

## HOW TO BE AN ELEATIC MONIST†

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There is a tradition according to which Parmenides of Elea endorsed the following set of counterintuitive doctrines:

- ( $\alpha$ ) There exists exactly one material thing.
- ( $\beta$ ) What exists does not change.
- ( $\gamma$ ) Nothing is generated or destroyed.
- ( $\delta$ ) What exists is undivided.

For convenience, I will use the label ‘Eleatic monism’ to refer to the conjunction of  $\alpha$ – $\delta$ .<sup>1</sup>

Eleatic monism flies in the face of common sense. Scholars of pre Socratic thought rarely have anything to say in its defense beyond what the Eleatic philosophers said themselves, and virtually no one treats it as a serious option in metaphysics today.<sup>2</sup> Jonathan Barnes declares that  $\alpha$  by itself (never mind the remaining doctrines) is “at best absurd and at worst unintelligible.” (1979a, p. 2) It is not hard to see why. How could anyone possibly look at a sandy beach, witness the birth of a child or the death of a loved one, or gaze into the far reaches of space and believe that there exists exactly one thing that is neither generated nor destroyed, unchanging, and undivided?

The problem is not just that Eleatic monism seems to be false. Rather, the problem is that it seems to be so incredibly wide of the mark, so vastly out of touch with the truth, that it is hard to see what sorts of considerations could have led someone even to take it seriously, much less embrace it. What I offer in this paper is a way into the monist’s frame of mind—a model, if you will, for understanding this otherwise apparently unintelligible world view. I will not argue that we should find Eleatic monism plausible; but I will show that, contrary to what many of us might initially have expected, the doctrine does have a legitimate place on the landscape of contemporary metaphysics.

I will argue that the doctrines of Eleatic monism ought to be accepted by anyone who accepts the following four theses:

EXTENSIONISM	There are no unextended material objects.
EXCLUSIVISM	Not every filled region of space at every time is filled by a material object.
ETERNALISM	There are some past objects, there are some future objects, and there neither were nor will be objects that do not exist.
THE PLENUM PRINCIPLE	Spacetime is a connected set of points, and every region of spacetime, no matter how small, is filled by matter.

Exclusivism stands in contrast with what we might call *inclusivism*, the thesis that every filled region of space at every time is filled by a material object.<sup>3</sup> Eternalism is to be understood in contrast with presentism, the thesis that it always has been and always will be the case that there are no actual but non-present objects.<sup>4</sup> Extensionism and the plenum principle are self explanatory.<sup>5</sup>

Though I will not defend this claim here, I believe that each of the four theses can reasonably be attributed to the Eleatics. Furthermore, they are all very well-motivated even from a contemporary point of view. Exclusivism is implied by the common-sense view that (for example) there is no object that fills the scattered region occupied by the Sears Tower and the moon. Eternalism is implied by the special theory of relativity.<sup>6</sup> The plenum principle is consistent with contemporary physical theory, and is often taken for granted as an idealizing assumption.<sup>7</sup> Extensionism is motivated by the notorious paradoxes of Zeno, which continue to be discussed, developed and taken seriously in the contemporary literature.<sup>8</sup> Thus, by showing that Eleatic monism ought to be accepted by anyone who accepts these four theses, I will have done quite enough to show that, counterintuitive or not, it is a live option in contemporary metaphysics that deserves to be taken a lot more seriously than it has been.

My plan will be as follows. I will begin by discussing some technical details. I expect that some readers will be suspicious that talk of times and regions of space in the formulation of exclusivism, and unqualified talk of past and future objects in the formulation of eternalism, is incompatible with current physical theory. I also expect that some readers will wonder about the relations between inclusivism and a very similar view, mereological universalism, which I have defended elsewhere (Rea 1998b). Section 1 will be devoted to addressing these issues. In section 2, I will begin the main argument of the paper by showing that anyone who endorses extensionism, exclusivism, and the plenum principle ought to accept  $\alpha$ . In section 3, I will show that anyone who accepts both  $\alpha$  and eternalism ought to accept  $\beta$ . In section 4, I will show that anyone who accepts both  $\alpha$  and eternalism ought to accept  $\gamma$ . Finally, in section 5, I will show that  $\delta$  follows directly from  $\alpha$ .

## 1. Technical Concerns

There are diverse views about the nature of times. One natural view is that times are concrete sums of events, or of spatial points. Another is that times are abstract states of affairs—total ways the world is, was, or will be. But one might worry that talk of times is unacceptable from the point of view of contemporary physics. The reason is that such talk might seem to presuppose that time as we know it is an absolute, observer-independent feature of reality, whereas the special theory of relativity seems to imply that space and time are both mere appearances of a more fundamental reality—namely, spacetime. Similar concerns might arise with respect to talk about regions of space and also with respect to unqualified talk about “past” and “future” objects. Thus, it might seem that, at best, the formulations of exclusivism, eternalism, and related doctrines are insensitive to relativity theory and, at worst, they are ontologically loaded in a way that will substantially affect the arguments that follow.

However, there are ways of understanding talk of times, regions of space, and past and future objects that get around these concerns. We may take a concrete time to be a plane of simultaneity, or a sum of point-sized events in spacetime all of which are simultaneous with one another in some frame of reference; we may take abstract times to be the total state of the universe on such a plane; and we may take regions of space to be regions of spacetime on such a plane. Presentism may then be defined as the view that always there exists exactly one concrete time or, alternatively, that always exactly one abstract time obtains.<sup>9</sup> Eternalism may be defined as the view that every concrete time that ever did or will exist (in any frame of reference) in fact exists or, alternatively, that every abstract time obtains. Exclusivism will be the view that not every filled region at every concrete time is filled by a material object or, alternatively, that not every filled region on every plane corresponding to an abstract time is filled by a material object.

Given what I have just said about exclusivism, one might wonder whether inclusivism is equivalent to the doctrine that every filled region of spacetime is filled by a material object. The answer is no. Inclusivism as I have defined it implies only that every filled region *at every time* is filled by a material object. But some filled regions of spacetime may not exist at a single time. They might instead be regions that span across multiple times without themselves being wholly located on any time.

Despite superficial similarities, inclusivism is also different from *mereological universalism*, the doctrine that the members of every set of disjoint objects compose something. One reason is that inclusivism is, but universalism is not, transparently incompatible with the view that the world contains matter but no material objects.<sup>10</sup> Another reason is that the conjunction of universalism with inclusivism and eternalism implies that every filled region of spacetime is filled by a material object whereas inclusivism and eternalism alone do

not. (Here is the argument: Inclusivism implies that every filled spatial region at every time is filled by a material object. Eternalism implies that every time and every object that ever did exist or will exist *does* exist. Now, consider a filled region of spacetime R. Either R is located at a single time or it spans multiple times. If it is located at a single time, then inclusivism implies that R is filled by a material object. On the other hand, if it spans multiple times, then R is the sum of multiple filled sub-regions each of which is located at its own time. By inclusivism, each of those sub-regions is filled by a material object; but it does not yet follow that those objects have a sum. Universalism, however, does imply that those objects have a sum, and so it implies that R is filled by their sum.) Furthermore, if we assume (as seems plausible) that there can be matter only if there are material objects, universalism implies inclusivism but not the other way around. Thus, universalism is a stronger doctrine than inclusivism. So much for technical concerns. I turn now to the main arguments of the paper.

## 2. Against Plurality

Spacetime exists, and some of it is filled by matter. This much is obvious. Not so obvious, however, are the conditions under which a filled region of spacetime is filled by a material object. Common sense tells us that regions filled by matter arranged treewise, or cellwise, or computerwise, or housewise are filled by material objects, whereas regions such as the scattered region filled by the moon and the Sears Tower are not. But common sense is mistaken on this score.

Consider the question, “Under what conditions is a filled region of spacetime filled by a material object?” I’ll call this the “Unity Question” since it effectively asks for the conditions under which the matter filling a region of spacetime composes a single unified thing.<sup>11</sup> In this section, I will argue that, given the plenum principle, the following three claims are the most reasonable answers to the Unity Question: (i) every filled region of space at every time is filled by a material object (and perhaps others are as well), (ii) all and only unextended regions of spacetime are filled by material objects, or (iii) the largest filled spatiotemporal region is filled by a material object, and there are no objects distinct from that one. If I am right, then the common sense beliefs mentioned above about which regions are filled by objects and which are not cannot be correct. Furthermore, and more importantly for our purposes, if I am right, then anyone who accepts exclusivism, extensionism, and the plenum principle should accept (iii) and, therefore, should also accept  $\alpha$ .

Here is my argument for the claim that (i-iii) are the most reasonable answers to the Unity Question:

- (1) If we believe that there are artifacts, then we should accept inclusivism.
- (2) If we reject artifacts, then we should not believe in any composite objects.<sup>12</sup>

- (3) However: we should believe that there is *some* material object or other.
- (4) Therefore: If we reject artifacts, we should believe in material simples but no other material objects. (From 2, 3)
- (5) We should not believe in a plurality of *extended* simples.
- (6) Therefore, if we reject artifacts, we should believe either that there are unextended simples but no other material objects or that there exists exactly one extended simple. (From 4, 5)
- (7) Therefore: if we accept artifacts we should accept (i), and if we reject them then we should accept (ii) or (iii). (From 1, 6)

This concludes the argument; now I will defend the premises.

### 2.1. Defense of Premise 1

Consider your dining room table. Now suppose that, by cosmic accident, in a virgin forest some matter appears that is arranged in precisely the same way as the matter of your table. Does the matter in the forest compose an object? If so, presumably it does so because the following general claim is true:

- ( $\varphi$ ) Whether the matter in a region composes an object depends entirely on how that matter is arranged. It does not depend on how that matter is related to human minds or mental activity.

This general claim is fairly intuitive.<sup>13</sup> However, together with the claim that artifacts (such as tables) exist, it implies inclusivism.<sup>14</sup>

Consider any filled region R of space at some time. Obviously the matter in R will be arranged in some way or other; and, regardless of how it is arranged, had it been arranged in just that way *for a purpose*, there would be considerable pressure on those who believe in artifacts to say that R contains an artifact. Of course, some ways of arranging matter are such that no *human* could arrange matter in that way for a purpose. But there seems to be no reason for thinking that there couldn't be purposive agents vastly more creative than we are, and so there seems also to be no reason for thinking that some ways of arranging matter are essentially non-purposive. Thus, there is good reason to think that, for any filled region of space, had the matter in that region been arranged in just the way that it is for a purpose, the region would have contained an artifact. But notice: In accepting  $\varphi$ , we have already conceded that whether the matter in a region composes an object does not depend upon anyone's attitudes, purposes, and so on. Thus, if a region would have contained an object if its matter had been arranged the way that it is for a purpose, that can only be because the region *already* contains an object. Thus, the admission that there are artifacts opens the ontological floodgates. Once we admit artifacts, we admit that purposive arrangement is sufficient for composition; but then the

only way to avoid saying that composition depends in some way upon purpose is to accept inclusivism.<sup>15</sup>

Some philosophers reject  $\varphi$ . Those who do are committed to *constructivism about composite objects*—the thesis that the apparent sortal properties of composite objects (properties like *being a horse*, *being an electron*, and even *being a composite object*) are not intrinsic to anything. The reason is obvious: If composition depends on human mental activity, then for any composite object kind K, it is impossible for a K to exist unaccompanied by human beings; thus the property of being a K is not independent of accompaniment; thus it is not intrinsic.<sup>16</sup> But once we see this commitment, we can see also that rejecting  $\varphi$  is of no use in resisting the overall argument of this section. The central question of this section, after all, is not whether we conceive of and describe the world as if it contains a plurality of material objects (obviously we do), but whether *independently of our conceptual and linguistic activity* the world contains such a plurality. Thus, it is a mistake in the present context to think that rejecting  $\varphi$  offers a way of preserving belief in artifacts without commitment to inclusivism, for the person who rejects  $\varphi$  does not really believe in artifacts. One who rejects  $\varphi$  may well *say* she believes in artifacts (and who is to stop her?). But she does not think that artifacts, or any other composite object, are among the denizens of the world as it is independently of our conceptual and linguistic activity.

## 2.2. Defense of Premise 2

So, if one believes in artifacts, then one ought also to believe inclusivism. But what if one is unwilling to accept inclusivism? What if, in fact, one takes commitment to inclusivism as good reason to reject belief in artifacts? As I see it, one should believe only in simples. I say this because I accept premise (3), defended below, and because I think that there is no non-arbitrary way of excluding artifacts from one's ontology without excluding every other composite object as well.<sup>17</sup> I cannot *prove* that artifacts could only be excluded by an arbitrary principle. But I think that a close look at the two most detailed recent attempts to defend ontologies that include composite objects but not artifacts will reveal that the grounds for optimism about finding a non-arbitrary way of excluding artifacts are shaky at best.

The two attempts that I have in mind are Peter van Inwagen's defense of the claim that there are no composite objects except living organisms and Trenton Merricks's defense of the claim that there are no composite objects except those that have non-redundant causal powers. Both van Inwagen and Merricks reject artifacts. However, their arguments prove either too much or too little: either they speak in favor of eliminating all composite objects or they are insufficient to motivate the rejection of artifacts.

Van Inwagen's view that there are no composite objects other than living organisms follows from what he takes to be the only plausible answer to the

Special Composition Question. The Special Composition Question asks under what conditions the members of a set of objects compose something. After surveying and rejecting various answers, van Inwagen settles on the following: The members of a set of objects compose something just in case the set's only member is a simple or the activity of the members of the set constitutes a life. (1990, sec.9) But the arguments for this view are unconvincing. Van Inwagen offers three reasons for thinking that all and only living organisms deserve a place in our ontology. First, he says that we are forced to believe in at least some organisms—namely, those that think. Second, he expresses pessimism about finding a plausible answer to the Special Composition Question that will let in organisms, artifacts, and natural bodies. Third, he notes that in rejecting artifacts and natural bodies, we avoid all of the problems associated with belief in such things. (1990, pp. 122–3) In fact, however, we are no more forced to believe in organisms than we are forced to believe in computers or various other artifacts; and many of the metaphysical problems that attend belief in organisms also attend belief in artifacts. This is the heart of the problem. Once this is clear, we see that the decision to privilege organisms over artifacts is arbitrary. An answer to the Special Composition Question that lets in (for example) all and only *computing* things will be just as plausible or implausible as van Inwagen's answer; and the prospect of avoiding metaphysical problems will speak just as strongly or weakly in favor of the categorical elimination of organisms as it does in favor of the categorical elimination of artifacts.

According to van Inwagen, we are forced to believe in thinkers because of Cartesian arguments. The Cartesian arguments that he has in mind are arguments like this: "I exist. If I exist, I am a composite material thing. Therefore: some composite material thing exists." The second premise is not Cartesian, but it is entailed by the constraining assumptions listed in the Preface to *Material Beings*.<sup>18</sup> In support of the first premise, van Inwagen points out that he, like everyone else, knows that he exists because he is directly aware of his own existence. To those who would challenge this claim by saying that we are in fact directly aware only of our own mental activity and not of our own existence as a single unified entity, van Inwagen responds by saying that thought seems to require a unified subject. This latter claim is also among the constraining assumptions; but elsewhere he offers a few remarks to motivate it. The activities of artifacts—shelves, automobiles, etc.—are plausibly construed as "disguised cooperative" activities, he says. But thought is different. On his view, it is easy to see how simples might work together without composing anything to hold up books or to move a human being down the road, but it is not easy to see how simples might work together to think without composing anything. Thus, thought seems to require a subject whereas the activities of artifacts do not. (1990, pp. 117–8)

But why the difference? If composition isn't required for simples to cooperate in performing all of the very complicated activities that automobiles perform, why should it be required for simples to cooperate in thinking? Perhaps

the answer will appeal to some allegedly relevant difference between automotive functions and the activities of thinking organisms. But if this is the answer, then change the example. The activities of computers are in many relevant respects very similar to the activities of thinking organisms. Thus, if composition isn't required for simples to cooperate in performing all of the complex thought-like activities that my computer performs, it is very hard to see why it should be required for simples to cooperate in thinking. No difference between computers and human beings seems to make a difference with respect to explaining why the activities of one but not the other could be understood as a disguised cooperative activity. But if that is right, then there is no clear reason for thinking that composition is required for mental activity but not for computer activity. Thus, we are forced to believe in organisms only if we are also forced to believe in computers; and so if it is acceptable to eliminate artifacts altogether, it should also be acceptable to eliminate organisms altogether.

One might insist that conscious mental activity is relevantly different even from computer activity, so that (contrary to what I have just said) the activities of computers can be understood as disguised cooperative activities involving simples whereas human consciousness cannot. Perhaps this is right. Perhaps consciousness is *sui generis*. But if so, then it is hard to see why Cartesian considerations should count as evidence in favor of the existence of anything material rather than as evidence against materialism. Granted, such considerations give me evidence of my own existence. But they do not give me evidence of my existence as a material object. Rather, they seem to give me evidence that I am not a material object. Suppose I believe, as van Inwagen does, that all of the activities of alleged artifacts and natural bodies are plausibly construed as disguised cooperative activities involving simples. Suppose I also believe that thought requires a subject, but, like van Inwagen, I have no evidence that any of the other activities of living organisms require a subject. My evidence then points to the conclusion that, apart from thought, all of the activities attributed to objects composed of material simples are plausibly understood as disguised cooperative activities involving simples. Shouldn't I then infer that thinkers are *not* composite material objects? It is hard to see why I would go the other way and infer that thinkers and things relevantly like them are the *only* composite material objects. Certainly nothing *forces* me to go this way. Thus, even if consciousness is *sui generis*, there seems to be no reason to think that Cartesian considerations by themselves force us to believe in any material object. So if we have good reasons for eliminating artifacts, it is hard to see why we wouldn't go the whole distance and eliminate organisms as well.

Of course, Cartesian considerations plus an unwavering commitment to materialism will force us to believe in some material object or other; and let us simply grant that the kinds of material objects we would thus be forced to believe in are human beings. Even still, there is no more reason to expand our ontology to include all and only organisms than there is to expand our ontology to include (say) all and only computing things. After all, computing things have

at least as much in common with thinkers as organisms do; and the property of being a computing thing is no more or less vague than the property of being an organism. Thus, the exclusion of artifacts seems arbitrary and unmotivated.

So there seems to be no principled reason in van Inwagen's work for thinking that living organisms exist but artifacts do not. Merricks defends a somewhat similar ontology; but he avoids the charge of arbitrariness by explicitly defending a principle that allegedly supports the ontology. The problem, however, is that the very evidence he points to in support of his ontology seems in fact better to support the conclusion that either his principle is false (in which case it proves nothing) or else it is true but implies that there are no composite objects at all (in which case it proves too much).

Like van Inwagen, Merricks takes his prior commitment to materialism and his view that thought requires a subject as convincing evidence that at least human beings are composite material objects. Also like van Inwagen, he argues that there are no analogous considerations supporting belief in inanimate macrophysical objects and that eliminating such things solves various metaphysical puzzles without doing violence to common sense beliefs about the world. (2001, chs. 2 & 5) Importantly, however, these arguments are supplemented by the following further claim: Human beings, but not inanimate macrophysical objects, have *non-redundant causal powers*, or causal powers that are not exhaustively duplicated by the conjoined causal powers of their microphysical parts. This implies that inanimate macrophysical objects, if they exist at all, are *over-determining* causes of their effects. Thus, Merricks argues, since we should not believe in overdetermining causes without good reason, and since we have no good reason for believing that the effects commonly attributed to inanimate macrophysical objects are overdetermined, such objects ought to be eliminated. (2001, chs. 3 & 4) Human organisms, however, are to be retained. More generally, *all and only* those things with non-redundant causal powers are to be retained. In light of this principle, Merricks advocates an ontology that includes conscious organisms; but he is officially silent on the question of what exists besides conscious organisms. Strictly speaking, he endorses only the claim: "to be [for material objects] is to have non-redundant causal powers" (2001, p. 115).

But why think that there are *any* composite objects with non-redundant causal powers? In defending the claim that the causal powers of inanimate macrophysical things are redundant, Merricks asks us to consider the example of a baseball. (2001, ch. 3) Everything that a baseball might be said to cause (visual sensations, vibrations in a bat, the shattering of a window) is also caused by the activity of the atoms that allegedly compose the baseball. Moreover, according to Merricks, it is not the case that the baseball and the atoms are in any sense *cooperating* causes of the baseball's effects. The baseball does not cause its atoms to do the things that they do; nor does it work together with its atoms in any other way to cause the effects that it causes. Rather, says Merricks, the causal powers of the atoms working together exhaust the powers of

the baseball. And so too for any inanimate macrophysical object. But couldn't the same be said for human beings, or for any other organism? Indeed, wouldn't any reason for thinking that the powers of baseballs are exhausted by the powers of their microphysical parts also be a reason for thinking that the powers of *any* alleged composite object are exhausted by the powers of their microphysical parts? If so, then Merricks's principle proves too much, implying that there are no composite material objects whatsoever.

Merricks does not argue straightforwardly for the conclusion that human beings have non-redundant causal powers. Instead, he argues for the conclusion that we have no reason to think that the causal powers of conscious mental states are redundant. If this is true, he thinks, then Cartesian considerations, in conjunction with various intuitive reasons for rejecting dualism, will be sufficient for our being warranted in believing that we (conscious beings) exist, that we are composite material objects, and (therefore) that our causal powers are in fact not redundant. (2001, chs. 4 & 5) I shall not contest this latter claim. What I am more interested in is Merricks's argument for the conclusion that we have no reason to think that the causal powers of conscious mental states are redundant.

At the heart of his argument is the claim that the property of being conscious is causally efficacious and not supervenient upon the properties and relations obtaining among microphysical objects. There are different kinds of supervenience. The sort Merricks focuses on is what some call 'strong' or 'logical' supervenience: A properties supervene on B properties iff, as a matter of metaphysical necessity, once the B properties are fixed the A properties are fixed as well.<sup>19</sup> Merricks grants that if consciousness *did* supervene on intrinsic microphysical structure, then the fact that a human being causes something by virtue of being conscious might, all by itself, constitute reason for thinking that the relevant effect was non-cooperatively caused by the atoms that compose the human being. But, he argues, given that consciousness does not supervene, the fact that a human being causes an effect by virtue of being conscious does not, all by itself, give us reason to believe that the human's constituent atoms non-cooperatively caused the effect. He then turns to the question of what *else* could give us reason to think that the effects of being conscious are caused by the behavior of our constituent atoms. He considers and rejects three possibilities. I have no substantive quarrel with his rejection of the first two possibilities, so I shall pass over them in silence. But the third possibility merits closer attention.

One would clearly have reason to think that the effects of being conscious are non-cooperatively caused by the behavior of our constituent atoms if one had reason to believe the following claim:

Microphysical Closure (MC): Every physical effect has microphysical causes to which non-microphysical causes are causally irrelevant.<sup>20</sup>

As I understand it, MC is equivalent to the claim that all effects of alleged macrophysical objects are non-cooperatively caused by the behavior of their

microphysical parts. Merricks rejects MC partly on the grounds that it is an empirical claim whose truth has not yet been empirically established. But all by itself, this response is inadequate. In the argument that eliminates artifacts, Merricks relies on something like the following assumption:

Restricted Microphysical Closure (RMC): All of the effects of alleged inanimate macrophysical objects are non-cooperatively caused by the behavior of their microphysical parts.<sup>21</sup>

But there is no reason to think that this claim is on any better or worse footing empirically speaking than MC. Any empirical reason for thinking that all of the effects of *inanimate* macrophysical objects are non-cooperatively caused by their microphysical parts will also be (or correspond to) an empirical reason for thinking that all of the effects of *all* macrophysical objects are non-cooperatively caused by their microphysical parts. So if Merricks were to rest his rejection of MC entirely on the inadequacy of empirical evidence in support of it, he would be unable to resist someone who rejected the more restricted claim about inanimate macrophysical objects on precisely the same grounds.

In fact, Merricks does not rest his rejection of MC entirely on the dearth of empirical evidence in its favor. He offers two supplemental claims. First, he reminds us of his argument for the claim that consciousness does not supervene on microphysical properties and relations, and he says that this claim counts as evidence that MC is false.<sup>22</sup> Second, he says that MC does not *seem* to be true, since it does not seem that conscious mental events and their effects are sums of atomic events and their effects.<sup>23</sup> Both claims are problematic.

Merricks's defense of the claim that consciousness does not supervene rests on two assumptions: (a) that consciousness is intrinsic and (b) that the same conscious states cannot be tokened in multiple overlapping objects. I do not endorse these assumptions; and so I am not persuaded by Merricks's argument for the conclusion that consciousness does not supervene.<sup>24</sup> But rather than pursue these objections in detail here, I want instead to focus on a deeper problem with his appealing to the anti-supervenience argument as evidence against MC. The problem is just that the claim that consciousness fails to supervene is *not* evidence against MC. Recall that the sort of supervenience Merricks focuses on is *strong* supervenience. But the failure of strong supervenience does not imply the failure of *causal determination*. Property dualists like David Chalmers, for example, deny that consciousness strongly supervenes on the microphysical; but they do not deny that conscious states are non-cooperatively *caused* by microphysical events. (Cf. Chalmers 1996, ch. 4) At most, the failure of strong supervenience only guarantees that conscious mental states are not identical to or logically entailed by microphysical properties. It does not guarantee that MC is false, even on the assumption that consciousness is causally efficacious.

Merricks's second reason for rejecting MC is that it doesn't seem to be true because conscious mental events and their effects don't seem to be sums of atomic events and their effects. This is a straightforward appeal to intuition. As

such, it seems rather out of place as evidence against MC in light of his admission that MC is an empirical claim. More importantly, however, this claim suffers from the same problem as the first: to say that conscious mental events are not *identical* to physical events or sums thereof is not the same as saying that the former are not causally determined by the latter. And from a materialist point of view, the intuition that all of the effects of consciousness are *caused* by microphysical events seems to be on much surer footing than opposing intuitions.

Of course, if we *accept* both MC and Merricks's claim that consciousness fails to supervene, it is quite natural to believe that conscious mental states are either overdetermining causes of their effects or not causally efficacious at all. (Chalmers (1996) argues that there is room for other alternatives; but let us leave those aside for now.) Assuming these are the only alternatives, and assuming we have accepted Merricks's assumption that conscious states are causally efficacious, we are left with a choice between rejecting MC and accepting the claim that conscious mental states are overdetermining causes of their effects. Again, as Merricks says, we should not believe in overdetermination without good reason. But science gives us *very* good reason to believe that all of the effects of alleged macrophysical objects (human beings included) are *caused* by the properties and activities of their microphysical parts. Again, it is hard to think of a reason for believing RMC that would not also be a reason to believe MC; and Merricks himself is committed to believing that we have very good reason to accept RMC. Furthermore, it is hard to see how conscious mental states could possibly be *cooperating* causes of their effects if, as Merricks thinks, human beings are material objects composed of microphysical parts. Thus, if we are convinced that human beings exist, are material objects, and have causally efficacious, non-supervenient conscious mental states, it seems that the right conclusion to draw is that the principle "to be [for material objects] is to have non-redundant causal powers" is false.

One further point is worth mentioning. If sound, Merricks's arguments most clearly support the conclusion that consciousness is unique among (alleged) physical properties in failing to be non-cooperatively caused by microphysical events. But then shouldn't we take the proper upshot of those arguments to be that the subjects of conscious mental states are *non-physical* objects? In other words, shouldn't we see in Merricks's work a straightforward argument for *substance dualism* rather than an argument for the conclusion that thinkers and other things with non-redundant causal powers (if there are any such things) are the *only* composite material objects? Merricks, of course, says no. His goal is, among other things, to make room in our ontology for emergent properties with emergent causal powers. But that is a mighty large task with consciousness as his only example and a counterintuitive ontology as the consequence. Much better, it would seem, to accept overdetermination or epiphenomenalism or Chalmers's panpsychism or Cartesian dualism.

Merricks has given no convincing reason for rejecting MC. Hence, he has given no convincing reason for thinking that the causal powers of human beings are any less redundant than the causal powers of inanimate macrophysical

objects. We might take this as evidence that human beings are to be eliminated along with everything else and that therefore either thought doesn't require a subject or else it takes place in non-material things. Or we might take this as evidence that the principle 'to be is to have non-redundant causal powers' is false. Either way, Merricks, like van Inwagen, has failed to motivate an exclusivist ontology that eliminates artifacts without eliminating all other composite objects.

I conclude that the prospects are dim for defending an exclusivist ontology that includes composite objects but no artifacts. If there are composite objects, human beings, automobiles, and computers are among them. If some of the paradigmatic examples belong in our ontology, all of them do, and we must accept whatever excess baggage they bring along. On the other hand, if some have to be ruled out, then they all should be ruled out.<sup>25</sup>

### 2.3. *Defense of Premise 3*

So if we reject inclusivism, we should believe that there are no composite objects at all. Thus we face two alternatives: We can believe that there is matter but no material objects, or we can believe only in simples. (I assume that believing that nothing at all exists, not even matter, is beyond the pale.) Premise (3) rules out the first alternative. I accept this premise because, even if there are no familiar material objects, it seems clear that at least there is such a thing as the material world or the cosmos, and that it makes sense to ask whether *it* could have been bigger or smaller, whether it could have been propertied differently, and so on. But, as far as I can tell, the only way to understand such talk is to take 'the world' either as a term referring to a particular material object or as a collectively referring term like 'the L.A. Philharmonic Orchestra' or 'the Notre Dame football team'—a term that refers not to a single material object but to many objects collectively. Either interpretation, however, entails that there exists *at least* one material thing. Hence, we should not say that *no* region contains a material object.

### 2.4. *Defense of Premise 5*

I have argued so far that if we accept artifacts we should accept inclusivism, and if we reject them then we should believe only in simples. But suppose we do reject artifacts. What kinds of simples should we believe in, and how many should we believe in? Should we believe in unextended simples, or extended ones? And if the latter, then should we believe in many or just one?

I will not attempt to say whether we should believe in unextended simples. But I will argue that we should reject the view that there is nothing but a plurality of extended simples. Consider the question, which Ned Markosian (1998) calls the "Simple Question": What are the necessary and jointly sufficient conditions for an object's being a simple? Answers compatible with extensionism are not abundant in the literature, but there are at least two worth considering.

The first is that an object is a simple just in case it is a self. This answer is inspired (but perhaps not endorsed) by E.J. Lowe.<sup>26</sup> The second answer, defended by Markosian, is that an object is a simple just in case it is a *maximally continuous object*, where the term ‘maximally continuous object’ is defined as follows:

*x* is a *maximally continuous object* =<sub>DF</sub> *x* is a spatially continuous object and there is no continuous region of space, *R*, such that (i) the region occupied by *x* is a proper subset of *R*, and (ii) every point in *R* falls within some object or other. (Markosian 1998, p. 221)

However, as I shall now argue, neither of these answers supports the claim that there exists nothing but a plurality of extended simples; and I am at a loss to imagine any other that would.

The Lowe inspired answer is compatible with the claim that there exist many extended simples; but the underlying view of selves that Lowe defends seems to be incompatible with the claim that there exist *only* extended simples. According to Lowe, selves are simple substances that have physical properties (like *being six feet tall* and *weighing seventy kilograms*). But they are psychological substances rather than biological substances, and their physical properties supervene on the physical properties of the biological substances with which they are associated. (Lowe 1996, pp. 32–41) Whether psychological substances are supposed to be material objects or not is less than clear in Lowe’s discussion; nor is it clear what exactly the association between psychological substances and their biological bodies is supposed to be. Lowe in some places talks as if selves are material substances that are somehow located where their bodies are without sharing *any* material parts with their bodies; but in other places he talks as if selves are neither material nor immaterial substances. (1996, pp. 32–41, 7–8) But we needn’t resolve these issues here.<sup>27</sup> What is clear is that Lowe thinks that the purely physical properties of selves are had solely by virtue of their association with the biological substances that are their bodies. Though Lowe doesn’t say so explicitly, this seems strongly to suggest that even if selves could exist apart from their bodies, they could not have physical properties apart from bodies. But if that is right, then even if Lowe is correct in thinking that selves are in fact extended material simples, it could not be the case that there exist *only* extended material simples.

Whereas Lowe’s view fails to support the claim that there exists nothing but extended simples, Markosian’s view fails to support the claim that there exists a plurality thereof. According to Markosian’s definitions, a spatially continuous object is any object that occupies a connected set of spatial points.<sup>28</sup> This leaves open the question whether a connected set of points might be occupied by matter *without* being occupied by any object at all; but that is no problem for Markosian, who is interested only in addressing the question of what it takes for an object to be simple rather than the question of what it takes for a region to be filled by a simple. Nevertheless, he does take a position on

what it takes for a spatially continuous object to exist. On his view, *any* matter-filled connected set of points is occupied by a spatially continuous object. (1998, p. 222) This is certainly a plausible position to take. Moreover, it seems to be the *most* plausible position to take. For to suppose that there are additional necessary conditions for the existence of a spatially continuous object raises difficult questions, analogous to the unity question, about what those conditions might be; and it is hard to imagine a view other than Markosian's that would be even remotely plausible without implying that there are no spatially continuous objects at all. However, once we adopt the view that any occupied connected set of points is filled by a spatially continuous object, Markosian's answer in conjunction with the plenum principle implies that there exists exactly one extended simple.

Are there plausible alternative answers to the Simple Question? Apart from the suggestion that only point-sized regions of spacetime are filled by simples, it is hard to imagine any. Therefore, I conclude that those who accept extensionism, exclusivism, and the plenum principle ought also to accept Markosian's answer to the Simple Question and the attending consequence that there exists exactly one extended simple. However, one loose end remains to be tied. Markosian's answer makes reference to regions of *space* rather than regions of *spacetime*. If we take this fact seriously, the view (in conjunction with the plenum principle) might lead us to conclude that there exists exactly one simple which is *extended* in space but *multiply located* in time. On the other hand, if we take 'space' as equivalent to 'spacetime', we might reach a different conclusion—namely, that there exists exactly one simple which is extended throughout all of spacetime. As it turns out, both views are consistent with the doctrines of Eleatic Monism, and both are consistent with the third answer to the Unity Question mentioned at the outset of this section. However, I think that contemporary philosophers ought to prefer the latter view. The reason is that the former view presupposes that there is some objective, observer-invariant, way of dividing spacetime into space and time; but this presupposition is inconsistent with contemporary physical theory. As I indicated earlier, talk of times and regions of space can be given sense within the context of relativity theory; but relativity theory implies that the way spacetime breaks down into regions of space and times will be different for different observers.<sup>29</sup> Thus, it implies that there is no single frame of reference in which the *whole universe* could possibly count as wholly present. One might choose to reject relativity theory (treating it as empirically adequate, but false); but short of that, there seems to be no way to make room for the claim that there exists exactly one thing which is extended throughout all of space but enduring through all of time.

## 2.5. Conclusion

I have now finished defending the premises of my argument for the conclusion that, given the plenum principle, the most reasonable answers to the Unity Question are inclusivism, the view that all and only unextended regions

of spacetime are filled by material objects, and the view that there exists exactly one material object which fills the largest filled region of spacetime. If the argument is sound then one who accepts exclusivism and extensionism ought to embrace the third alternative and therefore ought to accept  $\alpha$ .

### 3. Against Change

In this section, I will show that anyone who accepts  $\alpha$  and eternalism ought to accept  $\beta$ , the claim that nothing changes. I will run the argument first under the assumption (defended above) that the one material thing that exists is extended throughout all of spacetime. I will then drop the assumption and show that the conclusion remains.

Something changes only if it exists at multiple times. But something exists at multiple times only if it is wholly present at multiple times or has proper parts at multiple times.  $\alpha$  entails that there exists exactly one material object; hence, it entails that nothing has proper parts—at multiple times or at a single time. Therefore, something changes only if it is wholly present at multiple times. But if eternalism is true, all times exist and (if the times are abstract) all times obtain. So, given eternalism, the largest spatiotemporal region that exists will be a region that spans multiple times. But if this is right, then there is something wholly present at a *single* time only if some region other than the largest spatiotemporal region is filled by a material object. However, on the assumption that the one thing that exists is extended throughout all of spacetime, it follows that the only region that is filled by a material object is the largest filled spatiotemporal region. Thus, nothing is wholly present at a single time. And if nothing is wholly present at a single time, then *a fortiori* nothing is wholly present at multiple times. Therefore, if eternalism and  $\alpha$  are true, nothing changes.

One might object that this is a bit hasty. Perhaps we might say that something extended across multiple regions of spacetime changes just in case it is propertied differently at different regions. And if we did say this, wouldn't we then have a basis for saying that the world changes? If this sort of view were coherent, perhaps we would. But as it is, it is hard to see how coherently and precisely to formulate the claim that a *simple* thing extended over multiple regions of spacetime is propertied differently at different regions. The reason is that it is hard to see what it would mean for an extended thing to be propertied *at a region* without either itself exemplifying the property in question *simpliciter* (i.e., in a way that is not relativized to a region) or having a part at the region that exemplifies the property. We might say that an extended simple exists at R just in case some of the simple fills R; but what would it mean to say that an extended simple has at R the property of being F? If we say that it means that some of the simple fills R and, furthermore, the simple has F, then we commit ourselves to the claim that the simple has F *simpliciter*. On the other hand, if we say that it means that some of the simple fills R and, furthermore, *the bit of the simple in R* has F, then we commit ourselves to the claim

that there is a *bit* of the simple in R; and it is hard to see why that bit wouldn't count as a part. The problem, in short, is that property exemplification requires a subject; but in the case of properties exemplified *only* at sub-regions of the total region filled by an extended simple, there is no plausible candidate for a subject unless we suppose (contrary to our present hypothesis) that the simple is wholly present at each of the relevant sub-regions.

So, on the assumption that the one thing that exists is extended throughout all of spacetime,  $\alpha$  and eternalism together imply  $\beta$ . But suppose we drop this assumption in favor of the view that the one thing that exists is extended in space but multiply located in time. Adopting this view allows us to reject the premise that nothing is wholly present at a single time or at multiple times. It also allows us to say that multiple sub-regions of the total spatiotemporal region filled by the simple are each filled by an object (namely, the simple) which can bear properties. However, we still must face the fact that nothing changes without unqualifiedly having *different* properties at different times.<sup>30</sup> Unfortunately, as many have argued, the only views that are compatible with the claim that objects have, unqualifiedly, different properties at different times are presentism and the doctrine of temporal parts.<sup>31</sup> There are, of course, various ways of accounting for the *appearance* of change that do not involve commitment either to presentism or the doctrine of temporal parts. For example, an object which changes from being F to being G might be said to have the time-indexed properties *being F-at- $t_1$*  and *being G-at- $t_2$* ; or it might be said to *have- $t_1$ ly* the property of being F and to *have- $t_2$ ly* the property of being G.<sup>32</sup> But, reasonable as these views might be (and I do think they are perfectly reasonable), they are not views according to which one and the same object has, unqualifiedly, different properties at different times. Time-indexed properties (if there are such things) are possessed eternally; and properties that are *had- $t$ ly* for some  $t$  are not had unqualifiedly. Thus, short of accepting presentism or the doctrine of temporal parts, it appears that genuine change really is impossible—which is just to say, again, that  $\alpha$  and eternalism together imply  $\beta$ .

#### 4. Against Generation and Destruction

In this section, I will argue that the conjunction of  $\alpha$  with eternalism implies that nothing is generated or destroyed. I assume that generation and destruction are processes that occur in time. More exactly: I assume that for any object  $x$  and time  $t$ ,  $x$  is generated at  $t$  just in case  $x$  exists at  $t$ , there are (or were) times prior to  $t$ , and at every time prior to  $t$   $x$  did not exist; and I assume that for any object  $x$  and time  $t$ ,  $x$  is destroyed at  $t$  just in case  $x$  exists at  $t$ , there are (or will be) times after  $t$ , and at every time after  $t$   $x$  will not exist. Thus, if there is exactly one time and exactly one thing that exists at that time, the thing in question is neither generated nor destroyed; and nothing that exists outside of time is generated or destroyed. More interestingly, this view has the consequence that time (or spacetime) itself is ungenerated. This is consistent with big bang cosmology if we think (as seems reasonable) that the initial spacetime

singularity still counts in some sense as spacetime. Furthermore, it is consistent with the view that God created time so long as we understand creation as a process that may or may not involve temporal generation.

The argument for the conclusion that  $\alpha$  and eternalism entail that there is no generation or destruction is simple. If eternalism is true, then all concrete times exist and all abstract times obtain. Furthermore, eternalism implies that the world is the total material content of all the times that exist (or, in other words, the total material content of spacetime). Hence, there neither are, were, nor will be times at which the world does not exist. Hence, the world is neither generated nor destroyed.  $\alpha$  implies that there is nothing but the world. Thus, nothing is generated or destroyed.

Of course, one might just modify the definitions of generation and destruction. One might say that something is generated at  $t$  just in case it exists at  $t$  and there is no time prior to  $t$  at which it exists; and one might make similar modifications to the definition of destruction. In doing this, we preserve the letter of the claim that generation and destruction occur. But I take it that the spirit underlying the denial of generation and destruction remains: There is exactly one thing—the world; and there neither is, was, nor will be any time at which it did not exist.

## 5. Against Division

The final doctrine to establish is the doctrine that what exists is undivided. This doctrine follows directly from the thesis that there exists exactly one thing.

Suppose, for *reductio*, that reality is divided. This cannot mean simply that there are holes in reality—“places” where there exists literally nothing at all, not even spacetime. A donut is undivided (in some relevant sense), despite the fact that it has a hole in the middle. Rather, what the division thesis must mean is that there is some bit of reality that is completely separated, or spatiotemporally isolated, from the rest. But to say that there is some bit of reality that is completely separated from the rest is just to say that there is some *thing* (i.e., a bit of reality) that is completely separated from some *other* thing (i.e., the rest of reality). Hence, the division thesis implies that there is more than one thing. But (we are assuming) there is exactly one thing. Hence, the division thesis must be false.

Is there any way to formulate the division thesis in a way that does not presuppose that there is more than one thing? Apparently not. Separation is a two-place relation. A thing cannot be separated from itself except by having parts that are separated. Thus, anyone who accepts  $\alpha$  ought also to accept  $\delta$ .

## 6. Concluding Remarks

I have argued that anyone who accepts exclusivism, extensionism, eternalism, and the plenum principle ought also to accept Eleatic monism. Since each of these theses is believable and well-motivated, and since two of them are

very widely accepted, I take it that this conclusion implies that Eleatic monism is a live (even if somewhat bizarre) option in contemporary metaphysics.

I do not deny that Eleatic monism is counterintuitive. However, I think that the degree to which it is counterintuitive can be mitigated. Eleatic monism denies that there are familiar particulars that come into and pass out of existence, last over time, and so on. But note that denying the existence of familiar particulars is not the same as denying the existence of anything that could give rise to the experiences that help to explain our belief that there are familiar particulars. All of our dog-experiences, tree-experiences, and so on could be caused by non-persisting stuff distributed spatiotemporally in ways just like the spatial and temporal parts of real persisting dogs, trees, and so on would be distributed if there were such things. Of course, given that we exist and that our experiences of the world are in constant flux, Eleatic monism entails that we are not denizens of the material world.<sup>33</sup> But it does not require us to deny anything that is manifest to the five senses. In effect, all Eleatic monism really denies is the claim that what appear to be discrete objects or properties of discrete objects really are discrete things or properties after all. In this respect, the Eleatic monist is not far different from eliminativists like Merricks and van Inwagen who deny that human beings have heads, shoulders, knees and toes as discrete parts. Such a view appears absurd; but once it is understood, we see that, though it might run contrary to our philosophical intuitions, it does not conflict with anything discoverable by empirical observation.

The central question of this paper asks how the Eleatics could have beheld the same world we behold—a world that includes birth and death, apparent multitudes of tiny objects, and so on, without believing that the world also includes plurality, change, generation and destruction, and spatiotemporal division. I take it that the answer is just this: perhaps they were common sense exclusivists, perhaps they were eternalists, and perhaps they accepted the plenum principle and didn't believe in unextended objects. None of these theses is obviously bizarre; and, as far as I can tell, together they imply a coherent (even if counterintuitive, even if false) metaphysic. But that is a big step up from absurd, and a far cry from unintelligible.

## Notes

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1. See, for example, Owen 1960. For references to other philosophers who endorse the traditional reading of Parmenides, see Barnes 1979a and 1979b. Barnes himself

dissents from the tradition, however, arguing that there is no reason to attribute  $\alpha$  to Parmenides. A more recent dissenter is Patricia Curd (1998), who argues that in fact Parmenides did not endorse  $\alpha$ , but something else which was unfortunately confused with  $\alpha$  by subsequent commentators. I should also note that, though at least one follower of Parmenides—Melissus—undisputably endorsed the claim that there exists exactly one thing, Melissus B9 gives good reason to doubt that he believed that the one thing that exists is a *material* thing. So it may well be that what I am here calling Eleatic monism was in fact not endorsed by any Eleatic philosopher at all. But, having acknowledged this possibility, I will not concern myself with it any further. My aim here is not so much to attribute a view to the Eleatics as it is to show that the view commonly attributed to them and dismissed as unintelligible can in fact be motivated by a set of very plausible theses, each of which is endorsed by prominent contemporary philosophers.

2. But see Horgan 1993 for a step in this direction.
3. I assume that if a region is filled at all, it is at least filled by *matter*. The dispute between inclusivists and exclusivists concerns whether every spatial region filled by matter is filled by a *material object*. Exclusivism would be true if, for example, only unextended regions are filled by material objects. Extended regions might then be filled by matter, and they might *contain* many material objects (namely, unextended ones); but, on this view, it would not be the case that any extended region is *filled* (or wholly occupied) by a material object.
4. Presentism and eternalism are not mutually exhaustive views about time. See Rea 2002 for further alternatives and references.
5. Though perhaps the notion of connectedness bears explanation. A set of points is connected iff it is not the union of two disjoint closed sets of points. A set  $S$  of points is closed iff every accumulation point of  $S$  is in  $S$ .  $P$  is an accumulation point of  $S$  iff every set of points less than some finite distance away from  $P$  contains a point that is not in  $S$ .
6. On this and other arguments for eternalism see Rea 2002 and references therein.
7. On this topic, see the essays in Saunders & Brown 1991.
8. There are also other arguments available for extensionism. See, especially, Zimmerman 1996.
9. I do not claim that this definition is unproblematic; nor do I claim that this is the only way of trying to define presentism in a relativistic context. But it is a natural definition given what I have just said about times. For deeper exploration of the issues here, and for arguments to the effect that presentism is incompatible with relativity theory, see Rea 2002 and references therein.
10. I say “transparently incompatible” because there is an obvious argument from the premise that inclusivism is true to the conclusion that, if there is matter then there are material objects. But if (as I think) the latter claim is a necessary truth, then, strictly speaking, both universalism and inclusivism are incompatible with its denial.
11. This question closely resembles, but is not the same as, what Peter van Inwagen calls the “Special Composition Question” (discussed below). In a world devoid of mereological simples, the Unity Question might still have an answer that implies that there are extended material objects. It is not so clear that the Special Composition Question could have such an answer in such a world.
12. If (1) is right, one can’t accept artifacts without accepting inclusivism; but one *can* accept inclusivism without accepting artifacts. (Cf. Heller 1990 and Jubien 1993). One who does so could then believe in composite objects without believing in arti-

- facts. I do not believe that one *should* accept inclusivism without accepting artifacts. But even if I am mistaken, the conclusion of the present argument remains unaffected. Thus, for convenience, I shall set this sort of view aside without further argument.
13. But only on the assumption that the facts about how some matter is arranged *include* facts about how that matter is spatially and causally related to matter in relevantly nearby regions. A marble table might be created by chipping stone away from a block of marble. Thus, one way to arrange marble tablewise is to remove relevantly nearby marble; and, accordingly, one way to destroy a marble table is to embed it seamlessly in a larger block. (For more on this, see Rea 1998b, pp. 352–353. See also Sider (forthcoming).) One might think it odd to talk as if changing the relational properties of some marble is a way of changing its *arrangement*; but avoiding such talk would require cumbersome complications in the discussion that follows. Thus, since nothing substantial hinges on this, I'll accept a little oddity for the sake of readability.
  14. In Rea 1998b, I argue that if we accept artifacts, we ought to accept universalism. Some, but not all, of what I will say in the next few paragraphs is adapted from that earlier argument.
  15. This implies that either every material object belongs to multiple kinds, at least one of which is a possible artifact-kind or many, if not all, material objects are co-located with at least one other object which is a member of a possible artifact-kind. I am content with this consequence, and have defended it elsewhere (Rea 2000).
  16. The definition of intrinsicness as independence of accompaniment is defended in Langton & Lewis 1998. Sider (forthcoming) raises interesting objections against this definition; but the objections don't cast doubt on the claim that independence of accompaniment is *necessary* for intrinsicness.
  17. One who accepts inclusivism without accepting artifacts might get an ontology that includes composite objects without arbitrariness. (Cf. Heller 1990 and Jubien 1993.) But, as I explained in note 12, I am for convenience setting these sorts of views aside.
  18. In particular, it is entailed by assumptions 7 and 8 (van Inwagen 1990, pp. 5–6).
  19. Cf. Merricks 2001, p.89, premise 1.
  20. Merricks 2001, pp. 110. Note that this claim is different from the one to which Merricks applies the label 'Microphysical Closure' (Merricks 2001, p.141). But the label fits this claim and so, for convenience, I'll use it.
  21. See Merricks 2001, Chapter 3; see also Chapter 6, pp.145.
  22. He writes:

This chapter argues that the existence of some objects with causally relevant properties (*viz.*, objects with conscious mental properties) does not supervene on microphysical doings. Because of that, I have argued, we should say that some of what those objects cause, in virtue of having those properties, lack microphysical causes. (Merricks 2001, p. 110)

23. He writes:

Yet I endorse the exceptionless existence of microphysical causes with respect to the effects of (alleged) baseballs. This is, in part, because we have no compelling argument for the claim that, if baseballs existed, their existing and having some causally relevant property would fail to supervene on the microphysical... .

Moreover, recall the arguments in Chapter Three (§II) for the claim that the baseball's atoms shatter the window. One such argument was that every atom arranged baseballwise causes something, and when what one of them causes is added to what each of the others causes, the 'sum' is the shattering of the window. And a similar point holds for everything the baseball seems to cause. But it does not seem that, for example, when what one of my atoms does is added to what each of the others does, the "sum" is my consciously deciding. (2001, pp. 111)

24. See Merricks 2001, pp. 89–107. For criticisms which, by and large, I endorse, see Sider (forthcoming).
25. Horgan (1993) arrives at a similar conclusion, though by a different route.
26. Lowe 1996. Officially, Lowe only defends the claim that *all* selves are mereologically simple; he does not defend the claim that selves are the *only* extended simples.
27. For critical discussion of Lowe's view, see Olson 1998.
28. Markosian actually says that a spatially continuous object is one that occupies a *continuous region* of space, rather than a connected set of points in space. But as he uses the terms, a continuous region is nothing more than a connected set of points.
29. On this, see Rea 2002 and references therein.
30. See Rea 1998a and Rea 2002 for further discussion and references. In Rea 2002, I note that some do not analyze change as the unqualified having of different properties at different times; but, I say there, it is not at all clear that this sort of view is intelligible.
31. See, e.g., Merricks 1994 (p. 169), Rea 1998a (p. 244), and Rea 2002 (sec. 1).
32. See Rea 1998a and Rea 2002 for discussion and references.
33. I mentioned in note 1 that Melissus B9 gives good reason for thinking that Melissus believed that there exists exactly one thing, period. But here we have a strong consideration against that interpretation of Melissus. For, given that we experience our own inner lives as a changing sequence of events, it would appear that the view that there exists exactly one thing is incompatible with the doctrine (also clearly endorsed by Melissus) that nothing changes. If there exists exactly one thing, then presumably *we* are that thing (never mind the plurality implied by the pronoun). But we change. Hence, either there is not exactly one thing or else there is change after all.

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