

Chapter 3

Bodily Resurrection: The Falling Elevator Model Revisited

Dean Zimmerman

The resurrection of the dead—in which Christians, Muslims, and many Jews alike believe—would doubtless be a miraculous event. But some have claimed that not even a miracle would suffice. Given certain conceptions of the body that is to be resurrected, it can seem flat out contradictory to claim that human bodies have a destiny beyond the accidents and diseases that at least *appear* to end our earthly lives.¹

More than thirty years ago, Peter van Inwagen wrote a paper that became the focus for much subsequent discussion of the doctrine of resurrection.² Van Inwagen did two things: he made a particularly clear case for the impossibility of resurrection; and then he told a story intended to show a way in which God could, after all, succeed in resurrecting every human body that has ever died. The story involved a kind of secret policy of “body-snatching” on God’s part: God surreptitiously takes (at least a large part of) each body just as it dies. Elsewhere, out of sight, these bodies are kept alive, healed, and in other ways improved, to prepare them for the New Creation.

However useful the story might be as a way to show that the appearance of complete biological death is compatible with the resurrection of these very bodies, there is a downside to supposing the story is true. Large chunks of matter do not *seem* to disappear whenever a human being dies. If God actually used this method, He would be in the business of replacing our living bodies with dead simulacra, made of entirely new

¹ Clarence Darrow, *The Myth of the Soul* (Girard, KS: Haldeman-Julius Publications, 1929) provides a paradigmatic, forceful statement of the case against the possibility of resurrection.

² Peter van Inwagen, ‘The Possibility of Resurrection’, *International Journal for Philosophy of Religion*, 9 (2003): pp. 114–21.

(or at least different, imported) material, at the last possible moment; and that would involve God in a sort of massive, systematic deception—roughly on the same scale as creating a “young earth” but hiding fake dinosaur bones in the ground to make it look as though our planet has an ancient and interesting history.

Just how unseemly would it be for God to follow this policy of deception? I do not doubt that God might have reason to disguise, to some extent, the facts about our ultimate destinies—including whether bodily resurrection occurs. A good case can be made for the conclusion that our freedom to choose among morally weighty alternatives depends upon a failure to see, with complete clarity, all the ramifications of our choices.³ A failure to know, with certainty, what happens at death might be a crucial part of the strategy God uses to shield us from some of the relevant facts. One way to hide the facts about the afterlife would be to deliberately deceive us about something—for example, by surreptitiously stealing our bodies at death.⁴ Still, it would be nice to be able to see a way in which the resurrection could happen that did not involve quite so much trickery. It was in this context that I developed what I called “the Falling Elevator Model” of survival for living organisms, and offered it to van Inwagen as an alternative to his original model.⁵

³ Michael Murray, ‘Coercion and the Hiddenness of God’, *American Philosophical Quarterly*, 30 (1993): pp. 27–38.

⁴ Van Inwagen considers this as a potential explanation for deceptive divine body-snatching. See Peter van Inwagen, *The Possibility of Resurrection and Other Essays in Christian Apologetics* (Boulder, CO: Westview Press., 1998), p. 49.

⁵ Dean Zimmerman, ‘The Compatibility of Materialism and Survival: The “Falling Elevator” Model’, *Faith and Philosophy*, 16 (1999): pp. 194–212; a shortened version appeared as Dean Zimmerman, ‘Materialism and Survival’, in Eleonore Stump and Michael Murray (eds), *Philosophy of Religion: The Big Questions* (Oxford: Basil Blackwell, 1998), pp. 379–86.

The Falling Elevator Model is so-called because it involves a last-second jump that saves us from what looks like certain death—a strategy sometimes used by cartoon characters when an elevator cable breaks and they are hurtling toward the subbasement. Reaction to the proposal was mixed. Hud Hudson and Kevin Corcoran said: “That’s so crazy, it just might work!”, making good use of it in their very different versions of Christian materialism.⁶ Others thought it was merely crazy, and have criticized it from various perspectives. I begin by describing what the model was originally intended to do, and also what *I* hope the model can do. The bulk of the paper consists of responses to a series of important criticisms leveled against Falling–Elevator–style resurrection by William Hasker, David Hershenov, and Eric Olson.

The Original Setting: Van Inwagen’s Materialist Metaphysics

I shall assume, throughout this paper, that the body to be resurrected is a living organism belonging to the species *homo sapiens*. For van Inwagen, there is a special urgency to the question whether such things survive the (apparent) deaths to which organisms are prone; for he believes that human persons simply *are* organisms, and can survive nothing that an organism cannot survive.⁷ So the body-snatching model of how my body could escape its apparent demise is, from van Inwagen’s point of view, a model of how *I* could survive apparent death. When he wrote “The Possibility of Resurrection,” van Inwagen thought that there is no other way in which God could

⁶ See Hud Hudson, *A Materialist Metaphysics of the Human Person* (Ithaca, NY: Cornell University Press, 2001), Ch. 7, and Kevin Corcoran, ‘Physical Persons and Postmortem Survival without Temporal Gaps’, in Kevin Corcoran (ed.), *Soul, Body, and Survival: Essays on the Metaphysics of Human Persons* (Ithaca and London: Cornell University Press, 2001), pp. 201–17.

⁷ For the details of van Inwagen’s materialism, see Peter van Inwagen, *Material Beings* (Ithaca, NY: Cornell University, 1990), esp. Ch. 14.

ensure that a dying human body be resurrected. But that was many years ago, when he was still just exploring the possibility of various Christian doctrines, and not yet convinced of their truth. For his purposes then, it was interesting to note that the body-snatching model established at least the possibility of the rejuvenation of these very bodies. But, for some time now, he has been open to the idea that there may be other ways to “accomplish the Resurrection of the Dead ... , ways I am unable even to form an idea of because I lack the conceptual resources to do so.”⁸

The Falling Elevator Model describes a mechanism by which God could cause these very organisms to appear, elsewhere and perhaps elsewhen, without His having to replace, secretly, each dying body with a pseudo-corpse made of new matter. It was intended to be consistent with as much of van Inwagen’s metaphysics as possible.

Before sketching the proposal, I echo van Inwagen’s remark: I believe that there are ways besides the Falling Elevator Model by means of which God could accomplish the resurrection of these very bodies, short of outright body-snatching. I have no confidence whatsoever that the way I suggest is anything close to what actually happens. As in St. Paul’s day, skeptics ask: “How are the dead raised up? and with what body do they come?” (1 Corinthians 15: 35). What I offer is a “just-so” story intended to undermine the claim that the resurrection is simply impossible without massive deception on God’s part. To the extent that the story works, it does so by stretching the imaginations of those who think there is no way it could be done. The fine details do not represent my own speculations about the mechanism God actually employs; so I can afford to be flippant, at various points. Take me too seriously, and I will respond as St. Paul did to the resurrection-skeptics of his era: “Thou fool!”

⁸ van Inwagen, *The Possibility of Resurrection and Other Essays in Christian Apologetics*, p. 50.

A Sketch of the Model

Here are the bare bones of the Falling Elevator Model. I adopt van Inwagen's useful terminology: Whenever some matter constitutes an organism, there is a special kind of event, a Life, that occurs to the matter and that continues for as long as that organism exists. As bits of the matter are replaced by new material, the things participating in this Life change; but so long as the Life goes on, the organism continues to exist, no matter how much material change there has been. An essential feature of the Life of an organism is that it displays a kind of "self-maintenance", earlier stages in a Life tending naturally to cause later stages that closely resemble the earlier ones in crucial ways. Because of the self-perpetuating nature of its Life, an organism displays a distinctive sort of "immanent causation", its later stages nomologically dependent upon earlier stages. For an organism, the immanent causal dependencies must be *direct*—they cannot, for instance, pass through the computer banks of a teleportation device or a blueprint in God's mind. Some philosophers (though not van Inwagen) believe there are kinds of objects that can survive such episodes; according to many psychological continuity accounts of personal identity, for example, a person could be teletransported. Still, it sounds odd, at least, to say that the very same *organism* could be torn to bits by the teletransporter, only to reappear elsewhere when the device assembles a living body using new materials based on the same pattern. Van Inwagen thinks each of us *just is* an organism; whether or not that is so, I do not doubt that *my body* is just an organism; so, if this very body is to show up subsequent to (what appears to be) my death, its resurrection cannot be achieved simply by God's performing the function of a teletransporter—that is, using what He knows about the state of my body at death as a

blueprint for assembling one that exactly resembles it. Such a body would not continue the Life of this one; it would be a new organism, a mere duplicate.

The Falling Elevator Model is a way to allow the Life of a dying organism to go one way, while the dead matter goes another way. The trick is to posit immanent–causal connections that “jump” from the matter as it is dying, connecting the Life to some other location where the crucial organic structure of the organism is preserved. Immanent causation is not peculiar to organisms; all ordinary physical objects in which we take an interest are the kinds of things that exhibit causal dependencies of later stages upon earlier stages. This includes boring objects, like hunks of dead matter. If a pile of matter persists throughout a period of time, the existence and properties of the later stages of the matter must be partly causally dependent upon the existence and nature of the earlier stages. Since each bit of matter in my body is supposed to stay behind when I die, to be buried (or devoured or ...), there must also be immanent causal connections between the matter in the dying body and the dead material left behind—on pain of body–snatching. So every portion of the matter in my body undergoes something like fission at the time of my death. Consider just the atoms in my body; and pretend that my body consists entirely of atoms (and the parts of atoms). The Falling Elevator Model affirms that, at the moment of my death, God allows each atom to continue to immanently–cause later stages in the “life” or history of an atom, right where it is then located, as it normally would do; but that God *also* gives each atom the miraculous power to produce an exact duplicate at a certain distance in space or time (or both), at an unspecified location I shall call “the next world”. The local, normal, immanent–causal process linking each atom to an atom within the corpse is sufficient to secure their identities; no atom ceases to exist merely because it exercised this

miraculous “budding” power to produce new matter in a distant location. Still, the arrangement of atoms that appears at a distance is directly immanent—causally connected to my body at the time of my death; and there are no other arrangements of living matter produced by my dying body that are candidates for continuing my Life. The atoms do something that resembles fissioning—though what they really do is more like “budding”, producing exactly similar offspring in the next world—while the organism does *not* fission. My body’s Life does not divide, but goes in one direction only, carrying my body with it to a new location.

My Stake in the Falling Elevator Model

The Falling Elevator Model was originally developed as a sort of “five–finger exercise”, an attempt to see whether I could come up with a way to make sense of the resurrection within constraints that made it extremely (and, by my lights, needlessly) difficult. I do not share van Inwagen’s conviction that we are mere organisms. I do not claim to know what kind of thing we actually are, but I *suspect* that we may well be immaterial thinking things, generated by brains (and, in turn, able to think by means of complex interactions with brains).⁹ There are philosophical arguments I accept that make such a position a live option; in fact, I believe they show it to have many advantages over the most popular versions of materialism.¹⁰ And I find a dualist conception of human persons strongly favored by central theological traditions within Christianity—traditions

⁹ The metaphysics of persons I find most attractive has been dubbed “emergent dualism” by William Hasker, who has done much to develop and defend the view. See William Hasker, *The Emergent Self* (Ithaca, NY: Cornell University Press, 1999) and earlier writings.

¹⁰ See Dean Zimmerman, ‘Material People’, in M. Loux and Dean Zimmerman (eds), *Oxford Handbook of Metaphysics* (Oxford: Oxford University Press, 2003), pp. 491–526, and Dean Zimmerman, ‘From Property Dualism to Substance Dualism’, *Proceedings of the Aristotelian Society*, Supplementary Volume 85 (2010) [forthcoming].

to which I try to be as faithful as I can.¹¹ Given such a dualism, it is much easier to see how God could insure our survival. Even if souls are generated and sustained by neural activity, and so are not naturally immortal, they might nevertheless be preserved by God in an unnatural state, awaiting reunion with the (or a) body. Given the strong dualistic inclinations human beings largely share (inclinations that seem to go further back than the origins of today's major religions), one could hardly accuse God of massive *deception* if our survival of death were managed in this way. It is just the sort of thing that we, left to ourselves, tend to believe anyway!

Still, I regard the Falling Elevator Model as more than an abstract exercise in van Inwagen metaphysics. Christians believe in much more than mere survival of death. Christian dualists must insist that disembodiment is at best a truncated, incomplete form of existence for human persons; we await the resurrection of the body and a renewal of the entire cosmos. And we are typically instructed to believe in the resurrection of *this very body*, a body that, to all appearances, shall one day decay in the grave (or be devoured by sharks or cannibals, or blown to smithereens at the center of a nuclear explosion, or subjected to one of the many other interesting fates frequently encountered in the literature on resurrection). So even a Christian dualist can have some motivation to believe in the resurrection of bodies that, to all appearances, are utterly destroyed.

Not all philosophers have been as receptive as Corcoran and Hudson to the possibility of resurrection by a perfectly timed leap out of the various Falling Elevators

¹¹ I advocate emergent dualism as a natural view for Christians to take. See Dean Zimmerman, 'Should a Christian Be a Mind-Body Dualist?', in M. Peterson and R. Van Arragon (eds), *Contemporary Debates in Philosophy of Religion* (Malden, MA: Basil Blackwell, 2004), pp. 315–27.

awaiting us at the ends of our earthly lives.¹² In particular, William Hasker, David Hershenov, and Eric Olson have raised important objections, to which I now turn.

Hasker and the Necessity of Identity

Hasker's arguments against the Falling Elevator Model are complicated. But the general strategy is this: He points out that the Falling Elevator Model must include a "closest continuer" account of the persistence conditions of organisms. But any closest continuer theory will, he argues, do one of two things: either require the denial of the necessity of identity; or else lead to "other assumptions that are at least equally problematic." For details about these "other assumptions," he directs the reader's attention to Harold Noonan's book, *Personal Identity*.¹³ My original paper had included an argument to the effect that, however much one might dislike the closest continuer theory, a materialist of van Inwagen's stripe must accept it in order to deal with cases of fissioning organisms. But Hasker disputes this claim as well; he offers van Inwagen a way to deny that the purported stories about fissioning (human) organisms represent cases in which the presence of a competitor makes a difference.

My reply to Hasker has three parts: (i) I explain why the Falling Elevator Model requires a closest continuer theory, and explicate the "only x and y " principle that is violated by such a theory; (ii) I rebut Hasker's argument that a van Inwagen-style materialism can hold onto the "only x and y " principle; and (iii) I argue that rejection of

¹² In the original paper, I anticipated objections from philosophers who doubt that ordinary matter could be given extraordinary causal powers allowing it to jump spatiotemporal gaps; for such philosophers, I proposed an alternative form of direct causal dependency that does not go by way of powers given to the bits of matter themselves, but depends upon a certain kind of divine decree (Zimmerman, "'Falling Elevator' Model", pp. 207–9).

¹³ See Hasker, pp. 230–1; acknowledgement that the closest continuer theorist has an alternative to contingent identity is made in a footnote (n. 64) on p. 230, where he refers the reader to Harold Noonan, *Personal Identity* (London and New York: Routledge, 1989). See also Hasker, p. 220, fn. 40.

an “only x and y ” principle is not nearly so problematic for materialists as Hasker makes it seem.

Hasker describes the commitments of the closest continuer theorist in this way: “The question to be asked is whether it is *consistent with the actual history* of the surviving individual that there should be an ‘equal claimant’ to identity with the person in the past.”¹⁴ Hasker’s terminology is informal, but the intent is pretty clear. He is considering merely possible cases, so talk of “the actual history of the surviving individual” is shorthand for “the history of the individual in a world where it survives” from one time to another. According to Hasker, it could not be the case that that very same history occurs in some other possible world in which the presence of another individual makes a difference to the survival of the original individual. This thesis about persistence conditions is sometimes called “the only x and y principle”, and can be tidied up a bit in this way:

(OXY) There are no possible individuals x and y such that: (i) x persists from t to t^* in some world w , (ii) y does not exist in w , (iii) the event which is the history of x between t and t^* in w (“the actual history of x ”) could have occurred in a world w^* in which y also existed, and (iv) because of y ’s presence in w^* , x does not persist from t to t^* in w^* , but stops existing at some time between the two.

As Harold Noonan has pointed out, if a principle like (OXY) is meant to rule out closest continuer theories, “the event which is the history of x between t and t^* ” must be carefully parsed. Closest continuer theorists want to say that events just like those that happen within the region occupied by a human organism throughout some period could have occurred, but have failed to constitute the life of a single individual simply because of things that happen elsewhere—notoriously, in another room. If the event which is a

¹⁴ Hasker, p. 230.

particular organism's life essentially involves that organism, or essentially involves the absence of events in another room, then (OXY) can happily be accepted by the closest continuer theorist. (OXY) is only equivalent to the denial of a closest continuer theory if "history of x between t and t^* in w " is understood in such a way that (1) it is not an event that could only happen to x , and (2) it does not imply anything about events outside of the region occupied by x between t and t^* . Noonan satisfies (1) by stating the principle in terms of the "hunks of matter" that constitute x throughout the period; and he satisfies (2) by appealing to the notion of "mere Cambridge changes." Some events happening to the hunks of matter constituting x will be *extrinsic* events ("mere Cambridge changes", like coming within five feet of a burning barn); but other events will be *intrinsic* to the matter— simply a matter of what is going on inside the region occupied by the matter. The same history that happens to x from t to t^* in w will occur in w^* , so long as the series of hunks of matter that constitute x during that period occupy the same regions from t to t^* and undergo events intrinsically just like their counterparts in w .¹⁵

There is good reason to think the Falling Elevator Model will require denial of (OXY). Imagine a world wI , just like the actual world except that, many years ago, God secretly caused my atoms to "bud", generating duplicates in the next world in just the way the Falling Elevator Model recommends that God do at my death—but in wI , I am *not* about to die, and the atoms in my body carry on with their terrestrial biological activities in the same way they did in the actual world. Since this budding happened during the middle of my childhood, in wI a child appeared in the afterlife who remembers—or seems to remember—my childhood. On the face of it, the mere

¹⁵ Noonan, pp. 153–4.

occurrence of this budding event should not have killed me as a child; I should have been able to survive having my atoms cause duplicates to appear far away in this manner, so long as the atoms in my body did not themselves do anything unusual, then and there. If I would *not* have survived this unnoticed childhood budding of my atoms, it could only have been because my survival is incompatible with one stage in my Life producing competing stages (even when one of the competitors is far away in space–time). But, in that case, (OXY) would be violated straightaway: for in *w1* there is a history involving hunks of matter undergoing events that are intrinsically just like the events in my actual history; but in *w1* I am replaced by a duplicate at the undetectable point of budding merely because of something that happens outside the region in which that history occurs.

Suppose, then, that in *w1* I survive this childhood budding of my atoms. Now imagine a world *w2* in which the budding occurs simultaneously with the destruction of my earthly atoms. The Falling Elevator Model implies that Zimmerman himself would thereby have leapt to the next world. But the same history that, in *w2*, constitutes a single person—childhood me and then the resurrected me—occurs in *w1* and *fails* to constitute a single person. So, on this supposition, too, (OXY) is violated. Whatever one says about what happens in a childhood “budding”, the Falling Elevator defender winds up affirming a closest continuer account of my persistence conditions: whether certain intrinsically similar events constitute the Life of a single person can depend upon events that happen outside of the places where the events in that Life *actually* occur.

The argument is not airtight; some materialists can embrace the Falling Elevator Model without commitment to a closest continuer theory. Hud Hudson, in his ingenious use of the Falling Elevator story, shows how to avoid the closest continuer account of

personal identity by tearing a page from David Lewis's book: cases of fission can be regarded as cases in which there were two things *all along*, sharing temporal parts prior to, but not after, the fission event. In the case of the childhood budding followed by my normal life and eventual resurrection, the child and I shared our childhood temporal parts; but then, in the next world, we ceased to overlap. But, whether or not a person had been allowed to continue in the time and place at which budding occurred, pre-budding stages plus child-like stages that appear in the next world would have constituted a single person; and (OXY) is not violated.

Van Inwagen and many other Christian materialists—e.g., Peter Geach, Trenton Merricks, Kevin Corcoran, Lynn Rudder Baker, and Michael Rea—reject the metaphysics of temporal parts that allows Hudson to sidestep the threat to (OXY) posed by childhood budding and similar stories. I had argued that, whether or not these materialists accept the Falling Elevator Model, the fact that organisms can undergo fission will force them to reject (OXY) and accept a closest continuer account of personal identity; so, for them, my Falling Elevator Model comes at no cost. Hasker, however, denies that my argument goes through; van Inwagen and company can, he says, affirm (OXY) in the face of fission—even when it is human-like creatures who undergo fission.

Here is why I thought materialists who reject temporal parts would be forced to deny (OXY) for certain possible human-like organisms. The principle is hard to credit when applied to many actual organisms, such as bushes and certain worms, in which there can be symmetrical duplication of major organs, or diffuse, divisible, life-sustaining systems. When half of a bush (including half the roots) is pruned away, what is left is also a bush. One is tempted to say it is the *original* bush. But had the two

halves simply been separated to make two different bushes, at most one can be identical with the original. Given their equal claims to be the original bush, and the implausibility of supposing there are “brute facts” about bush identity, the thing to say is that division in half, for a symmetrical organism, destroys it. The materialist who accepts (OXY), however, cannot say that, if half the bush is kept alive, the original bush is destroyed; but if the same half had been removed and simultaneously killed, the original bush would have survived. For roughly symmetrical organisms that can live through large-scale loss of parts, the only principled way to draw the line would be: removing *half* the matter kills the organism, but less than half does not.

Human beings are not perfectly symmetrical, of course—although the cerebrum shows a surprising amount of symmetry, and we do seem able to survive with either hemisphere. Unlike the cerebrum, the brain stem is not divisible into two potentially independently functioning halves, nor is the heart. Nevertheless, our failures of symmetry would seem to be biological accidents, given duplication in so many other organs. If humans can have symmetrical brain hemispheres, human-like creatures could have symmetrical and divisible organs and systems along an entire plane of symmetry. What should the proponent of (OXY) say about creatures like us, but with divisible brain stems, hearts, and so on? Could such a creature lose half its matter, yet survive? Van Inwagen says it could not.¹⁶ I argued that it is implausible for the materialist to take this line.¹⁷ I will not repeat my objections here, because Hasker seems to agree with

¹⁶ van Inwagen, *Material Beings*, pp. 202–12.

¹⁷ Zimmerman, “‘Falling Elevator’ Model”, pp. 199–200.

them: he says van Inwagen *should* have said that such a creature *could* survive the destruction of half its parts at once.¹⁸ He offers van Inwagen a different response.

Hasker's discussion involves Mark, a human-like creature whose cerebrum, brain stem, and so on are neatly divisible. Hasker thinks he has found a way for van Inwagen to maintain that: (a) Mark could survive the destruction of half of his matter, (b) fission along the same plane would result in Mark's death, and (c) (OXY) is true. In the case in which half of Mark's cells are destroyed, Hasker claims that it is not "*consistent with the actual history*" of Mark that an "equal claimant" should have existed. The destruction of half of Mark's cells—the ones which, had they been carefully removed, would have constituted an equal claimant—is "*an event in Mark's own life,*" says Hasker.¹⁹

If this is to represent a way to save (OXY), the claim must be that the events undergone by the series of hunks of matter constituting Mark, in the world that includes destruction of half of his matter, cannot be paired up with intrinsically similar events undergone by a similar series of hunks of matter in a world where Mark undergoes fission. But I do not see why this must be so. Compare two surgeries: in one, an organ is cut away from a living body and simultaneously destroyed; in another, the organ is cut away in the same fashion but preserved for transplantation into another body. There need be no difference between the two surgeries, from the point of view of the hunks of matter constituting the patient's body before, during, and after the surgery; intrinsically, the events within the body of the patient will "look" exactly the same. Similarly, when considering just the region occupied by Mark's body, and the events that go on within it

¹⁸ Hasker, p. 229, proposes that "we accept as data" that fission would end Mark's life, but destruction of half Mark's parts could result in his survival.

¹⁹ *Ibid.*, p. 230.

when half of its matter is cut away and simultaneously killed, I cannot see why a region *just like that* could not contain exactly similar matter undergoing exactly similar events, when the departing organs are cut away and preserved alive. It sounds as though Hasker is saying that the otherwise similar events occurring in the world where fission occurs would differ simply because, in that world, *they would not happen to Mark*. But allowing *happening to Mark* to count as something that is required for the same history to occur in the two worlds would trivialize (OXY), turning it into something a closest continuer theorist could easily accept.

So Hasker has not provided a way for a van Inwagen materialist to avoid the closest continuer theory. But is Hasker right to think that a materialism committed to the closest continuer theory is utterly untenable?

At some points Hasker seems to argue in this way: If a closest continuer theory of identity over time is accepted, one should have to admit that identity is contingent. But that is unacceptable.

An “identity relation” that is merely contingent is not *identity*, and to accept a closest continuer theory for the persistence of persons is in effect to admit that no person is identical with a person that existed at an earlier period of her own life. And this is a price none of us should be willing to pay.²⁰

However, in a footnote to this sentence, Hasker grants that “there can be a version of the closest continuer theory that avoids making identity a contingent relation,” but one that leads to “assumptions that are at least equally problematic.”

I agree that, if the closest continuer account leads to denial of the necessity of identity, it should be rejected. There is a familiar, plausible argument against contingent identities. Actual identity requires sharing all properties. And it is hard to deny that, for

²⁰ Hasker, p. 230.

every x , necessarily, x is identical to x . But then Jones will have the property of being necessarily identical to Jones, Smith the property of being necessarily identical to Smith, and so on. Smith, then, could not be Jones without being necessarily identical to Jones; and so contingent identity is ruled out. Never mind the fact that there are ways to escape this line of reasoning. Hasker and I accept it, and that is enough for present purposes.

How is it that the closest continuer theory leads to denial of the necessity of identity? Consider the incidence of childhood fission described above—the example in which I survive and grow old, to meet my childhood offshoot in the next world who is not identical with me. It would be tempting, were I a materialist advocate of the Falling Elevator story, to imagine meeting the child and saying: “Had things gone differently—for example, had my matter been destroyed at the point of fission—I would have been identical with *him*. But, as it turns out, I am *not* identical with him.” Most of Hasker’s discussion of the Falling Elevator Model presumes that its advocate will have to accept the truth of some contingent identity statement along these lines.²¹ But there is a simple way out for the materialist (a way out that Hasker recognizes, but only in footnotes²²). Instead of saying that I could have been identical to the child, I should have said: “Had my matter been destroyed at the point of fission, the matter which was caused to appear in the next world by the fissioning of the particles would have constituted *me*, and not this child. In those circumstances, this poor child would not have existed.”²³

²¹ See Hasker, p. 221 and pp. 230–1.

²² *Ibid.*, p. 221, fn. 40; and p. 230, fn. 64.

²³ Noonan describes a couple of ways to maintain a closest continuer theory while holding onto the necessity of identity, including this one. See Noonan, pp. 157–8.

Hasker does not worry about this alternative to contingent identity, because he believes Noonan has shown it to be “at least equally problematic.”²⁴ Noonan’s problems for the view, however, do not seem to me to be nearly as bad as denying the necessity of identity. His discussion is subtle and extensive, highlighting some unintuitive consequences of closest continuer theories. The main sort of troubling consequence can be illustrated by the case of me and the result of my childhood budding. To retain the necessity of identity, the closest continuer should *not* say that, had things gone differently and my matter been destroyed just as it budded, I would have been identical with this child from whom I am actually distinct. The closest continuer should rather say that, had the matter been destroyed, *this child would not have existed*. The surprising thing about such a claim is that, even though the child would not have existed, events would have occurred that are exactly like those that constituted my Life up to “budding” and the child’s next-worldly life.

How bad is it to admit that the next-worldly child could rightly say to me, “Had your matter been destroyed at the time my matter was generated, I would never have existed, and you would now be composed of the matter that is, instead, constituting me”? I think it is not nearly so dire as rejecting the necessity of identity. Yes, it is a violation of (OXY). But that alone should hardly shock the materialist. Those who reject (OXY) can point out that there is plenty of reason to doubt whether the presence of a single organism in a region throughout a period is *ever* an entirely intrinsic matter. Whether some matter constitutes a thing of a certain kind depends upon whether there is more matter attached to it. A half of a house is not a house—even if it *would* have been a house, had it not been connected to another suite of rooms. Let “Baldy” be the part of

²⁴ Hasker directs us to consult Noonan, Ch. 7.

my body that does not include my hair. Baldy is not the whole organism; the whole organism includes at least the living parts of my hair. But if all my hair could die, and the rest of my body remain the same for any period of time, then something intrinsically just like Baldy *could* be an entire organism. Such examples are enough to overthrow (OXY) already; so, if Noonan's principle really isolates the most problematic commitment of closest continuer theories, it is a commitment that arises in very simple situations of the gain and loss of parts.

It still seems to me, then, that the best option for the materialist who opposes temporal parts is: Learn to live with the closest continuer theory. Once one has done that, there should be no problems making use of the Falling Elevator Model—at least, none coming from violation of (OXY) and recognition of the relevance of “equal claimants” in the next world.

Hershenov and the Assimilation Principle

The Falling Elevator Model implies that an organism can lose all of its tiniest parts at once, replacing them with entirely new matter. David Hershenov argues that this is not possible.²⁵ In the normal course of things, new matter is assimilated by a body gradually. “There is an overlap of the new and the old, and this enables the new particles to be assimilated into the individual's body.” Hershenov claims that this is essential to assimilation; new parts can only be taken on board in the presence of many old parts.

²⁵ Hershenov actually raises two objections. He first asserts that, “[s]ince the corpse is the same size as the being that was dying, if it is a result of fission, then half of its matter is new” (David Hershenov, ‘Van Inwagen, Zimmerman, and the Materialist Conception of Resurrection’, *Religious Studies*, 38 (2002): pp. 451–69, p. 462). But that is not how things work on the official, final version of my Model (Zimmerman, “Falling Elevator” Model’, p. 206). It is true that twice as much matter exists at the end of the process; but *all* of the new matter is in the resurrected body, none of it in the corpse. Hershenov's main objection has this version as its target.

And so, “when *every* part of the body fissions, as Zimmerman postulates, there is no assimilation of new particles and cells to earlier ones.”²⁶ Thus the resurrected body is a duplicate, constituted by brand new matter that never had a chance to become part of my body.

The exact formulation of Hershenov’s assimilation principle is important. I might be able to accept an assimilation principle that merely rules out the possibility of an organism’s losing all of its proper parts at the same time. Suppose that, as a matter of necessity, whenever a living thing dies, there are some proper parts that also cease to exist (e.g., cells or organs that perish along with the organism). I am not at all sure whether this is true. But if it were, then, so long as the resurrection jump works for the organism as a whole, it ought to succeed in bringing these proper parts into the next world as well. And therefore, whenever a living thing survives death by means of the falling elevator method, some proper parts of it will also survive.

Hershenov’s assimilation principle is clearly meant to require much more than just *some* continuity of proper parts whenever new parts are acquired. In the normal case, he says, “new particles ... get caught up in life processes with some old particles while other particles that were already part of the organism are exhaled, excreted, and perspired. There is an overlap of the new and the old [particles], and this enables the new particles to be assimilated into the individual’s body.” But “when *every* part of the body fissions, as Zimmerman postulates, there is no assimilation of new particles and cells to earlier ones.”²⁷

²⁶ Hershenov, ‘Materialist Conception’, p. 462.

²⁷ Ibid., pp. 462–3.

A crucial advantage of the Falling Elevator story is that, at some level of scale, the matter in my body stays in this world. Whatever is involved when any hunk of matter “stays put” in the ordinary way, that same sort of (boring) process happens in the space–time region occupied by my body at death and my corpse afterwards. Now, it is a vexed question how (and, indeed, whether) ordinary matter persists through time, especially at the subatomic level. Hershenov’s talk of “particles” suggests that he is accepting a presupposition of my original account: ultimately, every physical object is completely decomposable into a set of partless particles. I, in turn, made this assumption because it is part of van Inwagen’s metaphysics of composite objects. Personally, I should rather leave it an open question whether we are made of persisting simples—a question to be settled, if it can be settled at all, by physics. The assumption of ultimate simple parts is problematic because the most fundamental description of physical systems may well be hard to interpret in terms of spatially restricted, minimal parts. I know of no compelling argument for the impossibility of infinitely divisible homogeneous matter, for example; so I suppose the metaphysician has no business ruling it out as impossible. This should not stop us talking about parts and wholes, but it might undermine the idea that there is some bottom level of simplest parts. So I shall try to develop an assimilation principle that does not presuppose that every physical object is decomposable without remainder into simple particles.

The notion “decomposition without remainder” is useful in articulating assimilation principles:

(D) x is decomposable without remainder into the objects in $S =_{df}$ every member of S is a part of x , and every part of x has at least one part in common with some member of S .

Here is a first stab at an assimilation principle that would undermine the Falling Elevator Model.

(AP1) If x persists through some finite period leading up to, but not including, t , then, if x exists at t , it is not then completely decomposable without remainder into a set of things none of which was part of x before t .

This first stab is not so good, because it does not say enough about the scale of the parts in the complete decomposition. Some metaphysicians believe there are such things as mere hunks of matter—for example, the matter now making up the top half of my body and the matter now making up the bottom half. If there are such things, they are the kind of thing that cannot gain or lose any bits of matter; it is a truism that, if some of the matter in my body is taken away or some new matter added, I am no longer constituted by exactly the same matter—but rather by just *some* of the matter, or by some new portion of matter that includes the old matter as a part. So take two hunks of matter a and b that together make up all of my body prior to some time t ; and add some atoms to a to produce a^* and to b to yield b^* . At t there is a set of things, namely the set containing just a^* and b^* , which is a complete decomposition of my body at t . Yet neither of the two was part of my body prior to t . So (AP1) implies that I cannot survive this; but there really should be no problem with assimilating the two atoms that were added to a and b —there are plenty of other parts that were parts of my body before t and that remain parts of it at t .

Here is a better proposal:

(AP2) If x persists through some finite period leading up to, but not including, t , then, if x exists at t , every set S into which x is decomposable without remainder at t has members with parts that were parts of x before t .

This second assimilation principle seems to me what Hershenov wants and needs. But it is not obviously true; and there is reason to suspect that it is *actually* violated by objects in our world. At sufficiently small scales, the particles composing

the atoms in our bodies start to behave oddly. Electrons, protons, and neutrons obey surprising statistical laws that ought to undermine our confidence in the persistence through time of the particles constituting the atoms in our bodies. Electrons, protons, and neutrons are all fermions; and indistinguishable fermions caught up in the same quantum-mechanical system—for example, all the protons in my body—do not seem “trackable” over time. When plotting the probability of such a system evolving in various ways throughout a period, one must ignore potential differences in its future states that involve nothing more than the permutation of indistinguishable particles—for example, permutations in which two electrons, protons, or neutrons switch places. Why do nature’s laws fail to distinguish between circumstance *A*, in which *this* proton shows up *there* and *that* proton shows up *here*, and circumstance *B*, in which *that* proton shows up *there* and *this* proton shows up *here*? Many theoretical physicists and philosophers of physics have argued that the best explanation is that the imagined difference between *A* and *B* does not exist—these are not two distinct states of the system. If the two protons really persisted over time, *A* and *B* *would* be distinct states; and so the protons do not really persist.²⁸

Since our bodies are interacting with other systems consisting of further indistinguishable electrons, protons, and neutrons, one cannot accept this conclusion and straightforwardly affirm that most of the neutrons, protons, and electrons in my body right now were also present in my body moments ago—at least, not if that means they were definitely *not* present in the *other* physical objects surrounding me moments ago. At this subatomic level, there seems to be a set *S* that qualifies as a complete

²⁸ For discussion, see Michael Redhead and Paul Teller, ‘Particle Labels & the Theory of Indistinguishable Particles in Quantum Mechanics’, *British Journal of the Philosophy of Science*, 43 (1992): pp. 201–18, and Nick Huggett, ‘Identity, Quantum Mechanics and Common Sense’, *The Monist*, 80 (1997): pp. 118–130.

decomposition, without remainder, of my body at t ; despite the fact that no members of it are identical with parts of my body prior to t —at least, no members of it are *determinately* identical with indistinguishable particles constituting my body at earlier times. Given indeterminacy of identity over time for indistinguishable particles, (AP2) seems to be at least not determinately true.

The moral I have drawn from quantum statistics is not inevitable. There are alternative explanations of the strange statistics of subatomic particles. Bohm's version of quantum theory, for example, renders identity of particles through time unproblematic but unknowable. And even without Bohmianism, it has been argued that the statistics do not rule out the possibility of undetectable facts about fermion identity—through-time.²⁹ Still, I should not want to gamble on an assimilation principle that requires the falsehood of an attractive explanation of this strange feature of quantum statistics. One quite plausible moral to draw from quantum theory is that atoms and other distinguishable objects made of atoms can persist through time, despite the fact that, at each time, they are decomposable without remainder into a set of particles that do not, strictly speaking, persist through time. If such objects can gain new parts, then they can do so despite the fact that, at some level of smallness, they are wholly constituted by sub-atomic particles none of which existed earlier, nor, so far as we know, had parts that existed earlier.

To sum up my response to Hershenov: The Falling Elevator Model *may* be consistent with a weak assimilation principle for living things, according to which they cannot lose all their proper parts at once — so long as death, for such things, always involves the simultaneous loss of proper parts that could, themselves, survive by the

²⁹ See Simon Saunders, 'Are Quantum Particles Objects?', *Analysis*, 66 (2006): pp. 52–63.

same mechanism. The model will *not* work if (AP2) is true; but that principle is arguably too strong, probably inconsistent with the persistence of actual living things. What Hershenov needs is an intermediate assimilation principle, one that is weaker than (AP2), but still inconsistent with the resurrection jump. If there is a true principle of this sort, then I expect Hershenov will find it, if anyone can. However, it is not clearly articulated in Hershenov's criticisms so far, which suggest something more like (AP2).³⁰

Eric Olson and Discontinuous “Momentum”

In this volume, Eric Olson raises an objection to the idea that tiny particles in my body could carry information about my body's structure into the next world across a spatiotemporal gap. His worry is “not an objection to remote causation in general, or to immanent causation across a spatiotemporal gap, or even to the idea that an atom might cause itself to reappear at a distant time and place without traversing any of the intervening locations.”³¹

It is rather that no such miraculous powers could work together to insure that the atoms appearing in the next world are properly arranged so as to constitute a body just like mine at death. Olson simplifies matters by considering the case of particles that cause *themselves* to appear at a location not continuous with their current position; but his worries would apply with at least as much force to the powers needed to implement

³⁰ Even if there is no fact of the matter whether the same protons, electrons, and neutrons are present in my dying body and also in my corpse; still, there are facts of the matter about *atom* and *molecule* identity. A mode of resurrection that does not leave the very atoms and molecules in my body behind, to compose a corpse, would still constitute body-snatching. The Falling Elevator Model has a job to do even assuming indeterminacy of identity at the quantum level.

³¹ Eric Olson's article in this volume (Chapter 4), p. xxx.

the Falling Elevator Model (in which an atom causes a distinct but indistinguishable atom to appear elsewhere):

How could an object that perishes have the power to reappear at some particular distant location? How could it “find” that place? For an object to cause itself to reappear at a nonrandom location, it would need to have a property analogous to momentum. But the momentum an object has at a given time can only tell it where to be next. It can tell it what direction to move in and how fast. It can’t tell it where to be at a time after the object has ceased to have that momentum. ... [E]ven if your atoms could reliably find the next world, they could not possibly know where and when to reappear so that the result was a living human being, and not simply a cloud, widely dispersed across space and time. It might happen, perhaps, but it would be fantastically unlikely. It would be like some of the atoms released in an exploding star arranging themselves spontaneously into a living human being. And even if such an event were to get your atoms to the next world arranged as they are now, it wouldn’t get *you* there, as the atoms’ organic arrangement would not have been immanently caused by their thisworldly arrangement, but would be an artifact of chance.³²

Olson has granted the possibility of “immanent causation across a spatiotemporal gap”; but then I think he ought to grant the possibility of “a property analogous to momentum” that determines where the effect occurs. He seems to think that causation over a gap must be imprecise with respect to the location of the effect, because, during the gap, nothing has the momentum–like property. But I do not see why the momentum–like property needs to continue to be exemplified in order for it to succeed in “pointing to” a specific future location. I shall construct a number of momentum–like properties that could serve to explain why the new particles end up precisely where they do, retaining all of their spatial relations and relative states of motion.

³² Eric Olson’s article in this volume (Chapter 4), p. xxx.

Were we inhabiting a Newtonian substantial space, the trick could easily be managed in any number of ways. Olson is willing to grant that “mnemic causation” is possible—that is, he grants that there could be causal relations that hold between temporally distant events, and not in virtue of intervening causal processes. A temporally gappy causal relationship resembles a ticking time bomb; the cause occurs, and, after a certain interval has passed—long or short, precise or imprecise—the effect occurs. In Newtonian space–time, there are non–relative, precise facts about temporal distances between events; so there is no reason why the ticking time bomb of a mnemic causal relationship could not be perfectly precise. The atoms in my body could, for instance, cause the appearance of duplicate atoms precisely six billion years from the instant at which they are given this power. Again, assuming Newton’s absolute space, the atoms could cause more than just the existence of duplicates *somewhere* in space at that precise time. Let every atom in my body, at my death, be given the power to cause a duplicate to appear at a precise temporal interval in exactly the same part of absolute space it then occupies, and in exactly the same state of motion relative to space. Of course God would have to insure that, in the next world, the parts of space we occupied at our deaths remain habitable, or else be prepared to whisk us out of harm’s way as soon as we reappear. A speculative geography of the next world could no doubt be concocted so as to allow for our reappearance by this means, in suitable surroundings.

Momentum–like properties can also be constructed in the Minkowskian space–time of Special Relativity, which includes universe–wide inertial frames that could be used to play the same role as substantial space in the Newtonian context. The Minkowskian manifold lacks Newton’s frame–independent facts about the number of years or miles between spatiotemporally separated locations. But for every pair of

locations, there are frame–relative facts about such distances; and one frame might be particularly relevant to the powers of atoms in a dying body, so that they duplicate themselves at a precise temporal distance (relative to that frame) in the same state of motion (relative to that frame). One version of this approach would make the same inertial frame relevant to all dying bodies. Perhaps God has already chosen a frame to be the rest frame of the New Jerusalem, and our bodies are given the power to appear after a certain number of years, as years are measured by clocks in the New Jerusalem; and in the same state of motion they were in at death, relative to the rest frame that will be occupied by the Holy City. Another possibility would be that the relevant frame for each body is determined by its own state of motion at death—for example, by its center of mass.

In General Relativity, however, it becomes trickier to cook up spatial and temporal components of a momentum–like property that will do the job—a property that will send the duplicate particles to a particular place in the future, arranged so as to form a resuscitable body then, and arranged thus because of their current arrangement. The space–time of a General Relativistic universe not only lacks privileged sameness of place over time, it also lacks the sort of global inertial frames that I appealed to in the Minkowskian setting (at least, it has no such frames so long as it has any material contents at all). One possibility worth considering is that there is one “timer” that sets the same deadline for all instances of effects produced by mnemonic causation. The power to generate duplicate atoms could, for example, be a power to cause them to appear somewhere within a single future space–like slice—say, a slice in which a dramatic universe–wide event occurs, such as a massive overhaul of the created world. But how could the place and time of my death be matched up with a particular location within

such a slice, in such a way that each of the atoms in my body is pointed toward an appropriate subregion of the new location, resulting in a duplication of my body's dying structure?

One might be tempted to posit extra dimensions—beyond the four dimensions of a standard space–time manifold—in which paths link the locations of my particles at death to locations later on; these higher–dimensional paths could be constructed so as to insure that the later locations stand in the same geometrical relations as the locations of particles in my dying body. But one might instead rethink the idea that individual atoms (or smaller particles) are given *independent* replicating powers. If each atom produces a duplicate atom based on an independent power, their powers need to be precisely coordinated, lest the atoms generate nothing more than a next–worldly cloud, just as Olson says. But suppose the miraculous powers to generate new matter are given, not directly to atoms or to the states of individual atoms, but to the quantum state of all the fermions and bosons in my body, say. In that case, their arrangement here and now causes two subsequent arrangements: a similar (but dead) arrangement of subatomic particles in a contiguous space–time region, and a similar (but rapidly reviving) arrangement triggered by the world–wide event which marks the beginning of the next world. The location at which the resurrected body appears could be an indeterministic matter; each human–shaped quantum system might stand an equal chance of showing up in a given region at the magic moment.

Conclusion

I do not wish to rely upon the Falling Elevator Model as a mechanism for *my* survival. I hope, like the Apostle Paul, that one can be absent from this body yet present with the

Lord, even before a general resurrection returns us all to a more natural, embodied state. But I do also want to make sense of the way in which a resurrected body represents the continued life of *this very body*. The Falling Elevator Model is doubtless not the only way God could succeed in doing so, short of body–snatching. But it still seems to me to be *one* way to do it, despite the criticisms of Hasker, Hershenov, and Olson.³³

³³ I am grateful to David Hershenov for saving me from a serious mistake in my discussion of assimilation principles.