Stage Names:
Towards a Stage-Theoretical Semantics for Persons' Names

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ABSTRACT: Four-dimensionalist accounts of personal persistence according to which personal names are temporally rigid produce counterintuitive results in branching cases. I sketch a semantics for the stage theory according to which names refer indeterminately over reference classes of stages and, in branching cases, select different reference classes at different times. Where fission occurs there is one person before fission, afterwards two people each of whom 'were' that person, and no answer to the question of how many people there are 'all along'. This account produces a more intuitive reading of fission cases than standard perdurantist accounts. Arguably, in understanding personal persistence *if* you are a four-dimensionalist you should be a stage theorist rather than a worm theorist.

KEY WORDS: Fission, identity, names, personal identity, stage theory.

Four-dimensionalist accounts of personal persistence according to which personal names are temporally rigid produce counterintuitive results in branching cases.[1] I sketch a semantics for the stage theory according to which names refer indeterminately over reference classes of stages and, in branching cases, select different reference classes at different times.[2]

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[1] Names are *temporally rigid* in that they refer to the same individual at every time.

[2] The problem of personal fission addressed in the current essay suggests that identity may be 'occasional' so that individuals that are identical before fission are not identical afterwards. In 'Occasional Identity or Occasional Reference?' (Baber 2015) and 'Stage-theoretical naming and counting' (Baber 2022) in this journal I argued that personal names are temporally flexible and, in fission cases, refer to different persons at different times so that it is reference rather than identity that is 'occasional'. I elaborate this account further in the current paper, proposing a stage-theoretical semantics for personal names.

Where fission occurs there is one person before fission, afterwards two people each of whom 'were' that person, and no answer to the question of how many people there are 'all along'. This account produces a more intuitive reading of fission cases than standard perdurantist accounts. Arguably, in understanding personal persistence *if* you are a four-dimensionalist you should be a stage theorist rather than a worm theorist.

1. Referring to Stages

Persons, on perdurantist accounts, are four-dimensional aggregates of stages or 'worms' standing in a kind-specific unity relation for *person* and, on most accounts, personal names refer to the same person at every time. John Perry, addressing the puzzle case of personal fission, in which one person intuitively 'becomes two different people', is a notable exception. On his preferred account, the Lifetime Language, personal names select different person-histories at different times in cases of fission (Perry 1972). It is not however clear that Perry is a perdurantist since he notes that he leaves open the question of whether person-histories, aggregates of stages that exist at different times, are persons. More recently Wolfgang Schwarz in response to fission cases has provided an account according to which names are temporally flexible that is supposed to be compatible with both perdurantism and the stage theory, and with endurantism as well (Schwarz, 2014). On the stage theoretical ('exdurantist') account to be defended here they *are* stages. This poses the question of which stages they are—or, more precisely, which stage or stages the utterance of a personal name at any given time refers.

According to the Present Stage View (PSV), in 'de re temporal predication' names refer to stages that exist at the time of utterance and express singular propositions about them (Sider 1996, 2001). (1) says of Joe Biden's current stage that it was a senator, that is, that it bears a kind-specific counterpart relation to some earlier senatorial stage.

(1) Biden was a senator.

This account poses a problem for understanding talk about individuals who have no current stages and so how we should understand (2):

(2) Socrates was a philosopher.

Sider, who endorses the PSV, suggests that (2) be understood as 'a *de dicto* temporal claim, the result of applying a sentential operator "WAS" to the sentence "Socrates is a philosopher"' (Sider 1996: 450).

Prima facie (1) and (2) are of the same form, but on this account they are not because of the extra-linguistic fact that Biden is alive but Socrates is dead. Even when it comes to individuals of any kind with which we are more intimately connected once they cease to exist *de re* rapport is lost: as soon as my parrot becomes an ex-parrot I cannot, strictly speaking, talk *about* her. The suggestion that we cannot talk *de re* about Socrates, or even recently-deceased companion animals, is highly unintuitive.

Arguing that this result is unsatisfactory, Pablo Rychter (2012) proposes that stages receiving Kripkean baptism can be non-arbitrarily selected for reference. A name's reference, on this account, is fixed by an initial act of 'dubbing' or 'baptism' and later uses of the name pick out the object so named by being linked to that original act via a causal chain. According to Rychter's Baptized Stage View (BSV) 'Biden' and 'Socrates' refer to past stages so baptized. In (1), 'Biden' refers to a person-stage baptized 'Joseph Robinette Biden' some eighty-one years ago and is true because that stage bears the kind-specific counterpart relation for *person* to subsequent senatorial stages that existed prior to the time of utterance. Likewise, 'Socrates' refers to a baptized stage in 5ᵗʰ century BCE Athens and (2) is true because that stage bears the counterpart relation for *person* to later, mature philosophical stages.

Not all individuals however have unique baptized stages. Rychter cites Julius, designated as the inventor of the zip (Rychter 2012: 377). 'Julius', he suggests, '*vaguely* refers to each of the inventors of the zip', noting that 'indeterminacy in singular reference is an already familiar phenomenon that can be treated with standard supervaluationist tools' (Rychter 2012: 377–378). *If however we have supervaluationist tools why bother with baptism?* Rychter's account is disjunctive, and unnecessarily so. Where there is an identifiable baptized stage to secure reference, the assigned name at every time refers to that stage on his account; where there is not, the name refers indeterminately over a class of stages. In the case of Julius, baptized by description as the inventor of the zip, the name 'Julius' refers indeterminately over all and only those stages that were involved in the process of inventing the zip. In other cases, which Rychter does not consider, his account suggests that names refer indeterminately over *all* stages that constitute an individual's history. So it is in the case of Lucy, a primitive hominid who roamed the African savannah 3.2 million years ago, but was only baptized in 1970 by paleo-archeologists who discovered her bones. Lucy's remains are not Lucy. And it would be arbitrary to select any stage of Lucy as the referent of

her posthumously acquired name or any proper part of her history as the class of stages over which her name indeterminately refers.

If indeterminate reference is in order, then it seems more natural to understand 'Lucy' as referring indeterminately over the class of *all* stages that constitute her history. And, arguably, even where there is an identifiable baptized stage it is more natural to take the name conferred at baptism to refer indeterminately over a range of stages which includes that stage. Intuitively (1) is not *about* an infantile 1942 Biden-stage but about *Biden* and on the stage-theoretical semantics to be sketched here that is to say the name 'Biden' refers indeterminately over the stages that constitute his history. There are many, many stages—on some accounts, continuum many stages—that constitute a person's history. But persons, on the stage view, are not their histories and persons' names do not refer to the transtemporal aggregates of person-stages or 'worms' that constitute their histories as perdurantists claim. Rather, on the stage-theoretical account to be sketched here, personal names refer indeterminately over stages that figure in persons' histories.

2. Indeterminate Reference

On my proposed account reference to persons gets treatment comparable to the supervaluationist response to the Problem of the Many.

There is just one cloud in the sky but many aggregates of water droplets overlapping the region it occupies. It is not clear which compose a cloud since many are eligible and it would be arbitrary to select one of them as *the* cloud (Lewis 1993: 164). Lewis declares that while we cannot deny arbitrariness 'we can deny that it is trouble … [O]ur unmade semantic decisions don't matter since what we want to say will be true under all different ways of making the unmade decision' (Lewis 1993: 172). Pointing skyward I say 'That is a cloud'. My demonstrative 'that' is vague and picks out different eligible aggregates of water droplets on different precisifications. But on every admissible precisification 'That is a cloud' is true. There is no determinate answer to the question of which aggregate of water droplets 'that' picks out, but my utterance, 'That is a cloud' is determinately true.

Sentences may be determinately true or false even when the reference of terms that figure in them is indeterminate, a result Lewis recommends we 'learn to live with it, as we do in other contexts. "I owe you a horse, but there is no particular horse such that I owe you that horse"' (Lewis

1993: 173). On the current account, person's names refer to person-stages but there is no particular stage to which a personal name refers.

Names are assigned to stages at baptism and propagate to all stages that bear the kind-specific unity relation for *person*, the I-relation, to the baptized stage. On this account naming individuals is comparable to the Kripkean agenda for reference to natural kinds where we tag a sample of a given kind and subsequently refer to all other items that are appropriately related to the 'baptized' sample. According to the canonical story we tagged a sample of H_2O as 'water' and subsequently that designation attached to other quantities of stuff that bore the appropriate natural kind relation to the sample, i.e. having the same microstructure. This stuff is water because, like the tagged sample, it is H_2O.[3] As regards reference to spatio-temporal particulars the relevant relation on those stages that inherit baptismal names is not similarity with respect to microstructure but a kind-specific causal relation. Biden's senatorial and presidential stages inherit his baptismal name because they are related to the baptized stage by the presumably causal kind-specific counterpart relation for *person*.

At any time, t, 'N's stage at t' refers determinately to a person at t who is I-related to the baptized stage.[4] At any time, t, a personal name 'N' refers indeterminately over those stages that are I-related to N's stage at t—*N's reference class at t*. A sentence ascribing a property, F, to a person, N, at a time, t, is true if the reference class over which N refers at a time of utterance, t', includes a stage at t that has that property.

(3) [At t'] N is F at t

In (3), the time of utterance, t', determines the class of stages over which 'N' refers and t selects the stage in virtue of which N is F. (3) is true iff 'N's reference class at t'' includes a stage at t that is F.

At any time of utterance, 'N' refers indeterminately over the set of stages that are I-related to *a* stage at the time of utterance that includes *a* stage baptized 'N'. Both indefinite articles are of interest. A person-stage may be I-related to more than one baptized stage. People change

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[3] I am grateful to the anonymous reviewer for this journal for pointing out the analogy between my proposal for reference to stages with Kripke's model of naming natural kinds!

[4] Persons *are* stages on the stage-theoretical account and *N's stage at t* is just N, in the way that the City of Baltimore is just Baltimore, and not to a part, feature, or property of Baltimore. 'N's stage at t' refers to a person but is not a *personal name*, a natural language expression that purports to refer to a person.

their names and adopt pseudonyms. More interestingly, where fission occurs there are times at which more than one stage is I-related to the same baptized stage.
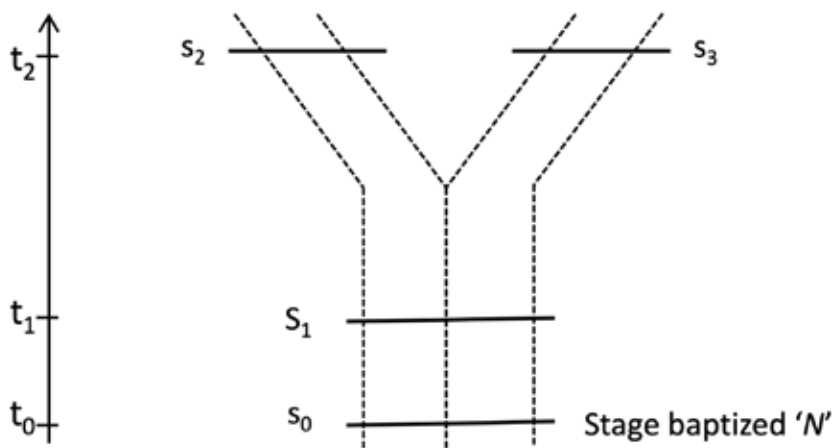
S_1 is N's stage at t_1. To determine the reference class of 'N' at t_1, start at s_1 and trace the I-relation from there to earlier and later stages. The reference class of 'N' at t_1 is represented by the Y-shaped structure. s_2 and s_3 are N's stages at t_2. To determine the reference classes of 'N' at t_2 start with s_2 and s_3 and trace the paths of the I-relation to earlier and later stages. The I-relation is not transitive. s_2 and s_3 are each I-related to s_0 but not to one another, so the left and right branches represent two overlapping reference classes of 'N' at t_2.[5] 'N' is both synchronically and diachronically ambiguous: it selects different reference classes before and after fission; and after fission selects different reference classes at the same time.

This account preserves what Rychter describes as 'two orthodox views about proper names: first, the view that proper names are not context sensitive … second, that the referent of a name is the individual originally baptized with it' (Rychter 2012: 374). Names do not determinately refer to different stages at different times as they do on the Pres-

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[5] This is the way in which Lewis understands the I-relation—without any no-branching clause. The significant difference is that on this account the aggregates of stages that belong to reference classes are not persons so there is just one person, counting by identity, before fission (Lewis 1983).

ent Stage View and in non-branching cases they refer indeterminately over the same reference classes at every time. And the reference class(es) over which a name refers is determined by baptism and includes the baptized stage. Unlike the Baptized Stage View it comports with our intuition that when we ascribe a property to a person we are referring to that person and not to some long-past stage. In (1) we are talking about *Biden*, referring indeterminately over many person-stages, and saying that there is a past senatorial stage amongst them rather than saying of a baby-stage in Scranton 81 years ago that it is I-related to a more recent senatorial stage.[6] This account provides an intuitively correct reading of fission cases as well as ordinary cases.

3. Fission: Vagueness and Ambiguity

At t_1, Wholly is in a blue room about to undergo a double hemisphere transplantation. After the procedure, the left and right hemisphere recipients are baptized 'Lefty' and 'Righty' and, at t_2, occupy red and green rooms respectively. s_1, Wholly's stage at t_1, is I-related to s_0, the stage at t_0 who was baptized 'Wholly' and to post-fission stages s_2 and s_3, stages at t_2 of Lefty and Righty respectively.

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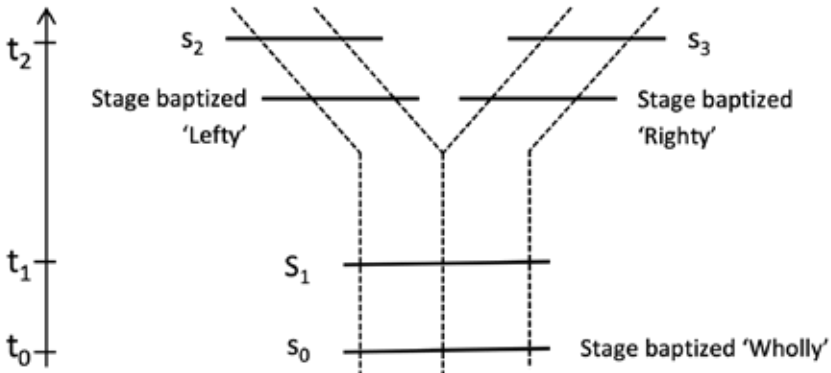
[6] To further accommodate our intuitions in this matter we could modify the account so that in some contexts 'Biden' referred indeterminately over a proper subset of its reference class—over those stages salient to the speaker, to those residing in the Whitehouse, to those existing within 11 years of the time of utterance, or whatever.

Before fission Wholly will be in the red room and Wholly will be in the green room since Wholly's stage at t_1 is I-related to stages in the red room and in the green room. At this point the incredulous stare kicks in. How is it possible that, after fission, Wholly be both entirely in the red room and entirely in the green room? Adopting the first-person perspective, I cannot imagine being entirely in two different places. I can imagine my experience being partly of two places, of my visual field as a sort of split screen. But when I conjure up this picture there are spatial relations between the imagery on the two sides of my visual field: they are parts one experience. I cannot imagine being entirely in two places *at different times* either. There might be a what-it-is-like experience of states of affairs at different times for God, an atemporal being, but not for me.

But that is irrelevant. On the current account, while a person about to undergo fission is *going to be* in two different places there is no time at which any person *is* in two different places. Persons are instantaneous stages. Wholly at t_1 is not identical to either the person-stage in the red room at t_2 or the person-stage in the green room at t_2. There is no time at which Wholly present-tensedly *is* entirely in the red room and *is* entirely in the green room. Wholly's stage at t_1 is however I-related to stages in both places: before fission Wholly can look forward to being in the red room and to being in the green room and, at t_1, that is true also of both Lefty and Righty.

Though the names 'Lefty' and 'Righty' will not be in use at t_1, unless Wholly has issued a pre-fission baptismal directive, they refer at t_1. Before fission, 'Lefty' and 'Righty' each select the same reference class as 'Wholly'.

(4) Lefty = Wholly[7]

(5) Righty = Wholly

(6) Lefty = Righty

Begin with the post-fission stage baptized 'Lefty' and trace back the I-relation to Lefty's stage at t_1. That stage, s_1, defines the reference class of 'Lefty' at t_1, which includes all and only those person-stages that are I-related to it, represented by a Y-shaped structure which includes s_3 as well as s_1 and s_2. And that is the reference class of 'Wholly' at t_1. Begin-

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[7] Identity is not 'occasional'—see below. So it would be *de trop* to specify a time when the persons designated in (6) – (8) are identical. In branching cases however names designate different persons at different times.

ning with the post-fission stage baptized 'Righty' produces the same result, so (6), (7) and (8) are true at t_1.

At any time, t', an individual N is, was, or will be F at a time t if and only if their reference class at t' includes a stage at t that is F. And the reference class of both 'Lefty' and 'Righty' at t_1 includes a stage in the red room at t_2.

(7) [At t_1] Lefty is in the red room at t_2.

(8) [At t_1] Righty is in the red room at t_2.

Since 'Lefty', 'Righty', and 'Wholly' select the same reference class at t_1, represented by the Y-shaped structure, they have all the same properties at t_1, including futural properties. That set of stages includes a post-fission stage in the red room at t_2 so both (7) and (8) are true.

At t_2, however, (6), is not true—not because identity is 'occasional' but because reference is. At any time, t, an identity statement $N_1 = N_2$ is true if and only if the reference class of N_1 at t = the reference class of N_2 at t. At fission, the reference of 'Lefty' and 'Righty' shifts to the left and right branches respectively. At t_2, 'Lefty' selects the set of all and only stages that are I-related to s$_2$, which includes s_1 but not s_3 and 'Righty' selects the set of stages that are I-related to s_3, which includes s_1 but not s$_3$. Since 'Lefty' and 'Righty' select different reference classes at t_2, (9) is false.

(9) [At t_2] Righty is in the red room at t_2.

'Righty' is diachronically ambiguous. (8) is true but (9) is false because 'Righty's reference class at t_1 includes a stage at t_2 in the red room but its reference class at t_2 does not. (4) and (5) are true at t_2, on different interpretations, because after fission 'Wholly' is also synchronically ambiguous, a phenomenon common for names outside of regimented formal languages.[8] There are two concurrent stages at t_2 that are I-related to the pre-fission stage baptized 'Wholly': s_2 and s_3. At t_2, 'Wholly' refers ambiguously over reference classes defined by s_2 and s_3, represented by the left and right branches respectively. On one disambiguation (4) is true at t_2; on the other (5) is true at t_2. There is however no post-fission

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[8] 'George Wilson' refers, ambiguously, to a Buffalo Bills football player, a former chair of the Johns Hopkins philosophy department, and a fictional character in *The Great Gatsby* (if that counts); 'John Perry' refers to the Stanford philosopher who wrote 'Can the Self Divide?' and to a ship.

stage that is I-related to both the stage baptized 'Lefty' and the stage baptized 'Righty' so at t_2 (6) is false at t_2.

Since (6) is true before fission but false afterwards there is one person before fission but two afterwards counting by identity. Synchronic counting is always by identity: at any time there are exactly the same number of persons as there are person-stages, hardly surprising since persons *are* stages. Diachronic counting however is *never* by identity since persons are instantaneous stages and stages that exist at different times are not identical. But there is no such thing as diachronic identity, either as distinct from or as a restriction on identity simpliciter. There are just diachronic identity *statements*—statements in which individuals are identified by descriptions that are true of them at different times. The President of the United States was the junior senator from Delaware. That identity statement is true because, timelessly speaking, the President of the United States is identical to the junior senator from Delaware in 1972. The President of the United States in 2024 = the junior senator from Delaware in 1972 since 'the President of the United States in 2024' and 'the junior senator from Delaware in 1924' both refer to Joe Biden and Joe Biden = Joe Biden. That is to say, on the current account, the reference class 'the President of the United States in 2024' selects = the reference class 'the junior senator from Delaware' selects. It a *diachronic* identity statement because it refers to Biden by descriptions that are true of him at different times. No senatorial stage is identical to any presidential stage. But expressions that purport to refer to persons do not refer determinately to stages—in this case to Biden's senatorial and presidential stages respectively—but indeterminately to stages that exist at different times.

After fission both Lefty and Righty remember being in the blue room and that is where they were: (10) and (11) are true since the reference classes 'Lefty' and 'Righty' select at t_2 both include a stage in the blue room at t_1.

(10) [At t_2] Lefty is in the blue room at t_1.

(11) [At t_2] Righty is the blue room at t_1.

Lefty and Righty didn't come into existence at fission. They were somewhere at t_1, and where they were was the blue room. At t_1 however they weren't, so to speak, *they*: there was just one person in the blue room. And at t_2 there is just one person in the red room, namely Lefty, who was in the blue room at t_1. So (12), a diachronic identity statement, is true at t_2.

(12) The person in the red room was the person in the blue room at t_1.

The current account is elaborate, but it produces more intuitive results than perdurantist alternatives according to which personal names refer to the same aggregates of stages at every time, without taking on any additional metaphysical baggage.

4. Consider the (Perdurantist) Alternatives

Perdurantists agree that persons are I-interrelated aggregates of person-stages, where the I-relation is the kind-specific unity relation for *person* but disagree about whether the I-relation may branch. On accounts that permit branching there are in fission cases two persons at every time who 'cohabit' before fission. Those that avoid branching by building non-branching requirements into the conditions for I-relatedness avoid cohabitation but preclude survival in fission cases. The current stage-theoretical account avoids both results, which can be negotiated but are nevertheless costly.

According to Lewis the I-relation is intransitive and, when fission occurs, branches. Lefty and Righty share stages before fission and are then 'almost identical' because they overlap. Before fission they count as one: synchronic counting is by identity-at-a-time, an almost-identity relation. But almost-identity is not an indiscernibility relation for all properties.[9] (9) is true because Lefty includes a stage at t_2 in the red room amongst his temporal parts but (10) is false because Righty does not, even though her stage at t_1 is I-related to a stage in the red room at t_2. I-relatedness is not sufficient for the ascription of futural properties.

Considered from the first-person perspective this is highly unintuitive. Even if I am a space-time 'worm', a transtemporal aggregate of person-stages of which my current stage is just a proper temporal part, I view my prospects from the time-bound perspective of a stage, as Lewis grants (Lewis, 1983: 59).[10] At t_1 I understand that my current stage is related to a stage in the green room in just the way that co-personal stages are related in ordinary cases—by some combination of psychological continuity and connectedness grounded in a causal relation on events that occur to stages at different times. But I only have a 50-50

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[9] Vide Lewis 1993.
[10] See also Parsons (2015) who argues that this supports a 'phenomenological argument for stage theory'.

chance of getting there. More poignantly, I recognize that my fission may be truncated. It may be that one hemisphere takes and its recipient lives long and prospers but the other sputters on for a few hours and then poops out. Before fission I cannot desire that it be I rather than my stage-sharing cohabitant who survives because my cohabitant and I token the same psychological states.[11]

Perdurantist accounts that incorporate a no-branching condition for the I-relation avoid cohabitation. But on such accounts individuals who undergo fission do not survive. I-relatedness is sufficient for the ascription of futural properties but no pre-fission stages are I-related to any post-fission stages. My stage at t_1 is related to post-fission stage in the green room in the way that co-personal stages are ordinarily related, whether by psychological continuity or something else. But I will not get there or anywhere else because I will cease to exist and be replaced by two newly-minted persons who q-remember my actions and experiences. They will more or less faithfully carry out my intentions but that is cold consolation because I will be dead. This account runs counter to our conviction that personal survival is intrinsically grounded, presumably in an imminent causal relation on states of a person at different times.

Like perdurantist accounts that prohibit branching, the stage-theoretical account sketched here avoids cohabitation. On this account however persons survive fission: survival is I-relatedness and the I-relation may branch. Survival is never identity—whether in ordinary or branching cases—but the scheme for assigning properties to persons at times makes the correct diachronic identity statements come out true. It also makes true the correct synchronic identity statements, both before and after fission. And synchronic counting is by identity: at any time there are exactly as many persons as there are person-stages. Counting by identity there is one person before fission and two afterwards.

There is no answer to the question of how many persons there are all along—a feature not a bug. When it comes to persons there is no view from nowhen. The 'timeless' view of fission, as represented by the aerial view of roads overlapping at a concurrence, is misleading. We persons view ourselves and our prospects like motorists on the ground looking ahead from the time-bound perspective of stages. The current stage-theoretical account respects the first-person perspective and makes the talk come out right.

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[11] The perdurantist may be able to respond to this concern but I'm not counting on it. For a discussion of truncated fission see Ehring (2021).

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