

The Doctrine of Temporal Parts

PHIL 1480 Metaphysics

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1. Can two material objects be in the same place at the same time?

An argument that the answer is *yes*.

Case: At 10 am, I took a lump of modelling clay, and I shaped it with my fingers until it took on this statue-shape; at 4pm, I put it on the table. Let 'statue-shaped' denote the exact shape in question.

P1: There is a statue-shaped statue on the table at 4pm which did not exist at 9am.

P2: There is a statue-shaped lump of clay on the table at 4pm which did exist at 9am.

C: There is more than one statue-shaped object on the table at 4pm.

The argument seems to be valid, based on *Leibniz's Law*, the principle that if Fa and $a=b$, then Fb .

2. A view about spatial parts

Whenever an object O exactly occupies a region of space R [at a time t], and R^- is a subregion of R , O has a part [at t] that exactly occupies R^- .

This rules out the possibility of '*extended atoms*': partless objects [i.e. 'atoms', in the philosophers' sense] that occupy regions of space that are bigger than points [i.e. are 'extended'].

3. An analogous view about spacetime

Whenever an object O exactly occupies a region of spacetime R , and R^- is a subregion of R , O has a part [timelessly speaking] that exactly occupies R^- .

Define 'x is a temporal part of y at t' to mean: x is a part of y, and x exists only at t, and every part of y that exists at t has some part in common with x. Then the above-quoted principle entails that every object has a temporal part at each time at which it exists. (Just let R^- be the intersection of R with the time in question). Call this the *doctrine of temporal parts*.

4. Timeless parthood and parthood at a time

The doctrine of temporal parts, stated in this way, purports to use the word 'part' in a timeless sense—i.e. the claim that x is part of y is supposed to make sense from the eternal point of view, with no need to supply an answer to the question '*when* is x part of y '.

If you think this makes sense, you'll need to say something about the non-timeless notion of parthood that features in most of our ordinary talk (e.g. when we say 'the plank was part of the ship at the beginning of the story, but then it stopped being part of the ship'). In his book, Sider advocates the following analysis:

' x is part of y at t ' means that x 's temporal part at t is part [timelessly speaking] of y 's temporal part at t .

5. What if timeless parthood makes no sense?

Many philosophers think this makes no sense, and so dismiss the doctrine of temporal parts, stated the way I stated it above, as meaningless.

However, there are some consequences of the DTP that even they should regard as intelligible. Here are two:

DTP' Whenever an object x exists at a time t , there is an object y that exists only at t , and occupies the same region of space as x at t .

DTP'' Whenever an object x exists at a time t , there is an object y such that y exists only at t , and y is part of x at t , and every part of x at t has a part in common with y at t .

6. How does the doctrine of temporal parts bear on our original argument about the statue and the lump of clay?

According to Sider, the DTP lets us respond to what would otherwise be crippling objections to the conclusion of this argument.

(i) How can the statue be unlike the clay in respect of, e.g., its vulnerability to destruction, given that they have exactly the same microscopic parts? Reply: they don't have the same microscopic parts in the most fundamental, timeless sense of 'part'.

(ii) If two wholes can be made of the same parts, doesn't that mean that wholes are 'over and above' their parts? Reply: two wholes can't be made of the same parts in the most fundamental, timeless sense of 'part'.