of the proposal to replace ground and reality talk with talk simply of analyses. Merely stating truth conditions doesn't necessarily tell us in virtue of what metaphysically a given claim is supposed to be true, rather than stating a semantic equivalence.

But the starkest problem with this proposal is that although it is advertised as a way to reconcile the insights of reductionism and nonreductive physicalism, the position does not give the nonreductive physicalist what he wants at all. And this is because it

makes what psychologists say consistently false. They are, according to the view, trying to assert claims meeting the second set of truth conditions and yet, according to the view, there are no such higher order properties.[22] According to Gillett, although we may use psychological statements like 'Tom is in pain' so as to track the first set of truth conditions, he agrees with Fodor that psychologists usually do not. Instead Gillett argues they use psychological sentences to express claims about the instantiation of irreducible psychological kinds. This means that the kinds of claims psychologists generally make when asserting their hypotheses, making predictions and providing explanations, are, according to the compositional reductionist, false.

Gillett is assuming that for a sentence like 'Tom is in pain' to be true, it must be tracking a kind, the referent of 'pain.' What the grounding framework gives us is a way of seeing how sentences may be true in virtue of how reality is structured without requiring that the true sentences directly mirror this structure. The key point the position I am defending relies upon is that one truth (or set of truths) may explain another even while demonstrating why the explanantia may mislead as to reality's structure.

Now, I should note that there are other metaphysical frameworks that have been developed that are also able to accommodate something like the position I articulate in this paper and don't suffer the problems just noted. For example, John Heil develops quite a similar position in Chapter 9 of his most recent book (2012). Heil's approach differs from mine in that he uses the framework of truthmaking rather than grounding to

[22] In fairness to Gillett, he isn't defending compositional reductionism in his paper, only aiming to set it out as an interesting view worthy of consideration. He presents the complaint I just made as a puzzle that those who want to advocate the position would have to solve. I am arguing that it is not a problem for the different view I propose here.

make his point but the broad sketches of the two approaches are the same.[23] In the truthmaking framework, there is a basic set of facts about genuine ontology and then a truthmaking relation is postulated to obtain between these facts and sentences (or other truthbearers). Unlike Heil, I believe the grounding framework of Fine is superior to the truthmaking framework. In my view, it is going to be important to see some truths as grounded in what is not real and this is essentially nonsense in the truthmaking framework. I have also been influenced by Fine's critique of truthmaking developed in his (2012).[24]

Sider's metaphysical framework using the fundamental notion of 'structure' to replace Fine's 'real' and the introduction of a concept of a metaphysical semantics (distinct from that of a linguistic semantics) to replace talk of grounding is also an interesting alternative framework that might allow one to state the kind of non-skeptical anti-realist view I defend here. I haven't argued against Sider's framework in this paper either. My goal rather has been to argue that a desirable approach to solving the mind-body problem should be able to capture situations in which a sentence is true, its truth is grounded or made true by facts about the world, and yet it misleads on matters of ontology. If one prefers to adopt Sider's framework or perhaps the truthmaking framework to accommodate this, fine. One is still thereby acknowledging that one must move beyond the tools for presenting metaphysical positions that philosophers of mind have traditionally allowed themselves. And this is what needs to be recognized.

7. Conclusion

[23] They were developed independently.
[24] But see Asay (manuscript) for a rebuttal.

I hope to have shown here how at least one grounding framework may be useful in the philosophy of mind, providing us especially with a range of anti-realist views that do not reject the truth, factuality, importance, or justification we have for claims in psychology. Psychological claims may possess all of these honorifics without undermining the search for a unified, sparse, and nonredundant underlying metaphysics.[25]

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