## The Possibility of Resurrection by Reassembly

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#### 1 Introduction

Many theists are committed to the view that a vast number of macroscopic material objects which have completely decomposed will one day populate the world again. Some are committed to this view because they hold that human persons are identical to such objects, and yet those persons will one day be resurrected. But even some theists who deny that human persons are identical to material objects think that, when human persons are resurrected, their original bodies are also raised. For simplicity, I will assume the materialist view.

The commitment generates a dilemma. Either human persons do not really go out of existence, or they can be brought back into existence after they have completely decomposed. Since both of these claims are prima facie false, the theist has some explaining to do.

This puzzle has resulted in a range of creative and often exotic materialist-friendly models of resurrection.<sup>2</sup> But the oldest of these is the

<sup>&</sup>lt;sup>1</sup> Olson (2015) dubs these alternatives *preservation* and *radical resurrection*, respectively.

<sup>&</sup>lt;sup>2</sup> These include reassembly models (e.g. Hershenov 2012; Davis 2010; Davis and Yang 2017) a body-snatching model (van Inwagen 1978) an anti-criterialist model (Merricks 2001 and 2009), constitution models (Baker 2005 and 2007; Corcoran 1998) fission models (Corcoran

naïve reassembly model, which embraces the second horn of the dilemma, claiming that persons who ceased to exist long ago can be brought back into being by reassembling them from the particles that composed them when they perished. The story goes something like this: St Paul dies and is buried. His corpse decays. The particles that once composed him are gradually scattered across the face of the earth, perhaps even being incorporated into other organisms. Then Resurrection Day³ arrives, and a booming voice from heaven commands 'Paul! Arise!' From around the world, those scattered particles obediently converge on a Paul-shaped region and reassemble into a Paul-shaped object. But it is not *just* a Paul-shaped object. This newly assembled object is in fact St Paul himself: the very man who traveled around the first century Mediterranean and penned several of the New Testament epistles.

This naïve reassembly model of resurrection has fallen into disfavor. Davis and Yang (2017) observe that, while materialist accounts of resurrection are diverse, 'What is common among contemporary philosophers of religion is the outright dismissal of the possibility of resurrection by reassembly...' (213). This 'outright dismissal' is due in large part to the following three problems.

(1) Suppose that God not only reassembles the particles that composed Paul when he died, but also a different collection of particles that composed him when he was ten years old. Now we have two newly-assembled Pauline objects composed of exactly the particles that once composed St Paul. And it seems that, if the reassembly model of resurrection is true, then both of these Pauline objects will be St Paul. But nothing can be identical to two distinct objects. Let's call this the *double resurrection problem*.<sup>4</sup>

1998 and 2001; Dougherty 2014; Hudson, 2001; O'Connor and Jacobs 2010; Zimmerman, 1999 and 2010), multi- and scattered location models (Hudson 2010), a hyper-time model (Hudson 2017), and Thomistic models (e.g. Stump 2003, ch. 6).

<sup>&</sup>lt;sup>3</sup> I borrow this term from Hudson (2001).

<sup>&</sup>lt;sup>4</sup> Thanks to Mark Murphy for pressing me to consider this objection.

- (2) Suppose St Paul's body was eaten by a cannibal, who then died while the particles that composed St Paul at the moment of Paul's death were parts of the cannibal's body. Then, on Resurrection Day, where will the shared particles go? To the body of the resurrected Paul, or to the body of the resurrected cannibal? Let's call this *the cannibal problem*.
- (3) Finally, there is a serious question about whether a Pauline object assembled from the particles that once composed St Paul would be St Paul himself, or whether he would instead be a mere intrinsic duplicate of the original. Unfortunately for reassembly theorists, Peter van Inwagen (1978) has argued persuasively that he would be a mere duplicate.<sup>5</sup> While it's plausible that some objects, like watches, can survive certain kinds of disassembly and reassembly, it is not plausible that a person can survive reassembly following total decomposition. If van Inwagen and other authors who have defended this point are right, then reassembly does not solve the fundamental problem about resurrection: the problem of how people who have apparently ceased to exist manage to show up again on Resurrection Day, thus apparently surviving a long gap in their existence. Let's call this *the gap problem*.

I believe that these problems for resurrection by reassembly are not nearly so intractable as has often been supposed. In section 2 I argue that viable solutions to the double resurrection problem have, in effect, already been developed by advocates of fission models of resurrection. Then, in section 3, I defend a novel solution to the cannibal problem. Finally, in section 4, I argue that the gap problem can be avoided by upgrading the naïve reassembly model to a novel variation on the theme of resurrection by reassembly.

#### 2 The Double Resurrection Problem

Let's begin with the double resurrection problem, which was formulated by Peter van Inwagen (1978) and echoed, e.g., by Lynne Rudder

<sup>&</sup>lt;sup>5</sup> See also Olson (2010) and (2015).

Baker (2005), who regards it as 'logically conclusive' (378). We can set up the problem as follows.

Presumably, God could assemble two distinct Pauline objects, where a Pauline object is an object qualitatively identical to St Paul. God could even assemble two Pauline objects out of particles that at one time composed the original St Paul. For example, God could assemble one Pauline object from the particles that composed Paul when he died, and another from the particles that composed Paul when he was ten years old. Now it seems that, if the naïve reassembly model of resurrection is correct, then assembling a Pauline object out of particles that once composed St Paul is sufficient for resurrecting Paul himself, and so any such object will be identical to St Paul. So, were God to create two Pauline objects composed of particles that once composed St Paul, there would be a pair of objects, each of which was identical to St Paul, but which were not identical to each other. But if the identity relation behaves the way most of us think it does, this is impossible. So, the naïve reassembly model is false.

I think the reassembly theorist can reasonably resist this argument. To see how, it will be helpful to recognize that double resurrection has a lot in common with paradigmatic cases of fission. Both double resurrection cases and paradigmatic fission cases feature two objects competing for identity with some earlier object. With this in mind, I propose draw on ideas which have been discussed in the context of fission models of resurrection to argue that there are at least two reasonable ways a reassembly theorist can solve the double resurrection problem. Both of these ways involve denying the premise that, if the naïve reassembly model of resurrection is correct, then any Pauline object composed of particles that once composed St Paul is identical to St Paul.

One option for the reassembly theorist is to follow in the footsteps of Dean Zimmerman (1999 and 2010) by adopting a closest-continuer account of diachronic identity. On a closest-continuer theory, whether an object, x, at a time, t1, is identical to an object, y, at a later time, t2, depends in part on whether y has any competitors for identity with x. If x fissions, producing distinct fission products y and z which are equally qualified

candidates for being x, then x does not survive fission. But in the absence of multiple equally qualified competitors, x survives (Jacobs and O'Connor 2010). Zimmerman made use of this notion in the context of his fission model, but we can also apply it to double resurrection by reassembly.

The reassembly theorist can say that, if God were to assemble two Pauline objects, each from particles that once composed St Paul, then neither of these objects would be St Paul. But if God assembles just one such object, then that object would be the original Paul. So it is false that, if the reassembly model of resurrection is correct, then any Pauline object composed of particles that once composed St Paul is identical to St Paul. A further condition on identity with St Paul is that there are no equally qualified competitors.

Admittedly, adopting a closest-continuer account of diachronic identity comes at the cost of rejecting the plausible 'only x and y principle', which—very roughly—says that the identity of an individual x with individual y does not depend on anything extrinsic to x and y, such as whether y has any competitors. But Zimmerman (1999 and 2010) anticipated this objection early on and has argued that a three-dimensionalist materialist must reject the only x and y principle independently of any concerns about the possibility of resurrection.<sup>6</sup> He points out that, if this is correct, then rejection of the principle is not an additional cost of a resurrection model for the three-dimensionalist materialist. As far as I can tell, the reassembly theorist is free to simply echo Zimmerman on this point.

And if closest-continuer theories are too much to swallow, there is another option for reassembly theorists: they can adopt a metaphysics of emergent particularities. According to Jacobs and O'Connor (2010), mereological simples and at least some composite objects, including human organisms, are constituted in part by thin particulars or 'particularities' which they describe as 'a primitive, non-qualitative, particular component of [an object] that is necessarily unique to [that object]' (74). In the case of

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<sup>&</sup>lt;sup>6</sup> For dissenting voices, see van Inwagen (1990) and Hasker (1999).

composites like a human organism, the particularity is 'emergent' in the sense that it 'does not reduce to the sum of the particularities of the simples' that compose the organism (76). Though Jacobs and O'Connor endorse certain immanent-causal conditions on persistence, these conditions are only necessary, not sufficient; an object's survival also depends on what happens to its particularity. In fission cases, when an object, O, stands in the appropriate immanent-causal relations to two or more distinct objects, O goes where its particularity goes.

Suppose the reassembly theorist adopts a metaphysics of emergent particularities. Then she can deny that, if the reassembly model of resurrection is correct, then any Pauline object composed of particles that once composed St Paul is identical to St Paul. For she can say that being such an object is necessary but not sufficient for being St Paul, and that the missing ingredient is Paul's emergent particularity. And since at most only one object can have St Paul's emergent particularity, where there is more than one Pauline object composed of particles that once composed St Paul (as in cases of double resurrection), St Paul goes where his emergent particularity goes.<sup>7</sup>

I conclude that there are at least two reasonable solutions to the double resurrection problem available to the reassembly theorist. Moreover, both solutions were originally employed in defense of fission models of resurrection. So, at least in this respect, the reassembly model is no worse off than fission models. And that is significant, because Zimmerman's original fission model has proved attractive enough to inspire at least four other variations on its central theme (Corcoran 1998/2001, Dougherty 2014, Hudson 2001, and O'Connor and Jacobs 2010).8

#### 3 The Cannibal Problem

<sup>&</sup>lt;sup>7</sup> This suggestion mirrors Jacobs and O'Connor's own application of their emergent particularities view to Zimmerman's fission model.

<sup>&</sup>lt;sup>8</sup> The discussion in this section benefited from helpful comments by Mark Murphy and various referees.

The cannibal problem is perhaps the oldest puzzle for reassembly models of resurrection, and it is still frequently presented as a serious—maybe even decisive—objection to those models (e.g. Corcoran 2001, Hudson, 2017, Merricks 2001, Olson 2015, and van Inwagen 1978). Above I introduced the problem with an imaginary case in which a cannibal dies after eating the body of St Paul, so that both Paul and the cannibal shared some of the same particles at their respective deaths. The puzzle is then what happens to those shared particles on Resurrection Day.

Although this worry first appeared in the guise of cannibal cases, these are instances of a more general problem. Dougherty (2014) and Graves et. al. (2017) argue that non-human animals will be resurrected, and if that is the case, non-vegetarianism and predation present the same problem that cannibalism does, on a grander scale. Moreover, Olson (2015) observes that people who die later in history may be composed of particles that once composed people earlier in history. And Merricks (2001) notes that organ donation adds a further complication. So, as other authors have pointed out, the problem isn't really about cannibals; it is much more pervasive than that. The result is that the general resurrection will require many individual particles to be in multiple bodies—and so presumably multiple places—at once. But surely that is impossible, so the reassembly view is false. Or so the objection goes.

A typical reply to this objection by reassembly theorists is to deny that all of the particles that decomposed from an organism are needed for successful reassembly. Pressing the cannibal objection against reassembly models, Olson (2015) acknowledges the possibility '...that only a certain proportion of one's atoms are needed [for resurrection]—more than half, say' (??).9 But he protests that 'The longer there are human beings on earth,

<sup>&</sup>lt;sup>9</sup> Davis (2001) cites Augustine's suggestion that shared atoms go to whoever had them first (while new atoms are presumably substituted for them elsewhere), and he suggests that this and "lots of other policies [for what to do about shared atoms] seem possible" (236).

the greater will be the proportion of their atoms that were once part of others. If our species survives long enough, virtually all of our descendants' atoms will once have been someone else's, making it impossible for everyone to have life after death by reassembly' (p??). And again, if animals are also to be resurrected, the problem is much worse. So, this apparently simple solution may not work.

Fortunately, at least two other responses are available. First, it turns out there is an easy way to resist the claim that the general resurrection will require some particles to be in multiple bodies at once. Just imagine a staggered resurrection where no two or more individuals with shared particles are resurrected simultaneously. For any set of people who shared particles at the times of their deaths, God could resurrect one of them, remove the needed particles from her resurrected body (by gradual replacement, if necessary), and then resurrect the next person in line for those particles.

But I confess that it strikes me as a bit odd that there would be restrictions that force God to stagger resurrections in this way. Why can't God just call us up out of the dust as God pleases? One might also think the idea fits ill with certain passages of Scripture. So while this is an option for solving the cannibal problem, it would be nice if it were not the only option.

It's not. There is another strategy we have not yet tried: deny the premise that particles cannot be in multiple bodies at once. Radical as this may sound to some, whether objects can be multilocated—i.e. wholly

This idea presupposes that some but not all simples that composed a person at the time of death are needed for resurrection.

<sup>&</sup>lt;sup>10</sup> This possibility was brought to my attention by Cody Gilmore and independently by Joshua Spencer.

<sup>&</sup>lt;sup>11</sup> Though I hesitate to read such details into the passage, one might think 1 Thessalonians 4:16 suggests that at least all who died 'in Christ' will be resurrected at roughly the same time.

located at each of two or more disjoint spacetime regions<sup>12</sup>— is currently a live question at the intersection of mereology and the metaphysics of location, where the idea arguably enjoys the support of recombinatorial and conceivability arguments, as well as the existence of respected theories which countenance mulitilocated objects like enduring entities in a 4D universe, backward time-travelers, and immanent universals.<sup>13</sup> For present purposes, these specific cases of multilocation are valuable insofar as they suggest that there is no barrier to multilocation *in principle*. For once one grants that objects and regions can be related to each other in such a way that multilocation occurs, what's to stop God from simply decreeing that some objects and regions be so related, whenever God desires?<sup>14</sup>

In fact, there is considerable precedent for employing multilocation to address problems in philosophical theology. It has already been applied to divine omnipresence (Cross 2016; Hudson 2009 and 2005 ch. 7; Inman 2017), the Eucharist (Pruss 2009 and 2013; Cf. Butakov 2017), the Trinity (Effingham 2015 and forthcoming), mind-body dualism (Effingham 2015), and even resurrection (Hudson 2010). So I am in good company as I turn to apply multilocation to the cannibal problem.

Suppose that God wants to resurrect two people, a cannibal and a victim, who shared particles at their respective deaths. God issues a suitable decree, and particles from around the world begin to converge on (or discontinuously jump to) two disjoint, human-shaped regions, one which will soon be occupied by the resurrected cannibal, and another which will soon be occupied by the resurrected victim. Now consider a particle, p, which belonged to the cannibal when the cannibal died, and the victim when the victim died. Where will p go? To the cannibal region or the victim

<sup>&</sup>lt;sup>12</sup> Hudson (2005) adds the condition that the object does not also occupy the fusion of those disjoint regions. This allows him to distinguish multilocation from a similar relation he calls 'entension.'

<sup>&</sup>lt;sup>13</sup> For an overview of this literature and an extensive bibliography, see Gilmore (2014).

<sup>&</sup>lt;sup>14</sup> One can think of this as a theological gloss on recombination arguments that appear in the literature.

region? God's decree,entails that p will go to both regions. So, p multilocates. It travels to the cannibal region *and* it travels to the victim region. The cannibal problem turns out to be no problem at all.

One might be put off by the strangeness of resurrected persons sharing multilocated parts. I have some sympathy for this reaction, but I think the strangeness can be alleviated. The multilocation of shared particles on this model can be fairly ephemeral because shared particles can be subsequently removed (gradually if necessary) from resurrected bodies, at which point multilocation becomes unnecessary. For this reason, the multilocation can be viewed as an aspect of the momentary miracle of resurrection. And we already knew miracles were strange.

One might also worry about the fact that bodies which share multilocated particles will mereologically overlap. Maybe, due to the overlap, those bodies are not really distinct bodies. (Similarly, one might be inclined to say that Siamese twins share a body, rather than having distinct but overlapping bodies. But I distrust any line of reasoning which arrives at the conclusion that bodies which share multilocated particles are not really distinct bodies. After all, if I were to discover that I, right now, share some multilocated particles with other human beings, I wouldn't conclude that my body is more scattered and of very different size and shape than I thought it was. I would be inclined to say that, as it turns out, distinct human bodies of ordinary size and shape sometimes share multilocated parts. So that's what I'm inclined to say about the resurrection case as well.

Finally, a dialectical worry. Hudson (2010) sketches (but does not endorse) a model of resurrection on which people survive their deaths simply because God multilocates them in a suitable way. By divine fiat, a person is wholly located at both a premortem spatiotemporal region and a postmortem spatiotemporal region, disjoint from the premortem region. If we are going to be generous about multilocation, why not just adopt Hudson's proposal rather than going to all the trouble of trying to solve the notorious problems facing resurrection by reassembly? My response to this

<sup>&</sup>lt;sup>15</sup> Craig (2012) holds this view.

worry is that I think there are reasons to be unhappy with Hudson's proposal—reasons that do not afflict my solution to the cannibal problem.

First, Hudson's model is probably not neutral on the nature of time. Presumably, for an object, O, to be multilocated across different times, O will have to be located both at some time t1 and at some other time t2. But I prefer A-theoretic views which 'take tense seriously' and do not spatialize time. On those views, existing at different times is not very much like existing at different places, and it seems that the closest we could get to O being multilocated across time is a case where O *is* located at t2 and O *was* located at t1, or where O *is* located at t1 and O *will be* located at t2, etc. Philosophers who take tense seriously will deny that these cases entail that O is located both at t1 and at t2. The upshot is that multilocation across time may be impossible, even if multilocation across space is not. This is a worry for Hudson's model, but my solution to the cannibal problem avoids it altogether.

Second, Hudson's model dispenses with identity-preserving causal connections<sup>17</sup> between the premortem and postmortem person.<sup>18</sup> So, in light of Wasserman's (2018) recent analysis of personal time in terms of the causal relations that secure diachronic identity, on Hudson's view a resurrected person will have a disjointed 'personal timeline'<sup>19</sup>—a timeline for her premortem life, and a distinct timeline for her postmortem life. Any such person's resurrection and afterlife will not lie in the future on her premortem personal timeline, and her premortem life and death will not lie

<sup>&</sup>lt;sup>16</sup> Incidentally, I take it Hudson is aware of probably unbothered by this fact.

<sup>&</sup>lt;sup>17</sup> I borrow this term from Wasserman (2018).

<sup>&</sup>lt;sup>18</sup> And if Hudson added such causal connections to his story it would end up being either a version of Zimmerman's fission model where a premortem individual jumps to the afterlife at the moment of her death, or, with a few more tweaks, it would be a version of the 'upgraded' reassembly model I develop in the next section. Below I argue that the upgraded reassembly model is better than Zimmerman's fission model, so, if I am right about this, the best way of adding identity-preserving causal connections to Hudson's story would transform his model into precisely the model I defend in this paper.

<sup>&</sup>lt;sup>19</sup> The notion of personal time comes from Lewis (1976).

in the past on her postmortem personal timeline. This might seem like lessthan-genuine resurrection.

Third, and relatedly, an individual multilocated in the way Hudson imagines may not even be the same person at her postmortem location as she is at her premortem location. Nikk Effingham (2015) has argued that a multilocated rational substance which is a person at each of its locations may not be the *same* person at each of its locations, under certain circumstances. But I only want to flag these concerns; I will not pursue them here.

The takeaway is that Hudson's multilocation model faces several worries which do not threaten my solution to the cannibal problem. I conclude that, other things being equal, a reassembly model augmented with a multilocation solution to the cannibal problem is a valuable alternative to Hudson's model. But of course, whether other things are equal will depend on whether the reassembly theorist can solve the gap problem as well. So let's turn to that problem next.

## 4 The Gap Problem

Above I introduced the gap problem as the problem that reassembly is insufficient for resurrection because, intuitively, taking the parts that once composed St Paul and reassembling them Paulwise would result in a mere intrinsic duplicate of St Paul, and not the apostle himself. But if reassembly is not sufficient for resurrection, why not? What is missing? The general consensus seems to be that reassembly fails to meet certain necessary causal conditions on survival: a reassembled person is not causally connected in the right ways to the premortem person. This suggests that the reassembly theorist might be able to overcome the gap problem by adding suitable causal connections to her story. That is what I propose to do here. I am going to 'upgrade' the naïve reassembly model to a reassembly model that features identity-preserving causal connections between the premortem and postemortem person.

In a paradigmatic case of persistence, St Paul persists from an earlier time to a later time because the arrangement of the particles which compose him at the earlier time causes a suitably similar arrangement to occur at a later time, and it does so in virtue of the particles' own causal powers, 20 not because this behavior is imposed on them from an outside source. Now suppose we modify this paradigmatic case in the following, exotic way. Imagine that the particles which compose Paul are disassembled, and that their disassembly causes those same particles to reassemble into a Pauline object at a later time. And as before, imagine that the disassembly causes the reassembly in virtue of the particles' own causal powers, not because this behavior is imposed from an outside source.

In this more exotic case, which we might describe as a case of automatic reassembly, I have the intuition that the reassembled individual is identical to the disassembled individual, and so it is a case of persistence. If my intuitions are right, this suggests that the reassembly theorist could overcome the gap problem by simply adding to her model that St Paul's reassembly on Resurrection Day is caused by his own death and decomposition in virtue of special powers possessed by the particles that compose him.<sup>21</sup>

But I am unhappy with this version of the idea, for two reasons. First, developing this model would involve following the fission theorists' hypothesis that God somehow endows the particles that compose St Paul with special resurrection powers. I am leery about resurrection powers (whether fission or reassembly powers) for several reasons. There are

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<sup>&</sup>lt;sup>20</sup> I prefer to cast causal powers as immanent, irreducibly modal properties (see, e.g., Jacobs 2017), but the reader is invited to substitute her own preferred view.

<sup>&</sup>lt;sup>21</sup> The kernel of this idea was brought to my attention by Joshua Spencer], who attributed it to Hud Hudson. The thought was basically that human bodies could, at some point after decomposition, and presumably with some kind of divine aid, automatically reassemble. I have not seen the idea of resurrection by automatic reassembly in print, much less developed in any detail, so I have undertaken to develop it here.

metaphysical worries about such powers that it would be nice to avoid.<sup>22</sup> Moreover, we will see below that we can develop a successful reassembly model of resurrection without postulating any new powers that the theist doesn't already have on hand simply in virtue of being a theist. So, resurrection powers are uneconomical.<sup>23</sup> Finally, resurrection powers seem very ad hoc. Even if we did need them for a model of resurrection, they don't seem to be useful for anything else, and they are also highly unusual and unprecedented in ways that suit the resurrection theorist. This makes them feel contrived. It is not hard to imagine a resurrection skeptic reacting to the hypothesis of special powers to jump to the afterlife at the moment of death, or special powers to reassemble good as new after total decomposition, with a snarky 'How convenient'.

The second reason I am unhappy with the idea of Paul's destruction causing his own resurrection solely by his own powers is that it strays pretty far from the classic reassembly model since it has Paul reassembling entirely on his own, rather than God reassembling Paul by performing some miracle on Resurrection Day.

Fortunately, I think we can hold on to the idea of Paul's destruction causing his own resurrection while avoiding these drawbacks. Zimmerman (1999) has shown that there is a way to do what resurrection powers do

For example, Eric Olson (2010) expresses skepticism about the momentum-like properties that resurrection powers would require to ensure that simples which appear or assemble on Resurrection Day do so in an appropriate (and highly specific) arrangement. Zimmerman (1999) acknowledges that some will worry that resurrection powers must be essential to whatever has them, so God cannot simply confer them on objects at a convenient moment (cf. Jacobs and O'Connor 2010, 79).

<sup>&</sup>lt;sup>23</sup> A fan of resurrection powers might push back by highlighting a different respect in which resurrection powers appear more economical than a backtracking decree. A backtracking decree requires a divine intervention in the natural order, whereas the resurrection powers theorist can get by without such an intervention by proposing that resurrection powers are natural to organisms like us (cf. Jacobs and O'Connor 2010). But the traditional picture of resurrection is that of a miracle God performs at the eschaton. An account of resurrection as a natural outworking of natural powers fits ill with this traditional picture, and so seems inadvisable.

without resurrection powers, and his suggestion more closely reflects the traditional picture of God performing a special act on Resurrection Day to bring about St Paul's resurrection.

Zimmerman suggests that one could replace resurrection powers with a divine 'backtracking decree'.<sup>24</sup> The rough idea is that God resurrects people by issuing a decree whose causal results are determined in large part by the premortem state of the person to be resurrected. Following Zimmerman, Hudson (2001) imagines God issuing a decree like this: 'Let there be a glorious and imperishable spiritual body which will be as was the natural body of Abraham at his death' (193). Hudson and Zimmerman both point out that a decree like this is too empty of content to be causally efficacious on its own. Any human body that results from the decree will depend substantially on a corresponding premortem body and its features. Consequently, a backtracking decree like this enables rather than disrupts identity-preserving causal connections between premortem postmortem individuals.<sup>25</sup>

So, suppose we take the paradigmatic case of persistence that we considered above and substitute a backtracking decree for the particles' causal powers. Then the earlier arrangement of the particles which compose St Paul causes the later arrangement with the help of a backtracking decree. If Zimmerman is right, then our paradigmatic case of persistence is still a case of persistence (albeit not a paradigmatic one) after this modification. In other words, Paul still survives.

And if that is so, then it is plausible that the more exotic case of persistence where disassembly causes later reassembly will also still be a case of persistence if we modify it by replacing the particles' reassembly powers with a suitable backtracking decree. This will allow us to get by without postulating any bizarre resurrection powers at all, for the only power presupposed by the use of a backtracking decree is God's power to

<sup>&</sup>lt;sup>24</sup> The term is Hudson's (2001); the idea is Zimmerman's (1999).

<sup>&</sup>lt;sup>25</sup> Cf. Olson's (2010) discussion of immanent causal connections, and how a non-backtracking divine intervention disrupts such connections.

bring about states of affairs by decreeing them—and the theist is already committed to that.<sup>26</sup>

So, I propose the following model of resurrection by reassembly and backtracking decree. Where S is any human person or other organism that God wishes to resurrect, let 'particles which decomposed from S' mean those particles that were lost through the process of S's death and decomposition: roughly, any particle that ceased to be a part of S and was not replaced. (Some fiddling might be needed to deal with amputations, organ transplants, etc.) Let 'an S-like configuration' mean a configuration of particles that composes an object resembling premortem S. The resemblance ought to secure substantial qualitative continuity with premortem S—including any of S's essential qualitative properties—but it need not be as strong as strict qualitative identity with premortem S at a selected instant (e.g., the moment of her death).

Now suppose God wants to resurrect St Paul long after Paul has died and decomposed, and the particles which composed him have been scattered throughout the biosphere. To do this, we may suppose that God issues the following backtracking decree: 'Let any particles which decomposed from St Paul reassemble into a Pauline configuration'. When God issues this decree, the scattered particles that decomposed from St Paul will converge on a certain region (perhaps a region specified by God), where they will reassemble into a Pauline object. We need not settle on any particular account of how the particles travel to the designated region. There are a variety of prima facie viable options. They may simply travel continuously through 3-space, or perhaps through hyperspace, <sup>27</sup> or through

<sup>&</sup>lt;sup>26</sup> One might go a step farther and endorse Robert Adams' proposal that "the most fundamental natural faculty of any created substance is its liability to be affected by God" (Hughes and Adams 1992, p. 224). Thanks to a referee for bringing my attention to this.

<sup>&</sup>lt;sup>27</sup> There is precedent in the literature for appealing to hyperspace to explain how God performs certain miracles. See the final chapter of Hudson (2005).

wormholes,<sup>28</sup> or they might jump discontinuously from wherever they are to their final destination.

We can see how this story differs from the naïve reassembly model by focusing on the backtracking component of the decree. On the naïve reassembly model, God simply sees that certain particles—call them the xs—decompose from St Paul, and then decrees 'Let the xs reassemble Paulwise on Resurrection Day'. If issued, this decree would produce a Pauline object even if the xs had never composed St Paul. By contrast, the decree I formulated above does not feature any particular particles; it merely specifies a condition that any given particle may or may not meet: the condition having decomposed from St Paul. If no particles meet this condition, the decree will have no effect even if it is issued. Nothing will be assembled—no Pauline object (much less St Paul himself).

On the other hand, if there *are* particles meeting the condition in question, this will be because there was a St Paul who died and decomposed. So, the backtracking decree and Paul's disassembly together, and only together, causally suffice for the assembly of a Pauline object. This ensures a much more robust causal dependence of reassembly on decomposition than the naïve reassembly model manages to secure. And if Zimmerman is right about backtracking decrees, it is a sufficiently robust sort of dependence to enable Paul to survive.

One might reasonably worry that a backtracking decree will not secure suitable causal connections between Paul's decomposition and his reassembly given certain views of causation, particularly my preferred account of causation in terms of immanent powers and dispositions.<sup>29</sup> For on a powers view, it might seem that Paul's decomposition will not count as causing his later reassembly if the only or primary powers and dispositions involved in connecting these two events are God's, and not the powers and dispositions of Paul and his own parts.

<sup>&</sup>lt;sup>28</sup> Cf. Dougherty (2014) 166-178.

<sup>&</sup>lt;sup>29</sup> Thanks to a referee for this objection.

Fortunately, I think there is a robust sense in which the immanent causal powers and dispositions of Paul and his own particles are responsible for the reassembly. For although the particles do not have any exotic resurrection powers, the backtracking decree is formulated precisely to enable the more mundane powers and dispositions of those particles to cause reassembly on Resurrection Day. Here's how.

Following Robert Adams,<sup>30</sup> the theist can say that all created objects have a natural disposition to do as God decrees. But under the conditions imposed by the backtracking decree we formulated above, any particles that decomposed from St Paul can act in accord with this natural disposition to do as God decrees only by assembling into a Pauline object. That, after all, is what the decree requires. Moreover, these particles meet the condition of having decomposed from St Paul because, at some point, they decomposed from St Paul—a process that features the ordinary powers and dispositions of organisms and their parts. So, it certainly looks like Paul's decomposition explains his resurrection by means of the powers and dispositions of Paul and his parts: dispositions to die and decompose, and to do as God decrees. Granted, these mundane dispositions wouldn't result in resurrection apart from the divine decree, but they still play a robust role in securing the causal link between Paul's decomposition and resurrection under the unusual conditions imposed by the decree. And once again, if Zimmerman is right about backtracking decrees, this is enough of a causal link to ensure diachronic identity.

This model of resurrection by reassembly and backtracking decree is an attractive one. At the eschaton, long after we have entirely ceased to exist, God reassembles us from the dust by fiat. That's it. No fancy resurrection powers attributed to ordinary objects; no divine interventions at the moment of a person's death, no furtive snatching away of bodies, and so on. So long as the decree by which God performs this eschatological miracle is formulated in the right way, it will result in resurrection by reassembly.

<sup>&</sup>lt;sup>30</sup> Hughes and Adams (1992). Cf. Gasser and Quitterer (2015).

But since the model hinges on a backtracking decree, one might reasonably wonder why we ought to bother about a model of resurrection by reassembly at all. Why not just stick with Zimmerman's model of *fission* by backtracking decree, rather than *reassembly* by backtracking decree? To answer this question, I will finish this section by identifying some advantages that the foregoing reassembly model enjoys over Zimmerman's fission model.

According to the backtracking decree version of Zimmerman's fission model, at the resurrection, God issues a decree that, together with facts about the particles that composed Paul at the moment of his death, causes a Pauline object to appear on Resurrection Day. Since this fission-like event is caused in part by the arrangement of Paul's particles at the moment of Paul's death, there is only a heap of dead matter at the next instant rather than a Pauline object, and so the Resurrection Day Pauline object turns out to be St Paul's closest continuer. The upshot is that Paul survives his death, appearing again at the eschaton. This proposal is clever, but it suffers from certain drawbacks, at least some of which the reassembly model avoids.

First, Olson (2010) points out that Zimmerman's story requires that the arrangement of particles that causally contributes to Paul's resurrection is the one that occurs at the last instant of Paul's premortem life, and this commits the fission theorist to some disputed metaphysical points<sup>31</sup>: (i) that there is a last instant of Paul's life rather than a first instant at which he is dead; and (ii) that there is no metaphysical vagueness about when an organism dies or decomposes. By contrast, the reassembly theorist can remain neutral on these issues because nothing in the timing or content of the reassembly theorist's backtracking decree (or anything else in the reassembly theory) requires there to be a last moment of Paul's premortem life. So this is one point at which reassembly has an advantage over fission.

Second, Hershenov (2012) worries that there is not enough mereological continuity in Zimmerman's model between Paul at the last

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<sup>&</sup>lt;sup>31</sup> See Olson (2015) for worries of this sort.

instant of his premortem life, and Paul at the first instant of his postmortem life. After all, each of the particles which compose postmortem Paul are mere duplicates of the particles which composed him at his death. More continuity than this might be required for persistence. But the reassembly model dodges this worry too, because on that view *all* of the particles which composed Paul at his death also compose him at his resurrection.

Finally—and to my mind most significantly—some have worried that, on Zimmerman's model, no one ever dies. St Paul's jump from premortem existence to Resurrection Day seems more like a time travel journey than a case of death and resurrection. This not only violates the spirit of the doctrine of resurrection; it also denies a fact of commonsense: that people die.<sup>32</sup> It is hard to see how this denial is much more palatable than van Inwagen's (1978) suggestion that the bodies we bury are divinely planted simulacra.<sup>33</sup>

But while Zimmerman's proposal might suffer from this problem, it seems much less plausible to see my upgraded reassembly model as a mere time travel journey. This is because the backtracking decree is formulated in such a way that Paul's death and decomposition are part of the cause of his later reassembly. The crucial, identity-preserving causal connection reaching from Paul's premortem life to the afterlife does not bypass Paul's death and decomposition, so it seems wrong to say that Paul jumps to the afterlife without dying. Rather, Paul dies, decomposes, and is later reassembled.

For these reasons, I think the reassembly model outlined above is an improvement on Zimmerman's fission model, even though it borrows from Zimmerman the crucial ingredient of a backtracking decree.

#### 5 Conclusion

<sup>&</sup>lt;sup>32</sup> For discussion of this concern, see Baker (2007), Corcoran (2001), Dougherty (2014), and Hudson (2001). Corcoran attributes the objection to William Hasker.

<sup>&</sup>lt;sup>33</sup> Hasker (2011) sees in Zimmerman's model even greater and more unfortunate similarities to the uncommonsensical element of van Inwagen's view.

I have considered the three most influential objections to the idea of resurrection by reassembly: the duplicate resurrection problem, the cannibal problem, and the gap problem. I've argued that reasonable solutions to the duplicate resurrection problem already appear in the literature, though they have usually been used in the service of fission models. Then I presented a novel solution to the cannibal problem that appeals to multilocation. Finally, I argued that reassembly theorists can solve the gap problem by upgrading from the naïve reassembly model to a reassembly model featuring a backtracking decree. I conclude that these standard objections to the possibility of resurrection by reassembly are not nearly so powerful as has often been supposed.<sup>34</sup>

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