

What Exists?

Vanessa Carr, SLT Philosophy Forum, 25/01/15

c. 400 BC: Democritus, an influential pre-Socratic philosopher, proposes a theory on which all matter ultimately consists of invisible particles that are indestructible, and calls these particles *atoms*.

19th Century: John Dalton, a chemist, proposed that each chemical element is composed of atoms, which cannot be destroyed or altered, but which combine to form chemical compounds.

1897: J. J. Thomson discovered the electron, a particle smaller than the atom. He proposed that electrons were *parts* of atoms – and he was right.

We now know that atoms are made of a nucleus and electrons that spin round the nucleus. We also now know that the nucleus is made from neutrons and protons, which are made of quarks.

1970s: The formulation of the Standard Model, which posits 17 kinds of fundamental particles: 6 different kinds of quarks, 6 different kinds of leptons (an electron is a type of lepton), and 5 different kinds of bosons (including the recently observed Higgs boson!).

So we now have a *layered* picture of reality. All the ordinary objects we interact with ('medium-sized dry goods' as Austin calls them) are *composite*; they are made of smaller objects, which are themselves made of smaller objects, which are themselves made of smaller objects...

e.g. We are human organisms made of a number of biological systems, which are made of organs, which are made of tissue, which is made of cells, which are made of molecules, which are made of atoms, which are made of particles.

Because everything is ultimately made of fundamental particles, we tend to think that a complete theory of fundamental physics will be a Theory of Everything; everything can, at least in principle, be explained by fundamental physics. Recently, some philosophers have gone from this idea to an extreme proposal...

Nihilism: The view on which there are no composite objects, there are only simple objects: fundamental particles.

Why would anyone hold a view like Nihilism? Don't *we* exist as complex organisms?

1. It is difficult to say when some objects compose a further object:

Maybe a group of objects compose a further object when they are in contact with one another?

- But many of the fundamental particles that we are made of are not in contact with one another. Atoms are mostly empty space, and so are all the things composed of atoms.
- If we hold hands, we are in contact with one another.

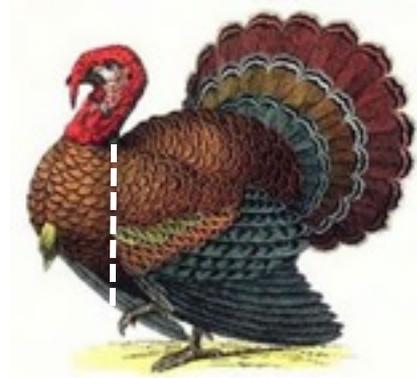
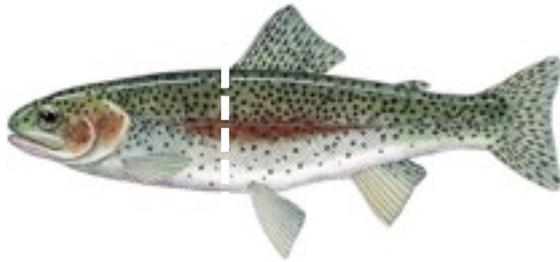
2. The Nihilist's challenge: Why posit extra objects in addition to the fundamental particles? You don't need extra objects to explain all that is observed. Instead of composite objects we can appeal to particles arranged a certain way.

Question 1: What reasons are there for thinking that there are extra objects in addition to the fundamental particles?

There is another extreme response to the question of what exists...

Universalism: The view on which there is an object corresponding to every filled region of space-time.

This means that all the ordinary objects we talk about exist, but so do loads of other weird objects, including trout-turkeys (cf. Lewis 1991, p.7-8): a single object composed of the undetached front half of a trout and the undetached back half of a turkey, where it's front, fishy half is a good distance from its back, feathered half, which exist for as long as both the trout and the turkey exist.



There are also *klables* (Shoemaker 1988, p. 201): an object that's made up of a kitchen table every day from midnight until noon, and that's made up of a living room table from noon until midnight.

This means that there are always many objects located at the same place at the same time, e.g. the klable and the kitchen table between midnight and noon.

Why would anyone hold a view like Universalism?

1. It's difficult to say when some objects compose a further object, so as to restrict the composition to familiar ordinary objects.
2. At least, unlike on the nihilist view, it means that *we exist*.
3. Although many more objects exist that we generally think exist, the existence of all the additional objects doesn't matter much. We only talk about the objects that are *useful* to us.

Question 2: Are there reasons for thinking not only that ordinary objects do exist, but that they are the only things that exist?

References:

David Lewis (1991). *Parts of Classes*.

Sydney Shoemaker (1988). 'On What There Are', *Philosophical Topics*.

Peter van Inwagen (1990). *Material Beings*.