

Unity of Objects

Perhaps a good ontology should dump the concept of 'objects', replacing it with collections of simple particles or chunks of space-time that interest us, named as we please. We may also prefer to think in terms of events or processes. However, if the best way to understand reality focuses on objects (and possibly their properties), then philosophers need some account of what unifies an object, and hence what qualifies it for a place in our system.

An 'aggregate' is any collection of separate items which hang out together, pretending to be an object. A pile of random rubbish can be referred to as if it were an object, but it is not unified. If you move some parts of it, the rest remains behind, and no internal principle or force holds it together. It might qualify as an object if it were a feature in a landscape garden, or a lot in an auction, but that only shows that we can treat any ingredients as one object. We even talk of the universe as an object. I can treat my bicycle as an object, even when its components are scattered across the floor, so the parts don't even need to be aggregated. In all of those cases, though, we are treating the parts as single objects. If we say those parts are also aggregates, then it is aggregates all the way down, and we are 'nihilists' about the existence of objects. A commitment to objects needs a principle of unification.

An obvious strategy is to seek the unification principle in modern physics. The force of gravity holds very large objects together, then electro-magnetism works at shorter distances, and at the lowest level we have powerful nuclear forces. If an aggregate is held together in this way when it moves or receives an impact, then it might qualify as an object. However this will not give us a sharp criterion. Are the rings of Saturn or the Earth's atmosphere single objects? An aggregate might only hold together at low accelerations, or against very weak impacts. In addition, standard physics offers us fundamental particles (such as electrons and quarks) which are treated as unified objects, with no mention of internal forces to unify them. The physics is illuminating, but doesn't solve the metaphysical problem.

We might say that unity comes in degrees, with a rubbish pile slightly unified, and an atomic nucleus highly unified. Stages of unity may be marked by increasingly strong bonding, clear-cut functions, and coherent causal powers. Absolute unity may only exist in fundamental particles, but we cannot be sure of that. Another traditional candidate for absolute unity is a mind. My mind may have parts, such as memory, desire and reason, but the self which experiences these things is often understood as a perfect unity. A bold proposal is that since matter has to contain unities, and only minds can provide that, matter must be founded on mind-like unified atoms ('monads').

So far we have considered physical objects, but similar questions may be asked about abstract objects. We may find perfect unity in the concept of a circle, or of the number seven, but set theory treats each set as an object when it appears to be nothing more than an aggregate of its members. The empty set is an exception, and may be a perfectly unified object, but a set with no members is a puzzle for even the keenest fans of set theory. The science of mereology studies formal treatments of part-whole relations, but its systems contain no principle of unification, so that nihilism about objects is usually presumed, and any parts can compose any bizarre whole that you choose. However, we normally assume that parts come first, and compose a whole, but a part isn't a part if it isn't part of a whole, so perhaps the unified whole must come first, to even discuss mereology.

An interesting question is whether the unity of an object contains its 'modal profile' (its possibilities and necessities). A volcano, for example, is an assemblage of structures and chemicals, but its outstanding feature is its potential for dramatic behaviour. If that potential is part of the volcano's essential nature, it may belong in the object's unity. Alternatively we may prefer to say that the potential is caused by its nature. We could never explain the whole world of objects, though, if we made no reference to their potentials.

A unified object is traditionally called a 'substance'. A substance is intrinsically single and unified, but it may not be the whole of the object. It is the aspect of the object which has a single origin, supports its predicates and properties, remains stable when the object changes (perhaps even losing or gaining a few properties or parts), and dictates the essential nature and kind of the object. Substances of this type do not figure in modern physics, so it is a metaphysical concept, a component of how we have to conceive of the world. Substances solve many difficulties, about unity, predication and change, and they prevent a regress of explanations of the nature of objects, but they are notoriously elusive. The biggest problem is that because they support the object's properties (as its 'substrate'), they seem to have no properties themselves, making them 'bare substrates'. Properties depend on their substrates, so the substances must have non-dependent existence, but beyond that there is little we can say about them. Extreme views say that there is just one substance (nature), or there are two (mind and matter), or they are infinite in number. Because we have no direct experience of substances, empiricists tend to favour the view that objects are just bundles of properties, or collections of atomic (indivisible) components.

Discussions about substance have focused on some intriguing examples. For example, a lump of clay seems to be a substance, as it coheres, has properties, and can survive many changes. If we mould it into a statue of a man, it then seems to become a 'statue', as well as a lump. So is it two substances? That seems absurd, but there are two essential natures here, one with a special shape which can be destroyed by squashing, the other which is unchanged no matter what shape it is. We may say two substances temporarily coincide, like two roads that cross, or introduce other criteria for what counts as a substance. The plot thickens if we note that a cat without its tail is still a cat, which means that the tailless part of a complete cat is a cat-within-a-cat. If we accept that we have two coinciding cats here (tailless and entailed), then the removal of the tail seems to turn them into one cat (merging the two substances). If we say that a substance is fixed by having a single origin, then consider two bicycles: they are two substances; we then dismantle them both, and make two different bicycles by mixing the parts; we then dismantle those two, and reassemble the originals; it seems that the originals have stopped being those substances, but then started again. These may just be infuriating puzzles, but we are looking for a conceptual scheme which can accurately describe each case, and without that there is no metaphysical account of what unifies objects.