

Fission, cohabitation, and the concern for future survival

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1. The common-sense view about what matters

We ordinary people desire various things for our futures. At the most general level, we want our futures to go well rather than badly, whatever we take their going ‘well’ and ‘badly’ to consist in. More basic than this desire is the desire that we should *have* futures. We want to continue to survive from one moment to the next. This desire for continued survival, along with the attendant beliefs and attitudes (such as the belief that being shot is likely to frustrate this desire and the disposition to fear murderous gunmen) I shall call the *concern for future survival*.

What does it take to satisfy my desire for continued survival? To borrow a term from David Lewis, a ‘platitude of common sense’ (1976a: 18) has it that my desire is satisfied iff the person I am now exists in the future; that is, iff there is a future person with whom I am identical. On this view, what matters in survival is personal identity (for brevity, simply ‘identity’). Derek Parfit has challenged this view by observing that one can imagine oneself undergoing certain processes that do not interrupt what matters, but do interrupt identity. One such process is fission: I divide into two people, each of whom is bodily and psychologically very similar to me, but neither of whom is identical with me.¹ Parfit believes, for well-known reasons that will not be rehearsed here, that the relation between me and my fission products contains everything that matters to me in survival. Since this relation is not identity, Parfit concludes that what matters cannot be identity. Rather, what matters is the sort of psychological continuity that holds between a person and her fission products, or between a person at one time and that person at another time. This continuity involves links of memory (or quasi-memory, a capacity that enables one person to ‘remember’ the experiences of another), along with the persistence of most beliefs, desires, values, etc.

¹ Whilst Parfit concedes that ‘[t]he best description is that I shall be neither resulting person’ (1987: 279), he views this description as unsatisfactory because it suggests that fission is as bad as death. For simplicity, I shall ignore this worry.

Let us grant that fission is as good as survival. Must we abandon the common-sense belief that what matters is identity (hereafter, the *common-sense view*)? Lewis thought not. He agreed with Parfit that what matters is psychological continuity, but argued that wherever we have such continuity, we have identity. According to Lewis, people are four-dimensional and comprised of person-stages. He conceptualised what matters in terms of relations not between people, but between person-stages. Two person-stages are stages of the same person (that is, I-related) iff they are psychologically continuous (R-related). In this terminology, the common-sense view is expressed as the view that what matters is the I-relation. Lewis reconciles the common-sense view with the view that what matters is psychological continuity by claiming that '*the I-relation is the R-relation*' (1976a: 22). His account entails that a case of fission involves two separate people who share their pre-fission person-stage but not their post-fission person-stages.² Fission, then, is as good as survival because it is survival.

Does Lewis succeed in preserving the common-sense view? I will briefly outline a well-known objection by Parfit to Lewis's account, along with Lewis's response and two attempts to make a 'cohabitation'³ (that is, pre-fission stage-sharing) view of fission more robust. I will argue that whilst cohabitation accounts can escape Parfit's objection, they fail to preserve the common-sense view for another reason.

2. Parfit's objection

Parfit (1976) argued that Lewis's attempt to preserve the common-sense view has implications contrary to common sense. Imagine a case of fission in which one fission product dies immediately after fission. On Lewis's view, this involves two people, C_1 and C_2 , who share pre-fission person-stage S . After fission, C_1 dies and C_2 survives. S has a common-sense desire for survival 'on behalf' (Lewis 1983: 74) of both C_1 and C_2 , yet since C_2 survives long after fission while C_1 does not, C_2 's pre-fission desire for survival is satisfied while C_1 's is not. Therefore, observes Parfit, the desire for survival found in S cannot be the common-sense kind.

² More people will be involved if the fission products themselves fission. For simplicity, I assume that they do not.

³ I borrow this term from Mills (1993).

Lewis concedes that ‘there is a limit to how commonsensical one’s desires can possibly be under the peculiar circumstance of stage-sharing’ (1983: 74), and argues that S’s desire is best interpreted as ‘Let at least one of us survive’. As such, both C₁ and C₂’s desire for survival is satisfied. However, as Theodore Sider (2001) notes, this entails that whether one’s desire to survive is satisfied can depend on what happens to someone else, which takes Lewis far from his goal of preserving common-sense beliefs about what matters.

There have been attempts to modify Lewis’s account to escape Parfit’s objection.⁴ Eugene Mills has argued that, rather than claim that the pre-fission person-stage ‘does the thinking for both of the [people] to which it belongs’ (Lewis 1983: 74), we should take the people sharing the pre-fission person-stage⁵ to have distinct but qualitatively identical streams of consciousness. To paraphrase Mills (1993: 43), when the shared person-stage says the words ‘Let me survive’, each of the people sharing the stage wishes to survive, and each utters the sentence intending the use of ‘me’ to refer to himself.

Mills’s account escapes Parfit’s objection. The desire that each pre-fission person expresses with the words ‘Let me survive’ is satisfied iff that person has a stream of consciousness that continues for sufficiently long a time. Whether each person’s desire is satisfied does not depend on what happens to the other person.

Simon Langford (2007) offers a cohabitation account that does not involve the claim that the pre-fission person-stage has two distinct streams of consciousness. He endorses Lewis’s definition of a person as ‘a maximal, R-interrelated aggregate of person-stages’ (Lewis 1976a: 22), along with Lewis’s view that two person-stages are I-related iff they are R-related, and the principle that for any person P, only P’s stages have what matters for P’s survival. This enables him, like Lewis, to hold that fission involves two people who share a pre-fission person-stage, that what matters is identity, and that wherever we have identity we have psychological continuity. Unlike Lewis, Langford is not committed to the view that whether one’s desire for survival is

⁴ I will not discuss versions of the cohabitation view that do not address the objection, such as Robinson’s (1985), Perry’s (2002), and Noonan’s (2003).

⁵ Mills writes not of stage-sharing, but of people being ‘associated with’ bodies. For simplicity, I express his cohabitation view in terms of stage-sharing.

satisfied can depend on what happens to someone else. As a result, Langford escapes Parfit's objection whilst avoiding the need to subscribe to Mill's 'two streams' view.

3. The concern for future survival: a new problem for cohabitation

Parfit's objection is not the only obstacle faced by those who take cohabitation to rescue the common-sense view. I will argue that people sharing a pre-fission person-stage cannot properly be concerned for their future survival in the way that ordinary people are. Pre-fission stage-sharers, therefore, are not ordinary people. This means that, whilst cohabitation may tell us that pre-fission stage-sharers survive fission, it tells us nothing about the survival of ordinary people. And since the common-sense view is a view about what matters in survival to ordinary people, cohabitation tells us nothing about the correctness of the common-sense view.

What does the fact that ordinary people are concerned for their future survival tell us about the sort of things that they are? Among other things, I suggest that it entails that their future survival and demise are both real possibilities, and that they are aware of this: concern for one's future survival, if it could never be jeopardised, would be as misconceived as concern that one's birth date should remain unchanged. A being whose survival cannot be jeopardised, then, cannot properly be concerned for its future survival⁶ – at least (as we shall see), not in the way that ordinary people are.

Here lies a problem for cohabitation. In the case of a person who shares at least one person-stage with at least one other person, let us say that, during those shared stages, she is a 'cohabiting person' or a 'cohabitant'. According to the cohabitation views considered here, a person-stage's being a pre-fission stage determines that it is cohabited. This determination is logical: from the premises that fission does not interrupt identity, and that fission gives rise to two distinct people where previously there seemed only to be one, it follows that the pre-fission person-stage is cohabited. Fission logically determines the cohabitation of the pre-fission person-stage, just as Gordon Brown's election as Prime Minister logically determines that, before election, he is the future Prime Minister. Further, for those elected Prime Minister at time t , there is nothing more or less involved in being the future Prime

⁶ It may feel such concern even so, if it is deluded about the sort of being that it is. This does not entail that it is a *proper* subject of such concern. Similarly, that I may feel remorse for a murder that I falsely believe I have committed does not entail that I am a proper subject of such remorse.

Minister at any earlier time t_n than being elected Prime Minister at t ; and for those who fission at t , there is nothing more or less involved in being cohabited at t_n than fissioning at t .⁷ This, I will argue, entails that the survival of cohabiting people, unlike that of ordinary people, cannot be jeopardised. Therefore, cohabitants cannot properly be concerned for their future survival in the way that ordinary people are.

Since there is nothing more or less involved in being cohabited at t_n than fissioning at t , it follows that if person-stage S is cohabited, S's cohabitants cannot die before fission. The survival of S's cohabitants, then, cannot be jeopardised until after fission, and so they cannot properly be concerned for their future survival in the way that ordinary people are. The same point should, it seems, apply to the future Prime Minister: there is nothing more or less involved in being the future Prime Minister at t_n than being elected Prime Minister at t ; so if X is the future Prime Minister, X cannot die until after the election. Therefore, X, like S's cohabitants, cannot properly be concerned for his future survival in the way that ordinary people are.

This is counterintuitive. What does it mean to say that S's cohabitants, or the future Prime Minister, 'cannot die' before a certain event? Well, I am not suggesting that they are immune to the usual sorts of fatal mishaps: bullets, diseases, etc. Rather, the propositions 'S is cohabited' and 'S's cohabitants will die before fission' are inconsistent, as are 'X is the future Prime Minister' and 'X will die before election'. If the first proposition of each pair is true, then whilst there is one sense in which S's cohabitants can die before fission and X can die before election, there is another sense in which they cannot.

Lewis explains this distinction in a paper about time travel. He considers whether a time traveller, Tim, could kill his grandfather in 1921, given that his grandfather in fact dies in 1957. Noting that Tim has the skills required to succeed in killing someone, Lewis writes,

We have this seeming contradiction: '*Tim doesn't [kill Grandfather], but can, because he has what it takes*' versus '*Tim doesn't, and can't, because it's logically impossible to change the past.*' I reply that there is no contradiction. Both conclusions are true[.] They are compatible because 'can' is equivocal. (1976b: 150)

⁷ Lewis also takes post-fusion person-stages and person-stages of extremely long-lived people to be cohabited. I will ignore these sorts of cohabitation, and will not explore the implications of my argument for them.

Since '[w]hat I can do, relative to one set of facts, I cannot do, relative to another, more inclusive set', there is a sense in which Tim can kill Grandfather in 1921 and a sense in which he cannot.

These points apply to our discussion of cohabitation. There is a sense in which S's cohabitants can die before fission and X can die before election (because they are vulnerable to fatal mishaps); and a sense in which they cannot (because their doing so is incompatible with certain facts). It is in this latter sense that I have argued that S's cohabitants cannot die before fission, and that X cannot die before election.

As it stands, my argument is unlikely to persuade anybody that S's cohabitants or X cannot properly be concerned for their future survival in the way that ordinary people are. Let us consider two objections to this claim.

4. Causal and logical constraints

First, the preceding section's argument takes the truth of some statement about what happens to X in the future to disqualify X from properly being concerned for his future survival; yet for all people, there are similar true statements about what happens to them in the future. As a result, if X cannot properly be concerned for his future survival, nobody can properly be so concerned.

This conclusion is implausible. We do not generally view ourselves as constrained by the truth of statements about what happens to us in the future. To the extent that we recognise constraints on what can – 'in any ordinary sense' (Lewis 1976b: 151) – happen to us, we recognise causal constraints, but not logical ones of the sort just described. And, since we do not believe that backwards causation occurs, we believe that what happens at earlier times can constrain what happens later, but not vice versa. Therefore, the truth of statements about what happens to me in the future cannot, in the relevant sense, constrain what happens to me beforehand, and cannot disqualify me from properly being concerned for my future survival. That X is the future Prime Minister, then, does not disqualify him from properly being concerned for his future survival in the way that ordinary people are.

What about S's cohabitants: can they, too, properly be concerned for their future survival in the way that ordinary people are? They cannot, since their case differs in an important way from that of X. In considering what can happen to X, we ignored logical constraints and focused only on causal ones. When considering what can happen to S's cohabitants, however, we cannot ignore the logical constraints

imposed by the fact that S fissions. Were it not the case that S fissions, S would be a stage of only one person. S's cohabitants owe their very existence to the fact that S fissions:⁸ if they exist at all, they survive until after fission. In considering what can happen to them, then, one thereby recognises that there are two of them, and consequently one must acknowledge that they cannot die before fission. One cannot coherently entertain the possibilities *both* that S is cohabited *and* that S's cohabitants may die before fission. And, since the survival of S's cohabitants cannot be jeopardised before fission, they cannot properly be concerned for their future survival in the way that ordinary people are.

5. Guaranteed survival

Second, does it follow that, since S's cohabitants cannot die until after fission, they cannot properly be concerned for their future survival before fission? One might suppose that, before fission, they can properly be concerned for their future survival in virtue of the fact that their survival can be jeopardised after fission. Consider an analogy: God has guaranteed my survival until Thursday, and I am bound to play Russian roulette on Friday. I might reasonably fret now about Friday's events even if I know that I cannot perish until after Thursday. As such, I can now properly be concerned for my future survival.

Whilst this may be true, I nevertheless fall short of being concerned about my future survival *in the way that ordinary people are*. Ordinary people do not have the luxury of knowing that their survival is guaranteed until some future time. Having my survival guaranteed until Thursday may not disqualify me from properly being concerned about my future survival now; however, it means that I will have an unusual attitude towards any events due to occur before Thursday that, in the absence of this guarantee, I might reasonably worry about. If, for example, I discover that the

⁸ Advocates of Lewis's philosophy may insist that in the closest possible world where S does not fission, S's counterpart is a person-stage of only one individual, who is the counterpart of each of S's cohabitants in this world. Therefore, each of S's cohabitants could have existed in the absence of fission because she has a counterpart that does. S's cohabitants, then, do not owe their existence to the fact that S fissions. This conclusion gives defenders of cohabitation the right result; however, it stands or falls with Lewis's controversial counterpart theory, and as such is unlikely to convince those unsympathetic to Lewis's metaphysics. (I owe this point to Jens Johansson.)

game of Russian roulette will occur two days earlier than planned, bringing it within the period of my guaranteed survival, I will feel greatly relieved. As such, my attitude is not representative of how ordinary people are likely to receive the news that a potentially fatal game in which they must participate will occur earlier than planned.

If we wish to consider what attitudes ordinary people might reasonably adopt towards (*ex hypothesi*) survival-jeopardising events, then, we should not take as case-studies individuals whose survival is guaranteed until after the occurrence of those (what in ordinary circumstances would be) survival-jeopardising events. Since their survival is guaranteed until after fission, cohabitants do not make good case-studies for considering the attitude of ordinary people towards survival-jeopardising events, unless we consider only events that will occur after fission. Anyone who wishes to analyse the proper attitude of ordinary people towards fission itself, and who is not already convinced that fission does not jeopardise survival, need take no interest in cohabitants. As a result, Lewisian accounts of fission need not dissuade advocates of a Parfitian account from rejecting the common-sense view.

6. Conclusion

Fission is philosophically interesting because it presents an opportunity to analyse what matters in survival to ordinary people; specifically, it presents an opportunity to evaluate the common-sense view. To serve this purpose, it must be the case that the people involved in fission can properly be concerned for their survival in the way that ordinary people are. The cohabitation view of fission, whilst initially appearing to reconcile the common-sense view with the view that what matters is preserved through fission, ultimately fails to do so because cohabitants cannot properly be concerned for their future survival in the way that ordinary people are.⁹

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