

The Problem of Temporary Intrinsic

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1. The problem

Change [in respect of intrinsic properties] occurs. Lewis: 'How is this possible?'

An argument by *reductio ad absurdum* that change does not occur:

1. x is straight at t_1 (Assumption)
2. x is bent at t_2 (Assumption)
3. x is straight (From 1)
4. x is bent (From 2)
5. x is straight and x is bent (From 3, 4)

Line 5 seems to be (analytically) inconsistent. So everyone who disputes the conclusion of this argument must hold that the inferences from 1 to 3 and from 2 to 4 are invalid.

2. Competing theories about the meanings of temporal operators

The pair of sentences {I am straight, I am bent} is analytically inconsistent, but the pair of sentences {I am straight at t_1 , I am bent at t_2 } is consistent.

We are looking for a theory about the meaning of these adverbs 'at t_1 ' and 'at t_2 ', which explains how they get rid of the inconsistency. (Not just any old adverbs get rid of the inconsistency: {I am perfectly straight, I am bent double} is still inconsistent. Lewis considers three such theories: he argues that since the first two are false, the third must be true.

Theory 1: the original sentences have an *extra argument place* which is filled in explicitly by 'at t '. When you leave out the 'at t ', the filler of the argument place is determined by the context.

- Analogy: Plato's argument that ordinary things have inconsistent properties. The set {Simmias is taller, Simmias is shorter} is inconsistent! This doesn't seem to be a very compelling paradox. To resolve it, we point out that sentences of this sort are really relational: that is, they have an extra argument place, which we can fill in explicitly using 'than'. That's why 'Simmias is taller than Socrates' and 'Simmias is shorter than Cebes' are consistent.

Theory 2: presentism. Ignore for today.

Theory 3: temporal parts. ' x is F at t ' means 'the temporal part of x at t is F '.

3. Lewis's argument against theory 1

Shapes—like the properties expressed by 'is straight' and 'is bent'—are 'genuine intrinsic properties'. But according to theory 1, they are really relations, not properties at all.

Some have responded to this by denying that properties are the sorts of things about which it must make sense to ask whether something has them *simpliciter*, as opposed to having them relative to this, that or the other time.

But the issue about 'properties' is a side issue. (And the issue about 'intrinsic' is even more of a side issue.) The real question is whether it makes sense to ask what shape something is *simpliciter*, not relative to anything. Lewis insists that the answer must be 'Yes'.

According to Lewis, it really does make sense to ask whether something is straight or bent *simpliciter*.

- That doesn't mean that when I ask 'Is Bill Clinton standing?' the question I have in mind is 'Is Bill Clinton standing *simpliciter*?' The answer to that question is obviously *no*, if Bill Clinton is a four-dimensional spacetime worm: four-dimensional things are too big to have shape properties *simpliciter*. If I asked 'Is Bill Clinton standing?', you would normally assume that I didn't mean to ask a question with such an obvious answer, and hence you would fill in an implied 'at *t*' from the context.

As well as insisting that it makes sense to talk of things having shapes *simpliciter*, Lewis also insists that 'x is F at *t*' actually entails 'Something is F *simpliciter*'.

This second claim seems quite controversial, since it more or less guarantees that we will end up with having to believe in temporal parts. It might be denied even by someone who agreed with the first claim. But they would have to come up with a fourth account of the semantics of 'at *t*'. That seems hard to do.

4. Shapes and spacetime

An opponent of temporal parts might hold that some things do have three-dimensional shapes *simpliciter*, namely certain *three-dimensional regions of spacetime*. (A variant on this approach would appeal instead to *regions of space*.) 'I am straight at *t*' means 'The intersection of the region of spacetime I trace out with *t* is straight'.

But this strategy seems only to work for shapes: there is no prospect of doing the same thing for 'is red' or 'is bald' or 'is a child' or 'is a professor'...

5. The argument from backwards time-travel