Against Monism*

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Abstract

Jonathan Schaffer distinguishes two sorts of monism. Existence monists say that only one object exists: The World. Priority monists admit the existence of The World's parts, but say that their features are derivative from the properties of The World. Both have trouble explaining the features of statespace, the set of possibilities available to The World.

1. Monism and pluralism

Let's agree to take ontology seriously. We must then take **monism** seriously. According to monism, there exists only one (nonabstract[1]) object: the entire world.[2]

To be sure, monism clashes with what we ordinarily think and say. But so do other revisionary ontologies that we ought to take seriously. Consider **nihilism**, the thesis that the only objects that exist are the partless elementary particles of physics.[3] Although the nihilist says that tables and chairs do not exist, she is quick to add that there *do* exist "particles arranged tablewise", "particles arranged chairwise", and so on.[4] Here are three reasons to take nihilism seriously, despite its revisionary nature. (1) Nihilism is not refuted by mere perception. If there were no tables, only particles arranged tablewise,

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[1]I have no particular definition of 'abstract' in mind; but I mean to count spacetime points, tropes, etc., as concrete.

[2]Recent literature on monism and related topics includes Hawthorne and Cortens (1995); Albert (1996); Horgan and Potrč (2000, 2002); Schaffer (2007*a*, 2007*b*).

[3]Cian Dorr (2005, 2002) defends nihilism; Trenton Merricks (2001) and Peter van Inwagen (1990) defend related views.

[4]van Inwagen (1990). "Particles arranged tablewise" is a plural referring expression, to be distinguished from singular expressions such as "aggregate of particles arranged chairwise" and "group of particles arranged chairwise". The nihilist rejects the existence of aggregates and groups (construed as being concrete, anyway).

our sensory experience would be the same. (2) Nihilism is not refuted by science. Evidence that leads chemists to posit molecules and economists to posit economies is just as well accounted for by the more cautious posits of the nihilist: particles arranged molecule-wise, particles arranged economy-wise. (3) Nihilists can count ordinary and scientific sentences as being in some sense "correct", even if they are not strictly true. For instance, 'there exists a table' is "correct" iff there exist particles arranged tablewise.[5]

Like nihilism, monism is a revisionary theory of the reality that underlies the appearances of ordinary thought and science. Like nihilism, monism is consistent with both perception and science. Suppose that, as we would ordinarily say, there exists a person working at a desk. The monist will say instead that The World has a certain property in virtue of which it is "correct" to say that 'there exists a person working at a desk'. And when the chemist says that matter is composed of molecules, this is "correct", if not strictly true, because The World has an appropriate property. Jonathan Schaffer (2007*a*) construes these properties adverbially: The World is "tabley-here" and "chair-ey there".[6] Neither mere perception nor scientific experiment will tell us whether tables and chairs and we ourselves really exist, or whether there is only The World with its properties of being tabley-here, chairey-there, and personey-there.

I take monism seriously enough to give arguments against it. All fundamental properties, for the monist, are properties of the entire world.[7] (They must be, for there are no other objects in the monist's ontology to *have* fundamental properties.) My arguments turn on this fact.[8]

What is *intuitively* wrong with monism is that it takes the fundamental facts to be facts about the whole world. When an object has an intrinsic property, for instance a certain shape, that seems to be a fact just about that object, not about the rest of the world. When two things are separated by a certain distance, that is of course not a fact about either object individually, but it seems to be a

[5] Correctness might be held to suffice for truth in ordinary linguistic contexts; see Horgan and Potrč (2000); van Inwagen (1990, §§10–11).

[6] See also Hawthorne and Cortens (1995), who appeal to adverbial modification in defense of the view that *no* objects exist. I construe this talk as not presupposing the real existence of regions of space or spacetime; otherwise the view isn't really monism. The monist might instead appeal to Josh Parson's (2004) "distributional properties". I discuss this issue at length in a forthcoming paper.

[7] By "fundamentality" and "naturalness" I have in mind Lewis's (1986, 59–69) picture.

[8] Thus, my arguments apply also to what Schaffer (2007*a*, 2007*b*) calls **priority monism**, according to which, despite the existence of smaller objects, only The World has fundamental properties. (My "monism" is what Schaffer calls **existence monism**.)

fact just about the two; the fact doesn't bring in any other objects. Now, there may be some facts that are much more holistic than this, for instance facts about quantum-entangled systems.[9] But monism goes too far; it makes *every* fundamental fact *maximally* holistic.[10] Only if we are **pluralists** and posit a plurality of sub-world entities can we avoid this consequence.

One could just leave the argument there, but I prefer not to flat-footedly insist on premises about the nature of fundamental properties.[11] I want to push the argument further in three ways, two involving possibility, one involving intrinsicality.

2. Combinatorial possibility

Consider a world containing just a single computer screen with a 4x4 pixel resolution. Each pixel can be on or off. Since there are 16 pixels, and there are two states for each pixel, 2^{16} states are possible for the entire screen.[12]

The existence of this statespace is common ground between monists and pluralists. But only the pluralist can give a satisfying account of *why* the statespace has 2^{16} members. The pluralist can say: the statespace has 2^{16} members because i) there are 16 pixels, each of which has two available fundamental states; ii) the fundamental states of the system include *only* the states of the individual pixels; and iii) the possibilities for the entire system are generated combinatorially from the entities in the system and the fundamental states those entities can inhabit. The monist can tell no such story. For the monist, the fundamental properties are the members of the statespace itself: the 2^{16} maximally specific properties of the entire screen. These properties are not generated combinatorially from more fundamental pixel-properties. Why, then, are there exactly 2^{16} of them?

Relatedly, consider screens with different numbers, n, of pixels. The statespace always has 2^n members. What accounts for this regularity? The pluralist has an easy answer; the monist does not.

Relatedly, no world of this sort will ever have a statespace with a cardinality that is not a power of 2. Why are statespaces with the other cardinalities

[9] Schaffer (2007*a*, 2007*b*) argues for monism by appeal to entangled systems.

[10] Even in quantum mechanics, some states of particles—charge, for instance—aren't holistic. Also, quantum mechanics *per se* does not require that all particles are entangled.

[11] Compare Lewis's (1986, 202–204) "argument from temporary intrinsics".

[12] Anti-haeccitists will think that there are fewer members of the statespace, but the argument is otherwise unaffected.

missing? Again, only the pluralist can answer the question.

Facts about the *size* of the statespace aren't the only facts that the pluralist is in a better position to explain. There are also facts about the *structure* of the statespace. Suppose our task is to describe the statespace. To say only that there are 2^{16} points in it would leave out all sorts of information about the natural groupings of points in the statespace. Consider, for instance, the subset of the statespace consisting of the points in which exactly one pixel is lit. The members of this subset "go together" in a way that the members of the following subset do not:

$$\{\{\langle 1,1\rangle, \langle 2,4\rangle, \langle 3,4\rangle\}, \{\}, \{\langle 2,3\rangle\}\}$$

Such natural groupings can be readily explained by the pluralist; they emerge from the natural groupings of the most fundamental facts, facts concerning which pixels are lit. If I know that the facts about the pixels are fundamental, and I know some general facts about similarity, then I have enough information to tell you which subsets of the statespace "go together". The "general facts about similarity" I have in mind would likewise tell me that if I had an 8×8 array of pixels, then the set of points in the statespace in which a single pixel is lit would also count as a natural subset of the statespace.

For the monist, the facts about which subsets of the statespace "go together" must be brute. When faced with the statespace of the 4×4 screen, the set S_1 of single-pixel-lit states is a natural subset. When faced with the statespace of the 8×8 screen, the set S_2 of single-pixel-lit states will be a natural grouping. There are patterns here that ought to be explained. The single-pixel-lit states always "go together". But why? The monist cannot give the obvious answer, that this pattern in the natural groupings is *generated* by *general* facts about naturalness and the fact that the single-pixel states are fundamental.

3. Haecceitistic possibility

Consider a two-pixel world—nothing else exists. And each of the two pixels may be either on or off. Some people—"haecceitists"—think that a world in which pixel A is off and pixel B is on is a different world from the world in which pixel A is on and pixel B is off. If haecceitism is true, the statespace would have four members (both on, both off, A on/B off, A off/B on).

Whether the statespace has four members might matter. For instance, if there were certain probabilistic laws governing the system, the claim that there

are four members in the statespace might be part of an explanation—appealing to a limited principle of indifference—of why it's more likely to have: one pixel off and one on, than to have: each pixel off.

Now, it seems to me that the monist cannot say that the statespace of the two-pixel system has four members. The monist, I think, must say that there are just three states in the statespace: both-off, both-on, and one-off-and-one-on. Intuitively, to distinguish two states in the statespace, each a one-off-one-on state, would require positing the individual pixels. How else would these states differ, other than by a permutation of the properties had by the pixels?

As I say, it *seems* true that the monist cannot distinguish two one-off-one-on states. My best *argument* for this appeals to the following principle:

Fundamental states are qualitative Fundamental states involve the instantiation of purely qualitative properties and relations. If a fundamental state involves one object, that state is the instantiation of a qualitative property by that object. If a fundamental state involves more than one object, that state is the instantiation of a qualitative relation by those objects.

I understand "qualitative" properties and relations as those that must be isomorphically distributed in duplicate possible worlds. Given this principle, the monist must admit that the states of the two-particle system involve the instantiation of qualitative properties by The World. But if the monist distinguishes two properties X and Y of the entire system, corresponding to what the pluralist would call, A-on/B-off and A-off/B-on, then X and Y cannot be qualitative, because a possible world in which The World has property X would be a duplicate of a possible world in which The World has property Y. (Recall the symmetry of the world—nothing exists in the world other than the two pixels.)

4. Intrinsicality

Why posit multiple objects? My argument so far has been: to yield an attractive theory of the statespace. My final argument will be: to yield an attractive definition of intrinsicality.

We ordinarily take it that some pairs of objects are perfect duplicates and others are not (any two electrons are exactly alike; no two people, not even twins, are *exactly* alike), and that some properties are intrinsic and others are not (**having unit negative charge** is intrinsic; **being within five feet of a proton**

is not). Now, the monist won't take statements like these at face value—the monist thinks that there don't really exist electrons. Still, the monist will want to say that such claims are "correct"; they have the same status as do other claims about the world that we ordinarily make, for instance 'there exist some tables and chairs', 'there exist electrons', and so on. So: it's common ground that we want to make some sense of the notions of intrinsicality and duplication.

David Lewis (1986, 61–62) suggested the following definitions:

Definition of duplication objects are duplicates iff their parts may be put in one-one correspondence preserving the perfectly natural (fundamental) properties and relations

Definition of intrinsicality a property is intrinsic iff it can never differ between a pair of possible duplicates

These definitions, or definitions a lot like them,[13] are, I think, the best that have been proposed. But they are not available to the monist.

If the monist takes Lewis's definitions at face value, they apply only to properties of The World, since that's the only object there is. We thereby get the—correct—result that the natural properties of The World are intrinsic; but no other facts of intrinsicality are generated. There seems to be no way to get from the fact that the monist's World-properties are all intrinsic to any facts about the correctness of ordinary judgments of intrinsicality, for instance that "the property of **having unit negative charge** is intrinsic".

Suppose, on the other hand, that the monist does not take Lewis's definitions at face value, but instead takes them in whatever spirit ordinary claims about the world are to be taken (as being merely "correct" rather than true). In this spirit, the monist is free to speak of properties of electrons and the like. But Lewis's definitions still won't generate the desired facts, because the monist ought to say—even in the spirit of speaking merely correctly, rather than truly—that only The World has perfectly natural properties. Might the monist deny this, and claim that sub-World claims of naturalness are correct? But how would the correctness of these claims be grounded in strictly true claims of naturalness? I don't see how they could be. At any rate, the monist owes us a story.[14]

[13] In my view, the definitions must be revised in light of the possibility of gunk. See Sider (1993, chapter 4). See also Sider (1996) for a defense of Lewis's definitions.

[14] Actually, my forthcoming paper on monism shows how the monist could tell such a story. I wrote the latter paper after the present one.

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