There is no *simpliciter simpliciter*

Abstract

This paper identifies problems with indexicalism and abverbialism about temporary intrinsic properties, and solves them by disentangling two senses in which a particular may possess a property *simpliciter*. The first sense is the one identified by adverbialists in which a particular possesses at all times the property as a matter of foundational metaphysical fact regardless of whether it is manifest. The second involves building on adverbialism to produce a semantics for property-manifestation according to which different members of a family of second-order properties of the foundational property are relevant to property manifestation at different times.

1 Introduction

Here's the background to the problem we solve in this paper. Endurantists about persistence are those who hold that objects persist over time by being wholly present at every time at which they exist, and literally identical to themselves across time. This poses a fundamental problem for the endurantist, namely, how composite objects with temporary intrinsic properties could possibly be identical across time given the constraints of Leibniz' Law.

One move that some endurantists make at this point is to argue that endurantism is best combined with the metaphysics of presentism. As Mark Hinchliff argues, if the only real time is the present, then the only properties an object has are the properties it has in the present, and no contradiction arises from holding that it is tenselessly true that an object exists at multiple temporal locations and has different properties at those locations.[1] Presentism though, is itself a controversial metaphysics at least insofar as it remains unclear whether it is even coherent given the constraints of the theory of special relativity. Best then, if endurantism were not to be saddled with such a questionable metaphysical partner. But if the endurantist is to embrace eternalism—the view that all times are equally ontologically real—then the endurantist must

reconcile change over time with the claim that objects are strictly identical across time and are wholly present whenever they exist.

For those endurantists who embrace eternalism, the first move in defending the idea that objects could be identical across time despite changes in their temporary intrinsic properties, involves relativising properties to times. Thus, to use the well-worn example of colour properties, rather than an object being at one time (t_1) red and the next (t_2) blue—which raises the issue of how the object at t_1 can be identical to the object at t_2 since it would appear to have different properties at each of those times—instead it is tenselessly true of the object that it has the properties of being red-at-t_1 and blue-at-t_2. On this view, sometimes known as indexicalism,[2] the object's properties never change, and thus there is no putative counterexample to Leibniz' Law.

This wasn't quite satisfactory, however. For it left open the question as to whether there is any property that an object has *simpliciter,* rather than relativised to some time. Take a ball that is red at t_1, t_2 and t_4, but blue at t_3. At t_1, when some agent—call him Dick—looks at his red ball, it seems that it is simply *red*: not that it has the property of being red-at-t_1. This intuition intensifies when we reflect that if our chameleon ball, after flirting with blueness, is again red at t_4 Dick will judge that it has the very same property— redness—that it had at t_1 and t_2. We want it to be the case that there is some sense in which the ball is red at t_1, t_2 and t_4 in virtue of instantiating the same property at each of those times, whether this amounts to instantiating the same universal of redness at each time, or to having an instance of redness that persists. But in fact on this view, although the ball has all the very same properties at each of the times at which it exists, the property that Dick is commenting on to Jane when he announces at t_2 'look, Jane, the ball is red' is the property red-at-t_2, a distinct property from the one he was acquainted with at t_1. That is to say, at t_1 the ball is red in virtue of instantiating the red-at-t_1 property, and is red at t_2 in virtue of instantiating the red-at-t_2 property: at each

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[1]Hinchliff, M. (1996). "The puzzle of change." *Philosophical Perspectives 10, Metaphysics* 119-133.

[2] A defender of this view includes Van Inwagen, P. (1990). "Four-Dimensional Objects." *Nous* 24: 245-255.

time at which the ball is red, it is so in virtue of instantiating a *different* property.[3]

Considerations such as these led to the next move, supplied by Johnston.[4] Why not suppose that it is the very same property—redness—that always underlies Dick's judgments of redness, but what varies is how this property is instantiated. The property of redness is had by the ball in a number of different temporally modified *ways*: it is had $t_1$ly, $t_2$ly and $t_4$ly. Thus the very same property—redness—is indeed possessed at different times, it is just an 'adverbial' matter *how* it is possessed—hence the view is sometimes known as adverbialism.[5]

It is problems with this view that the current paper addresses. Our worry is that this solution *still* leaves us with a puzzle about what it is to be red *simpliciter*. For, we will argue, the ball will timelessly possess the properties of instantiating redness $t_1$ly, $t_2$ly and $t_4$ly and blueness $t_3$ly: it will possess them at every time at which it exists. Now recall that the idea of adverbialism is that it allows us to say that the ball instantiates the very same property—redness—at t_1 and t_2, but it instantiates it in a different manner at each of those times. The problem is that blueness is also instantiated at t_1 and t_2 (albeit in a $t_3$ly manner). Indeed, blueness is instantiated in the same manner at t_1 and t_2 as it is at t_3. So it is difficult to see how we could explain the ball's being blue at t_3, in terms of it instantiating blueness $t_3$ly, given that it instantiates the very same property at both t_1 and t_2. And of course the same holds true *mutatis mutandis* of redness.

So what does it take to say that something is unqualifiedly red—red *simpliciter*—and can the endurantist give an account of it? Perdurantists—those who believe in temporal parts—have what looks like a very neat solution. At t_1

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[3]Stone raises a similar problem in his Stone, J. (2003). "On staying the same" *Analysis* 63(4): 288-292.

[4]Johnston, M. (1987). "Is There a Problem about Persistence?" *The Aristotelian Society* Supp 61: 107-135. pp. 113-115.

[5]Defenders of which include Haslanger, S. (1989). "Endurance and Temporary Intrinsics." *Analysis* 49: 119-125; Johnston, M. (1987). "Is There a Problem about Persistence?" *The Aristotelian Society* Supp 61: 107-135. pp 113-115; Lowe, E.J. (1988). "The Problems of Intrinsic Change: Rejoinder to Lewis." *Analysis* 48: 72-77.

there exists a ball-part that is red *simpliciter* and it is this property that at t_1 underlies Dick's judgement that the ball is red. And it is the very same property that underlies Dick's judgement that the ball is red at t_2 and t_4, it is just that that property is possessed by a distinct object, a different temporal part of the ball. So on each occasion we get to say that Dick is confronted by something that is straightforwardly red. So far it seems the endurantists can't match this. Our aim is to help them.[6]

We think that the difficulty that has beset endurantist solutions to these problems is that the idea of possessing a property *simpliciter* is not univocal. There are at least two separate notions at work. A good theory should say something about the connexions between them, but there is no reason to suppose that they are identical.

The first notion is a strictly metaphysical one. It would indeed be disturbing if there were no sense in which there was an underlying property of redness, which things at different times could possess. Those endurantists who believe in properties relativised to times are in trouble, we think, if it turns out that the ball's being red-at-t_2 has no more intimate metaphysical connexion to its having the property of being red-at-t_1 than its being spherical-at-t_1. What we want is some property, redness, which really does persist across time.

The second notion has both a metaphysical and a semantic component. The metaphysical component addresses the issue of why it is that at certain times certain properties are manifest and at other times not manifest, given that the underlying properties that are possessed *simpliciter* are possessed at every time. That is, given that adverbialism tells us that the ball possesses redness *simpliciter*, and thus possesses redness at t_3, we need some account of why redness is manifest at t_1 and t_2 but not at t_3. The semantic component addresses the issue of how it can be that there is semantic content in common between what seems to be the same judgement made at different times. It requires that

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[6] Neither of the authors is an endurantist: one of us (DBM) is a perdurantist, but not because of considerations of possessing properties *simpliciter*. The other (KM) thinks that perduratism and endurantism are metaphysically equivalent,

there be some account of what is in common between Dick's judgement at t_4 that 'the ball is red' and his judgement at t_1 that 'the ball is red'.

It might seem that these two notion of '*simpliciter*' should be the same: that there should be an enduring property present whenever that property is manifest, and the similarity in the judgements is that they are both judgements about the same objects' possession of this same property. We argue that disentangling the two desiderata means that they can be separately settled.

In section two we explicate these three distinct issues, and with them the two attendant notions of *'simpliciter'*, and we consider a number of ways that the endurantist might attempt to bring these two notions of *simpliciter* together and solve the three problems as one. Ultimately, however, we argue that any of these strategies will fail.

We call these two notions of '*simpliciter*' M-*simpliciter* and 'S-*simpliciter*'. The notion of having a property M-*simpliciter* is just the metaphysically fundamental notion of having that property regardless of whether it is currently manifest. Thus, on the adverbialist view, an object which is ever red—say at t_1—is always red, even if it is not sensibly so at some other time t_3, in virtue of not being red $t_3$ly.

The notion of having a property S-*simpliciter* is the notion of simply being red, which is true when and only when the property of redness is manifest. So something is red S-*simpliciter* just when it (under ideal circumstances) is sensibly red. So, for example, if an object is red M-*simpliciter* but not red $t_3$ly, then at t_3 it is not red S-*simpliciter* since an observer in ideal circumstances would judge that in some important sense the object simply is not red. Providing an account of what it is to instantiate a property S-*simpliciter* thus involves solving the metaphysical problem of why it is that persisting properties are manifest at some times and not others.

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and thus that any advantage possessed by one view can be represented in the other view in different terminology.

We call this second sense of '*simpliciter*' S-*simpliciter* (semantically *simpliciter*) to highlight the semantic aspect of this notion of *simpliciter:* the issue of what the common content is between agents' judgements at different times that, say, 'the ball is red'.

In section three, we defend a view about having properties S-*simpliciter* we call *variable role adverbialism* (henceforth VRA). This is the view that our ordinary judgements about the instantiation of properties at times—our judgements about whether at times some property is instantiated S-*simpliciter*—do not simply track the instantiation of properties M-*simpliciter*. So, for instance, our judgements about whether the ball is red at some time do not merely track whether the ball instantiates redness M-*simpliciter*. Rather, such judgements track whether, at the relevant time, the ball instantiates redness, and that redness plays a particular role—the relevant role varying with the time at which the ball is judged to be or have been red. More generally, we hold that what it is for an object to have some property P S-*simpliciter* at t is for that object to tenselessly instantiate P-ness—to be P M-*simpliciter-* and for P-ness to play the role that is relevant at t.

Our view is analogous to first-order functionalism in the philosophy of mind: the view that mental states are the states that play functional roles, rather than the states of having the roles played, or the roles themselves. On this view in the philosophy of mind, the meaning of mental state terms is different from the meaning of physical state terms, even though they may be the very same states. Thus 'pain' means the state that plays a role R. And 'C fibres firing' refers directly to a kind of neural state. But, in certain domains, the pains are nonetheless identical to the physical states.[7] So on our view, the meaning of 'M-*simpliciter*' and 'S-*simpliciter*' are different even though at times when some object possesses a property both S-*simpliciter* and M-*simpliciter*, it is the very same property that it possesses both ways.

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[7] Jackson, F. Pargetter, R. and E Prior, (1982). "Functionalism and Type-Type Identity Theories*." Philosophical Studies* 42 209-225.

There is however a crucial difference between our view and first-order functionalism in the philosophy of mind: in the philosophy of mind a certain state is realised whenever a certain fixed role is played. On our view a property is possessed S-*simpliciter* only when that property plays a particular role, where that role varies depending on the time. There is, however, a static meta-role which is the role of playing these different roles at different times, and it is this meta-role that explains what is in semantically in common between our judgements, at different times, that a property is possessed S-*simpliciter*. Hence we will argue that VRA allows the endurantist to reconcile the possession of temporary intrinsics with Leibniz' Law, whilst also allowing us to say that there is a genuine sense in which properties are possessed *simpliciter*.

2 Two senses of *'simpliciter'*

A major problem for endurantism is supposed to be that it renders all properties relational, and this means that there is no straightforward sense in which an object is just plain red.[8] This suggests that there is no sense in which objects instantiate properties *simpliciter*. But, we argue, there is a crucial ambiguity in this idea of instantiation of a property *simpliciter*. There are two sorts of problems: a purely metaphysical problem and a mixed metaphysical and semantic problem. There is thus no reason to suppose that a solution to one of these problems will automatically solve the others. Our advice to the endurantist is that once we see the difference between the problems, we can see how they can be solved separately. We must therefore distinguish these problems and the corresponding senses of instantiation *simpliciter*.

The first of our senses in which an object can have a property *simpliciter* is the strictly metaphysical sense in which there is a non-relational, non-indexical property that plays a crucial constant role in explaining property attributions at times. We will henceforth call this sense M-*simpliciter* for metaphysically *simpliciter*. One of the main motivations for the adverbial view of property instantiation is precisely that it, in contrast to indexicalism, allows that properties are instantiated M-*simpliciter*: for it allows that there is a property of red *simpliciter*; it is just that it is instantiated in different ways at different times.

Thus whenever the ball is red, it is so in virtue of instantiating one and the same property—redness—at each of those times.

So there is this metaphysical sense of *simpliciter* in which it is true that the ball just is red. This means though, that the adverbialist is committed to the ball being red M-*simpliciter* at every time at which it exists. That is, adverbialists are committed to its being the case that the ball possesses redness at t_3 (when the ball is manifestly blue) although at t_3 that redness is not possessed $t_3$ly. We are not sure that all those who write in this area see this,[9] but surely it must be so. Certainly the ball does not possess redness $t_3$ly, but at t_3 it must possess redness M-*simpliciter* (and of course the higher order properties of possessing redness $t_1$ly and $t_2$ly). For if it were not the case that the ball possesses redness M-*simpliciter* at t_3, then there would be an interval—t_1 to t_2—over which the ball had redness *simpliciter*, and a moment—t_3—at which it does not. Assuming that redness *simpliciter* is an intrinsic property, we would have a return of the problem of temporary intrinsics. For the ball itself would posses contradictory properties. The price of both solving the problem of temporary intrinsics *and* having an underlying ontology of properties that are possessed *simpliciter* but are had in varying ways, is that the underlying properties remain *possessed* when they are not *expressed.* The analogy here[10] is with modal properties under the assumption of strict trans-world identity. All super-models have the property of being fat wly, (where w is some world in which those models are fat). But even though the models have the property of being fat wly, they do not manifest fatness in the actual world, because the fatness property is not instantiated in the actually manner. The fatness property, like the redness property at t_3, is possessed but is not manifest. There is of course an issue of just how substantial an explanatory question it is why a property which is possessed is not expressed. We discuss this in section five.

This brings us to the second sense of *simpliciter*—what we have called S-*simpliciter*. Notice that we cannot explain the ball's not being manifestly red at

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[8]Lewis, D. (1986). *On The Plurality of Worlds* Oxford: Blackwell pg 204.
[9] Johnston certainly sees this, others concentrate on persisting traits while they are manifest, ie. redness at t_1 and t_2.
[10] Johnston uses a similar analogy in his (1987).

t_3—not being red S-*simpliciter*—in terms of it failing to possess redness (failing to be red M-*simpliciter*). So the notion of having a property S-*simpliciter* cannot simply be the notion of having a property M-*simpliciter.* For if an object ever instantiates a property M-*simpliciter*, then it always instantiates it whether it is manifest or not, and hence whether it is possessed S-*simpliciter* or not. And what of the semantic component to the notion of instantiating a property S-*simpliciter*: what is in common between utterances made at different times, that an object possesses some property S-*simpliciter*?

An obvious way to try to give an account of this would be to try to find truth conditions that are the same for each such utterance. Could the presence of the property of being red M-*simpliciter* do this work? Once again, for the very same reasons as we saw above, clearly not. Can we say that at each time when Dick judges that the ball is red, the content of his claim is that the ball possesses the property of redness? No: for even when Dick's judgement 'the ball is manifestly red' is false—as at t_3 when it is manifestly blue—the ball possesses the property of being red M-*simpliciter*.

So the strictly metaphysical sense of M-*simpliciter* will not do double duty in explicating the notion of instantiating a property S-*simpliciter*, nor in explaining what is in common between judgements at different times, that a property is possessed S-*simpliciter*. An obvious suggestion at this point would be to hold that what explains the manifestation or not of redness at different times, are the various second-order properties of redness being instantiated in different temporally modified ways at different times. Suppose that we are considering the ball's manifest redness at t_1. Then we might try conjoining the property of being red M-*simpliciter* with one of the second-order properties of instantiating redness in a particular way. We might say that the ball is red S-*simpliciter* at t_1, in virtue of being red M-*simpliciter* and having the second-order property of being red $t_1$ly. And this would seem to given the appropriate truth condition for Dick's judgement, at t_1, that the ball is manifestly red.

There is a problem here though. If the property of redness is possessed $t_1$ly, then there is a second-order tenseless property of instantiating the property of redness $t_1$ly—and similarly for the property of instantiating the property of

blueness $t_3$ly and so forth for all of the ball's properties. Why is the adverbialist committed to such a family of properties? Why can she not hold that there is only one property—redness, say—and it is simply a tensed fact that redness is instantiated in different ways at different times? In that case there is no intrinsic property of instantiating redness $t_1$ly, say, in addition to instantiating redness.

We do not think that this option is open to the adverbialist. A simple argument might just be that there is, as a matter of logical truth, a second-order property instantiated whenever a property is instantiated in a particular way. When the ball is red at t_1, its redness is instantiated $t_1$ly, and thus it has the second-order property of having a certain property instantiated in a particular way: in this case the property having the property of redness instantiated $t_1$ly.

Moreover, if instantiating redness in some temporal manner is a genuine way of being red, then it is presumably not a mere relation to a time (this would in any case just get us back to indexicalism) but something more substantial. This thought would lead to a version of the argument from temporary intrinsics to the effect that if at t_1 the ball has the property of having redness instantiated $t_1$ly, and if at t_3 it fails to have that property, then since the ball is strictly identical across time it must have contradictory properties: it both has, and fails to have, the property of redness being instantiated $t_1$ly. Thus it should be true at all times at which it exists that it has the property of instantiating redness $t_1$ly.[11]

But we think that even those who do not believe in higher-order properties as logically entailed by the possession of properties, or in talk of properties being had in certain ways, should be moved by these considerations. For what is it to be an adverbialist? The idea of something being done in a certain way seems to require something that makes it so. We might say that someone is running, and that they run badly, or quickly, or sillily. These are all adverbs to be sure, but

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[11] We formulate the idea of second-order properties here, as properties particulars may possess of having certain properties or having them instantiated in certain ways. But the argument could equally be formulated in the other conception to found in the literature as a property of a property. In this case we would think of being instantiated t2ly as a property of the enduring property instance of redness, which it must still possess at t3 on pain

there must be a difference maker. And these difference-makers are the properties of the runner such that he, for instance, instantiates running badly. These difference makers are not mere logical constructs. There must be some intrinsic categorical basis for these facts that explains the difference. And just as there must be some categorical basis for the difference between running quickly and running badly, so too, we think, there must be a categorical difference between instantiating redness $t_1$ly, and instantiating it $t_2$ly. This categorical basis then, is that there is one property that makes it true that redness is instantiated $t_1$ly, and a distinct property that makes it true that redness is instantiated $t_2$ly. (Something we will return to is that the difference of these properties must be relevant to the manifestation of properties at different times)

So there is not simply one property, redness, that is instantiated in different ways—there must also be the properties that make the differences between the instantiations. If these are not second-order properties then perhaps they are categorical properties that make true the second-order claims. And if these properties are not mere relations to times, then a version of the argument from temporary intrinsics applies to them. If the property that makes it true of the ball that it is red $t_2$ly is true of the ball at t_2, then if the ball exists at t_3 it must possess that property at t_3, on pain of contradiction. But if the ball has the very same categorical property at t_3 as it does at t_2, then it is difficult to see how possession of that property could explain the ball's instantiating redness in a $t_2$ly manner at t_2, but not at t_3.

Another way of thinking of the relation between instantiating a property and instantiating it in a certain way is as the difference between a determinable and a determinate. Perhaps the difference between being red and being red $t_1$ly is the difference between a determinable and a determinate. Red is a determinable, and one determinate way of being red is to be red $t_1$ly. But if this is the right way to understand the relationship, the argument from temporary intrinsics returns. For determinate properties are no less subject to that argument than are determinable ones. If an object has mass at t_1, then the

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of contradiction. We will sometimes adopt this second locution when it makes exposition easier, but nothing hangs on the choice.

argument from temporary intrinsics to the effect that it must have mass at t_2 on pain of contradiction, is no stronger than the argument that if it has determinate mass 50g at t_1 then it must have mass 50g at t_2. So also the argument from a ball's instantiating the determinable redness at t_1 to its instantiating it at t_2, is surely not stronger than the argument from its instantiating the determinate red $t_1$ly at t_1 to instantiating red $t_1$ly at t_2.

We conclude, therefore, that the adverbialist ought to be committed to this family of higher-order properties which enduring objects possess at every time at which they exist.

But then consider the truth condition we just appealed to for being red S-*simpliciter*. We said that the ball is red S-*simpliciter* at t_1 in virtue of being red M-*simpliciter* and having the second-order property of being red $t_1$ly. That, however, will not do. For this condition remains true at t_2: at t_2 the ball is red M-*simpliciter* and is red $t_1$ly. Yet the ball is not red S-*simpliciter* at t_2 in virtue of being red M-*simpliciter* and being red $t_1$ly. And Dick's judgement at t_2 that the ball is manifestly red is not true in virtue of the ball being red $t_1$ly at t_2. This is even more apparent at t_3, when the ball is red M-*simpliciter* and is red $t_1$ly, yet is clearly not red S-*simpliciter* since we would judge that it is manifestly blue.

So the endurantist cannot think that being red S-*simpliciter* is either a simple first-order property, or even a univocal second-order property, since at every time t_n, being red S-*simpliciter* depends on having some different second-order property of possessing redness $t_n$ly at different times t_n. So then on each occasion that the ball is red, it is so in virtue of instantiating a different second-order property: redness $t_1$ly at t_1, redness $t_2$ly at t_2 and so forth.

Another option for the endurantist is to say that being red S-*simpliciter* is a *complex* conjoined second-order property. For the ball has the second-order complex conjoined property of having the properties of redness $t_1$ly and $t_2$ly and $t_4$ly. Then the truth conditions for an utterance of 'the ball is manifestly red' might be:

  (a) the ball is red M-*simpliciter*

and

(b) the ball has the second-order properties of being red $t_1$ly and red $t_2$ly and red $t_4$ly.

Call the conjoined property of being red M-*simpliciter* and having the relevant second-order properties the *R* property. Then we could say that the ball is red S-*simpliciter* at t just in case it has the R property at t. And clearly the ball does has the univocal R property whenever it is right to judge that it is manifestly red. So each time the ball is red S-*simpliciter*, it is so in virtue of instantiating the same property—R—at each of those times.

But of course, this will not do. First, the sense in which the R property is the property *in virtue* of which the ball is red S-*simpliciter* at, say t_1, is clearly thoroughly derivative on just one of the conjuncts: the conjunct that specifies that the ball is red $t_1$ly. So too *mutatis mutandis* for every other time at which the ball is red. Worse still, what holds true for the property of being red M-*simpliciter* also holds true for the R property. For just as the ball is red M-*simpliciter* at t_3, so too the ball instantiates the R property at t_3, (as it must if it is to be strictly identical across time). But if instantiating the R property is being red S-*simpliciter*, then we should judge that the ball is manifestly red at t_3. So being red M-*simpliciter* and having the second-order conjoined properties do not provide the truth conditions for being red S-*simpliciter*, or for our utterances of 'the ball is manifestly red.''.

And this problem prevails regardless. For suppose that the R property is the property of having the property of being red $t_1$ly at t_1, and red $t_2$ly at t_2. Call this property the R* property. This seems more promising; after all, the ball is red at t_1 and t_2 in virtue of being red $t_1$ly at t_1 and red $t_2$ly at t_2. But what is this property of being red $t_1$ly at t_1? Does the ball have the property of being red $t_1$ly at t_1 at times other than t_1? Does the ball have the property of being red $t_1$ly at t_1, *at t_3*? Well surely the very same arguments that we earlier rehearsed which tell us that the ball has the property of being red $t_1$ly at every time at which it exists, will also tell us that it must have the property of being red $t_1$ly at t_1 at all times at which it exists. Hence it must indeed have the property of being red

$t_1$ly at t_1 at t_3. But then we are back to where we began, with the ball instantiating the R* property at t_3 when we want to say that it is not red S-*simpliciter*.

There is of course a general problem here, which explains why no matter how complex our R property becomes, it won't do the work required. For no timeless property of whatever complexity will do the work. The point is that while there may be some underlying M-*simpliciter* property that is the redness at any time, what it is about how the redness is expressed to an agent or in the world depends on when the agent or the world is. If an agent is at t_1, there is a role, if we can use such an expression, of being had $t_1$ly that explains why the property of redness is sensible at that time. At different times it is different roles that have to be played for a property to be sensible to agents at those times. And when we are attempting to explain the S-*simpliciter* sense of 'the ball is red' we are trying to explain something which involves different locations of the agent, and thus the many ways the property of redness is instantiated become relevant to the agents' sensing of that property.

3. Variable Role Adverbialism

What sense then, can we make of this notion of having a property S-*simpliciter*? Well of course, what explains why the ball is not manifestly red at t_3 is that while the ball possesses redness $t_1$ly, $t_2$ly and $t_4$ly, it fails to possess it $t_3$ly. We think that the lesson here is that for the adverbialist, the semantics of property talk can be understood as analogous to the semantics of first-order functionalism in the philosophy of mind. Recall that for the adverbialist, the ball is red M-*simpliciter*, so it possesses the property of redness at every time at which it exists, including those times at which we would not describe the ball as red, namely at t_3.

What this tells us is that it is not sufficient for something to be red S-*simpliciter* that it possess the property of redness. Being red M-*simpliciter* is a necessary, but not a sufficient condition, for something to be manifestly red at a particular time. Rather, the ball is manifestly red only when the property of redness plays a particular functional role, namely the role of causing the ball to appear red—

what we might call the manifest-redness role. Or, to use a more perspicuous example, suppose that at t_4 the ball is flattened. Then suppose further that at t_3 the ball has the property of being round—it is round M-*simpliciter*—although it does not have the roundness property $t_4$ly. But at t_4 we do not judge that the ball is round. Why not? Because at t_4 roundness is not playing the appropriate functional role, namely the role of causing things to roll, to be circular, and so forth. While roundness is a necessary condition for something to count as being round S-*simpliciter* at some time, it is not sufficient. It is also necessary that at that time, the roundness property play the appropriate role—namely the manifest-roundness role.

So what it takes for it to be correct to judge at some time t that an object O has manifest property P, is for O to have P M-*simpliciter*, and for the P property to play the appropriate role at t. So O has P S-*simpliciter* at t just if O has P M-*simpliciter* and at t that property plays the appropriate role. But what is it for P to play the appropriate role at t? Return to our ball. Why does redness play the manifest-redness role at t_1, t_2 and t_4, but not t_3? Well in fact, talking of a univocal 'manifest-redness role' is a little misleading. For there is no single role that redness play, in virtue of which that redness is made manifest. In fact then, we should talk about the functional *roles* that redness plays. What are these roles? They are the roles of being instantiated in particular temporal ways. At t_1 the role of being manifestly red is the role of being instantiated $t_1$ly. So at t_1 the ball is red S-*simpliciter* because redness plays a particular functional role: namely the role of being instantiated $t_1$ly. At t_2 redness must play a different role in order to be manifest: the role of being instantiated $t_2$ly. Then redness is not manifest at t_3 because at t_3 the appropriate functional role is not played: for at t_3 redness does not play the role of being instantiated $t_3$ly. So what it is for redness to play the appropriate role at any time t_n, is for redness to have the second-order property of being instantiated $t_n$ly. In general then, what it is for some property to play the appropriate role at some time t_n, is for that property to have the second-order property of being instantiated $t_n$ly. The point is that it is having these second-order properties that explains an object's appearing, or failing to appear certain ways at different times: for it is in virtue of these second-order properties that first-order properties are made manifest at times.

This account then, is analogous to a first-order functionalist account of mental properties, but is instead a first-order functionalist account of the instantiation of properties S-*simpliciter*. To clarify, consider the property of being in pain. First-order analytic functionalists think that pain is just whatever plays the pain role, and thus there may be nothing in common between the various realisers of pain aside from the fact that they are pain realisers. First-order empirical functionalists think that pain is whatever actually plays the pain role—they think 'pain' is a rigid designator—and thus if C fibres firing actually play the pain role, then C fibres firing are all and only the pains. So there is something in common between all of the realisers of pain, namely that they are all C fibres. Our variable role adverbialism falls somewhere between these two views. For, we think, just as empirical functionalists are wrong to think that being a C fibre firing is sufficient for something to count as being a pain—no C fibre firing in a scientist's petrie dish is a pain—so too on our view having the redness property at a time is not sufficient for us correctly to judge that something is manifestly red at that time. But, unlike the analytic functionalist who holds that any realiser may realise pain, on our view only the property of, for instance, redness, can play the appropriate functional role such that redness is made manifest at that time. So the existence of the redness property is necessary for any object to count as being red S-*simpliciter:* just any old realiser will not do.

Our view then, is analogous to a view which one might have (but as far as we know no-one does) about pain: that pain is C fibres firing just when those fibres play the pain role. Thus only C fibres are ever pains, but sometimes C fibres do not realise pain, namely when they are in petrie dishes and are not playing the pain role. This is a first-order functionalism because in the cases where the C fibres are playing the pain role it is the fibres themselves that are the pain, not the second-order property of being a property that plays the pain role, even though it is in virtue of that second-order property's instantiation that the fibres are the pain.

Notice then, that our account too is a first-order functionalist account despite the fact that we appeal to second-order properties as the role determining properties. For on our view the ball is red S-*simpliciter* at a time just if at that

time it has the first-order property of redness and that first-order property plays the relevant functional role of making redness manifest. The fact that what it *takes* for redness to play the relevant role is for that first-order property to have the property of being instantiated in a particular temporal manner does not turn this into a second-order functionalist account. For a second-order account would hold that when the ball is red S-*simpliciter* the redness is the second-order property of having the property of redness play the relevant functional role.[12]

Returning to the ball then, whenever the ball is red S-*simpliciter*, it is in virtue of the very same property being instantiated—redness—and that property playing the appropriate role at that time. So at any time when the ball is red S-*simpliciter* the ball is also red M-*simpliciter*—but the property of being red M-*simpliciter* only counts as being red S-*simpliciter* where that property also plays the appropriate role. So being red S-*simpliciter* tracks the same property across time, it is just that it only tracks that property when it plays the relevant role.

Thus the ball is red S-*simpliciter* at some time t iff:
    (a) the ball has the property of being red M-*simpliciter*.
    and
    (b) at t redness plays the relevant functional role.

Compare this to the truth conditions for our earlier example of pain. In that case X is in pain at some time t iff:

    (a′) X has the property of having C fibres firing.
    and
    (b′) at t the C fibres play the relevant functional role.

In both these cases, pain and redness are manifest at a time just if the relevant property is playing the relevant role at that time. But there is a crucial difference between these two cases, and that difference emerges when we analyse conditions (b) and (b′). Consider (b′): at t the C fibres play the relevant

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[12] Jackson, F. Pargetter, R. and E Prior**.** *Op. cit.*; Braddon-Mitchell, D. and F. Jackson (1996*). The philosophy of mind and cognition*. Oxford, OX, UK ;

functional role. What is that role? It is the pain role. Suppose, for simplicity, that what it is to play the pain role is to be caused by bodily damage and to seek to avoid such damage. Then on every occasion in which X is in pain, it is in virtue of C fibres playing one and the same role: the pain role.

But that is not the case when we consider our adverbialist account of properties. For consider condition (b): at t redness plays the relevant functional role. What is the relevant functional role? Well as we have already noted, which role redness must play in order for it to be made manifest at a time (that is, for an object to be red S-*simpliciter* at that time), is sensitive to temporal facts. For at each distinct temporal location it is a different role that redness must play in order to be manifest at that time: at t_1 it is the role of being instantiated $t_1$ly, and at t_2 it is the role of being interknitted $t_2$ly and so forth.

If we return to the pain case we can construct an example—albeit false and bizarre—that is analogous to the one we find in the adverbialist case. Suppose that what it is to play the pain role is to have a certain mass, say 3 nanograms. Then all and only the C fibres that have a mass of 3 nanograms are pains. There is just one functional role—having a mass of 3 nanograms—that is the pain role. But now suppose we alter the example slightly so that the mass that is required for something to count as being pain varies depending on where in the brain the C fibre is located. As it turns out, what it is to be pain is to have a mass of 1 at location 1, a mass of 2 at location 2 and so forth. So a C fibre at location 5 will count as being a pain only if that C fibre has a mass of 5 nanograms. Then in this case we find that at each different location, a different role must be played for a firing C fibre to count as a pain. At location 1 it is the role of having a mass of 1 nanogram, at location 2 it is the role of having a mass of 2 nanograms and so on. Hence there is no univocal pain role.

There is, however, an important meta-role at play here. For there is surely something importantly in common between each of the roles just described. Namely, what it is to be a pain is to be in location N and have a mass of N nanograms. And to grasp what it is to be pain is not to grasp any of the roles that have to be played for something to count as a pain at *particular* locations—

it is to grasp something more abstract, the meta-role. It is to grasp how the role that must be played depends on the location. The reason that at different locations it is different roles that must be played, is because the meta-role— having C fibres with a mass of N nanograms at location N—has a hidden spatial indexical. And thus playing the meta-role involves playing different roles at different locations.

Something analogous is true on our adverbial account of properties. In that case, although it is different roles that must be played at different times for properties to be manifest at those times, nevertheless there is a meta-role that is in common between every instantiation of a property S-*simpliciter*. For what it is for redness to be manifest at a time t_n, is for redness to be instantiated $t_n$ly at t_n. So the meta-role in this case is that a property P is instantiated S-*simpliciter* at t_n just if P is instantiated $t_n$ly at t_n. So here, instead of a spatial indexical we find a temporal indexical such that playing the meta-role involves playing different roles at different times. And once again, it is grasping this meta-role role that is important to grasping the idea of having a property S-*simpliciter*. For what matters in grasping the idea of being red S-*simpliciter* is not that one grasps that redness must be instantiated $t_1$ly at t_1[13] to be made manifest, nor that it must be instantiated $t_2$ly at t_2 to be made manifest, but rather, what must be grasped is that the manner in which redness must be instantiated is sensitive to which time it is: namely that redness must be instantiated in the same temporal manner as the current temporal location.

4. A-intensions and the semantics of S-*simpliciter*

So far then, we have explicated the metaphysical component of the notion of instantiating a property S-*simpliciter*. What are we to say though, of what is in common between our judgements at different times that a property is instantiated S-*simpliciter*? The idea will be that what is in common between all our judgements that, say, the ball is red S-*simpliciter*, is the relevant meta-role.

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[13] This formulation works because redness is instantiated $t_1$ly at all times if instantiated at all: the more cumbersome at $t_1$redness would need to be instantiated $t_1$ly at t_1 would be required if this were not so. What changes is not whether redness is instantiated $t_1$ly; it is what kind of instantiation is relevant.

One way to further explicate this notion of common content between judgements about properties instantiated S-*simpliciter*, is by comparison with two-dimensional semantics.

Briefly, the core idea of two-dimensional semantics is that sentences have different intensions when considered along two different semantic dimensions.[14] On one dimension, what Jackson calls the *C*-intension, we consider what terms pick out in worlds considered as counterfactual. The *C*-intension then, is what we might think of as being the 'Kripke intension.' If water in the actual world is H_2O, then considered counterfactually 'water' picks out all and only H_2O in all other worlds. The other intension, what Jackson call the *A*-intension, is the dimension along which we consider what terms pick out in worlds considered as actual. If the actual world is one in which a clear potable liquid of somewhat different chemical composition than H_2O exists, then 'water' refers to that substance. So if considered as actual, the chemical composition of that liquid is XYZ, then 'water is XYZ' is true. The *A*-intension tracks what is semantically in common between utterances of 'this is water' in different worlds considered as actual.[15]

4.1 Temporal intensions

Recall that we earlier introduced the idea of a meta-role which is crucial in grasping the idea of instantiating a property S-*simpliciter*. This means that we can hold that what is in common between judgements at different times that a property is instantiated S-*simpliciter*, is that the same meta-role is being played at each of these times. So, for instance, we could say that the truth conditions

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[14]Frank Jackson uses the terminology of an A-intension, while David Chalmers uses the terminology of a primary intension. For more on two-dimensional semantics see Jackson, F. (2004). "Why we need A-intensions."*Philosophical Studies.* 118(1-2): 257-277; Braddon-Mitchell, D. (2004). "Masters of our Meanings"*Philosophical Studies*; 118(1-2): 133-152; Chalmers, D. (2004). "Epistemic Two Dimensional Semantics" *Philosophical Studies*; 118(1-2): 153-226.

[15] Or so we say. Stalnaker, for example, thinks that the A-intension does not group together utterances with anything semantically in common, but rather groups metasemantic information. Stalnaker R.C., (2004) 'Assertion Revisited: On the Interpretation of Two-Dimensional Modal Semantics' *Philosophical Studies*118, 1-2, pp. 299-322.

for an utterance of 'the ball is red S-*simpliciter*' made at any time t_n are as follows:

    (a) the ball has the property of redness M-*simpliciter*

    and

    (b) the property of redness is instantiated $t_n$ly at t_n.

Given that (b) has a temporal indexical, however, in what sense is there any content in common between an utterance of 'the ball is manifestly red' made at t_1, and an utterance made at t_2. After all, at t_1 it is because redness plays the role of being instantiated $t_1$ly that the ball is manifestly red, and at t_2 it is in virtue of redness playing a different role, the $t_2$ly role, that the ball is manifestly red. But consider. Just as 'the ball is manifestly red' is true at different times in virtue of different roles being played at those times, so too the A-intension of 'this is water' picks out different chemical substances in different worlds considered as actual. This suggests that we might employ a temporal analog of the A-intension to explain what is semantically in common between utterances that attribute properties S-*simpliciter*. In that case we would evaluate statements such as 'the ball is red' at different times considered as now, rather than different worlds considered as actual. Let us call the temporal analog of the A-intension the *temporal A-intension*.

So consider again the case of water: what underlies the A-intension of the claim made of some liquid L, that it is water? Let us say that L is water just if L is a sample of something that has properties that play the water-role—properties such as being clear, potable, liquid and so forth.

So under what circumstances is the ball now red S-*simpliciter*? If it now has properties that make it sensible (perhaps ideally now sensible) that the ball is red: that is, if it now has the property of redness and that property now plays the appropriate functional role—what we might call the t_{now}ly role. Hence for every time considered as now, we rightly judge that the ball is red just if redness plays the t_{now}ly role: that is, if redness is instantiated $t_n$ly at t_n. Thus at t_1, 'the ball is (manifestly) red' is true just if redness plays the $t_1$ly role, and at t_2 is true just if redness plays the $t_2$ly role. It is this that explains how utterances

such as 'the ball is (manifestly) red' can be true at one time (t_1 and t_2) and false at another time (t_3) despite the fact that the ball is strictly identical across time and thus has all of the same properties at each of those times. For the temporal A-intension picks out different propositions at different times: at t_1 it picks out the proposition 'instantiates redness $t_1$ly' and at t_2 picks out a different proposition 'instantiates redness $t_2$ly', and there is nothing contradictory in this.

In effect then, the temporal A-intension is the meta-role of having redness play the relevant functional role. This means that there is an important difference between A-intensions as they are usually conceived, and temporal A-intensions. In the former case we will say, for instance, that what it *is* that plays the water role (H_2O, XYZ, etc) varies depending on which world we take to be actual. But the water role, the role of being clear, potable, liquid and so forth, remains constant across worlds considered as actual. But in the case of temporal A-intensions, it is not that what plays the role of rendering redness manifest varies depending on which time we take to be now: for it is always redness that plays that role. Rather, what varies across time is the role itself.

To clarify this, we can imagine a case in which a similar phenomenon presents itself when considering traditional A-intensions. For we have been supposing that the A-intension of 'water' is something like, 'water is whatever actually plays the water role'. But suppose our semantic intuitions were radically different. Suppose instead we held that the A-intension of water contained world indexicals, such that the role that some substance has to play in order to count as being water depends on which world the substance is in. So for instance, if we are in world W1, then water is whatever plays the R1 role. If we are in W2, then water is whatever plays the R2 role. Then as we move from world to world considering each as actual, it is different roles that we must consider when determining the referent of 'water' in each world. Nevertheless, there is still something in common between any utterance of 'this is water' made at any world considered as actual: namely that something is water only it plays role R_n at world W_n. It is this role that remains constant across worlds. And it is this that captures the A-intension of 'water' in this case.

In the same way, it is the role of instantiating properties $t_n$ly at t_n that remains constant across times and it is this that is the content in common between judgements at different times that something possesses a property S-*simpliciter* . Of course, in this case the temporal A-intension is much more illuminating that the crazy one we just considered in the case of water. For in the latter case the link between which world one is in, and which role some substance ought play to count as water, appears tenuous to say the least. So we might be tempted to say that in that case, the A-intension of 'water' captures only a very abstract and thin common content. Not so, however, in the more plausible temporal case. For we might expect that what time it is will be intimately linked to in which manner a property needs to be instantiated in order to be manifest at that time. Moreover, as we noted earlier, it is grasping the meta-role of instantiating properties $t_n$ly at t_n that is at the heart of an understanding of what it is to instantiate a property S-*simpliciter*: for what is crucial is to understand that there is a particular relation that needs to hold between the time and the manner of instantiation of a property if that property is to be manifest at that time. That utterances of 'the ball is red' have semantic content prior to the *a posteriori* discovery of which time is now, and thus which role redness must play in order to be manifest, attests to the importance of the temporal A-intension.

Are there any temporal C-intensions? If they were, they might be formed by temporal rigidification. If it is now t_1, we know that redness would need to be had $t_1$ly for a ball to be red S-*simpliciter*. Rigidifying on that, we would say that for a ball to be red S-*simpliciter* at other times regarded as countertemporal, redness would need to be possessed $t_1$ly. But redness always is possessed $t_1$ly, so the ball would be always red S-*simpliciter* if it is ever red S-*simpliciter*.

The moral of this is that we should not temporally rigidify. It gives the wrong answers. But there is an interesting reason why this is so: it is because we expect to find other times to be now, whereas we do not expect other worlds to become actual that are not! If there were world travel, we would not rigidify (or at least the pressure to do so would be reduced). If next year we expected to be in a world where XYZ played the water role, then we would be more inclined to just say that water is whatever plays the water role, rather than that water is

whatever actually plays the water role: in the former case the A and C intensions do not come apart.

But there is time travel. We expect to be in the future, thus there is good reason to suppose that temporal A and C intensions will not come apart. So we are inclined to judge whether the ball is red S-*simpliciter* by the standards that are appropriate for that time considered as now, as that is when the judgement will be crucial.

5. Property Manifestation: A Substantive Issue?

Our solution then, makes use of a family of second-order properties by appealing to the roles those properties play, and the meta-role of having those roles played. Ultimately though, these second-order properties are all properties of the underlying non-relational properties. What it is to be red S-*simpliciter* is for redness to play the relevant functional role: to be instantiated in a particular manner at a particular time. This still means that the endurantist is faced with the underlying mystery of exactly what these underlying properties might be, such that, for instance, instantiating redness is not sufficient for something to be manifestly red at some time.

So from our perspective there are really three problems that the endurantist must solve: the metaphysical problem and the semantic problem, which we have already met, and an additional explanatory problem. The metaphysical problem is the problem we solve by appealing to the existence of properties M-*simpliciter* and the existence of a family of higher-order properties. This allows us to hold that there are genuine persisting properties that one and the same object can instantiate at different times. The semantic problem we solve by appealing to the existence of properties S-*simpliciter*. This allows us to say that at least at the level of meaning there is something is in common between what is meant when one judges that something is red at one time, and judges that it is red at another time.

This does not, however, mean that we think that endurantism is out of the woods. For there remains an explanatory question, and our solutions to the

metaphysical and semantic questions help make clear precisely what this explantory question is.

This is the explanatory question: we know that an object that is red M-*simpliciter* manifests redness at a time only if it instantiates some second-order property of being red $t_n$ly for the appropriate t_n. We also know that the object in question instantiates redness $t_n$ly at all times at which it exists. So our ball instantiates redness $t_3$ly at every time at which it exists, although at t_4 this property is undetectable. Being red t_3y is an intrinsic though undetectable property of the ball at t_4. It is, as we put it earlier, possessed but not expressed.

How can this be? What is it about these intrinsic properties that makes them detectable at some times but undetectable at others, even though they are possessed at all times? This is the explanatory burden that the endurantist must still face.

One might think that it is no burden at all, for the question is a trivial one. What it is to have the higher-order property of possessing redness $t_3$ly, is just to be red at t_3 and not (necessarily) at other times. The apparatus of the second-order property simply systematises what we know about the object and how it is coloured at different times.

But if we are taking this metaphysical systematisation seriously, we see that it commits us to these higher-order properties which are always possessed intrinsically but are invisible at times. If these properties are indeed substantial ones, something needs to be said about how a property can be possessed at a time and yet make no difference at that time. The S-*simpliciter* sense of 'the ball is red at t_3 but not at t_4' depends on this idea—after all, the ball is red $t_3$ly at all times, but this only makes a difference at t_3. For this strategy to work, there must be some explanation of how it can be that a property is always possessed, but is visible at only some times. But this explanation cannot appeal to truth conditions that are the same as the ones the perdurantist employs, for then the view would be a terminological variant on perdurantism. Nor can it appeal to the ball's being red at only some times, (t_3 but not t_4).

We think our systemization makes endurantism coherent: but the cost is providing some account of how these properties can be intrinsic yet invisible at times. We are not sure whether the endurantist should take these properties to be primitive, or attempt a reductive explanation. There are perhaps analogies with the explanatory burdens that presentists place on themselves when they make the truthmakers of past-tense statements higher-order properties of presently existing things which are presently invisible. We do not know of any account which explicates the peculiar nature of those properties and we think that we have shown that the endurantist turns out to be committed to a very similar problem to that which burdens this kind of presentist. One of the authors thinks that this fact about endurantism is the best place for the anti-endurantist to attack the view. Both authors think, though, that a major moral of the paper is that enduratists must accept such properties.

Conclusion

Variable role adverbialism, then, is a view that provides a solution to both the metaphysical and semantic problems—it provides that there are non-relational intrinsic properties that underlie our property attributions at times and it allows that there is content in common between our judgements at different times that some property is manifest. It is, therefore, a significant improvement on traditional indexicalism. We think the indexicalist could embrace our solution to the semantic problem by holding that what is in common between judgements at different times that, say, the ball is red, is that there is some meta-role of being red-at-t_n at t_n. But indexicalism as it stands cannot allow that there are any non-relational properties that undergird our property attributions: there exist only the relations of having properties-at-times. Thus there is no sense in which there is a univocal property in virtue of which the ball is red at one time and red at another time. And there is no sense in which any object ever has a property M-*simpliciter*. Of course, a non-traditional indexicalism could embrace both aspects of our view, thereby holding that there are indeed properties that are had *simpliciter*: properties that are had, in

our locution, M-*simpliciter*, and those properties are made manifest at certain times in virtue of playing the appropriate role at that time: namely the role of being had at-t_n at t_n. This, then, would be variable role indexicalism, a view with little to distinguish it from the variable role adverbialism that we recommend.

Our view also has much to recommend it over traditional adverbialism. For although the adverbialist can maintain that there are non-relational properties that are had *simpliciter,* and can thus maintain that the ball is red at different times in virtue of instantiating the same property at those times, as it stands the account does not tell us in virtue of what why those properties are manifest at some times and not others. For not only does the ball have the property of redness at every time at which it exists, it also has the second-order properties of instantiating redness, $t_1$ly, and $t_2$ly, say, at every time at which it exists.

Our account tells us in virtue of what objects manifest properties at times. There are different notions of what it is to instantiate a property *simpliciter*. One is an underlying metaphysical notion that has a variable semantics which stipulates that what is required of the underlying metaphysical notion in order for it to count as instantiating properties *simpliciter* in the second sense, will vary with time. Our account does not, however, tells us why instantiating certain second-order properties at certain times renders those properties manifest at those times and not others. It does not answer the underlying explanatory question that all endurantists must answer. All we can say is that for the endurantist, when talking of property instantiation, there is no *simpliciter, simpliciter*.

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