“Bare Particulars”*

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One often hears a complaint about “bare particulars”. This complaint has bugged me for years. I know it bugs others too, but no one seems to have vented in print, so that is what I propose to do. (I hope also to say a few constructive things along the way.)

The complaint is aimed at the **substratum** theory, which says that particulars are, in a certain sense, separate from their universals. If universals and particulars are separate, connected to each other only by a relation of instantiation, then, it is said, the nature of these particulars becomes mysterious. In themselves, they do not have any properties at all. They are nothing but a pincushion into which universals may be poked. They are Locke’s “I know not what” (1689, II, xxiii, §2); they are Plato’s receptacles (*Timaeus* 48c-53c); they are “bare particulars”.[1]

Against substratum theory there is the **bundle** theory, according to which particulars are just bundles of universals. The substratum and bundle theories agree on much. They agree that both universals and particulars exist. And they agree that a particular in some sense *has* universals. (I use phrases like ‘particular *P* *has* universal *U*’ and ‘particular *P*’s universals’ neutrally as between the substratum and bundle theories.) But the bundle theory says that a particular is exhaustively composed of (i.e., is a mereological fusion of) its universals. The substratum theory, on the other hand, denies this. Take a particular, and mereologically subtract away its universals. Is anything left? According to the bundle theory, no. But according to the substratum theory, something is indeed left. Call this remaining something a *thin particular*. The thin particular does not contain the universals as parts; it *instantiates* them.

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[1]Some representative literature: Russell (1940, p. 97); Bergmann (1967); Loux (1970, 1998, chapter 3); Moreland (2001); Mertz (2001). Another complaint one sometimes hears is that substrata could not be “individuated”. I don’t see what the problem is (beyond the lamentable persistence of the word ‘individuate’.) The possibility of exactly similar particulars will be admitted by the defender of the substratum theory (who may well defend the theory precisely because it allows this possibility.) So the substratum theorist will reject the identity of indiscernibles; and why shouldn’t she? This rejection does not mean accepting distinct individuals with the same parts, of course (*pace* Mertz (2001, p. 52)), since each individual is its own part.

The theories differ sharply over the possibility of exactly similar particulars.[2] Assuming the principle of uniqueness of mereological fusion, no universals can have two fusions. So if the bundle theory is true, no two particulars can have exactly the same universals, since a particular is just the sum of its universals. But if the substratum theory is true, distinct particulars *can* have exactly the same universals. For despite having the same universals, they will have distinct thin particulars, distinct non-universal "cores".

There is supposed to be a further division among substratum theorists, between those who think that a particular contains its universals as parts and those who think that it does not. This difference strikes me as being merely verbal. Call the fusion of a particular and its universals a *thick particular*. The mereological difference between a thick particular and its universals is what we have been calling a thin particular. All substratum theorists agree that thin and thick particulars both exist. Thick particulars contain their universals as parts, thin particulars do not. Whether *particulars* have their universals as parts then depends on the nonissue of whether one means thick or thin particulars by 'particulars'.[3]

I said that substratum theorists appeal to a relation of instantiation between universals and particulars. But really, they shouldn't reify instantiation. They certainly must say that particulars instantiate universals, but on pain of an uneconomical regress, they ought to leave it at that. 'Instantiates' is part of their ideology, but stands for no relation (Lewis, 1983, pp. 351-355).

Bundle theorists have a corresponding gizmo: a predicate relating the universals had by a given particular to each other. Let this predicate be 'compresent'. A particular is a mereological sum of compresent universals; a particular has a universal iff the universal is one of some compresent universals whose fusion is that particular.[4]

Could the bundle theorist dispense with compresence, and say simply that a particular has a universal iff that universal is part of the particular? No. First, the bundle theorist needs compresence to say which fusions of universals count as particulars. Since there are no golden mountains, no particular has both

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[2] See Hawthorne and Sider (2002) for more on this.

[3] Sider (1995), section 2. I take it that unrestricted mereological composition is common ground here, although see note 5. I do not say that it is a nonissue whether universals are *located* wherever they are instantiated.

[4] Bundle theorists often neglect to say how relations fit into the picture. See Hawthorne and Sider (2002) for a detailed account of how compresence can be understood, and applied to relations.

goldenness and *mountainhood*; but there are fusions containing both of these universals as parts. Second, since parthood is transitive, the account would imply that any universal had by a part of a thing is had by that thing. I have parts with mass 9.10956×10^{-28}g, but I do not myself have that mass.[5]

Now let us look more closely at the complaint against the substratum theory. Thin particulars are alleged to be "bare"; "in themselves they have no properties".

Thought about this issue must begin with the obvious and flat-footed response: no, thin particulars are not bare. They have properties. For what it is to have properties, according to the substratum theory, is to instantiate universals.[6]

Since I am venting, let me belabor the point. If the objection is that thin particulars have no properties, then the objection is **just wrong**. Thin particulars have properties. They really do! Thin particulars may be red, round, juicy, whatever.

The epistemological argument that we could not know thin particulars may be just as swiftly dispatched. We clearly *can* know what universals a thin particular instantiates, and so know what it is like; and in what other sense ought we be able to "know it"?[7]

If this is not to be the end of the conversation, the objector must lean on the claim that thin particulars have no properties *in themselves*. But what does that mean? I will consider a few possibilities.

First, the objector might mean that thin particulars *have no intrinsic nature*. To this one initially ought to continue in a flat-footed spirit: yes they do. The intrinsic nature of a particular is given by the monadic universals it instantiates.[8]

[5]This discussion could continue. The bundle theorist might address the first problem by denying that composition is unrestricted (L. A. Paul (2002, pp. 579-580) floats this idea), and address the second by denying that parthood is transitive (or, more likely, saying that particulars are "composed" of universals in some sense that doesn't involve the usual notion of parthood). Or, they might try to define compresence spatiotemporally: compresent universals are those located in the same place. Like Paul (2002, p. 580), I doubt that properties in a single location need be had by the same particular. More importantly, shouldn't the facts of location themselves be understood bundle-theoretically? At any rate, we need not resolve these issues here.

[6]Compare Moreland (2001, p. 153). It isn't *quite* right that "to have properties is to instantiate universals", given that the universals in question are sparse; see below.

[7]Compare Chisholm (1969); Schaffer (2005).

[8]And by the polyadic universals instantiated by its parts (see note 17 below.) I assume that there are no relational monadic universals; the "universals" we are discussing are "sparse" (see

Since thin particulars instantiate monadic universals, they have intrinsic natures.

Perhaps, though, the objection is something like David Lewis's (1986, pp. 202-204) argument from temporary intrinsics. Lewis insists that there are things that are just plain straight-shaped. Not straight *with respect to a time*; just plain straight. To turn the straightness of an object at a time into a relational fact concerning something and a time would violate the intuitive monadicity of straightness. (Lewis goes on to conclude that changing persisting objects have temporal parts.) Likewise, our objector might say, the substratum theory is incompatible with *all* true monadicity. For whenever a thing is F, this fact is split in two: we have the object and we have the universal F-ness. Only one thing ought to be involved.

(This objection is most dialectically stable when offered by a third party to our dispute: the **nominalist**, who rejects the existence of universals. The objection must be that the substratum theory's *fundamental* facts are relational. Since the relational predicate 'instantiates' is the only primitive piece of ideology for the substratum theory, that theory's fundamental facts are those expressed by sentences of the form 'x instantiates U'. And these facts are relational, since each such sentence names a pair of entities. But now consider a parallel argument: the only primitive piece of ideology for the bundle theorist is the relational[9] predicate 'compresent'. Thus, the fundamental facts for the bundle theorist are those expressed by sentences of the form '$\ldots U_i \ldots$are compresent with one another'. These facts too are relational. Only the nominalist avoids relationality in the fundamental facts. The nominalist's ideology will contain one-place predicates F (for instance, 'has such and such a mass', 'has such and such a charge'); thus, the nominalist can admit fundamental facts expressed by sentences of the form 'x is F'.)

I don't find this objection any more compelling than I find Lewis's (and I don't find Lewis's very compelling.) What's so bad about a little relationality in one's underlying metaphysics? It needn't take us all the way back to Bradley. I confess, though, to being a little more tempted by a variant argument.

Warmup argument: when I am sitting, the proposition that I am sitting is true. But: is the proposition true because I am sitting, or am I sitting because the proposition is true? Obviously the former: I, not the proposition, wear the metaphysical pants.

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below). (Even if relational monadic universals were admitted, one could presumably introduce a distinction between intrinsic and extrinsic monadic universals; compare Haslanger (1989).)

[9] It should be variably polyadic. See Cover and Hawthorne (1998, section 3.5).

Now for the argument that tempts me. When I am sitting, am I sitting because I instantiate the property **sitting**, or do I instantiate the property because I am sitting? Again, I want to answer: the latter. Particulars, not properties, wear the pants.

Taking these thoughts seriously leads to a conception of abstracta on which their *raison d'être* is to allow us to *say* things we couldn't otherwise say, *not* to play a role in the fundamental facts about how nonabstract things *are*.[10] Most accept this view for numbers. No one really wants to say that for an object to have 9.10956×10^{-28}g mass is, fundamentally, to bear the **mass in grams** relation to the number 9.10956×10^{-28}. That brings in an irrelevant thing, a number. The point of using numbers to name mass properties is to facilitate the stating of general claims about the set of mass properties (this is possible because this set's structure parallels that of the real numbers). But the having of a mass involves at most the thing and a mass property.

And the new thought is that this should be taken one step further: the having of a mass involves less than the thing and a mass property; it involves only the thing. Even if there exists a property of having that mass, this property plays no role in the fundamental story of what it is to be 9.10956×10^{-28}g. Just as numbers' only role is to facilitate talk of the physical world, the only role of properties and relations is to facilitate other sorts of talk about the world. Talking about properties and relations is handy, for instance, if you want to theorize about meaning, or even if you just want to say things like 'Ted and John have something in common' when you have forgotten exactly what feature it is that Ted and John share.[11] Neither properties and relations nor numbers play a role in the metaphysics of how nonabstract things are.

The argument points either toward nominalism or toward properties as entities that play no "factmaking role", such as Lewisian (1986, §1.5) sets. (I suppose a substratum theorist — or a bundle theorist, who is also threatened by the argument — could consistently deny universals a factmaking role, but that is not the usual conception.)

As I say, I'm tempted by this line of thought, but I wouldn't know how to make someone who insists on a fundamental factmaking role for universals feel embarrassed.

Instead of complaining that thin particulars are bare because they lack an

[10] Joseph Melia (1995, 2000) defends this view.

[11] This role really calls for abundant properties and relations rather than sparse universals; see Lewis (1983, 348-351).

intrinsic nature, the objector might be complaining that thin particulars are bare because *what it is to be one* — the *identity* of a thin particular; its *essence* — does not involve properties.[12]

Intially we should return to our flatfooted mode. Thin particulars may be red, round, or juicy by virtue of instantiating universals. So could it not be part of a thin particular's essence that it instantiate certain universals?

Perhaps the objector thinks that only facts about a thing's *parts* can characterize its essence. The thought is hard to evaluate; speaking just for myself, my grasp of the relevant notion of essence cannot bear much weight. At any rate, how much would be lost by just giving in to this objector? What would be missing in a world in which none of a thin particular's properties are "part of what that particular *is*"? After all, the particular really would be red, round, or juicy (say), and intrinsically so.

Perhaps the objector thinks that no features would be *necessarily possessed by* a thin particular. This leads to modal readings of the complaint about "bare particulars", the final ones I will consider.

First modal reading: thin particulars would lack (nontrivial) necessary properties. At first glance this is a nonsequitur; the substratum theorist could simply claim that there are necessary truths about which universals a given thin particular instantiates. If the objection presupposes an extreme combinatorialism about modality, one wonders whether any theory of the nature of particulars would be immune. Would not extreme combinatorialism lead a nominalist to say 'any object that is F could have failed to be F', for an appropriate range of nontrivial substitutions for 'F'? Or a bundle theorist to say that any bundle which in fact contains universal U as a part might have existed — that same bundle — while lacking U as a part?

Perhaps the objector thinks that parthood has a special modal status, and that this status will generate a modal asymmetry between the substratum theory and at least the bundle theory. Here is one very strong principle: property P is a (nontrivial[13]) necessary property of x if and only if x has P and P concerns what parts x has. The properties that a thing has necessarily are its mereological properties. The principle does indeed imply that properties concerning which universals a thin particular instantiates are not necessary properties. And it might seem to allow the bundle-theorist's particulars to have nontrivial

[12] I have in mind Kit Fine's (1994) conception of essence; see Loux (1998, chapter 3) for remarks about bare particulars in this vein.

[13] This is to exclude self-identity and the like.

necessary properties like redness, roundness, or juiciness, since the properties of a bundle are parts of that bundle. But in fact this is not so. Consider a bundle, *b*, that includes universals of redness, roundness, and juiciness as parts. The principle implies that *b* necessarily has redness as a part. But it does not imply that *b* is necessarily red. *b* could exist and have the same universals as parts even if those universals were not compresent with one another, and so could exist without being red.[14]

Modal argumentation of this sort might continue, but in my view none of it runs very deep, because modality itself does not run very deep. In speaking about alternate possibilities, we tend to hold constant certain fundamental features of the actual world, and there isn't much more to necessity than this holding-constant of features of actuality. (See Sider (MS).) What necessary properties objects have is just a matter of which features of actuality we hold constant. So long as our theory of actuality is in order — so long as objects really are red, round, juicy; and intrinsically so — modal considerations should not change the accounting.

Another modal complaint is that if particulars were wholly distinct from their universals, then it would be possible for there to exist a *truly* bare particular: a particular that instantiates no monadic universals whatsoever. And isn't that absurd?

The substratum theorist may protest that given an appropriate conception of modality, substratum theory does not imply the possibility of truly bare particulars. David Armstrong (1989), for instance, builds the impossibility of truly bare particulars into his theory of possibility. One might object that this would be an *ad hoc* restriction on an otherwise liberal combinatorial component to our modal thinking. On the other hand, the substratum theorist may protest that *wholly* liberal combinatorial reasoning would generate analogous possibilities even for nominalists or bundle theorists: (i) in the former case, a possibility where '*x* is *F*' is false, for each primitive predicate 'F'; (ii) in the latter case, a possibility where no universal is compresent with any universal, not even itself.

I continue to regard these modal issues as shallow. But never mind: the substratum theorist can happily accept the possibility, and indeed the actuality, of truly bare particulars. Judging from the reaction on the street, truly bare particulars are widely regarded as the grossest of metaphysical errors. But this reaction, it seems to me, is based on confusion.

[14]Indeed, the principle under consideration implies that this is a possibility, since **being compresent with roundness and juiciness** is not a mereological property of redness.

Confusion about the distinction between *sparse* and *abundant* properties[15] underlies the following quick argument against truly bare particulars: "If something had no properties, then it would have the property of **having no properties**, and so it would have at least one property after all." In the abundant sense of 'property', each meaningful predicate corresponds to a property, so if we could predicate 'has no properties' of a thing, then that thing would indeed have a property corresponding to the predicate. Not so if 'property' is intended in the sparse sense, for then 'has no properties' — like 'is not red' and 'is either red or round' — does not correspond to a property. Just as a thing can be red or round without having a sparse property of **being red or round** (for there is no such sparse property), a thing can have no sparse properties without having a sparse property of **having no sparse properties** — for there is no such sparse property. And of course, the substratum theorist's "universals" are sparse.[16]

A subtler confusion underlies the following argument. "Every object must have an intrinsic *nature* — every object must *be* one way or another. But having a nature requires having monadic universals. Thus, every object must have at least one monadic universal." The argument correctly assumes a connection between intrinsic nature and monadic universals. But it misconstrues the connection. The connection is simply this: a thing's intrinsic nature is a function of what monadic universals it instantiates. It does not follow that to have a nature, a thing must instantiate at least one monadic universal; for a thing could have a nature simply by *failing* to instantiate monadic universals.

On an intuitive level: to have a nature is to "be a certain way". There must be answers to questions like "what is the thing like?", and "to what is the thing similar, and to what is it dissimilar?" Truly bare particulars *do* have natures in this intuitive sense. Indeed, they all have the same nature, and that nature is exhausted by the fact that they instantiate no monadic universals. That is the way that they are. "What is a truly bare particular like?" Answer: "It is not charged. It does not have any mass. It does not have any spin. And so on." "To what is a truly bare particular similar, and to what is it dissimilar?" Answer: "Things are *duplicates* (i.e., are exactly similar; i.e., have the same nature) iff they instantiate the same monadic universals — that is, iff, for every monadic universal M, the one instantiates M iff the other instantiates M. So any two truly bare particulars are duplicates; and any truly bare particular fails to be a

[15] The contemporary source of the distinction is Armstrong (1978*a*,*b*); the terminology is Lewis's (1986, pp. 59-69).

[16] Note further that abundant universals do not obey the combinatorial principles needed to derive the possibility of truly bare particulars.

duplicate of any particular that is not truly bare."[17]

You may have a picture according to which a thing must instantiate at least one monadic universal to get its foot in the door of reality. But this picture is inappropriate given substratum theory. For the substratum theorist, (thin) particulars constitute a fundamental ontological category. They are not composed of or constituted by universals. If we take this category seriously, there is no need for its members to be connected to members of other ontological categories in order to exist. Thin particulars can stand on their own.

If there were a monadic universal of **being a particular**, a most inclusive genus under which each particular must fall in order to be a particular, then there could be no truly bare particulars. But substratum theory requires no such universal since it already admits thin particulars as a fundamental ontological category. Thin particulars do not need to instantiate such a universal in order to be thin particulars; they can just be thin particulars! Compare the status of 'instantiates' as a primitive bit of ideology: the substratum theorist rejects the demand for an analysis of 'x instantiates U'. The notion of a thin particular is likewise a primitive piece of ideology; the demand for an analysis of 'x is a thin particular' will likewise be rejected.[18] Again, the thin particulars can stand on their own.

The substratum theorist should accept the actuality, not just the possibility, of truly bare particulars. I have in mind points of spacetime and mathematical entities.

What are the distinctive intrinsic features of points of spacetime? If we look to science for guidance, we find that physical theories require almost nothing of the points intrinsically. They require only that the set of spacetime points has a certain structure. This structure consists in the holding of spatiotemporal relations between the points, but is indifferent to what the points are like in

[17] See Lewis (1986, pp. 61-62) for this sort of definition of duplication. I have simplified the definition in a way that requires comment. The definition actually says that objects are duplicates iff their *parts* can be put into one-one correspondence, with corresponding parts having the same (perfectly natural) properties and standing in the same (perfectly natural) relations. In the text I have in mind mereologically simple truly bare particulars; and the more accurate thing to say about these is that they are duplicates iff they bear the same polyadic universals to themselves. Note further that fusions of truly bare particulars are duplicates of mereologically isomorphic fusions of truly bare particulars whose parts stand in the same (if any) polyadic universals.

[18] Or, one could try to get by with 'instantiates' as the only primitive predicate, and define particulars as those things that are not (alternatively: cannot be) instantiated by anything.

themselves.[19] Perhaps they require that points not have further spacetime structure, and hence that they not have further parts that stand in spatiotemporal relations. But beyond that, nothing. I suggest, then, that a natural and economic theory of points of spacetime is that each one is a partless, truly bare particular that stands in a network of spatiotemporal relations.[20]

Next consider mathematical entities (assuming such entities exist.) Suppose, for instance, that there exist sui generis natural numbers, a distinguished ω-sequence that is the fixed subject matter of arithmetic. What distinguishes these objects from others, in virtue of which they are **numbers**? One *might* answer: a distinctive intrinsic property shared by these entities and no others — a sort of numerical glow. But one might answer instead that it is the relation ordering this ω-sequence that is distinctive. In that case one might as well hold that the members of the sequence are truly bare partless particulars. Why not? Any further posited intrinsic features would be superfluous. (One might hold that no particular ordering of the sui generis numbers is distinguished from the point of view of mathematics. This leads toward a structuralist conception of arithmetic, but not away from the view that the entities themselves are truly bare.)

Suppose instead that one's natural numbers are not sui generis; suppose that instead one conceives of sets as the fundamental mathematical entities, from which the ontologies of less abstract branches of mathematics may be constructed. One's mathematical universe is therefore a universe of entities structured by set-membership. Then it might again be reasonable to hold that mathematical entities are partless and truly bare, though this will depend on

[19]Perhaps one could argue that the points must bear spatiotemporal relations to themselves. This would be a kind of intrinsic demand on the points, though not one requiring the instantiation of monadic universals.

There is an orthogonal but interesting complication here. It may be that spacetime structure is best thought of as emerging, not from relations between individual points, but rather from properties of extended lines, surfaces, or regions. This seems plausible for topological structure, for instance (the fundamental property is that of an open set), and for metric structure if distance is fundamentally path-dependent (Maudlin, 1993, §4). The issue is orthogonal because the needed properties of lines/surfaces/regions do not seem to demand anything intrinsically of the infinitely many individual points making them up.

[20]Leibniz assumed that points of spacetime would be thus, and wielded the identity of indiscernibles against them (Leibniz-Clarke correspondence, Leibniz's fifth paper, §§26-27.) This is all assuming the falsity of supersubstantivalism, the view that objects *in* spacetime are *identical to* points and regions of spacetime. If supersubstantivalism is true then of course points are not truly bare.

the nature of the relation of set-membership. For instance, suppose that there is a distinguished, but external, relation of set-membership (or a distinguished singleton function, as in Lewis's (1991) nonstructuralist alternative). Here, when one set is a member of another, this is not because of the intrinsic features of those sets. So the intrinsic features of sets are mathematically irrelevant. So the sets (or singletons, anyway) might as well be truly bare partless particulars. Alternatively, suppose that Lewis's (1991) set-theoretic structuralism is true: there is no privileged relation of set-membership. The intrinsic features of Lewis's singletons are now mathematically irrelevant, so they might as well be taken to be truly bare (Lewis is already committed to their being partless.) Indeed, they might as well be taken to be *utterly* bare — instantiating no universals whatsoever, not even polyadic universals. The singletons have no mathematically relevant qualitative features, not even relational ones. All that matters is that there are enough of them.

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There, I have that off my chest! The complaint about "bare particulars" is mostly confusion; and in the rest, there is no solid argument against the substratum theory.

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