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Physical Object

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Physical objects are the most familiar of all objects, and yet the concept of a physical object remains elusive. Any six-year-old can give you a dozen examples of physical objects, and most people with at least one undergraduate course in philosophy can also give examples of non-physical objects. But if asked to produce a definition of 'physical object' that adequately captures the distinction between the physical and the non-physical, the average person can offer little more than hand-waving.

Among metaphysicians, on the other hand, it is easy to find an account of what physical objects are. Too easy, in fact: if you ask ten metaphysicians, you are likely to get ten different accounts. So what exactly are physical objects?

We might be tempted to say, with George Berkeley, that physical objects are the things that can be sensed. But sensed by whom? Different beings have different sensory abilities; yet we don't want the notion of a physical object to be a relativistic one (especially considering the crucial role played by the concept in various philosophical debates, including the longstanding controversy over physicalism, the thesis that the only concrete objects in the world are purely physical objects). Perhaps, then, we should say that physical objects can be sensed by some sentient being or other. But if we say this then we run the risk of making the concept hopelessly broad – for is it not possible for a disembodied mind to sense itself, or even another mind? And might it not be possible for a creature with super-sensory powers to sense such seemingly non-physical entities as propositions?

Perhaps the most popular view of physical objects among philosophers working on topics like physicalism and the mind-body problem is that physical objects are the objects studied by physics. This would be a promising approach were it not for the fact that the best definition of 'physics' is *the study of physical objects*. To make matters worse, there appear to be numerous counterexamples to this physical theory account of physical objects: for surely numbers, equations, formulas, functions, properties, and propositions are among the objects studied by physics; and just as surely none of these things is a physical object. Moreover, there is nothing to stop physics from one day positing (perhaps even correctly!) such spooky entities as ghosts or the gods and goddesses of ancient times; and the physical theory account would then have to deem

such entities physical objects (even if they had neither mass nor spatial location nor any other property we normally associate with physical objects).

Another popular account of physical objects is the one offered by W.V.O. Quine, who suggested that a physical object is the aggregate content of any portion of space-time, however ragged and discontinuous. This is an excellent proposal, with very plausible results concerning which objects are physical and which are not. Unfortunately for Quine's account, however, it comes with some serious metaphysical baggage. For it entails the principle of unrestricted fusions, the mereological thesis that any physical objects whatsoever have a fusion. (Thus, for example, according to this principle, there is an object that is the fusion of your head, the moon, and a lone quark from Alpha Centauri.) It would be much better to have an account of physical objects that did not have such controversial commitments in other areas of metaphysics.

A more promising view, popular among ordinary people and championed by Peter van Inwagen, is that there is a family of concepts – such as being located in space, having spatial extension, persisting through time, being able to move about in space, having a surface, having mass, being made of matter, etc. – that are associated with the concept of a physical object. The idea is that the latter concept is an imprecise one, and that the extent to which an object exemplifies all or most of the concepts on the associated list is the extent to which that object is a physical object.

This commonsense account of physical objects is probably an adequate way of capturing the everyday notion of a physical object (the one that six-year-olds are more or less familiar with). But when it comes to the concept of a physical object that is featured in the disputes of philosophers, the commonsense account is problematic. One difficulty is that it makes the notion of a physical object a vague concept, which is undesirable given the role that concept plays in numerous philosophical disputes.

Another problem for the commonsense account is that it makes quarks, electrons, atoms, and even many molecules into non-physical objects. This is a bad consequence in a theory of physical objects, for two main reasons. (1) It's natural to think that all macroscopic physical objects are composed of quarks, atoms, etc., but also that every part of a physical object must itself be physical. (2) No one thinks that the existence of quarks and electrons refutes physicalism.

A third problem facing the commonsense account of physical objects is that in an alternative possible world with different properties and laws of nature, there may not be any objects that persist, that move around, or that have mass; there may instead be only instantaneous objects, say, with such alien properties as shootspa and poxie, which properties feature crucially in the otherworldly laws of nature. The commonsense account would have to say, rather implausibly, that there are no physical objects in such a world.

One thing there certainly will be in any world with physical objects is space. For that is where the physical objects must go. This thought suggests that physical objects are

objects with spatial locations. (Notice, by the way, that we did not say that physical objects are objects with spatial *extensions*. For that view would seemingly be refuted by such point-sized particles as the quarks of current physical theories.)

This spatial location account of physical objects was endorsed by Thomas Hobbes, and it certainly has some very intuitive consequences. Cats, rocks, stars, molecules and even quarks are in, on this view, and numbers, sets, and (presumably) properties are out. All of that seems good. But still, there are objections to the view.

One main objection to the spatial location account concerns the possibility of minds with spatial locations. For many ordinary people, as well as such philosophers as John Locke and Rene Descartes, want to define 'mind' as roughly synonymous with 'non-physical, thinking substance'. But some who accept this definition of 'mind', and say they believe in minds, also believe that minds can have spatial locations. (For example, such a person might say that your mind is currently located where your pineal gland is.) Such people will find the spatial location account unacceptable.

A second worry about the spatial location account involves objects such as sensations, specters, mirror images, hallucinations, and apparitions. All of these putative objects seem to have spatial locations, but it doesn't seem appropriate to call any of them a physical object.

A third objection to the spatial location account is that it seems to require a sharp distinction between space and time, which goes against the philosophically popular view that the three dimensions of space and the one dimension of time are really four intrinsically similar dimensions of the world.

Some proponents of the spatial location account will happily bite this bullet, for they already think, on independent grounds, that time and space are fundamentally different. Others may want to revise the view, saying that having a *spatio-temporal location* is the mark of the physical. Anyone who goes this route, however, will face awkward questions about whether such seemingly non-physical objects as numbers and propositions exist in time, even if they don't exist in space-time. If the answer is yes, then we are back to drawing a sharp distinction between space and time; and if the answer is no, then one wonders how it could be true that, for example, you were not thinking of the number 16 ten minutes ago but you are now.

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