

7-26-2010

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Recommended Citation

Thornburg, Kristin (2010) "The Perdurantist's Commitments," *Res Cogitans*: Vol. 1: Iss. 1, Article 4.

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The Perdurantist's Commitments

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Published online: 26 July 2010
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Issues of persistence through time have been controversial in recent scholarship. A popular new view is four-dimensionalism: the view that time is a dimension much like space. Although it has been motivated in part by advancements in special relativity, four-dimensionalism has primarily emerged as a solution to recent metaphysical dilemmas. In this paper, I will examine three solutions to David Lewis' problem of temporary intrinsics. I then find that the four-dimensionalist view of perdurantism solves the problem of temporary intrinsics while managing to avoid the serious problems that the other two views encounter. I agree with Lewis that it is the best view of the three. I will then show that this view in light of problems related to composition, nominalist perdurantism best explains our experience of objects.

In his book *On the Plurality of Worlds*¹, David Lewis presents the problem of temporary intrinsics. Objects have intrinsic properties that change over time. Intrinsic properties are all properties that are not relations to other objects, but matters of the object itself. For example, let's take an a straight stick; it's straightness is an intrinsic property. The stick does not have the property of straightness because it is related to another object in a certain way, rather it is straight simply in and of itself. But, just because the stick has an intrinsic property does not mean that it must always have this property. Intrinsic properties can be temporary. Suppose I bend the stick. It now has the intrinsic property of being bent. This means that as a whole through time, we have ascribed the stick as with the intrinsic properties of straightness and bentness. But straightness and bentness are incompatible; this doesn't make any sense! Because intrinsic properties are temporary, objects that undergo change can have incompatible intrinsic properties. Lewis argues that accepting a perdurantist view of objecthood best solves this perplexing problem.

But, others have offered other solutions to Lewis' problem. The first solution is to the problem of temporary intrinsics is endurantism. In his paper *Four-Dimensional*

*Objects*², Peter van Inwagen defends a version of endurantism, the view that while time is like space, objects *endure* through it; that is objects wholly exist at any instant. Endurantists like Van Inwagen accept a four-dimensional view of time, but deny the existence temporal parts.³ The biggest advantages of endurantism are that it avoids the problems of three-dimensional theories of time, but have intuitive appeal. The endurantist will say that given our strong belief that we are wholly present wherever and whenever we are and a lack of empirical evidence in favor of perdurantist theories, we have no good reason to accept theories that involve temporal parts.

It may appear *prima facie* that endurantists cannot solve the problem of temporary intrinsics. Given that objects change and that they are wholly present through time, they will have incompatible temporary intrinsic properties. If our bent stick was always fully the same stick through time, then it must be both straight and bent. Or does it?

Van Inwagen says it does not. He says that properties are ‘time-indexed.’ When we say that someone was hungry at time t_1 we mean, “that this object bore the relation *having* to the time-indexed property *hunger-at- t_1* or else that it bore the time-indexed relation *having-at- t_1* to hunger.”⁴ Let’s try to rephrase this with less jargon; Van Inwagen wants to say that when we are talking about a property of an object at a particular time, we are talking about an “instantaneous slice”⁵ of an object. But, unlike a temporal part of an object, the whole object is present. We have taken a slice of the temporal dimension of the object, but it remains fully itself. This slice has certain properties, and those properties are related to the time in which the slice existed. If we took a second time slice of the same object it would have a different set of properties because the second slice is related to a different time than the first. However, the object is fully present a both time slices.

In response to the problem of temporary intrinsics, the endurantist will say that the time slice of the stick before time t_1 , the moment it was bent, had the property of straightness and that property is related to the time in which it existed. After t_1 , the stick had a new time-indexed property, bentness. The problem of temporary intrinsics doesn’t arise because each property is related to a different time-slice of the stick. The stick was fully present at all times, but its properties were not.

The second view one could hold to solve the problem of temporary intrinsics is to deny the existence of any times except the present. Holding this view, aptly called presentism, entails denying a concrete past and the future. The present is the only true time, and the past and future are abstract, false times. The presentist avoids the problem of temporary intrinsics because she denies any intrinsic properties except the ones that exist in the present. With regard to the case of the bent stick, she will say that the only intrinsic property of the stick is its bentness. It is bent in the present, and since the past is a false time any other intrinsic properties we believe the stick to have had are not

false and irrelevant. The stick is not both bent and straight; it's simply bent. The presentist has successfully avoided Lewis' problem.

The final solution to the problem of temporary intrinsics is Lewis' favorite: to accept that incompatible intrinsic properties do not belong to the same thing. Rather, they belong to distinct temporal parts. The straight stick and the bent stick are each discrete temporal parts of the same stick. The straight stick has the intrinsic property of straightness, and the bent stick has the intrinsic property of bentness. It is perfectly reasonable for different objects to have incompatible intrinsic properties, so it follows that it is perfectly reasonable that the two distinct stages of the stick have two different intrinsic properties. This solution, perdurantism, Lewis argues is the best of the three.

But why does Lewis favor the last, perdurantist solution? All three theories solve the problem of temporary intrinsics, and all three have their drawbacks. Abductively speaking, the best solution will be the least problematic.

The disadvantage to the endurantist solution is that it denies intrinsic properties and replacing them with relations. By definition, intrinsic properties are not relations. They are those properties that pertain to the object itself, not to the objects relations with other things. There are no intrinsic properties anymore, only relations that seem intrinsic.

The presentist solution is problematic because it denies genuine change and persistence. If the present is the only real time, then things can't persist because there is no time to persist through. And further, an object can't change because we cannot compare the object to any other time. Such a comparison would be to compare a real object (the one in the present) to an abstract or false one (the one in the past), and that would be fallacious.

The temporal parts solution is unfavorable because adding temporal parts to our ontology offends our common sense notion that objects are wholly present whenever they exist. Non-perdurantists often object that perdurantism is incoherent or nonsensical. Some claim that the idea of temporal parts is so counterintuitive, it is practically unintelligible.

Lewis finds that the problems with endurantism and presentism are formidable. Intrinsic properties and genuine change and persistence are important philosophical distinctions, and giving them up would have severe repercussions. The problems with perdurantism, however, aren't so severe. The perdurantist just has to give up a common sense intuition which perhaps she had no good reason to believe anyway. Since the temporal parts solution solves the problem of temporary intrinsics and manages to avoid serious problems, I agree with Lewis that it is the best view of the three.

Now that perdurantism appears to be the least problematic, and the best abductively speaking, of theories that avoid Lewis' problem of temporary intrinsics. But aside from temporal parts, what commitments must perdurantists make? Let's look at two well-known theories to get a sense for the details.

In his essay, *Identity, Ostension, and Hypostasis*, Quine takes up the problem of identity. Our most common sense intuitions compel us to suggest that identity is entailed in material substance. If I were to ask you why the paper you are holding is the same object now as it was before these words were printed on it, I am sure your first answer would be that it is made out of the same 'stuff,' the same paper fiber or even the same protons, neutrons, and electrons now as it was before it became this essay. Suppose you take a closer look. In fact, during the printing process there were countless ink particles bonded to the paper that were not there before the printing. Strictly speaking, the structure of protons, neutrons, and electrons has been altered. The 'stuff' is not the same. This may be true, but it is undeniable that we really want to say that the paper remains the same object.

This is a restated version of Heraclitus' famous problem of the river; he said "You cannot bathe in the same river twice, for new waters are ever flowing in upon you."⁶ In contemplating the river, Heraclitus encountered the same problem of identity as when we considered the paper: if material substance is constantly in flux, then how can objects continue?

Strictly speaking they do not, according to Quine. Heraclitus is correct, each time he steps into the river he is bathing in a different river than he did before. The river is made up of many "river-stages," none of which are identical. Rather, they are all related; they each are a part of the same river. Or more precisely, they are part of an object that we call a river.

Quine's view is related to what is now called "space-time worm" theory. Like the name suggests, it holds that an object is a kind of space-time worm that connects all its temporal parts together. In the Quine example, the name river is a worm that connects various temporal parts together into what we call an object.

This is not the only way to formulate temporal parts. Theodore Sider has offered the "stage view" of temporal parts. Like Quine's view, objects are a series of temporal parts. But unlike Quine's space-time worm theory, when we refer to an object we are actually referring to the instantaneous temporal part at the very moment of utterance, not a summation of parts through time.

If perdurantists are willing to add temporal parts to their ontology, then in so far as they compose objects, it follows that temporal parts must also become part of their mereology. In order to make sense of how temporal parts and objects are related,

perdurantists must be able to explain when discrete temporal parts compose an object, and when they don't.

There are three mereological views for the perdurantist to choose from: restricted composition, eliminativism, and universalism. Restricted composition the view most compatible with common sense intuition. It is the view that not every class has a fusion, or simply sometimes two things compose and object, sometimes they don't. While this seems intuitive, creating a principled system for when a class fuses and when it doesn't has been utterly problematic, to a degree that the project is practically impossible.

If restricted composition is the most intuitive of the three theories, then eliminativism is certainly the least. It states that no class creates a fusion. There are no objects. The only things that exist are "simples," or the smallest possible things. They are indivisible, because anything smaller would not exist. What we believe to be objects are sets of simples arranged a certain way. There are no pens, for example, only sets of simples arranged pen wise.

The last view is unrestricted composition. It is the theory that every class creates a fusion. Any two things combined create an object. It is the intuitive opposite of eliminativism; if eliminativism was unintuitive because it gives us far too few objects, unrestricted composition is unintuitive because it gives us far too many! According to unrestricted composition, my right shoe and your left index finger are an object, as are a sock and Stonehenge etc.

Perhaps now we can see the extra burden on perdurantists; they have accepted temporal parts into their ontology, but they are now responsible for explaining how these temporal parts are composed, and then how temporal parts themselves compose objects. Given that restricted composition has been for the most part rejected as a tenable philosophical view, I will focus on the perdurantist's commitments if they choose eliminativism or universalism.

The eliminativist perdurantist has the sparsest ontology of all. Like any other true eliminativist, they only have one thing in their ontology: simples. Every "object" is only a collection of simples arranged in a particular way. It follows, then, that every temporal part of every object is simply a collection of simples arranged a certain way at a certain instant. A fairly straightforward view, as long as one has made a strong commitment to nominalism.

Since we don't have objects, the only thing that "carves up" simples into objects are the ways we name them. We see many simples arranged in a certain spatial manner, and we name it a certain thing. I am not, for example, sitting on a chair. I'm sitting on simples that are spatially arranged in a certain way that I call "chair." Positing temporal parts is just another way of dividing up simples, dividing them up in time rather than space.

The simples that are arranged chair wise at any instant are a temporal part of a “chair.” A commitment to nominalism makes this view tenable.

Of the two we discussed, Quine’s view is closer to this view. He accepts that there are no objects per se, only what we call objects. In his example the river only exists in momentary stages, but he does not accept a necessary connection between these stages. He is a nominalist about objecthood. There is no ghostly force or special relation that binds temporal parts together into objects, objects are distinct because we name them distinctly. In Quine, when we point to a river and say “this particular river” we mean “the riverish summation of momentary objects which contains this momentary object.”⁷

What about those perdurantists who hold unrestricted composition? Theodore Sider is one; in his view since every class has a fusion, any two simples make an object, and any two simples at an instant make a temporal part. The universalist has too many objects, but the universalist perdurantist has it worse, too many objects and too many temporal parts composing objects!

In addition to holding unrestricted composition, Sider is an adamant realist⁸. But what is a realist to do with all of these objects? Sider is committed to saying that any class of simples at any instant is a temporal part, and any class of temporal parts is an object. It is hard to imagine a bigger ontology! Now, not only is my right shoe and your left index finger an object, each combination of a temporal part of my right shoe and a temporal part of your left index finger is a distinct object. We now have more objects than we know what to do with.

The only way for Sider to make such a large amount of objects intelligible is to concede that there are in fact a very large number of objects, many more than our everyday intuitions would tell us. But, that we have so many objects is not a problem because we only need to talk about the ones that matter to us. And which objects matter to us? The ones we name. Perhaps Sider himself wouldn’t admit it, but he has just accepted a kind of nominalism about objects. His realism is at best only a quasi-realism. It is a realism that is theoretically true, but not practically true. Even Sider, who considers himself an ardent realist, still has to accept a kind of quasi-nominalism for his ontology to make sense of our everyday experience.

Let us consider both Quine and Sider’s versions of perdurantism in light of our everyday use of objects. Granted, our ordinary conception of objecthood (that sometimes two classes create a fusion, while other times they do not) quickly collapses. It appears that there can be no principled way to distinguish fusion-creating classes from those that do not fuse. Nevertheless, the better theory will better explain our everyday experiences of objects.

The nominalist is able to give us all and only the objects that are part of our everyday experience. What constitutes an object is that we call it an object. Thus, the only objects that exist are the ones which are, by Sider's view, important. Realists like Sider can also give us all the objects we name, but a plethora of others that non-philosophers would loathe to call objects. Ask anyone if my cell phone the instant I bought it and the white house when occupied by George Washington constitute a distinct object and the answer will certainly be no. As we've seen with Sider, even the perdurantist realist must employ a kind of practical nominalism to make sense of their ontology; this is because for the perdurantist, nominalism better describes our everyday experience with objects.

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¹ Lewis, David K.. *On the Plurality of Worlds*. Malden, MA: Wiley-Blackwell, 2001.

² Van Inwagen, Peter. "Four-Dimensional Objects." *Nous* 24, no. 2 (1990): 245-255.

³ As I will discuss later, this ontological claim amounts to the denial of perdurantism.

⁴ Van Inwagen, 247.

⁵ Van Inwagen, 247.

⁶ Quine, W. V. 1950. Identity, Ostension, and Hypostasis. *Journal of Philosophy* 47, (10/01): 621-32. pg 621.

⁷ Quine, 623.

⁸ Sider, Theodore. "Précis of 'Four-Dimensionalism'." *Philosophy and Phenomenological Research* 68, no. 3 (2004): 642-647.