

Primitiveness, Metaontology, and Explanatory Power

JIRI BENOVSKY *University of Fribourg*

ABSTRACT: Metaphysical theories heavily rely on the use of primitives to which they typically appeal. I will start by examining and evaluating some traditional well-known theories and I will discuss the role of primitives in metaphysical theories in general. I will then turn to a discussion of claims of 'equivalence' between theories that, I think, depend on equivalences of primitives, and I will explore the nature of primitives. I will then claim that almost all explanatory power of metaphysical theories comes from their primitives, and so I will turn to scrutinize the notion of 'power' and 'explanatory'.

RÉSUMÉ : Il est fréquent que les théories métaphysiques aient recours, et dépendent fortement, de l'usage de primitives. Dans cet article, j'examine et j'évalue d'abord brièvement certaines théories métaphysiques traditionnelles pour ensuite discuter le rôle des primitives dans les théories métaphysiques en général. J'aborde ensuite la question de «l'équivalence» entre des théories, qui, je crois, dépend de l'équivalence entre leurs primitives, et j'explore la nature des primitives. Je défends enfin l'idée selon laquelle presque tout le pouvoir explicatif des théories métaphysiques provient de leurs primitives, avant d'examiner la notion de «pouvoir» et d'«explication».

§1.

Among central points of discussion in metaontology are claims of 'equivalence' between allegedly competing theories¹. In this paper, I want to explore some general reasons there are for such claims, and see what can be learned from them. I believe that a *lot* in this metaontological debate, and in metaphysical debates in general, relies heavily on the use and the nature of *primitives* to which theories typically appeal. I will start by examining and evaluating some clearly *non-equivalent* theories and, in §2, I shall discuss the *role* of primitives in metaphysical theories in general. In §5-6, I will then turn to a discussion of claims of equivalence between theories that, I think, depend on equivalences of primitives, and I will explore the role and the *nature* of primitives in general. By doing this, I will emphasize the utmost importance of primitives in the construction of metaphysical theories and in the subsequent evaluation of them. In §7-8, I will claim that almost all explanatory power of metaphysical theories comes from their primitives, and I will then scrutinize the notion of "power" and "explanatory". Together, these points will naturally lead me to defend a global view on the nature of the metaphysical enterprise: very close to what Jonathan Schaffer² suggested, for different reasons, I will claim that what is at stake in metaphysics is to find out not just what there is or what there is not, but what is more fundamental than what: to find out what are the best primitives¹.

§2.

Let us start with one of the oldest problems in metaphysics: the problem of attribute agreement. A Ferrari and an apple are both the same shade of red, they 'share the same property', and the metaphysician's questions are: What are properties? What is their nature? How do objects have their properties? How is it possible for two objects to have the same property? These inter-related questions, and especially the third, is 'the problem of attribute agreement.'

A number of theories have been put forward as answers to these questions. Here, I shall now briefly examine three theories that I take to be the most representative of the variety of views available.

Let us begin with the view³ that objects like apples and Ferraris are bare particulars (substrata) that instantiate spatio-temporal multiply locatable (repeatable) universals. An object *a* is *F* if *a* instantiates the 'immanent' universal *F*-ness. Two objects *a* and *b* are both *F* ('share the same property') if *a* and *b* both instantiate the numerically same universal *F*-ness.

A second possible answer to the problem of attribute agreement is the tropes-bundle theory⁴. Under this view, there are no substrata, objects are 'just' bundles of compresent non-repeatable, non-multiply locatable, properties—tropes. An object *a* is *F* if *a* has among its members/constituents/parts an *F*-trope. Two objects *a* and *b* are both *F* ('share the same property') if *a* and *b* both have among their members/constituents/parts numerically different *F*-tropes that are exactly similar.

The third answer takes objects as basic: objects are not analyzed, rather they are taken as primitive. This is a Resemblance Nominalism such as the one defended by Rodriguez-Pereyra⁵. Under this view, *a* is *F* if *a* resembles all the *F*s, and *a* and *b* are both *F* ('share the same property') if they are both members of the same resemblance class.

Thus, we have three answers to the problem of attribute agreement; these I have only sketched, and not really explained, hoping that the reader is familiar with them. Now, I draw attention to the fact that these three answers, as different as they are, have something in common: they all answer the question in a primitivist way. The relation of exact resemblance between tropes, the instantiation of the same universal, or the fact that *a* and *b* resemble each other are all primitives postulated by the theories that use them, and they are precisely the tools that give us an answer to the problem of attribute agreement. In virtue of what are *a* and *b* both *F* ('share the same property')? *Answer 1*: in virtue of instantiating the same universal. And in virtue of what are two instances of *F*-ness instances of *F*-ness (the same universal)? That's a primitive. *Answer 2*: in virtue of containing exactly similar tropes. And in virtue of what are two exactly similar tropes exactly similar? That's a primitive. *Answer 3*: in virtue of resembling each other (and thus being in the same resemblance class). And in virtue of what do two objects resemble each other? That's a primitive.

The work is done by the theories' primitives. And don't think that I have carefully chosen my examples in a way that gives me such a result. Let me, quickly and even more sketchily, consider other examples of challenges that these theories face.

Typically, the universals view has been charged with Bradley-like infinite regress objections. Armstrong's reply⁶ is simply that the primitive 'relation' of instantiation is non-relational—so, no regress. To anticipate something that I will discuss in detail later, Armstrong was right to reply thus. *He* is constructing his theory, and he is the one who can tell us what his primitives are, and if he wants to postulate that instantiation is non-relational, he has the perfect right to do so: his primitives are

entirely in his power, they are his theoretical postulates (more on this later). Thus, as with the problem of attribute agreement, the problem of infinite regress is avoided by using (indeed, postulating) a primitive machinery.

Let us take an objection to the tropes-bundle view: it has been frequently argued that this view faces the 'problem of naturalness', sometimes also called the 'imperfect community problem'. One way to put the objection is to be found in Manley⁷: "Consider the resemblance class of tropes (in the actual world) that has as members all and only the pink color tropes, the baby-blue color tropes, and the purple color tropes. These all resemble each other to a good degree and no non-member resembles each of them to that degree. But this is no property class worthy of the name 'natural'". But Manley also sees the ease with which the theory can escape the problem: it actually does not even arise if we use *exact* resemblance rather than just resemblance. Exact resemblance is what we asked for when raising the objection, and exact resemblance is what the theory gives us—in a primitive way (which may not satisfy the objector, but again, why wouldn't the tropes-bundle theorist have the right to choose what his primitives are?).

Similar situations arise in the case of Resemblance Nominalism as well: the companionship problem creates a difficulty here as well, and the same sort of strategy can be applied to face it; and a threat of a regress, sometimes called Russell's Regress⁸, can also be answered by using the primitive fact that *a* and *b* resemble one another⁹. An interesting objection claims that Resemblance Nominalism has troubles with causality since causal powers of objects should depend on how objects are and not on how they are related to other objects¹⁰. The reply is as interesting as the objection¹¹: causal powers *do* depend on how objects are, while objects are the way they are in virtue of resembling other objects—this latter claim is among the primitives of Resemblance Nominalism.

What I have done above, in a frustratingly sketchy way, is to illustrate the first, and I hope quite obvious, claim I want to make about primitives: they do a *big* part of the job. Without their primitives, the theories could not even begin to work, and could certainly not face their theoretical challenges and objections. Let me elaborate a bit on this claim. First, I do not take it to be a surprising, and even less shocking, claim—and, *even* less, an objection: it's perfectly all right to introduce primitives that do heavy-duty jobs, for otherwise there would be little justification to bother with them in the first place! Why would we feel the need to postulate the existence of an entity such as a non-relational instantiation tie if it weren't for some important theoretical job to be done? Primitives are acceptable in our theories *precisely because* they do an important job. Second, this first claim about the importance of primitives in metaphysical theories can be generalized to many other cases, indeed, any theory contains such crucial primitives. For example, in §5-6 we will see the case of the Bundle Theory and the Substratum Theory in more detail, where central roles will be played by primitives like "compresence" or "substratum" to account for particularity of particulars and individuation of objects, their persistence through time, and so on. Pick any theory you like and you'll step on heavily loaded primitives without which it could not even start to answer the questions we asked and to do the job we want it to do.

Thus, such primitives are what I call "problem-solvers". In short, a problem-solver is a primitive that is there to solve a problem. Our three theories all answer the question of attribute agreement by using their primitives: the relation of exact resemblance between tropes, the instantiation of the same universal, or the fact that *a* and *b* resemble each other. At the same crucial places, all three views introduce a

primitive with the same function: *primitively answer the question* ("In virtue of what are *a* and *b* both *F*?"). Problem solved. With a problem-solver. Problem-solvers are commonplace in metaphysics, and in philosophy in general; without them we would not get very far. Primitive problem-solvers are the pillars that sustain the structures of our theories.

§3.

Not only are primitives the pillars of our theories, they also are 'points of contact'¹² between them. Take our three answers to the problem of attribute agreement: they all contain a primitive problem-solver at a crucial place in the theory that allows them to answer the question. Their primitives are, of course, clearly different, but they all have the same overall function within the theory: to explain how *a* and *b* can share the same property. In a very general sense, all three views answer the question *in the same way*: that is, in a primitive way. The meta-metaphysician might then raise her eyebrows—what difference does it really make, *with respect to the problem of attribute agreement*, to pick one theory rather than another?

Actually, many meta-metaphysicians do raise their eyebrows, in the case of other theories, and for different reasons not necessarily related to the theories' primitives. For instance, Eli Hirsch¹³ argues for an 'equivalence' claim between endurantism and perdurantism, claiming that these debates are merely verbal disputes that seem to say different things but that are, in fact, making the same claims only formulated in different ways, or, as he puts it, in different languages. Bennett¹⁴ focuses on the debate about composition and argues that there is little or no reason at all to go for one side of the debate rather than the other, even if they are not just terminological variants—it is epistemically under-determined which one we should choose. In another article¹⁵, I argued for an equivalence claim between (several versions of) the Bundle Theory and the Substratum Theory, and I shall use this case again below to illustrate my discussion of primitives.

The question is, if at the end of the day competing theories answer our questions and face their theoretical challenges mainly by using their primitives, what difference does it make to pick one theory over the others? Or, even more strongly, *is* there any difference between the theories at all? Are these theories then, in some sense, equivalent? And in what sense could that be? Are they metaphysically equivalent? Theoretically equivalent? Terminological variants? Epistemically indistinguishable but metaphysically different alternatives? I believe that to properly answer these meta-metaphysicians' questions, we need to say more about the *nature* of primitives. Thus, in the following section, I will distinguish two views about the role and the nature of primitives in metaphysical theories: a Functional View and a Content View.

§4.

The notion of a 'problem-solver', as I used it above, takes most seriously the *functional role* primitives play in theories. The idea here is that, primitives being primitive, we are not told much about their nature and thus they are, to paraphrase John Locke, "we-know-not-what", but: "we-do-know-what-they-do". Typically, primitives are introduced in a theory by a metaphysician who needs them to perform an important theoretical job, and thus, while introducing them, she describes what they are by saying what they do—for instance, when introducing primitive instantiation, Armstrong described it as a tie that has the capacity to relate universals

with substrata in a non-relational way. We learn from this almost nothing about the *nature* of instantiation, but we learn very well its *function*. There would be little justification for having such a primitive in a theory if it didn't do some important theoretical job—after all, that's why it is postulated by the theory in the first place—and so what really counts is what it *does*, and not so much what it *is*. Unless, of course, what it is *is* what it does; indeed, following this view about primitives, they are individuated by their functional role. This is the Functional View about the role and the nature of primitives that I will elaborate on and defend in what follows. But let me already anticipate one point, so you see where I am heading: *if* two primitives do the same theoretical job, and *if* they are individuated by their functional role, they are then equivalent not just for all theoretical purposes but metaphysically equivalent as well—they turn out to be just one and the same thing referred to in different ways. If that's true, there'll be consequences.

But there is another view about the nature of primitives—I will label it "the Content View"—that claims that not only primitives have a function but that they also have a content, a nature that is not functional. Under this view, if two primitives perform the same function, they may still not be the same thing, and thus they may not be metaphysically equivalent, but only theoretically equivalent (that is, equivalent for all theoretical purposes). The slogan goes: even if they *do* the same thing, they *are not* the same thing.

Let me now take an example, to make these views about primitives clearer and to see what consequences they have. In another place¹⁶, I discussed in detail the case of the Bundle Theory and the Substratum theory, and I claimed that several versions (the interesting ones) of these views are equivalent. In the following section, I will take just one example, just one version of both the Bundle Theory and the Substratum Theory, and only use it to illustrate the case I am trying to make about primitives.

§5.

On purpose, I will take here as my example an outcast: the Bundle Theory with (immanent) universals, that is typically rejected because of troubles arising from the principle of Identity of Indiscernibles, and I will compare it to the Substratum Theory that is typically said not to suffer from any problems here. Take Max Black's¹⁷ possible world with nothing in it except two homogeneous spheres that are perfect qualitative duplicates of each other. Now, how can the Bundle Theory with universals account for numerical diversity of these two spheres? The thought is that since they are perfect qualitative duplicates, they are bundles of the very same universals, and so they turn out to be one and the same bundle, rather than two. In other words, The Bundle Theory is committed to endorse the principle of Identity of Indiscernibles which says that if two objects have all exactly the same properties they are identical—'they' are one object. Indeed, if the two objects are bundles of properties and if the properties are the same (numerically the same, since they are universals) then it seems unavoidable that the two bundles are numerically the same as well. But, as Max Black's scenario shows, this principle is false, and so the Bundle Theory is false.

There are various possible ways the Bundle Theorist can react to face such an objection, like for instance rejecting Black's world as being a genuine possibility, or trying to account for numerical difference between the two spheres by appealing to haeccesitic properties ('being identical to sphere S1') or to location properties ('being

on the left of sphere S2'). But as we shall see, the Bundle Theorist does not need to appeal to such (mostly unpalatable) strategies, and she can actually get away from trouble in exactly the same way her opponent does. So let us first ask, how does the Substratum Theory account for numerical diversity of the two spheres? The answer is: the Substratum Theory contains a useful primitive problem-solver to do that, namely, the substratum. Indeed, according to this view, material objects like apples, Ferraris, or spheres are made of two sorts of components: a substratum (a 'bare particular') and properties (universals, in our present case) had (or 'instantiated' or 'supported') by this substratum. What is a substratum? It's the thing that supports/has/instantiates properties of an object. This, clearly, is something the substratum *does*. To put it in a more functional way, the role of the substratum in the theory is to be a function that takes properties 'in' and returns objects 'out'. *That's* what the substratum is doing, that's, *inter alia*, how and why it was introduced in the theory in the first place, and that's what it is (at least, under the Functional View of such primitives. I'll come back to the Content View below. Taking properties to make up objects is the substratum's main theoretical role, it is thus a 'unifying device'—a primitive problem-solver that answers the question of the particularity of particulars.

Now, what about the two indiscernible spheres? *Prima facie*, the Substratum Theory faces the same problem as the Bundle Theory: it uses universals, and since the two spheres have exactly the same properties, they instantiate the very same universals, and so they can neither be qualitatively distinguished nor numerically distinguished by their properties as it would be the case if these were tropes. But here again, the Substratum Theory can solve the problem with its powerful problem-solving primitive substratum: not only are substrata primitively responsible for the particularity of particulars, they are also responsible for primitive numerical difference between them—indeed, it just is a primitive postulate of the Substratum Theory that two substrata are numerically different even if they are not qualitatively different (and the two spheres are then numerically different in virtue of the numerical difference between their substrata). Problem solved. With a problem-solver.

Let us now see how the Bundle Theorist can approach this matter. Bundle Theorists typically manifest their dislike for so-often-called 'mysterious' entities like substrata, and they build their objects only with properties tied together by a special polyadic property called 'compresence'. Compresence, rather than a substratum, then plays the functional role of particularizing particulars: it is a relation that takes properties 'in' and returns objects 'out' and thus it plays with respect to this point the same role as the substratum; it is also a 'unifying device' whose primary (functional) role in the theory is to take properties to make up objects. Now, relevantly to the problem with the two indiscernible spheres, it is worth noting that this primitive relation of compresence does not contribute to the qualitative nature of objects and so it can very well be a numerically different relation in different objects without spoiling the two objects' qualitative identity—and thus it can account for numerical diversity of the two qualitatively identical spheres (the two spheres are then numerically different in virtue of the numerical difference between the relations of compresence that tie together their properties; or perhaps better, in our present case, in virtue of the numerical difference between different *instances* of compresence; either option can actually do the job). In this way, the relation of compresence is then not only a primitive problem-solver when it comes to the problem of particularity of particulars, but it can very well also primitively solve the problem with qualitatively indiscernible but numerically distinct objects—simply by postulating, exactly as the substratum theorist does with *her* problem-solver—that

this primitive unifying device is such that different objects are bundled together by qualitatively indistinguishable but primitively numerically distinct (instances of) relations of compresence. There is no reason why the Bundle Theorist should not be allowed to make such a move: she has, at her disposal, a primitive problem-solver, that she introduced in her theory because she needed to perform a theoretical job, and she can postulate it to possess any useful powers she needs it to, exactly as the substratum theorist feels free to do. Both theories contain a primitive unifying device to make up objects, and if one of the parties claims hers to have the additional primitive capacity to be numerically distinct, albeit qualitatively identical in different objects, there is no reason why the other party could not do so as well, if she feels the need. If such a primitivist strategy is acceptable for one side of the debate, it then should be so for the other side. Problems solved. With problem-solvers. (Note that I am not saying that building this additional power into her problem-solver is something that the Bundle Theorist *should* do; all I am saying here is that she *can* do it.)

§6.

Now, suppose that the Bundle Theorist follows this easy recipe. It then turns out that, first, both the Bundle Theory and the Substratum Theory face their theoretical challenges in the same—primitive—way (at least, the two challenges I discussed above), since both views contain a problem-solving unifying device that allows them to account for particularity of particulars and for numerical difference between qualitatively indiscernible objects, and second, that since primitives are individuated by their functional role, and their role being in this case the same, they just turn out to be one and the same thing under different names. Indeed, what difference does it make to call a primitive problem-solver a "substratum" rather than "compresence" if, in the end, the job it does is the same regardless of what you call it? The difference only seems to be terminological: stick to neutral vocabulary, like "unifying device", and reformulate the two views and see how they behave with respect to the problem of Identity of Indiscernibles. Both will be able to say that sphere S1 and sphere S2 can be distinguished by there being a primitively distinguished unifying device for S1 and S2. This is how a claim of equivalence between the Bundle Theory and the Substratum theory can get off the ground.

In what I said above, I mostly presupposed the Functional View of primitives, and I think that the case of the Bundle Theory and the Substratum Theory nicely illustrates how it works. If indeed this Functional View is correct, the primitives used by the two sides of the debate just turn out to be one and the same thing, and since, as we have already seen, primitives play a vital role in metaphysical theories (indeed, without its primitives, no theory would even begin to work, and primitives are used in all crucial places where a problem needs to be solved or a theoretical task needs to be done), it is then no wonder that if primitives of two theories turn out to be equivalent the theories that contain them turn out to be equivalent as well, and reveal themselves in the end to be no more than terminological variants. Thus, the combination of the Functional View of primitives, the claim that primitives of two allegedly competing theories do the same job, and the claim that most of the theoretical job is done by primitives, encourages a strong conclusion of theoretical *and* metaphysical equivalence between the two allegedly competing theories.

The Content View about the nature of primitives does not entail such a strong conclusion, but it entails one that, while weaker, is still pretty strong. According to the

Content View, even if we grant that the two problem-solving unifying devices used by the two sides of the debate are functionally equivalent, they still do have a different nature and thus they are not *metaphysically* equivalent even if they are theoretically equivalent (that is, equivalent for all theoretical purposes). After all, the Content View says that compresence is a relation and a substratum is not, so they just are not the same thing no matter how similar their functions may be. As a consequence, the two theories that contain these problem-solvers are not metaphysically equivalent either, and only a weaker conclusion can be drawn: while the two sides of the debate are *not* just terminological variants, it is epistemically under-determined which one we should prefer since they do the same job in very much the same way.

I believe that the Functional View is superior to the Content View. Think of the claim that one theory's problem-solver is a relation and the other theory's problem-solver is a substratum, and so they are entities with a different nature. What does such a claim amount to? Perhaps what one wants to say here is that there are some differences between the two problem-solvers like, for instance, the fact that a substratum is 'ontologically independent' (that is, it can exist without exemplifying any properties) while the relation of compresence cannot just 'be there' and relate nothing. But if that were the difference between the two problem-solvers, interestingly, it would be a *functional* difference: it would be something the substratum can *do* ('standing alone', tying no properties together) that compresence cannot *do*. So, in such a case, the Functional View applies: there is a difference between the two problem-solvers, and it is a functional one. If this were true, of course, it would block any equivalence conclusion between the two primitives (and consequently between the two theories) since it would show that the two problem-solvers actually do not do their jobs in the same way and do not play the same theoretical role. At best, any equivalence conclusion could thus only be partial. In another article¹⁸, I discussed this case about 'independence' with the result that there actually is no difference with respect to the two primitive problem-solvers at hand, but in principle it is an open possibility that there are places where they do turn out to play different roles. But let us leave this point aside: here, I am not defending any equivalence claims, rather what I want to point out is that any such a way to show a difference between two primitives will be a functional difference (a difference in what one can *do* that the other cannot *do*)—and so, I *am* defending the Functional View of primitives. In principle, we should not be surprised to find out that any difference between primitives is a functional one: primitives are introduced in a theory by the metaphysician who needs them to perform some important theoretical job because she cannot make her theory work otherwise, and so she'll typically postulate her primitive as being 'the thing that does this-and-this job'—and thus, define it functionally. This is why I think that any difference between primitives will typically always be a functional one, since without the need for an important theoretical role to be played, there would be little reason to introduce such primitives in the first place. If one wanted to insist that, in addition to the functions they play within a theory, primitives have a non-functional content (nature), this would amount then to insisting that there is a *difference that makes no difference*—and it seems to me that there is little reason for doing anything like that when building our metaphysical theories. Such an attitude towards primitives would be having an unreasonable soft spot for the terminology one uses—words like "substance", "substratum", "relation", and so on.

This completes my short discussion of some reasons a meta-metaphysician might have to argue for equivalence claims between theories. But here I am not so

interested in these equivalences; rather I am interested in the nature of primitive problem-solvers. When arguing for or against sexy claims of equivalence, one can be distracted from this question that is, I think, the more fundamental one—this is why I started this paper with a discussion of three clearly non-equivalent views. What we have thus seen until now is that (i) primitives are problem-solvers, (ii) they are vital—no theory could even begin to work without appealing to them, (iii) they do most, if not all, of the theoretical job done by our theories, (iv) they are 'points of contact' between theories, and (v) they are individuated by their functional role.

One might worry here whether the method I recommend using to see whether two theories are equivalent—that is, to look at how the theories and their primitives *work*, how they *function*, to see whether any equivalence claim can be drawn—might give us equivalence too easily and too cheaply. Indeed, in a very general way, one could use my claims to say that whenever two theories or two primitives explain the same thing, they turn out to be equivalent. The materialist and the dualist both account, in their own terms, for the fact that I feel back pain this morning and for the having of qualia in general. Does it then mean that I would say that they are equivalent, since they accomplish the same work in the end? Do their primitives "have the same function" because they somehow play the overall very general role of "helping the theory to solve the mind-body problem"? Doesn't then my functional view of primitives make claims of theoretical equivalence between them, and consequently equivalence between theories that use them, too cheap?

In order to claim that two theories or two primitives are equivalent, not only must they do the same *overall* job, but they must also do it *in the same way* relevantly to an apt *level of analysis*. Whether an equivalence claim is too cheap depends on the level of detail the claim provides. If such a claim is too general, it is very cheap; but if it is elaborated in detail and shows how the inner workings of two theories are similar and how their primitives behave in the same way at the same crucial places in the theories, it is worth the money. To take the example of my three theories from the beginning of this paper, one could thus say that since the trope theorist's primitive problem-solver is one that works with tropes, while the resemblance nominalist's does not, they do not work in the same way, since they "work with different tools". True enough (and, again, I take these three views to be examples of *non*-equivalent theories). But, on the other hand, one *can* claim that these two problem-solvers accomplish the same function *with respect to the problem of providing an answer to the problem of attribute agreement*—both do it in the *same way*, since they do it in a *primitivist* way. That is, they have the same overall function, relevant to a specified problem. Problem-solvers are here to solve problems, and so it is appropriate to evaluate what they are and how they function relatively to a specified problem. After all, this problem is the very reason for postulating them in the first place. Now, if the problem is specified by saying "we need to solve the attribute agreement problem" then the level at which the problem-solvers that are involved in its solving should be evaluated and compared is somehow general. And, I submit, this is what actually happens in the case of the three theories that I take as my example. The problem of attribute agreement *is* typically raised in a general way; indeed, if it were raised in a more precise way, like for instance "we need to solve the attribute agreement problem without having to accept any relations in our ontology" it would probably, and rightly, be seen as a question-begging and unfair way of putting the problem, by non-resemblance-nominalists.

What we learn here is that the answer to the question of whether two primitives "do the same job in the same way" (that is, have the same function) is relative to a way

of specifying the problem to be solved by these problem-solvers. Similarly, the answer of whether two *theories* are equivalent is also relative to a set of problems, puzzle cases, that we want them to provide a treatment for (after all, that's what theories are for). And as we have seen, it will not do to specify these problems in *too general* way or in a *too detailed* (question-begging) way. I think that there usually is a "best" or "preferred" or "non-question-begging" or "appropriate" way to put the problem to be solved, and it is part of the metaphysician's job to identify what is the most apt/relevant/best/appropriate level of analysis, and then to see how primitives (and theories) behave relative to it. Some levels are too general to be of any real use and some are too specific to the point they become question-begging; our job as metaphysicians is to determine what the correct/useful/best/appropriate level is. There is no general principled recipe for doing this; it is not a meta-metaphysical or purely methodological matter; rather it should be carefully done in detail when one does first-level metaphysics and when one tries to make the best sense of a metaphysical problem and the theories that try to solve it.

§7.

Bearing the functional view of primitives in mind, and focusing on the fact (see (iii) above) that they do most, if not all, of the theoretical job done by our theories, one may start to ask itchy questions about the notion of 'explanatory power'. From where does the explanatory power of our theories come? If what precedes is right, is all or almost all of their explanatory power just primitively postulated? What and how exactly do such theories explain? How can a primitive explain anything? After itchy questions, one may want to start to ask sceptical ones: What are such theories good for? Aren't they just clever and elaborated ways of answering our questions by primitively postulated 'answers'? If so, what have we gained by building such theories?

I am not a sceptic, but I do feel itchy. Thus, in what follows I will discuss the notion of explanation and explanatory power, and try to answer some of these uncomfortable questions. A general picture about the nature of the metaphysical enterprise will then emerge.

§8.

Among the different types of explanations, *why-explanations* hold an important place: "Why did dinosaurs die out? Because a giant meteor collided with the Earth." These explanations are often causal explanations. But this is not what we're looking for here; the relation between a question like the problem of attribute-agreement, theories like the ones from the beginning of this paper, and their primitive problem-solvers are clearly not causal and the explanation involved is not a why-explanation in this sense.

Closer to home, here is a kind of explanation that it will be useful to consider in some detail; this is an example familiar from the literature about the mind-body problem: "Why does lightning occur just when there is an electric discharge between clouds or between clouds and the ground? Because lightning simply *is* an electric discharge involving clouds and the ground. There is here only one phenomenon, not two that are correlated with each other; and what we thought were distinct correlated phenomena turn out to be one and the same. Here the apparent correlation is understood as *identity*."¹⁹

Thus, the relation between the explanandum and the explanans is here simply identity. Compare to our problem of attribute-agreement: the explanandum is the sharing of the same property, the explanans is, say, the instantiating of the same immanent universal. It does then seem like the right thing to say, if you are a friend of the universals view, that sharing the same property *just is* instantiating the same universal, comparably to the way lightning *just is* atmospheric electric discharge. In the same way, if you are a friend of substrata, numerical diversity of spheres S1 and S2 *just is* or *consists in* their having a numerically different substratum. *Prima facie*, it seems then that the relation between a primitive problem-solver and the phenomenon it explains is identity. But there are some problems with this view.

First, it is not true that all identities are explanatory, as for instance Ruben²⁰ argues. To take the example of lightning, the identity "lightning = lightning" is not explanatory, while the identity "lightning = atmospheric electric discharge" is, because even if there is only one phenomenon involved in the case of the latter identity, it is conceptualized in two different ways. This teaches us that explanation is—unlike identity—an irreflexive relation.

Furthermore, one can offer reasons to think that even the identity "lightning = atmospheric electric discharge" is *not* explanatory. This is the problem we had above: if the relation between 'sharing the same property' and 'instantiating the same universal' is identity, how does this *explain* anything? This worry is also familiar from the discussion of the mind-body problem. Kim²¹, when discussing the psychoneural identity theory, says: "... Our conclusion, therefore, has to be that both forms of the explanatory argument are open to serious difficulties. Their fundamental weakness lies in a problematic understanding of the role of identities in explanation, an important topic that has not received much attention in the literature. The only clear (and also simple) view is that identities function simply as rewrite rules in explanatory derivations—or any derivation, for that matter. [...] We do not have to say that identities have no role to play *in* explanations. For they can help *justify* explanatory claims—he claim that we have explained something. [...] It is only that identities do not generate explanations on their own."

The trouble, as I understand it, is that since the primitive problem-solver (the explanans) is actually the very same thing as the phenomenon we sought to understand (the explanandum), it is not very clear what we have gained by such an explanation; that is, by providing an explanation of what we wanted to understand in terms of a primitive that's actually the same thing as what we yearned to have a better understanding of.

One can respond to these worries by arguing that the relation of explanation is a lot like identity but is not identity. It is irreflexive, as we have already seen, but it is also asymmetrical. Granted, lightning *is* atmospheric electric discharge, and the phenomenon of sharing the same property *is* the phenomenon of instantiating the same universal. However, the explanation here does not consist just in pointing out this fact; it also points out that the explanans is *more fundamental* than the explanandum. This is then what we gain. This is what we learn from a good explanation. Explanations of this type are such that one of the two sides of the explanation relation is more fundamental than the other (and thus, explanation is not only irreflexive but also asymmetrical). What we have here then is a sort of *explanation-by-identity*—but not *identity*—that parallels a growingly familiar notion of grounding²²: if *a* is grounded in *b*, *a* is nothing over and above *b*. *a*, in other words, is an "ontological free lunch" in Armstrong's²³ sense; the "ontological price", to use

Schaffer's term, you pay for *a* and *b* is just whatever you would pay for *b* alone. Only in this sense can one talk about identity between *a* and *b*.

This kind of explanation goes around under many different names like 'in virtue of', 'just is', 'is grounded in', 'is', or 'consists in'—but these terms are tricky and are not always intended to mean anything like explanation. For instance, 'consists in' is sometimes taken to mean 'constitutes' that is a 'grounding' relation familiar from the debate about material constitution²⁴. We encounter this in very many cases of the workings of our metaphysical theories. For example, not only *a*'s and *b*'s having the same property *is* their instantiating the same universal (if you are a friend of universals) where the latter is taken to be more fundamental than the former, but we can also say that *a*'s persisting through time *is* *a*'s having temporal parts at different times (if you are a friend of temporal parts) where again the latter is taken to be a more fundamental phenomenon than the former. More often, one uses here the locution "in virtue of": *a* persists through time *in virtue of* having temporal parts at different times.

In the case of lightning and an atmospheric electric discharge, the chain of explanation goes on until the most fundamental level is reached—and what the most fundamental level is depends here on the current state of physics; it is largely an empirical matter. Not so, of course, in the case of explanation relations between primitive problem-solvers and explananda of our metaphysical theories. As metaphysicians, we are most typically not 'stopped' by empirical matters, but rather we find the end of our metaphysical discovery when we step on a concept that is unanalyzable any further without circularity—a substratum, non-relational instantiation, resemblance, and so on, depending on your favourite theory. Such notions are then taken by our theories to be too fundamental to be usefully (in a non-circular way) further explained. This raises an interesting problem.

Explanatory power is one of the main criteria we use to evaluate our metaphysical theories. After all, the very point of building a metaphysical theory in the first place is to provide an explanation for some phenomena that we want to better understand (particularity of particulars, sharing the same property, persistence through time, ...). If what I said above is correct, and very close to what Schaffer²⁵ argues for in a different way, the picture one gets of what metaphysics does and what it should do, thus, is not just to tell us *what there is* but, more importantly, to tell us, as Schaffer puts it "what grounds what", that is, in my way of putting it, to discover what are the most fundamental notions, which are primitive and which are not. The idea here, similar to Schaffer's, is that metaphysics does not and should not give us a *list* that is a sort of inventory of what there is, but rather a top-bottom structure of relations of 'grounding' or 'explanation' between types of entities or between concepts, saying which are primitive, which are not, and which are more fundamental than others.

But now, the interesting problem arises from the fact that some such structures (some metaphysical theories) take as a primitive problem-solving explanans what its opponent takes as being the explanandum, and *vice versa*. Again, the case of our theories from the beginning of this paper provides us with a nice example. The theory that appeals to universals says that *a* resembles *b* because *a* and *b* both instantiate the numerically same universal. *a*'s resembling *b* consists in *a*'s and *b*'s instantiating the same universal. *a* and *b* resemble each other in virtue of instantiating the same universal. And so on. The phenomenon of resemblance *is* the phenomenon of instantiating the same universal, where the latter is more fundamental than the former. Identity (instantiating the numerically *same* universal) is fundamental, resemblance is not—it is *derived* from identity. But not so for the

friend of Resemblance Nominalism: under her view, *a* and *b* have the same property because they are both members of the same resemblance class. Here, *resemblance* is the fundamental notion, and identity (sameness of properties) is derived.

How to tell then which one of these structures is better? How to choose between such competing metaphysical theories? In some cases, as we have seen in §5-6, we do not have to make a choice: these are the cases where we discover that the allegedly competing sides of the debate are actually not very different from each other—that indeed they are theoretically and/or metaphysically equivalent. But in many cases, this is not so, like the debate about persistence (endurantism vs. perdurantism²⁶), or the case of our three theories from the beginning of this paper concerning the problem of attribute agreement. Another way to ask the question is: how do we know that we are facing a primitive when we step on one? Is resemblance primitive? Is instantiation of a universal primitive? How to tell which one of these lies at the bottom of the structure and which one does not? As we have just seen in the preceding paragraph, one theory can take as a primitive what the other takes as being higher in the hierarchy of its structure, and *vice versa*, and it works—and, it actually works in quite a similar way in both cases, as we have seen in §2-3. Given that both friends of universals and friends of Resemblance Nominalism have the same right to introduce their own primitive problem-solving devices when they need one, it seems very hard to find independent, objective, grounds to choose one structure over the other.

I do not have a good answer to this question. I try to give one in a different article²⁷, where I defend the view that the reasons to select one theory over its competitors are mainly grounded in aesthetic considerations, and in the evaluation of aesthetic properties metaphysical theories possess. But I do not wish to press this point here. What I would like to say here is that even if we do not have a nice and straightforward recipe to select the best structures, and to decide and choose what is more fundamental than what, and which are the best primitives, we learn here to acknowledge the importance of these 'points of contact' between our metaphysical theories, the importance of carefully thinking about the possibility of equivalence between them, and thus to recognize the utmost importance of the role that primitives play in (the building of, and evaluations of) our theories.

Thus, we can answer these itchy questions: What is at stake in the competition between metaphysical theories? What is this competition good for? What do we learn? What is at stake is to find out which is the best primitive, and what is more fundamental than what—what explains what. Sometimes the answer will be a bit frustrating (while nevertheless illuminating): these are the cases of theoretical and/or metaphysical equivalences between some allegedly competing views. Sometimes it may be argued that the answer is framework-relative, in a Carnapian way. And sometimes we will continue to fight tooth and nail to show that resemblance is a better primitive than instantiation. Such work is not an easy one, and it cannot be done in a paper nor even in a book; rather it is the collective efforts of many metaphysicians that can bring any durable and good results. Such work, I suggest, is best seen as work on the primitives that sustain the structure of our metaphysical theories.

Notes

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¹ See, for instance, Bennett (2008), Benovsky (2008, 2009a), Hirsch (2005, 2007, 2008), Miller (2005).

² Schaffer (2009).

³ Armstrong (1978).

⁴ Williams (1953).

⁵ Rodriguez-Pereyra (2002).

⁶ Armstrong (1978).

⁷ Manley (2002, p. 84).

⁸ See Russell (1912) and Armstrong (1978).

⁹ Rodriguez-Pereyra (2002).

¹⁰ Armstrong (1978).

¹¹ Rodriguez-Pereyra, personal communication.

¹² Laurie Paul suggested this useful terminology to me in conversation.

¹³ Hirsch (2005, 2007, 2008).

¹⁴ Bennett (2008).

¹⁵ Benovsky (2008).

¹⁶ Benovsky (2008).

¹⁷ Black (1952).

¹⁸ Benovsky (2009b).

¹⁹ Kim (2006, p. 85).

²⁰ Ruben (1990, p. 219).

²¹ Kim (2006, p. 97-98).

²² Bricker (2006), DeRosset (2010), Schaffer (2009), and Schaffer (manuscript).

²³ Armstrong (1997).

²⁴ Wiggins (1968), Heller (1990, 2008), Burke (1994), Bennett (2004).

²⁵ Schaffer (2009).

²⁶ Contra Hirsch (2005, 2007, 2008) and Miller (2005), see Benovsky (2009a).

²⁷ Benovsky (manuscript).

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