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## Can I be an Instantaneous Stage and yet Persist Through Time?

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**ABSTRACT:** An alternative to the standard endurance/perdurance accounts of persistence has recently been developed: the stage theory (Sider, 2001; Hawley, 2001). According to this theory, a persisting object is identical with an instantaneous stage (temporal part). On the basis of Leibniz's Law, I argue that stage theorists either have to deny the alleged identity (i.e. give up their central thesis) or hold that stages are *both* instantaneous and continuants. I subsequently show that, although stage theory is flexible enough to accommodate the latter claim, the cost for accommodating it is an excessive proliferation of persistence concepts.

*Keywords:* persistence, stage theory, temporal counterparts, predication, Leibniz's Law.

According to stage theory (Sider, 2001; Hawley, 2001), I am not to be identified with a four-dimensional aggregate of temporal parts persisting through time by perduring, nor am I to be identified with a three-dimensional entity persisting through time by enduring. Rather, on stage theory, I am identical with a single instantaneous *stage* (temporal part) of a perduring aggregate.<sup>1</sup> But though I am an instantaneous stage I nevertheless succeed in persisting through time. I do this by having temporal counterparts within the very aggregate of which I am a part. In virtue of these counterparts, which are also identical

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<sup>1</sup> One may wonder exactly which instantaneous stage of the perduring aggregate I am identical with. My (!) thinking or uttering "I" takes time. So how is *the* referent of the indexical "I" – i.e. the referent that is supposed to be identical with an instantaneous stage – picked out? Stage theorists do not say. (However, see Hawley (2001: 57-60) for a somewhat sketchy and non-committal discussion of how language in general may be taken to latch on to a world of instantaneous stages.)

with instantaneous stages, temporal properties such as *having existed in the past* and *will exist in the future* can be predicated of me.<sup>2</sup> Thus I am a continuant. However, we should not conclude from this that the world contains *stages* that are continuants. For stages do not persist through time. They are instantaneous. Temporal properties such as *having existed in the past* and *will exist in the future* cannot be predicated of them. But if such properties can be predicated of me but not of stages, how then can I *be* a stage?

In this paper I shall argue that stage theorists either have to hold that I am not a stage after all or that, nevertheless, temporal properties such as *having existed in the past* and *will exist in the future* can be predicated of instantaneous stages and hence that stages are *both* instantaneous and continuants. And though the price for endorsing the latter claim need not be straightforward self-contradiction, yet the cost is, as we shall see, high.

According to Leibniz's Law, if *a* and *b* are numerically identical, then everything that is true of *a* is true of *b*, and vice versa.<sup>3</sup> In this case, however, it would seem that something is true of me that is not true of the stage. I have existed in the past, the stage has not. So by applying modus tollens it appears that we have to conclude that I am not identical with an instantaneous stage.

What is the stage theorists' response to this simple argument? Surprisingly enough, neither Theodore Sider nor Katherine Hawley addresses it, not explicitly at least. Sider, however, does have something to say about the *prima facie* awkwardness of the

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<sup>2</sup> The *modal* counterpart relation is a relation of similarity, Lewis has told us (Lewis, 1968). What does the *temporal* counterpart relation involve? Sider has no definite view on the matter: "The temporal counterpart relation is the same relation used by the worm theorist [perdurant theorist] to unite the stages of spacetime worms. Also known as the 'genidentity relation', the 'unity relation', the 'I-relation', and so on, it may be analyzed in some way (in the case of persons perhaps in terms of memory or bodily continuity), or taken as primitive; the stage theorist has no particular commitment to any of these alternatives." (Sider, 2001: 194) He does go on to say, though, that the temporal counterpart relation can be *intransitive* and that it thus allows for fission and fusion (pp. 204-205). Hawley, for her part, invokes unanalyzed "non-supervenient relations" (yielding immanent causation, spatiotemporal continuity, and similarity) in order to "stick" (her term) different instantaneous stages together, making them stages *of* the "same" ("same" in a loose sense) persisting object (Hawley, 2001: ch. 3; see also pp. 62-63). Hawley does not explicitly use Sider's expression "temporal counterpart", but this seems to be a mere verbal difference between the two.

<sup>3</sup> Sometimes Leibniz's Law is put in terms of quantification over properties. I prefer the more general, ontologically neutral, version (cf. Wiggins, 2001: 25).

thesis that I am numerically identical with an instantaneous stage and yet persist through time. I think his comment has some bearing on the argument from Leibniz's Law.

Sider writes:

I claim that I am identical to an instantaneous stage, and also that I will exist for more than an instant – how can I have it both ways? When I say that a 'stage' is instantaneous and so will not exist tomorrow, I am denying that it is *stage-counterpart* related to any stage in the future; the stage-counterpart relation is that of identity. When I say that 'I' will exist tomorrow, I mean that I have *person-counterparts* that exist tomorrow. (Sider, 2001: 201, n. 41)

Apparently, Sider is trying to make use of David Lewis's theory of contingent identity (Lewis, 1971) and apply it to the intra-worldly temporal case.<sup>4</sup> In Lewis's theory, an actual entity (actual in the indexical sense) may bear different counterpart relations (e.g. the *person-counterpart* relation, the *body-counterpart* relation, etc.) to different entities, even to one and the same entity, within one and the same (non-actual) possible world. If the actual entity is referred to by terms with different senses (associated with different sortals) then different counterpart-relations are picked out. I will not, however, dwell on the modal case but focus on the temporal one. Few accept Lewis's theory of contingent identity anyway and the modal case is not, I think, any clearer than the temporal one.<sup>5</sup>

So, does Sider's comment resolve our difficulty? What Sider wants to say, I take it, is that the expression "will exist tomorrow" is ambiguous and has different meanings in different contexts (cf. Sider, 2001: 200). Strictly speaking, we are not predicating and withholding the same temporal property when we say "*I* will exist tomorrow" and "*the stage* will not exist tomorrow". When I say "*I* will exist tomorrow", what is meant is that I have a person-counterpart that exists tomorrow; and when I say "*this stage* will not exist tomorrow", what is meant is that this stage does not have a stage-counterpart that exists tomorrow. If this analysis is correct, then the argument from Leibniz's Law does not

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<sup>4</sup> Cf. also Hawley's discussion of "the sweater" and "the thread" that temporarily coincide (2001: 156-158).

<sup>5</sup> See my (forthcoming) for a discussion of the modal case.

work, since strictly speaking, we are not dealing with the same temporal properties when we say that I will exist tomorrow and the stage will not.

This is a rather clever proposal but ultimately I do not think it is successful. Either stage theorists have to grant that we can truthfully say of the stage – using the very word “stage” – that *it* (de re) has a person-counterpart that exists tomorrow or they have to deny it. Suppose they opt for the latter. Then something is true of me that is not true of the stage. We can truthfully say of me that I have a person-counterpart that exists tomorrow, but we cannot truthfully say this of the stage. Here, there is no ambiguity. And thus a slightly modified version of the argument from Leibniz’s Law goes through.

Suppose that stage theorists agree that we can truthfully say of the stage (again using the very word “stage”) that it has a person-counterpart that exists tomorrow. Then, since having a person-counterpart that exists tomorrow is one meaning of “will exist tomorrow”, we can truthfully say of the stage that, in this sense of “will exist tomorrow”, it will exist tomorrow. The stage can thus be predicated the same temporal properties as can be predicated of me. And since I persist in virtue of the fact that such properties can be predicated of me, the same must be true of the stage (otherwise we again have a problem with Leibniz’s Law). But then it must be true that the stage (using the very word “stage”) persists through time after all.

Perhaps, stage theorists would want to say that what is true of the stage *qua* stage (i.e. referring to the stage with the very word “stage”) is that it persists or survives as a *person* (i.e. that the stage will be a person), as the stage, which exists today, will exist as a person tomorrow, due to its having a person-counterpart that exists tomorrow. But notice that it is nevertheless true of the stage *qua* stage that it persists; and it persists for as long as I do. I think, however, that many will agree that a theory according to which stages (i.e. temporal parts), which are held to be instantaneous, i.e. of zero duration, nevertheless are granted to persist through time and to be continuants is unattractive. Normally we suppose that to be instantaneous is *not* to persist, and to persist is *not* to be instantaneous. Hence, on a normal understanding of these words, we are contradicting ourselves if we say of a particular entity that it is instantaneous *and* persists through time.

Defenders of stage theory may at this point retort that we are dealing with two different senses of “instantaneous” and “persist”, respectively: to be instantantaneous<sub>1</sub> is

to lack a temporal counterpart of a certain sort, namely a stage-counterpart; but not to be instantaneous<sub>2</sub> is to have a temporal counterpart of a different sort, namely a person-counterpart. And not to persist<sub>1</sub> is to lack a stage-counterpart, but to persist<sub>2</sub> is to have a person-counterpart. Thus, they may declare that the fact that an entity is instantaneous<sub>1</sub> does *not* preclude that the entity is persisting<sub>2</sub>, although it *does* preclude that the entity is persisting<sub>1</sub>. Such a theory is pretty messy though, I submit, and it may come as a surprise to many of us that the terms have so different senses – they do not seem to have.

But suppose that we accept this line of reasoning (for the sake of the argument), why should the senses be restricted to stage-counterparts and person-counterparts? Given that I am my body, as many materialists claim (e.g. Lewis, 1971), I (a body) may have body-counterparts further ahead in time (“me” as a corpse) than I have person-counterparts. And thus it may be that I persist<sub>3</sub> for a longer time than I persist<sub>2</sub>. Hence, there may be many senses of “instantaneous” and “persist” to keep track of indeed. Probably as many as the number of sortals under which I fall: stage, person, body, philosopher, man, tax payer, human, animal, entity, etc (cf. Lewis, 1971: 210). (For example, if I have person-counterparts further ahead in time than I have philosopher-counterparts, then I will persist<sub>4(philosopher)</sub> for a shorter time than I persist<sub>2(person)</sub>.) I think that many will find such a proliferation of persistence concepts an excessively high price to pay for holding on to stage theory.

I wish to end with a quick diagnosis of the underlying fault with stage theory. The theory presumes that an entity (conceptualized as falling under a certain sortal) can truthfully be said to persist if the entity has temporal counterparts located earlier or later than itself in spacetime. *Prima facie* this is not correct. The concept of persistence seems to require *identity* – identity in the strict numerical sense – not anything weaker, like

standing in a certain counterpart relation to something else.<sup>6</sup> The oddities pointed out in this text strengthen this *prima facie* intuition regarding the concept of persistence.<sup>7</sup>

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<sup>6</sup> Notice that Sider and Hawley in effect accept this intuition when it comes to *stages*, i.e. stages *qua* stages (see e.g. the Sider-quote above). But why are stages so special in this respect? Why this, seemingly, arbitrary demarcation?

<sup>7</sup> Arguably, both the endurance and the perdurance accounts of persistence heed to this intuition: the endurance account by saying that a persisting object is wholly present at more than one time; the perdurance account by holding that a persisting object is a four-dimensional *aggregate* of temporal parts.

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