

PERSISTENCE, STAGE THEORY AND SPEAKING LOOSELY**Crawford L. Elder**

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Abstract. *What are the truth-makers for the claims we make about the ways familiar objects persist across change? “Stage theory” has come to be recognized as an alternative to endurantism and perdurantism. It locates the truth-makers in properties possessed by momentary object-stages and in relations between suitably propertied object-stages. This paper argues that stage theory needs tightening up: momentary stages are too short to possess by themselves the requisite properties, and relations to other stages cannot remedy the defect. Fixing this problem requires reconstruing stage theory. It then is the position that all claims of persistence are true only when we are speaking loosely; in philosophical strictness, nothing persists. What stage theory then endangers is neither endurantism nor perdurantism—these now have no subject-matter—but recent efforts to argue that the essence/accident distinction is as objective as persistence itself. But even reconstrued stage theory fails.*

Keywords: Stage Theory, endurantism, perdurantism, persistence

A topic that has recently returned to the forefront of philosophical discussion is what it is for an object to persist across change. Thirteen years ago one would have said that the two main answers available are endurantism and perdurantism (about which more below). Since then, however, Theodore Sider and Katherine Hawley have argued that a third view is possible, namely “stage theory” (Sider 1996, Sider 2001, Hawley 2001). What stage-theory says, roughly, is that the assertions we ordinarily make about objects persisting across time have, as their truth-makers, relations obtaining among instantaneous object-stages. Our persistence talk does not quantify over temporally extended entities, and certainly not over enduring entities.

This paper argues that the stage view, while ingenious, is in the end untenable. But it does not do so with an eye to defending either endurantism or perdurantism. For stage theory is not—so I shall argue—rightly considered an alternative to those two views. Both endurantism and perdurantism maintain that there really occurs in the world the phenomenon of objects’ persisting across change. Stage theory contains some loose ends, I shall claim—whether on Sider’s version or on Hawley’s—and on the most charitable way of cleaning these up, a way inspired by remarks from David Lewis himself, the theory ends up falling short of any commitment to real persistence. Statements asserting that familiar objects persist across time do come out as true, but true only in a philosophically loose way of speaking. When we speak with philosophical strictness, about the truth-makers for our ordinary claims about persistence, we refrain from asserting that any entity persists across change. As thus revised,

stage theory provides a way of denying that persistence occurs, rather than an account of what persistence consists in.

Hence the philosophical interest of this paper lies not in what it may show about the nature of persistence. Rather it lies in its bearing on another topic that has received a fair amount of discussion, namely the question whether the world's objects have some of their properties essentially, and others merely accidentally.

Claims that a given object has some of its properties essentially have for long been suspected of being empirically unsupported. Largely for this reason, the essence/accident has, since Quine, generally been regarded with disfavor. But recently some philosophers have argued for the Aristotelian idea that the essence/accident distinction is as fundamental to our understanding of the world's objects as is the very idea that those objects persist across certain changes, and are destroyed by other changes (Rea 2002, Elder 2004, Elder forthcoming; cf. Sidelle 1998). Empirical science does seem to endorse instances of this idea. It appears to claim, for example, that when a uranium atom undergoes fission, it is destroyed, but that when a uranium atom merely moves, it still continues to exist; that when a sample of water undergoes hydrolysis, it exists no longer, but that when water is merely heated, it only alters. The Aristotelian idea is that the distinction between destruction and mere alteration requires, and validates, a distinction between properties that are essential to, say, a given uranium atom or a given sample of water, and properties that are merely accidental.

But any vindication of the essence/accident distinction along these lines is ruled out if the truth of our talk about persistence by objects does not, in philosophical strictness, require us to suppose that there are *any* persisting entities in the world. That is exactly what a tightened-up version of the stage theory claims, I shall argue. Hence if the tightened-up stage theory turns out to be *untenable*, as I shall argue, space is restored in which to argue that the very phenomenon of persistence vindicates essentialism.

I

Stage theory is intended to capture some advantages that perdurantism appears to have over endurantism, as an account of persistence, while avoiding some challenges that perdurantism faces. Let me begin by explaining why it appears to do just that.

Endurantism is the view that at any moment at which an object exists, it is the complete object, whole and entire, that is located at that moment. Endurantism may be closest to our common sense understanding of persistence. In any case endurantism appears, of the three views, to provide the readiest understanding of how it might be that one and the same object could have had different futures, and could have had different pasts. The main disadvantage of endurantism is that it makes us wonder why a contradiction is not involved in the claim that, at different times, one and the same object has different properties or different parts.

Perdurantism is the view that any object extends across all the times at which it exists, just as a road extends across all the places at which it exists. At any one point or time-span within the object's existence, only some temporal part of the object—not the object whole and entire—is present. Perdurantism makes it easy to see why no contradiction is involved in the claim that, at different times, a given object has different properties or different parts: this claim will be true in virtue of one temporal part's having certain properties (or parts), while a distinct temporal part has different properties (or parts).

Another advantage sometimes claimed for perdurantism is that it makes it easy to understand how two objects, one of which traces out a longer temporal career than the other, might for a time occupy exactly the same volume of space. One standard example here is a statue composed entirely of gold. The statue cannot survive being flattened, but the lump of gold can; so when flattening occurs, the statue ceases to exist, but the lump of gold continues. By Leibniz's Law, these are distinct objects. But then the puzzle arises: how can two

distinct objects manage to *fit* into the same volume? Perdurantism replies that what occupies this volume, during the period of apparent coincidence, is a single temporal part which happens to be incorporated in two different temporally extended wholes—one which extends across a greater span of time (the lump), and one which extends across a shorter (the statue). The wholes have different dimensions, but what occupies the volume at which coincidence apparently occurs is just a single thing, a single temporal part (Sider 2001, Ch. 5; cf. Hawley 2001, pp. 156-58, pp. 183-89).

But this apparent advantage also generates puzzles. Take the temporally extended object that lasts over the first year of a cat's life, and that is found (as common sense would put it) just where the cat is. Why is this not a part of many different objects—a cat-like object that lasts exactly one year, another such object that lasts one year and one month, another such object that lasts seven years (Hawley 2001, p. 52)? Why is it not also a part of an object that extends across the cat's biological life and incorporates the first five months of the cat's corpse? Perdurantism faces a puzzle about what the conditions are, under which temporal parts between them compose a temporally extended object, and the worry is that answers to this puzzle will be either too liberal or too arbitrary.

The same sort of puzzle seems particularly troubling if we consider Parfit-like cases in which the two hemispheres of an accident victim's brain get transplanted into two different crania—crania belonging, let us suppose, to other victims who suffer accidents of their own, accidents that destroy their brains but leave their bodies otherwise intact (Parfit 1984, pp. 254-66; for Sider's treatment, see Sider 1996, pp. 437-42, or Sider 2001, pp. 188-208). Suppose that each of the hemisphere-recipients appears to display the personality and memories of the hemisphere-donor. Then we may be inclined to say that the hemisphere-donor—call him "Ted"—continues to exist, but in two different bodies. But Ted cannot be both of these hemisphere-recipients—call them "Ed" and "Fred"—since then Ed and Fred would not themselves be distinct. And it would be arbitrary to say that Ted is *just* Ed or *just* Fred. What then should the perdurantist say? David Lewis supplies the perdurantist with an answer: *both* Ed and Fred were present during Ted's existence (Lewis 1983). Ted's body was actually both Ed's body and Fred's body. More carefully, what we call "Ted" is a fairly long-lived temporal part that belongs at once to two different temporally extended objects ("worms", as they are sometimes called), namely Ed and Fred. But this answer is extremely hard to swallow, as Sider rightly points out. The long-lived temporal part that we call "Ted" may be just a single thing, but if its existing as long as it does amounts to the presence, across that span of time, of two distinct persons in the same volume of space, we have unacceptable ontological overcrowding. It just is not believable that two distinct persons should, over a fair stretch of their existences, spatially coincide with one another.

But both the puzzle about composition and the puzzle about coincidence would never arise, if there simply were not room in the world for temporally extended entities of any sort. In that case there would not even be any question as to the circumstances in which distinct momentarily-existing entities do (or do not) compose a temporally extended entity. Nor would we ever find it disturbing that distinct temporally extended entities—even if those entities are persons—coincide spatially over a stretch of time. And this is very close to the solution to both puzzles that stage-theory offers. Stage-theory maintains that what really is there in the world, making true virtually every true statement we might make about persisting objects, are just momentarily-existing objects—object-*stages*, in other words. Each object-stage possesses certain properties, and each is related in certain ways to other object-stages, and it is these facts about the properties possessed by individual object-stages, and about the relations that obtain between them, that make true virtually every true claim we make that speaks of

persistence by objects.¹ Stage-theory does *not* indeed claim that no temporally extended objects *exist*. For when stage-theory is combined with the doctrine of universal mereological composition—as happens in Sider’s case—the fact that distinct momentarily-existing objects exist, along a continuous spatio-temporal path, of itself *amounts to* the existence of a temporally-extended mereological fusion. But what stage-theory does maintain is that spatio-temporally extended entities virtually never figure in the truth-makers for ordinary claims that speak of persisting objects.

Thus for stage-theory, when we say something true about “the dog” or “a banana” or “that person”, what makes the saying true is how matters stand with some momentarily-existing entity, some dog-stage or banana-stage or person-stage. Indeed both Sider and Hawley are willing to make this claim in “object-level” discourse: any dog or any banana or any person is just a momentarily-existing stage.

II

But this position appears to yield an almost paradoxical conclusion—namely that any dog or person or banana is an extremely short-lived entity, one that bursts into existence only to vanish an instant later. How then could it be true of Ted Sider that he once was a boy, and that he will be an old man? Sider’s answer is that what it is for a person—that is, an instantaneous temporal stage—to possess the temporal properties picked out by the predicates “was a boy” and “will be an old man” is for that person to stand in an appropriate temporal counterpart relation to a past person (that is, a past instantaneous stage) that is a boy, and to a future person (stage) that is an old man (Sider 1996, pp. 437-38 and 446-47; Sider 2002, pp. 193-96). Hawley’s answer is similar. It is entirely possible for a stage to satisfy a “historical predicate” such as “grew on a banana tree” or “was a boy”, despite the fact that the stage exists for only an instant (Hawley 2001, pp. 53-57). It is likewise possible for a stage to satisfy a “lingering predicate”, a predicate such that nothing can satisfy it in just the space of a single instant—for example, “is thinking about Vienna”. All that is needed is that a stage be “suitably related” to earlier or later stages (or both) that themselves bear the right properties. For both philosophers, a great many of the claims we make about familiar objects such as persons and bananas and cats are made true by *relations* that obtain between a stage that we are talking about and stages that exist earlier and later (or both).

The idea that a stage can satisfy predicates that one would never have thought applicable to an instantaneous entity, by virtue of relations it stands in to other stages, is what seems to me ingenious about stage-theory. But I contend that it is precisely here that stage theory, as thus far articulated by Sider and by Hawley, has loose ends. These are connected with the point that *many* of the properties that we attribute to familiar objects are like those that Hawley’s “lingering” predicates seem to pick out: no mere object stage can instantiate any such property by virtue of what it intrinsically is like, during the meager span of its own existence. At best an individual stage can instantiate such a property by virtue of relations it bears to other individual stages, themselves “suitably propertied”—and what it is for these other stages to be “suitably propertied” in the requisite ways will involve an objectionable regress of relations to yet other individual stages. I will first illustrate this point, and will then argue that the regress is indeed objectionable.

It can perfectly well be true of the banana now in my fruit bowl, Hawley says, that it grew on a banana tree (Hawley 2001, p. 54). The truth-maker lies in a relation, or some

¹The one exception is provided by sentences that express “diachronic counting”—e.g. “over the course of the morning, there have been just four bananas in the bowl on my kitchen counter”. The truth-maker for these sentences, Sider says, does involve a temporally extended entity—a mereological sum of successive banana-stages (Sider 1996, p. 448).

relations, that tie the instantaneous stage picked out by “the banana now in my fruit bowl” to an appropriately propertied earlier stage, or to several. But just *which* properties must this earlier stage—or these earlier stages—possess? The simplest suggestion is that the truth-maker lies in a relation to some *one* earlier stage of which “...is growing on a banana tree” (or “...grows on a banana tree”) was true at the time that the earlier stage existed. But *growing on a banana tree* cannot be accomplished in the space of a single instant; at best, *being attached to a banana tree* can obtain in the space of an instant (and even that is debatable—more on this in section III). Should we say, then, that the truth-maker consists in a relation that the present banana (itself a momentary stage) bears to a *collection* of stages in the past, the earlier members of which were smaller and greener than the later members? But a collection of banana stages, incorporating members that exist at different times, would be a *temporally extended entity*. And the whole advantage of the stage theory over perdurantism is that stage theory does not, while perdurantism does, posit temporally extended entities as truth-makers. A better answer, therefore, is that “grew on a banana tree” is true of *this* banana in virtue of a number of different, graded relations that this banana bears to *each* of *many* earlier bananas, of which the earliest were smaller and greener than the latest. An analogous answer explains why “will one day turn black and rot” is true of this banana.

From *which* earlier and later stages can this banana inherit its “temporal properties”, as Sider calls them—to *which* earlier and later stages does this banana owe its satisfaction of “historical predicates”, to put it Hawley’s way? Only ones that are temporal counterparts of this banana—only stages to which (in Hawley’s phrase) this banana is “suitably related”. Very well: but what determines the extension of the temporal counterpart relation; in what does “suitable relatedness” consist? The first future stage to which this banana is suitably related must be one that is spatio-temporally continuous with this banana, and each successive such stage must be spatio-temporally continuous with the one just previous (Hawley 2001, p. 70). But this cannot be the *whole* answer, since this banana is spatio-temporally continuous with a series of instantaneous volumes of air (air-parcel-stages, in other words) located progressively farther away from this banana, and we do not want to say that “will have the chemical composition of air” is true of this banana. Moreover, a certain volume of decayed vegetable matter is spatio-temporally continuous with future stages that we do want to count as future counterparts of this banana, and we do not want to say that “will be dark and mushy and flat” is true of this banana.

A rough way of completing the answer would be to say that this banana’s temporal counterparts must not only be spatio-temporally continuous with this banana but must themselves be *bananas*, that is, instantaneous stages each of which qualifies as “a banana”. But this completion is *too* rough, since it invites the charge of circularity. A past or future stage can qualify *as* a banana only if it itself has the right *temporal* properties—only if it grew on a banana tree, will change color and ripen, etc. (Hawley 2001, p. 56, p. 78). Yet for a past or future stage to have these properties, we are saying, is for it in turn to be suitably related to yet other stages that themselves qualify as bananas. In the effort to say which past and future stages it is, from which *this* banana can inherit its temporal properties, banana-hood seems to keep retreating just beyond our grasp. The stage theorist seems unable to say more than that this banana has as its temporal counterparts just those past and future stages to which a banana bears the temporal counterpart relation.

Yet the problem here is more apparent than real, Hawley says. We can be sure that there are some *non*-relational properties that will serve to delimit the past and future stages to which this banana owes its temporal properties. Here is a rough sketch of the relevant non-relational properties: “for a stage to be a banana it is necessary (and perhaps sufficient) that it be yellow, curved, edible, and suitably related to other yellow, curved, edible, stages” (Hawley 2001, p. 56).

Hawley's response here thus invokes a dispositional property, *being edible*. My ultimate contention is that dispositional properties constitute the main obstacle to stage theory, as articulated by Sider and Hawley. Before I argue for that contention, let me first argue that it is not just by an unfortunate accident that the list of non-relational properties, that Hawley offers as delimiting the earlier and later stages that are *banana* stages, includes a dispositional property. The actual list Hawley offers is unfortunate, to be sure. It seems questionable whether to qualify as a banana, a stage need be edible or curved at all. A banana that grows on a tree the roots of which come in contact with just the wrong chemicals might be toxic or repellent, and a mutant banana might fail to be curved. A better list of non-relational properties might cite characteristic elements of banana DNA, or characteristic organic chemistry. But while "edible" might be a bad choice for inclusion on Hawley's list, it is no accident, I maintain, that the list turns out to include some dispositional properties.

The natural kinds to which we take familiar objects and familiar stuffs to belong are generally such that it is possible to make classificatory errors. That is, one may, upon casual observation, assign an object or a sample of stuff to a natural kind to which it does not really belong. The animal might look to be a mammal, but really be a marsupial; the stuff in the glass might look and smell like ethanol, and yet really be methanol; the nuggets might look like gold, but really be iron pyrites. Often the kind to which an object or sample really belongs can only be determined by running tests, in which one sees how that object or sample *acts* in particular circumstances. Dispositions possessed by the object or sample are often diagnostic of the natural kind to which it belongs.

If an object is a banana, then—however atypical its taste or shape or color may be—there are *some* tests that could be run to determine that it is indeed a banana. The object will have *some* properties that ground a disposition to pass those tests. So let us not make a fuss over Hawley's choice of *edibility* as a dispositional property diagnostic of banana-hood; let us simply allow edibility to stand in for whatever dispositions it is, the manifestation of which really would, in our best judgment, demonstrate that the object in question is a banana.

The first point to notice, then, is that *edibility* is not a property that any stage could instantiate by virtue of what it intrinsically is like over the meager span of its own existence. Nor is any other dispositional property. The instantiation of any dispositional property requires that a certain sequence of events at least *could* occur: namely, that an appropriate triggering event occurs, and is followed by the event that is the manifestation of that disposition. This is not to deny that there can be "finkish" dispositions—ones such that, once the triggering event occurs, some other factor intrudes to prevent manifestation of the disposition. It is rather to say that the occurrence in the world of dispositional properties requires the possibility of successions of events—in the normal case, a succession upon the triggering event of the manifestation event, and in the "finkish" case, a succession upon the triggering event of an event different from the manifestation event. (For those who suspect that dispositions have little to do with counterfactual conditionals, I recommend Choi 2008).

What then follows about the *bearers* of dispositional properties? If an object is to bear a dispositional property, by virtue of what *it* intrinsically is like over the span of its existence, then that object must be capable of persisting *from* the point at which it undergoes the triggering event *to* the point at which it figures (or, for the "finkish" case, fails to figure) in the manifestation event. No momentary stage can do that. So if a *stage* is to bear a dispositional property, it must do so by virtue of a *relation* it bears to some subsequent stage—or by virtue of relations it bears to each of several subsequent stages.

So—to stick with the original Hawley example—what would it be for a stage to be *edible*? To answer, we must say what properties must be present, in the subsequent stages to which the original stage is related by the "temporal counterpart" relation. But now we must note that these not be *actual* subsequent stages. A banana stage can be edible even though it is

never actually eaten—just as any object can have a dispositional property that never actually gets manifested. The most natural way for a stage theorist to accommodate this point is to invoke Lewis's way of treating counterfactuals. We must look to the stage's *modal* counterparts, in possible worlds in which each such stage figures in a series of stages that, as we say, gets ingested. In some such worlds, those series will get followed, on a spatio-temporally continuous path, with organic-molecule-stages that, as we say, are assimilated by the ingestor's metabolism; in other such worlds, they will not be so followed. If all worlds of the former sort are closer to the actual world than all worlds of the latter sort, then the actual stage—that is, the actual banana—is edible; if not, not. The crucial question will be whether the *modal* counterparts of the present, actual banana themselves have *temporal* counterparts, in the closest possible worlds, that possess the right properties.

But *which* properties must these temporal counterparts—these descendants of chewn and swallowed banana-stages—possess? The answer I have just given is that they must be assimilated by the host's metabolism. But assimilation, like being chewn, takes too long to occur in the lifespan of any single stage. What it is for organic molecules to *be assimilated* is for them to be transported by the ingestor's blood stream, and to then come to be used by the ingestor's cells. The more promising answer, for the stage theorist, might therefore be to say that the descendent organic-molecule-stages must have such-and-such a chemical composition. For it does seem possible that a stage should possess, by virtue of what it intrinsically is like over the meager span of its existence, one particular chemical composition or another.

But still we must ask: why would the presence of this chemical composition or of that, in one individual stage or another that is a descendant of a particular banana, amount to that banana's having been edible? The answer must again advert to dispositions. The presence of this or that chemical composition will *matter*—will be *relevant* to the original attribution of edibility—just because of the way that those descendant stages will interact with molecules within the ingestor's cells. The descendant stages must be such, by virtue of their chemical composition, as to get broken down by molecules in the ingestor's cells, broken down into components that then get caught up in the functioning of the cells themselves. So, yes: a stage can, by virtue of what it intrinsically is like over the meager span of its existence, have a particular chemical composition. But a stage cannot, by virtue of what it intrinsically is like over the meager span of its existence, have *all* that it takes to render an earlier stage (one which stands to it in the temporal counterpart relation) edible. To do that, the stage must have temporal counterparts of its own—momentarily-existing broken-apart components, that get caught up in the functioning of relevant cells.

But the regress continues. If it is to be true of some momentarily-existing broken-apart component, that it gets caught up in the functioning of a cell, that cannot be true in virtue of what that momentarily-existing entity intrinsically is like over the meager span of its own existence. Rather it must be true by virtue of a relation that the momentarily-existing entity bears to subsequent stages, ones that figure in successful operations of the cell. But successful operation is not achieved in a single moment either. And so on.

For the stage theorist, then, dispositional properties simply will not go away. In a moment I will argue that this creates serious trouble. But first I want to argue that the *sort* of regress I am narrating is no special artifact of the particular example of *edibility*. Edibility entered the discussion because we wanted to know about the temporal counterpart relation for bananas. That is, we wanted to know just which later and earlier momentarily-existing entities, located on spatio-temporally continuous paths that radiate out from a given banana (-stage), would qualify as later and earlier *banana* stages. Naturally we would want to ask the same sort of question about the temporal counterpart relation for persons, or for cats, or for dogs. The answers to the original question would have to specify non-relational properties that

a banana can be counted on to retain so long as it *is* still a banana at all—and so, *mutatis mutandis*, for the questions about persons and dogs and cats. Hawley might have done better, we noted, to talk about the presence of characteristic elements of banana DNA. But even so, the presence of those DNA elements would matter, for delimiting earlier and later momentarily-existent entities that are banana stages, largely because of dispositions that their presence underlies. By virtue of their characteristic DNA, bananas react in characteristic ways to specific chemicals transported up the stem on which they grow, and to specific climate conditions, and to being chewed and swallowed by humans. It is because characteristic DNA grounds distinctive dispositions that biologists are not simply making a fetish of DNA when they count it as relevant to the taxonomy of biological kinds. Similarly, it is because molecular composition grounds distinctive dispositions that chemists are not simply making a fetish of molecular composition, when they count it as relevant to the taxonomy of nature's liquids and acids and bases. In sum: yes, many of the properties that must continue to be present, for it to be true that a particular member (or sample) of a natural kind goes on existing at other times, will be categorical properties. But those categorical properties will be *relevant* to kind-membership largely because of dispositional properties that they ground.

Here, then, is the reason for thinking that stage-theory is stuck with regresses of an unacceptable sort. Any familiar object, or sample of a familiar stuff, owes its credentials *as* a member of its natural kind to its possession of various dispositional properties. But no momentarily-existent stage can, by virtue of what it intrinsically is like over the meager span of its existence, possess a dispositional property. Any stage must therefore *borrow* its dispositional properties from suitably propertied other stages, to which it is suitably related. But, as our reflections on edibility illustrated, the properties which these suitably related other stages must have—what qualifies them as “suitably propertied”—will be adequate to lend that dispositional property only because they themselves ground further dispositional properties. Thus the past and future stages from which a given stage inherits its dispositional properties—and with them, its credentials as a member of its natural kind—will have themselves to borrow *their* credentials, as bestowers of dispositional properties, from yet *further* suitably propertied stages, to which *they* are suitably related. There is no reason for optimism that this chain of borrowing will ever stop. Payment will never really be made. The credentials of any familiar object, as a member of its natural kind, will remain invalid.

Here we reach the limit of stage theory, at least as presented by Sider and Hawley. It did not have to be so (see next section). Suppose we said that the truth-makers for sentences that assign a particular object or sample to a particular natural kind are, so to speak, larger than what stage theory supposes. That is, suppose we said that *temporally extended entities* figure in these truth conditions—whole collections of stages, encompassing members both earlier and later. A temporally extended entity lasts long enough that it can, by virtue of what it intrinsically is like over the course of its not-so-meager span of existence, possess (and manifest) a dispositional property. A temporally extended collection of organic molecule stages, for example, can in this way—*without borrowing*—possess (and manifest) the capacity to get caught up in the successful functioning of a cell. It therefore can, *without borrowing*, bestow on a banana stage the dispositional property of being edible. Stage theory, in contrast, must in every case award a dispositional property to only an individual momentary stage. But then entitlement to that award must be borrowed from a subsequent stage, and an unacceptable regress is launched.

III

The idea of temporal counterparts is adapted from David Lewis' idea of modal counterparts. In this section I explore the thought that comments Lewis makes, about how different conversational contexts make it appropriate to heed looser or stricter counterpart

relations, may serve to save stage theory from the challenges posed by dispositional properties.

Lewis's famous view is that there are countless worlds other than the actual world. His argument for this startling claim is that "it is uncontroversially true that...there are many ways things could have been besides the way they actually are", and that this assertion must be taken as being the existential generalization it appears to be: it quantifies over "ways things could have been", and these are what Lewis calls "possible worlds" (Lewis 2001, p. 84). Yet Lewis's view *isa* startling one, however bland the premises from which Lewis says it is derived. The worlds other than the actual world are concrete and every bit as real as the actual world is: they are not mere fictions or stories or sets of consistent propositions. The consequence of their concreteness is that, in the very nature of the case, an object that exists in any one world does not exist in any other. (Since Lewis believes in "*absolutely* unrestricted" mereological composition—Lewis 1986, p. 212 n.—he believes in mereological sums that do span possible worlds. But "we ourselves," he writes, "and other things that we ordinarily name, or classify under predicates, or quantify over, are not among them"; such "*impossible* individuals" as these world-spanning sums do not "deserve our attention" (Lewis 1986, pp. 210-211).)

These contentions, taken together, appear to raise a puzzle. For Lewis holds that the facts about what exists and what things are like, in worlds other than the actual world, furnish the truth-makers for modal talk about how things in the actual world might and might not have been. Yet if, in the very nature of the case, no object that exists in the actual world is present in any other world, and worlds are "ways things could have been", why doesn't it follow that no object in the actual world could have been different from how it actually is? So far, however, Lewis's answer is clear: the modal truths concerning objects in the actual world are fixed by how matters stand with their *counterparts* in non-actual worlds, with the objects that "stand in" for the actual objects in those worlds. But then how are we to understand the claim itself that in the very nature of the case, no actual object exists in any other possible world? That claim now sounds as if it is the denial that any actual object has *counterparts* in other possible worlds. If how matters stand with an actual object's counterparts tells you how that actual object might have been, and the actual object's counterparts exist in other possible worlds, why doesn't it follow that this actual object might have existed in different possible worlds?

One way of answering this puzzle traces to what Lewis says about the abundance of counterpart relations. An actual object's counterparts in other possible worlds "stand in" for that object by virtue of their comparative similarity to that object. Yet depending on the conversational context, different *sorts* of similarities can determine which counterpart relations matter. Lewis writes (1986, p. 254):

We have many and varied relations of comparative similarity. Some differ from others because they put different weights or priorities on different respects of (intrinsic or extrinsic) qualitative similarity; and even if they are alike in the respects of comparison they stress, they can still differ because one is more stringent than another. Any of these relations is a candidate to be expressed by the word 'counterpart'.

One good answer to our puzzle, then, would seem to be this. When, in philosophical strictness, we are discussing the ontological status of "ways things could have been", and are claiming that these are non-actual worlds every bit as concrete as the actual world, we are speaking in a way that makes it appropriate to recognize only an extremely stringent counterpart relation. So stringent is this relation that no actual person or cat or banana bears it to any other object at all, in any possible world. It then is (vacuously) true that all the

counterparts of such an actual object exist in the actual world, and hence that in the very nature of the case, any actual object exists only in the actual world. Yet in more everyday contexts—as when we are asking whether I could have weighed less than I actually do, or whether that banana could have been bigger than it is—we appropriately recognize a looser counterpart relation. I bear this relation to many persons in other worlds who weigh less than I do, but who otherwise are strikingly similar to me, and so it is true that I could have weighed less. A similar story explains why it is true, of the banana on the kitchen counter, that it could have been bigger than it is.

Stage theorists are free to hold, analogously, that different conversational contexts call on us to heed different *temporal* counterpart relations—in particular, temporal counterpart relations that are more stringent or more relaxed. Indeed it would seem that stage theorists *must* take this position. For otherwise stage theorists appear to affirm countless inconsistent triads. The first element of each such triad is the assertion that any temporal stage, in the very nature of the case, lasts only an instant—more exactly, lasts only as long as the “before” or “after” phase of any physically possible change. The second element is a claim such as that this person, or this cat, or this banana is a temporal stage. The third element is a claim such as that this person will one day be old, or that this cat once was a kitten, or that this banana grew on a banana tree. This actually is a nasty-looking puzzle for stage theory, just as the naïve puzzle raised against Lewis looked nasty. Anything that lasts only an instant has neither a past nor a future. Yet Sider and Hawley are at great pains to make out the claim that many familiar objects have protracted and interesting pasts and futures. How then can familiar objects all be temporal stages? The official answer adverts to temporal counterparts. But if the presently-existing stages referred to by “this person” or “that banana” do have temporal counterparts, how then are we to understand the claim that in the very nature of the case, any stage lasts only for an instant? Why don’t the existences of these counterparts at other times render true a claim that the given stage lasts for far *more* than a single instant?

The answer must be parallel to the answer we have drawn from Lewis. Stage theorists must say that when, in philosophical strictness, we are discussing the truth-makers for our everyday claims about ways that familiar objects persist, we are required to heed a very stringent temporal counterpart relation. So stringent is this relation that no temporal stage bears it to any other temporal stage. It then is (vacuously) true that, for any given temporal stage, all its temporal counterparts occur exactly when it does. That is why it is true that in the very nature of the case, no temporal stage lasts longer than an instant. But in other contexts—as when we are asking about the future of a given person, or the past of a given banana or cat—it is appropriate for us to heed a looser temporal counterpart relation. In those contexts it will be true that any familiar object has countless temporal counterparts, both future and past.

The idea that stricter *and looser* temporal counterpart relations may all be perfectly genuine and perfectly relevant, depending on context, appears to provide stage theory with a response to the worries about dispositional properties. What if, in certain contexts, a *temporally extended* entity can “stand in” for a present temporal stage, and can qualify as temporal counterpart to that stage? What if, in other words, a whole *collection of* consecutive subsequent (or earlier) stages can legitimately be counted as *being* some present stage, but at a different (stretch of) time? Then—as we noted above—a present stage can claim to have a temporal counterpart that lasts long enough that, by virtue of what it intrinsically is like over the not-so-meager span of its existence, some disposition can get manifested. A present banana-stage can claim a future counterpart that, all in its own right, undergoes ingestion and assimilation into the ingestor’s metabolism. Then it will be possible to attribute to that stage, i.e. that banana, the property of *being edible*, without incurring any worry about an endless chain of borrowing and non-payment. And recognition of such looser temporal counterpart relations will also help out with the historical properties that the stage theorist wants to

attribute to familiar objects. A banana-stage, for example, will now be able to claim a past counterpart that, strictly on its own, gradually grew on a banana tree—a past counterpart that, in virtue of what it intrinsically was like over the span of its existence, was *attached to* a banana tree (since after all being attached is partly dispositional—it is a matter of resisting removal).

But will this deprive stage theory of its advantage over perdurantism: will it require the stage theorist to say that there really are temporally extended entities out there in the world, figuring in the truth conditions for true claims we make about persisting objects? Arguably not. The stage theorist might plausibly say that many of the claims we make about persisting objects are true only in a loose way of speaking—only in the sense of corresponding to loose temporal counterpart relations that link individual stages to earlier and later collections of stages. Speaking strictly, there are no temporal counterpart relations to temporally extended collections: the things we say that are *strictly* true are true only in virtue of *strict* temporal counterpart relations, ones that link individual temporal stages only to earlier and later individual stages. It is the strict talk that limns reality—that is ontologically accurate. But in certain contexts it is permissible to speak in an ontologically inaccurate way—to speak as if individual stages have as temporal counterparts whole collections, extended across time, of other stages. That is why, the stage theorist could hold, some contexts permit us to attribute to instantaneous stages both dispositional properties and robust historical properties.

That is how, I suggest, the “loose end” for stage theory, revealed in our discussion of dispositional properties, can most charitably be tied up. It is a tightening-up that, as I said at the outset, is suggested by remarks of Lewis’s own. But in the end, as I now shall argue, it makes stage theory an untenable position.

The stage theorist—on this tightened-up version of her position—says that we say something ontologically inaccurate when we say that a banana is edible, or that it grew to maturity on a banana tree. It even is ontologically inaccurate to say that Ted Sider once was a boy, and one day will be an old man.

In fact, it will be ontologically inaccurate to speak of familiar objects as persisting across time at all. For remember: the continued existence of a member (or sample) of a natural kind requires the continued presence of properties that either are dispositional, or that crucially ground dispositional properties. If those very properties can be said to obtain only when speaking with ontological looseness—when speaking as if there are temporal counterpart relations *to* some temporally extended *collections* of later or earlier stages—then so too can continued existence be said to occur only when speaking with ontological looseness. Stage theory would then be an “error theory” about our ordinary talk about persisting objects. As such, it would face the same sort of demand that any “error theory” faces: it must explain why such errors are in a way good—why we profit by making them. The stage theorist must specify some benefit that we derive from speaking as if there are temporally extended counterparts to present stages.

The problem is that for any benefit that one could describe, the deriving of it seems to be a cumulative affair, one that extends over time. But each of us can derive, over some course of time, some benefit only if each of us manages to *exist* over that course of time. Minds, at least, must be persisting entities, if the tightened-up stage theory is to discharge the duty that is incumbent upon any sort of “error theory”. But then stage theory is stuck with saying that there strictly are persisting entities—minds, at the very least—after all.

The problem cannot be avoided by saying that, speaking in a strict and ontologically perspicuous way, minds themselves do not really exist—that strictly, only *mind-stages* exist. For no *mind-stage* lasts long enough to derive (in and of itself) any benefit from any way of speaking or thinking. True, one could say that the predicate “derives a benefit from thinking as if there are temporally extended entities” can really be true of an individual mind-stage, by

virtue of its having the right temporal counterparts. But, if we are to avoid another endless cycle of borrowing and non-payment, the temporal counterparts in question will have to include whole *series* of successive mind-stages—*temporally extended* entities that last long enough that over the course of their existence benefits can accrue. Yet the revised stage theory, as we have envisioned it, says that in ontological strictness there are no temporally extended entities at all, at least none that figure in the truth conditions for our ordinary claims about persisting entities. If so, then the predicate “derives a benefit from thinking as if there are temporally extended entities” is not, in ontological strictness, true of anything. And a merely fictional benefit cannot be invoked, in saying what *really* explains what is good about the “ontologically erroneous” practice of speaking as if there are temporally extended entities.

What then of a doubly revised stage theory—one that asserted that there are persisting entities, all right, but only of one type, namely minds: could such a doubly revised theory claim to preserve much of what is good in original stage theory? It seems not. Then the door would be opened to Parfit-like cases that make it seem as if distinct minds coincide. The sort of advantage that Sider finds in stage theory would be lost. There would also be worries about *how many* successive mind stages together compose a single series, a single mind—worries which other aspects of Parfit’s work make vivid. So an advantage that Hawley finds in stage theory would be lost as well.

Stage theory has a loose end, and it concerns what the theory must say about properties that are dispositional or that ground a dispositional property. The loose end can be tied up, but only by turning stage theory into a species of error theory. But the stage theorist cannot discharge the obligation, incumbent upon any error theorist, of saying why the error in question is a useful one for us to make. Thus we need not find in stage theory any threat to the idea that the items that really populate the world persist across certain changes and cease to exist when other changes take place. There is consequently no threat to the idea that some properties that an object has are merely accidental to it, while others are essential.²

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