Non-paradoxical multi-location

HELEN BEEBEE & MICHAEL RUSH

1. Introduction

Stephen Barker and Phil Dowe (2003) claim that three paradoxes can be generated by the claim that there are multiply located entities – for example enduring particulars, enduring tropes, and immanent universals – with the second and third paradox each involving weaker assumptions than their predecessors.

We argue that neither of the first two alleged paradoxes are really paradoxes, at least with respect to the view that there are enduring particulars. It is an interesting question whether our responses can be made to work for the other cases of multiple location, but not one that we shall attempt to answer. In addition we leave to the reader the solution to the third paradox, since it turns on the same claim about temporary parts as does the solution to the second.

2. Paradox 1

Endurantism with respect to object O is the doctrine that O is wholly located at every moment at which it exists. Paradox 1 takes two alternative forms, depending on whether the endurantist wants to hold that there can be objects of zero temporal extent or, instead, that there is some quantum of time, of duration n, so that n is the shortest period of time in which an object can exist. We take the two versions in reverse order.

Let Eric the (Short-Lived) Cat be an enduring object which exists for precisely $100n$, between the times t_0 and t_{100}. Now take the 100 temporal slices of this time interval: let r_1 be the time interval between t_0 and t_1, r_2 be the interval between t_1 and t_2, and so on up to r_{100}. Existing for the duration of each slice r is an entity (a cat, one might assume – but we'll come back to that). Call these objects the Eric$_r$s. Now take the fusion, or mereological sum, of all the Eric$_r$s and call this fusion $F(\text{Eric}_r)$.

Paradox 1 (version 2) goes like this. (a) By hypothesis, Eric is wholly located at every moment at which he exists. So the relation between the Eric$_r$s is that of identity: each Eric$_r$ is simply Eric. Hence the fusion of the Eric$_r$s, $F(\text{Eric}_r)$, is simply

identical with each of the Eric$_r$s; but, since each Eric$_r$ has temporal extent n, it follows that $F(\text{Eric}_r)$ also has temporal extent n. But (b) $F(\text{Eric}_r)$ has a part at each r. So $F(\text{Eric}_r)$ is an object with temporal extent $100n$. So $F(\text{Eric}_r)$'s temporal extent both is and is not greater than n. Paradox.

Version 1 of the paradox, the version on which we assume that objects can have zero temporal extent, slices Eric into segments (Eric$_r$s) of zero temporal extent. (a) Since all the Eric$_r$s are identical, and each has zero temporal extent, $F(\text{Eric}_r)$ has zero temporal extent and hence is a 3D object. But (b) $F(\text{Eric}_r)$ has a part at each r, so is a 4D object. Paradox.

We claim that Paradox 1 equivocates with respect to the Eric$_r$s. According to one conception of the Eric$_r$s – the conception according to which they are identical with each other, as is assumed in part (a) of the argument – it is not true (contrary to what Barker and Dowe say) that any of the Eric$_r$s have temporal extent n (or zero). According to the other conception of the Eric$_r$s – the conception used in part (b) – each Eric$_r$ does have temporal extent n (or zero). But the fusion of the Eric$_r$s is not Eric. So the endurantist does not face a paradox; nor is she forced to admit that Eric has temporal parts.

Here is Eric at r_1, being born. Here is Eric again at r_{50}, playing with a ball of string. And here is Eric again, at r_{100}, passing away prematurely but peacefully in his sleep. Whenever I point and say, 'Look! There's Eric!' I am (according to the endurantist) pointing to the whole of Eric – that enduring entity – and not to any temporal part of him (for he has no such parts). Eric (thus conceived) does not have temporal extent n. After all, he lives to the ripe old age of $100n$! By hypothesis, when I point to Eric at a given time, I refer to the whole enduring cat, and not to some Eric-like object that only exists for duration n. No such object can be Eric. Eric does not get to have temporal extent n simply in virtue of existing for one instant at a time; there is just no other way of existing in time. If Eric were supposed to have temporal extent n on account of existing one moment at a time, then it would be impossible for any entity to have a 'temporal extent' that was anything other than n. No one, we think, would see as conclusive evidence against endurance the fact that we have to take things one moment at a time. Hence there is no $F(\text{Eric}_r)$ that has n temporal extent. The 'fusion' of all the objects I pointed to (supposing I pointed to Eric at r_1, again at r_2, and so on to r_{100}) is just the fusion of, well, Eric with himself. That fusion

is just Eric, and he does not have temporal extent n. Part (a) of the argument for Paradox 1 (version 2) has a false premiss and a false conclusion.

(In fact, the endurantist might well refuse to talk in terms of 'temporal extent' at all, since, according to her, objects endure rather than extend through time. Still, we can get along with 'temporal extent' talk so long as we take 'x has temporal extent n' to commit us to no more than the claim that x lasts for n amount of time, where 'lasts for' is neutral between 'endures through' and 'extends for'.)

Version 1 of the paradox might seem trickier. Doesn't the relevant kind of endurantist say that Eric *is* a 3D object, just as part (a) of the argument – the part whose (version 2) conclusion we are objecting to – says? Yes. But the intermediate conclusion of part (a) of version 1 is that $F(Eric_r)$ is an object with zero temporal extent, and *hence* that $F(Eric_r)$ is 3D. No sensible endurantist is going to equate being a 3D object and having zero temporal extent. For the (relevant kind of) endurantist, none of the $Eric_r$s have zero temporal extent, since they are all Eric, and his 'temporal extent' (in the neutral sense defined above) is $100n$. Hence $F(Eric_r)$ is, again, the fusion of Eric with himself, and it – that is, Eric – has 'temporal extent' $100n$. Eric is a 3D object, but not the object the first part of version 1 claims to exist.[1]

We are not out of the woods yet, however, because we still have the fusion of all the $Eric_r$s, where the $Eric_r$s are taken to be distinct objects with n (or zero) temporal extent. If *that* fusion turns out to be Eric, the endurantist is in trouble, because it will turn out that Eric does after all have temporal parts – all the $Eric_r$s – and that is precisely what the endurantist denies. (Or – to put it in terms of version 1 of the paradox – Eric will turn out to be both 3D and 4D, which is a contradiction.)

So what is this fusion? It lasts for the same amount of time as Eric – $100n$ – and it does seem rather cat-like. But it is not (we claim on behalf of the endurantist) Eric. It is Eric's life. Eric's short life has many stages. (100 minimal ones, to be precise.) Here, at r_0, is Eric's birth. Some time around r_{50}, Eric enters the playing-with-balls-of-string stage. And here, at r_{100}, is Eric's untimely but peaceful demise. These stages – the $Eric_r$s with shorter-than-$100n$ temporal extent – are not stages of Eric, but stages of his life. When I point in Eric's direction and thereby mean to pick

---

[1] In fact, the endurantist will presumably say that Eric is a 3D object whatever they think about whether there is such a thing as zero temporal extent. Suppose we agree that n is the smallest unit of time. Does that stop Eric from being 3D? Not at all. The endurantist is hardly going to say that Eric is now a 4D object with n temporal extent. After all, he patently *doesn't* have n temporal extent.

out an object with temporal extent less than 100n, I am not picking out Eric or a temporal part of him, but rather a stage of his life. The fusion of those stages is thus not Eric but his life.

There is therefore no paradox here. We have one temporal-partless cat, and his temporal-parted life. There is a fusion of temporal parts – Eric's life – and that fusion has 100n temporal extent. But there is no fusion of n temporal extent and so no paradox. (Version 1: there's the 4D fusion of temporal parts – Eric's life again – and then there's 3D Eric. Different properties but different objects, so no paradox.)

One might object that the distinction between Eric and his life seems rather *ad hoc*. We think not. The distinction has been made and defended elsewhere, for instance by Rowland Stout, most fully in his 2003. Moreover, Barker and Dowe themselves go on to draw a distinction between an object and the life of that object in order to generate Paradox 2, to which we now turn.

3. Paradox 2

'Lives,' say Barker and Dowe, 'are part of common sense ontology; we speak of entities – be they people, animate entities or inanimate – having long, interesting, varied, good, etc. lives. Lives are 4D things; they have beginnings, middles, and ends. *L(O)* [the life of object *O*] is just like an event occurring at a region *R*; it is located at *R* with proper parts located at each sub-region *r* in *R*.' (110) Quite so.

They go on to claim that, '[w]here there is a persisting thing … there is a life, *L(O)*. There is a necessary connection between a persisting thing and its life' (*ibid.*). But (they say) we should accept the Humean principle, *no necessary connections between distinct existences*. So *O* and *L(O)* cannot be distinct. So (they say) we should accept that *O* is part of *L(O)*.

Let's accept Barker and Dowe's assumption that *O* is part of *L(O)*.[2] Now here's Paradox 2. *L(O)* can be split into two non-overlapping temporal stages – call them *L(O)1* and *L(O)2*. *L(O)1* is located at *R1* (and nowhere else), and *L(O)2* is located at *R2* (and nowhere else). By hypothesis, *O* is part of *L(O)*. So (allegedly) *O* is part of *L(O)1*. But *O* is located at *r*s that are not in *R1*, so *L(O)1* cannot, contrary to

---

[2] Actually, we doubt whether an endurantist will accept that assumption since, for the endurantist, objects and their lives inhabit very different ontological categories. It is very hard to see how something that endures through time *could* be part of something that extends through time.

hypothesis, be confined to *R1* (since *O* is part of *L(O)1*). Similarly for *L(O)2*. Paradox.

What's gone wrong here? First it will be useful to consider what an endurantist might say about the problem of temporary intrinsics. It is a well-documented response to the supposed problem of how one and the same entity can endure through changes in its intrinsic properties (losing property *F*, say) to say that there is no paradox because such an entity has-at-t_1 property *F*, and does not have-at-t_2 property *F*. In other words we relativize the instantiation relation, a course of action often referred to as the 'adverbial' solution. Sally Haslanger, a defender of this approach, says that the 'intuitive idea behind the so-called 'adverbial' option is that objects have properties at times, and that time should modify this 'having' rather than the subject or the property' (1989: 120).

This solution is often overlooked. Mark Johnston (1987) says that 'the problem of identity through intrinsic change looked like a problem only because we forgot about the possibility of relativizing the instantiation relation' (1987: 129). Enduring entities have their properties not timelessly but at-a-time. How can one and the same enduring cat be playful and asleep? Simple: it is has-at-t_{43} the property of being playful and has-at-t_{78} the property of being asleep. Eric enjoys tensed attributions of properties. Properties of Eric's life, on the other hand, are had *timelessly* by his life. For instance Eric's birth has timelessly the property of taking place at t_0.

Now, what goes for instantiation goes, we claim, equally for parthood. One of us was once (an ineffectual) part of his cub-scout football team. Let's suppose for the sake of the argument that the team folded (rather than rejoiced) as soon as he quit. The relation between Michael and the team was, but no longer is, a part-whole relation: he was, but no longer is, a part of that team. The team was, but no longer is, partly located wherever Michael was located. In other words, Michael was a *temporary* part of the team. All this, we suggest, is just plain common sense for the endurantist.

The relationship between *O, L(O)1* and *L(O)2* is similar (supposing that the relation is genuinely part-whole). Let's use Eric again, and divide his life into his Youth and his Twilight Years. Eric was once (quite literally on current assumptions) in his Youth – he was, once, a part of that stage of his life. But at some point he stopped being a part of that stage and started being a part of his Twilight Years. For

Paradox 2 to work, it has to be true that Eric *is*, atemporally, a part of his Youth. But that is no more true than it is true that Michael is, atemporally, a part of his cub-scout football team. And that cannot be true because, if it were, Michael's team would have to exist right now since (happily) Michael does. And it doesn't. Once we accept that we ought to relativize the instantiation relation, we see that both Eric and Michael have *at-a-time* their properties of being-a-part-of-*x*.

      Grant that Eric is a part of his life. (We are not sure whether to say he is atemporally a part of his life. He is certainly not a temporary part of it in the sense of there being a time at which he exists but his life doesn't. But we can leave that issue aside.) It does not follow that he is, atemporally, a part of a *part* of his life, any more than it follows from the fact that Helen's brain is a part of her that her brain is also a part of her left foot. Eric is not atemporally a part of any part of his life. He is temporarily a part of his Youth and temporarily a part of his Twilight Years. Hence Eric's Youth does not exceed its required boundary – it stops as soon as Eric stops being a part of it. Hence there is no paradox.[3]

Centre for Philosophy, University of Manchester

Manchester, M13 9PL, UK

helen.beebee@man.ac.uk, michael.d.rush@man.ac.uk

Bibliography

Barker, S. and P. Dowe. 2003. Paradoxes of multi-location. *Analysis* 63/2: 106–14.

Haslanger, S. 1989. Endurance and temporary intrinsics. *Analysis* 49: 119–25.

Johnston, M. 1987. Is there a problem about persistence?. *Aristotelian Society Supplementary Volume* 61: 107–35.

Stout, R. 2003 (forthcoming). The Life of a Process. In *Pragmatic Process Philosophy*, ed. G. Debrock. Amsterdam: Rodopi.

---

[3] No cats were harmed in the writing of this reply.