

# Endurantism and Paradox

Paul R. Daniels

## Abstract

Mereological challenges have recently been raised against the endurantist. For instance, Barker and Dowe (2003) have argued that eternalist endurantism entails (1) persisting objects are both 3D and 4D, and that (2) the lives of persisting objects last longer than they actually do. They also argue that presentist endurantism also entails, albeit in a tensed way, that (3) the lives of persisting objects last longer than they actually do. While they've further argued (2005) that the objections raised by McDaniel (2003) and Beebe and Rush (2003) fail, here I show that such objections are tenable without requiring further significant metaphysical commitments; I argue that such endurantist defences are tenable, *contra* to prior analyses.

## Keywords

Endurantism, Multi-location, Mereology, Eternalism, Presentism

Barker and Dowe (2003) believe endurantism is, as a multi-location thesis, paradoxical. They argue eternalist endurantism entails that (§1) persisting entities are both three-dimensional (3D) and four-dimensional (4D), and that (§2) the lives of persisting entities last longer than they actually do. Dorato (2012) concurs and concludes that endurantists are committed to presentism. However, Barker and Dowe further argue that presentist endurantism also entails, albeit in a tensed way, that (§3) the lives of persisting objects last longer than they actually do. If they're right, endurantists everywhere are in trouble.

This is a pre-print version of this article. The final form is published in *Philosophia*. *Philosophia* is available at [link.springer.com](http://link.springer.com)

Please only cite or quote the final version.

But hope is not lost. McDaniel (2003) defends against the first challenge and Beebe and Rush (2003) against the second.<sup>1</sup> While Barker and Dowe (2005) argue that both defences fail, here I diagnose their errors: I argue that these defences *are* tenable without requiring additional significant metaphysical commitments and I provide a novel defence against the third challenge that shows presentist endurantism can also be defended. My position is simple: endurantism, as a multi-location thesis, is in no way paradoxical.

### 1. The Mereological Paradox

The first problem Barker and Dowe (2003: 107-10; *cf.* Barker and Dowe 2005: 69-71) present for the eternalist endurantist goes like this: Imagine a material object and call it Eric. According to the endurantist, Eric persists through time by being wholly located at each spacetime region through which it persists; and, as an eternalist, she believes all spacetime regions are equally real. Here, then, Eric will be a multi-located object in virtue of how it persists through time: we can call any thesis a multi-location thesis if, according to it, an entity can be wholly located at multiple distinct spacetime regions. So Eric is multi-*temporally* located because the regions at which Eric exists have different temporal co-ordinates.

Say Eric persists through the 4D region  $R$ . Eric is therefore wholly located at each  $r$ , where  $r$  is a 3D sub-region (time slice) of  $R$ . Call Eric at each such sub-region  $Eric_r$ . Since, according to endurantism, each  $Eric_r$  has *non-zero* spatial extent and *zero* temporal extent, each  $Eric_r$  is a 3D entity. As it's a central thesis of endurantism for identity over time, each  $Eric_r$  is identical with every other  $Eric_r$ . This is what we should expect.

---

\* I thank Toby Handfield, John Bigelow, Dana Goswick, and an anonymous referee for feedback on earlier drafts and helpful discussions.

<sup>1</sup> Beebe and Rush (2003: 312-4) also offer a defence against the first paradox. But I don't explicate it here for brevity and because I, like Barker and Dowe (2005: 71-3), find it unpersuasive.

Now consider the mereological sum, or fusion, of every  $Eric_r$  and call it  $F(Eric_r)$ . Barker and Dowe argue that if each  $Eric_r$  is identical with every other  $Eric_r$ , then each  $Eric_r$  must also be identical with  $F(Eric_r)$ . And since each  $Eric_r$  is a 3D entity, if it and  $F(Eric_r)$  are identical,  $F(Eric_r)$  must be a 3D entity as well. But, Barker and Dowe continue,  $F(Eric_r)$  exists at the 4D region  $R$ ; it has non-zero spatial *and* temporal extent. Since anything that has non-zero spatial and temporal extent is a 4D object,  $F(Eric_r)$  must be a 4D entity. So,  $F(Eric_r)$  is both a 3D and 4D entity. Contradiction!

McDaniel (2003) objects that while  $Eric_r$  and  $F(Eric_r)$  are both *Eric*, *Eric* is only a 4D object *extrinsically*; *Eric*, as an enduring object, is only *intrinsically* a 3D object. McDaniel invokes spacetime substantivalism here – the idea that spacetime regions exist and are distinct from material objects – a position the endurantist is motivated to endorse anyway (Sider 2001: 110-20). With this McDaniel argues that *Eric* bears a certain kind of relation with the 4D region through which it persists. So, to talk of *Eric* as a 4D object is merely to pick out the relation *Eric* bears to the 4D region through which it persists. Thus, since *Eric* is  $Eric_r$ , and  $Eric_r$  is clearly intrinsically a 3D object, *Eric* is intrinsically a 3D object. And since *Eric* is  $F(Eric_r)$ , and  $F(Eric_r)$  is a 4D object merely due to the region of spacetime through which it persists, *Eric* is extrinsically a 4D object. So, McDaniel argues, while no object can be both intrinsically a 3D object and intrinsically a 4D object, *Eric isn't* both intrinsically a 3D entity and intrinsically a 4D entity.

But Barker and Dowe (2005: 71) aren't convinced. They point out that since McDaniel's view maintains  $F(Eric_r)$  is extrinsically a 4D object because *Eric* bears a certain kind of relation with the 4D region through which it persists, it follows that  $Eric_r$  must be extrinsically a 3D object since  $Eric_r$  bears a location relation with the 3D region  $r$ . So, they argue, if McDaniel is right *Eric* must be both an extrinsically 3D *and* extrinsically 4D object. After all, according to the substantivalist picture, an object cannot have its 3D spatial shape intrinsically: the substantivalist thinks an object is shaped the way it is because it exists at a particular region; the shape of the object

depends on the shape of the region. Therefore, by definition, a material object cannot have its 3D shape intrinsically.<sup>2</sup> It follows from this and what McDaniel argues that all shapes had by objects, both 3D and 4D, are extrinsic properties. And just as how no object can be both intrinsically 3D and intrinsically 4D, no object can be both extrinsically 3D and extrinsically 4D. Contradiction, anew.

However, Barker and Dowe have misunderstood a crucial aspect of the endurantist picture here: if the endurantist has the metaphysical commitments McDaniel ascribes her, all material objects have their shapes extrinsically – whether they be 3D shapes or 4D shapes – and it mustn't be contradictory for objects to have different shapes *with respect to different regions*.<sup>3</sup> We can only say two shapes are incompatible if they're different but had with respect to the same region. It's not contradictory to say Eric is extrinsically 3D shaped in relation to  $r$ , while *also* being extrinsically 4D shaped in relation to  $R$ , since to endure through time is just to bear an locational relation with multiple spacetime regions. Many endurantists make a similar move in response to the problem of temporary intrinsics – the lump of clay goes from being “statue shaped” to being “squished shaped”; the statue doesn't have incompatible shape properties because one relation is had with respect to one region (e.g.  $s_1-t_1$ ) while the other is had with respect to another (e.g.  $s_1-t_2$ ). This is not contradictory since, to eliminate shape-talk, Eric *as a persisting entity* bears one kind of location relation with the 4D spacetime region,  $R$ , and a *different* location relations with each 3D sub-region through which it persists; the former is picked out by  $F(\text{Eric}_r)$ , while the latter by  $\text{Eric}_r$ .

---

<sup>2</sup> Skow (2007: 115-7) motivates this move. I should note that this isn't the consequence Skow sought for the substantialist. He argues that since shape cannot be intrinsic, substantialism should be abandoned. But the idea that all shapes are just extrinsic is also compatible with his argument (and more palatable to the substantialist).

<sup>3</sup> McDaniel (2007) also finds that all shapes of material objects are extrinsic.

Some might worry that I'm suggesting Eric is wholly located at both  $r$  and  $R$ , where those regions overlap (i.e. since  $r$  is a time slice of  $R$ ) – surely an enduring object cannot be wholly located at one region as well as an overlapping region! But this isn't what I'm saying and I don't think Eric is wholly located at both. Eric cannot be wholly located at both  $r$  and  $R$  since, according to the endurantist, Eric can *only* be wholly located at 3D regions (like  $r$ ). So we might make the salient point this way: the location relation Eric has with  $R$  is a different kind of relation than the wholly located relation it has with the  $r$ s. There are a number of ways we might detail this. Parsons (2007), Gilmore (2007; cf. 2008), McDaniel (2007), and Eagle (2010) all develop frameworks which distinguish different kinds of location relations. For instance, using Eagle's terminology, we could say that just because Eric *fills* and is *contained in* a 4D region doesn't mean Eric is wholly located there.<sup>4</sup>

## 2. The Lives Paradox

The second problem Barker and Dowe (2003: 110-12; cf. Barker and Dowe 2005: 73) put forth, also for eternalist endurantism, goes as follows: Again, consider Eric. Intimately connected with Eric and  $R$  is an event-like entity which occurs at  $R$ : the *life* of Eric – call it  $L(\text{Eric})$ . Divide  $L(\text{Eric})$  into two non-overlapping temporal stages:  $L(\text{Eric})_1$  and  $L(\text{Eric})_2$ .<sup>5</sup> Each of these are bound by, and only exists in, the distinct regions  $R_1$  and  $R_2$  respectively; they're

---

<sup>4</sup> We can say that Eric is *wholly located* (or *located*, in Eagle's terms) at the smallest region which it fills and is contained in – where Eric *fills* a region *iff* Eric occupies each subregion of it, and where Eric is *contained* in a region *iff* each part of Eric occupies a subregion of it. Filling and being contained in a region is not reducible to being located there; they are different kinds of extrinsic location relations (Eagle 2010: 54-56). We can see why enduring objects are only 3D objects here: because, according to the endurantist, Eric will *only* located at 3D regions (whereas perduring objects will be 4D objects because they're *only* located at 4D regions). The fact that an objects' dimensionality isn't an intrinsic feature of it doesn't threaten these sorts of claims with a properly robust framework of location relations.

<sup>5</sup> We might say  $L(\text{Eric})_1$  is its youth and that  $L(\text{Eric})_2$  is its old age.

each located there and nowhere else. Their argument proceeds: Clearly Eric is a part of  $L(\text{Eric})_1$  and a part of  $L(\text{Eric})_2$ . However this means Eric is located at  $rs$  in  $R_2$ . Since Eric is part of  $L(\text{Eric})_1$ , it follows that  $L(\text{Eric})_1$  has a part in  $R_2$ . Therefore,  $L(\text{Eric})_1$  isn't confined to  $R_1$ . Yet  $L(\text{Eric})_1$  is confined to  $R_1$ . Contradiction!

Here Barker and Dowe adopt two principles: the Humean independence principle and (what we might call) the multi-located parts principle. The independence principle stipulates that there aren't any metaphysically or logically necessary connections between distinct existences; which is just to say here that there's a necessary connection between a persisting object and its life: 'We think this means that one must accept that Eric is part of  $L(\text{Eric})$ ' (2005: 73). And the multi-located parts principle says an entity is located wherever its parts are and, if those parts are multi-located, then it too is multi-located.

Beebe and Rush (2003: 314-6) protest and argue that the instantiation relation has to be temporally relativised and extended for parthood. Here, then, enduring entities have their properties at-a-time, not timelessly. So it isn't the case that Eric is atemporally a part of  $L(\text{Eric})_1$ .

To make their point clear they draw an analogy. Consider Michael. Michael was a member of a cub-scout football team when he was young. However, as soon as he grew into adulthood he quit and the team disbanded. It's not true that Michael is part of his team atemporally since, were that true, it would mean the team exists now just because Michael does. Likewise, just because Eric is a part of its life it doesn't mean it's atemporally a part of a *part* of its life. Instead it's temporarily a part of the early part of its life and temporarily a part of the later part of its life; each such part ends as soon as Eric stops being a part of it. Thus,  $L(\text{Eric})_1$  is confined to the spacetime region to which it's bound.

In reply Barker and Dowe (2005: 73-4) argue that Beebe and Rush's position doesn't actually address the problem. Barker and Dowe explain that  $L(\text{Eric})_1$ , for instance, is a 4D entity with parts at each sub-region of  $R_1$  (e.g.

$r_1, r_2$ , and so on) and they call each such part a fact. Since there's a necessary connection between Eric and these facts, Eric must be a necessary constituent of each such fact. Barker and Dowe present these facts in the following form:

{Eric, X} at  $r_z$ . (Where  $r_z$  is any specific sub-region of  $R_1$  and X some other constituent distinct from Eric, e.g. a property of Eric at  $r_1$ )

And,  $L(\text{Eric})_1$  is the sum of these facts.

Now the contradiction Barker and Dowe derive about lives can be re-expressed: these facts are multi-located when they mustn't be. By the multi-located parts principle they're multi-located because the constituent Eric is multi-located. So even if Eric is a part of {Eric, X} in a time-relativised way (i.e. at  $r_z$  and not timelessly), Eric remains a multi-located constituent of that same fact in an alternate form; for instance:

Eric instantiates-at- $r_z$  the property of being fused with X.

Here we see Eric, the multi-located constituent, is timelessly a part of the fact. And so, again, the fact must be multi-located. So they conclude Beebe and Rush's reply fails.

But Beebe and Rush are right: The instantiation relation does have to be temporally relativised and extended for parthood. It's just that Barker and Dowe are also right: This alone isn't enough to get the endurantist out of the woods. Something needs to be said about the constituency of lives and the multi-located parts principle.

We might think, like Lombard (1986: 206-16), that an essential feature of any particular event is that it occurs at a certain time. By that I mean, Eric and the spacetime regions at which  $L(\text{Eric})_1$  occurs (i.e. the sub-regions of  $R_1$ ) are *essential* constituents of  $L(\text{Eric})_1$ . So for something to qualify as Eric's youth, Eric has to be a part of it *and* it has to occur at the right time – if either of them were missing, it wouldn't be the same event; we wouldn't have

$L(\text{Eric})_1$ .<sup>6</sup> Therefore, while  $L(\text{Eric})_1$  may be a sum of facts, each such fact must involve at least Eric and a specific sub-region of  $R_1$ . Thus any fact that's a part of  $L(\text{Eric})_1$  must be of the form:

Eric instantiates-at- $r_z$  the property of being fused with  $r_z$ .

As Beebe and Rush's case demonstrates, at least when it comes to lives, the only plausible version of the multi-located parts principle is a restricted one – the life of something, or part of its life, is located *only* where *all* of its essential constituents exist. Insofar as there's a necessary connection between Eric persisting and  $L(\text{Eric})_1$  existing, there's a similar necessary connection between  $L(\text{Eric})_1$  and the spacetime region at which it takes place. This allows the endurantist to say: if  $L(\text{Eric})_1$  didn't involve Eric it wouldn't qualify as  $L(\text{Eric})_1$  and, similarly, if it didn't happen in the early part of Eric's life it wouldn't qualify as  $L(\text{Eric})_1$ . In short, Eric without  $R_1$  isn't enough and neither is  $R_1$  without Eric; both are essential constituents of Eric's youth. After all, since we're supposing a duality of objects and spacetime regions (substantivalism), it seems natural to think that an event supervenes on *both* its constituent material object(s) and spacetime region(s).<sup>7</sup>

To put the point directly: recall that while Eric may exist at  $R_2$ ,  $R_1$  necessarily cannot;  $R_1$  and  $R_2$  are non-overlapping regions. So even if there's a time (e.g.  $R_2$ ) when one of the essential constituents of  $L(\text{Eric})_1$  exists but not the other, then  $L(\text{Eric})_1$  cannot exist that that time. Thus, Eric being multi-located doesn't entail  $L(\text{Eric})_1$  is also multi-located. And, as such,  $L(\text{Eric})_1$  can only be confined to  $R_1$ . The contradiction is avoided.<sup>8</sup>

---

<sup>6</sup> I take it that there's nothing unintelligible about this claim. But I suppose this will depend on one's ontology of events. However it isn't readily apparent that the endurantist cannot say this (or even that this is the only available route here).

<sup>7</sup> At least if we accept, as Barker and Dowe maintain (2005: 73), that Eric is a part of  $L(\text{Eric})$ . As an anonymous referee has pointed out, not everyone may be inclined to take objects to be *parts* of those events in which they play a role. This would seem to block Barker and Dowe earlier. I argue here that, even if we play their game, the endurantist is in no danger.

<sup>8</sup> My position might entail that  $L(\text{Eric})_1$  can be *partly* located in  $R_2$ , if at least one constituent of  $L(\text{Eric})_1$  is wholly located in  $R_2$ . But the possibility of partial location

### 3. The Presentist Paradox

The third and final paradox Barker and Dowe (2003: 112-3) articulate is simply a tensed version of the lives paradox.

While the defence in the previous section could be adapted here, it isn't necessary as there's no genuine problem for the presentist endurantist: According to her, endurantism *isn't* a multi-location thesis. Here I make the reasonable assumption that for an entity to be multi-located, in the sense Barker and Dowe want to employ, it must *exist* at multiple spacetime regions that are equally real and have distinct temporal co-ordinates.<sup>9</sup> But the presentist endurantist maintains that only one temporal co-ordinate is ever real – that which is present. So while multiple distinct spacetime regions exist, they all have the same temporal co-ordinate; according to the presentist endurantist, nothing can be multi-*temporally* located.

Also recognize that something that doesn't exist cannot have parts and an entity which exists cannot be a part of something that doesn't. So while Eric *did* exist in the past it *doesn't* follow that Eric *still* exists at those past times; Eric doesn't exist now *and* at the time when its youth occurred (which is in the past). Therefore, Eric cannot now be a part of its youth and its old age since its youth doesn't presently exist. And since Eric isn't now a part of its youth, its youth doesn't have a part in the present; its youth is wholly completed. So, according to a presentist endurantist, the relevant segment of Barker and Dowe's argument should read: Eric *was* (but not longer is) a part of its youth. Put thusly, their case that Eric's youth, or whatever segment is

---

isn't a threat to the endurantist position and, as such, I leave partial location unanalysed.

<sup>9</sup> Denying the second part of this conjunct – that the distinct spacetime regions must have different *temporal* co-ordinates – won't help Barker and Dowe's case since the presentist endurantist position doesn't entail that objects are multi-*spatially* located (although the view doesn't prohibit it). And to deny that the spacetime regions must be equally real would be nonsensical here.

in the past, isn't wholly completed collapses. And so the presentist endurantist faces no contradiction.

#### 4. Conclusions

The endurantist ontology should be clearer from this discussion: while enduring objects have differing location relations with 3D and 4D regions, this doesn't mean they're 4D objects. And the endurantist isn't committed to problematic views about events, like lives. As mereological challenges have arisen elsewhere in the persistence debate (Gilmore 2007, Effingham and Robson 2007), these are important points worth considering.

#### References

- Barker, S. and P. Dowe. 2003. Paradoxes of Multi-location. *Analysis*. 63: 106-14.
- Barker, S. and P. Dowe. 2005. Endurance is Paradoxical. *Analysis*. 65: 69-74.
- Beebe, H. and M. Rush. 2003. Non-paradoxical Multi-location. *Analysis*. 63: 311-17.
- Dorato, M. 2012. Presentism/Eternalism and Endurantism/Perdurantism: Why the Unsubstantiality of the First Debate Implies that of the Second. *Philosophia Naturalis*. 49 (1): 25-41.
- Eagle, A. 2010. Location and Perdurance. in *Oxford Studies in Metaphysics 5* (Ed. Dean Zimmerman). Oxford: Oxford University press. 53-94.
- Effingham, N. and J. Robson. 2007. 'A Mereological Challenge to Endurantism'. *Australasian Journal of Philosophy*. 85 (4): 633-640.
- Gilmore, C. 2007. Time Travel, Coinciding Objects, and Persistence. in *Oxford Studies in Metaphysics 3* (Ed. Dean Zimmerman). Oxford: Oxford University press. 177-198.
- Gilmore, C. 2008. Persistence and Location in Relativistic Spacetime. *Philosophy Compass* 3 (6): 1224-1254.

- Lombard, L. 1986. *Events: A Metaphysical Study*. Lombard, L. B. (1986).  
Events: A metaphysical study (pp. 355-389). London: Routledge &  
Kegan Paul.
- McDaniel, K. 2003. No Paradox of Multi-location. *Analysis*. 63: 309-11.
- McDaniel, K. 2007. Extended Simples. *Philosophical Studies*. 133: 131-141.
- Parsons, J. 2007. Theories of Location. in *Oxford Studies in Metaphysics* 5 (Ed.  
Dean Zimmerman). Oxford: Oxford University press. 201 - 232.
- Sider, T. 2001. *Four-Dimensionalism: An Ontology of Persistence and Time*.  
Oxford: Oxford University Press.
- Skow, B. 2007. Are Shapes Intrinsic? *Philosophical Studies*. 133: 111-30.