



# Fission, Self-Interest and Commonsense Ethics

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## Abstract

Jacob Ross argues that the fission cases discussed in the personal identity literature cannot be accommodated without rejecting basic intuitions of everyday ethical thinking. He notes that many philosophers have responded to the challenge of fission ‘by rejecting the metaphysical assumptions on which it rests’. In particular, that many have denied that in fission one ceases to exist. He contends that these denials do not meet the challenge to commonsense ethical thinking. I reject these claims. One of the metaphysical views he considers is the multiple occupancy view of Lewis and Robinson, according to which in fission there are all along two numerically distinct, initially collocated, persons. I claim that Ross has not shown that this view has counterintuitive ethical implications.

**Keywords** Personal identity · Fission · Commonsense ethics · Multiple occupancy

## 1 Introduction

Jacob Ross (2014) argues that the fission cases discussed in the personal identity literature (familiar from e.g., Parfit, 1971), in which one person appears to divide into two, cannot be accommodated without rejecting some basic intuitions of everyday ethical thinking. This might seem an old-hat idea. Didn’t Parfit teach us that we must reject the commonsense assumption, which indeed appears to be fundamental to everyday ethical thought and practice, that ‘identity matters in survival’? But Ross considers this and argues that ‘this view [Parfit’s thesis], like the commonsense view it replaces, cannot avoid counterintuitive implications in certain fission and fusion cases’ (2014: 223).

I do not wish to dispute this part of Ross’s argument. Rather, I object to an earlier contention of his. He notes that many philosophers have responded to the challenge to commonsense ethical thinking that fission appears to create ‘by rejecting

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the metaphysical assumptions on which it rests' (2014: 222). In particular, that many have denied that in fission one ceases to exist. He contends that these denials do not meet the challenge to commonsense ethical thinking; that the deniers of cessation of existence are still left with commonsensically counterintuitive implications.

I deny these claims. One of the metaphysical views he considers is the multiple occupancy view (so called by Robinson, 1985; see also Lewis, 1976), according to which in fission there are two numerically distinct collocated persons who part ways at the time of the operation (Robinson, 1985: 301). I claim that Ross's arguments do not show that the multiple occupancy view has commonsensically counterintuitive ethical implications. Of course, many philosophers find the metaphysical view it elaborates problematic, but so seems to be the metaphysics of any extant alternative views.<sup>1</sup> Ross's focus is on counterintuitive *ethical* implications and my denial is that his arguments establish these.

## 2 Overview

To understand Ross's arguments, we need to step back and look at the discussion of fission presents in the previous literature.

It seems a fundamental platitude of our ethical thought that only the doer of a deed merits punishment or reward for it (call this 'the principle of the moral necessity of agency'). But this principle is challenged in the mid-twentieth century debate about personal identity. In particular, it appears inconsistent with the neo-Lockean psychological continuity account (the paradigm of which is given in 1970 and Swinburne & Shoemaker, 1984), according to which personal identity is constituted by *non-branching psychological continuity*.

Parfit's famous argument reveals that it follows from this neo-Lockean story (endorsed by Parfit himself) that personal identity lacks the foundational ethical status common-sense affirms; it is of merely derivative importance; it is not fundamentally what matters.

To see this, we must look at some details of the neo-Lockean account.

Its basis is the 'transplant case' which has made it seem to many philosophers that suitably caused psychological facts can suffice for personal identity.

Shoemaker (1963) tells the seminal story. Brown's brain is transplanted into Robinson's skull, with consequent transference of psychological traits. Most modern philosophers have found it undeniable that in this case Brownson – the resultant person – is Brown.

The position to which this 'transplant intuition' (so called by Olson, 1997: 42) seems to point is that personal identity is constituted by psychological facts.

<sup>1</sup> Note that although the multiple occupancy account is standardly explained presupposing a four-dimensional view of continuants and as treating persons as perdurers, as in Lewis's writings, it is not required to so explain it. In fact, it is the main purpose of Robinson's paper to demonstrate this. He develops a multiple occupancy view, rather, within a 'subset of Wiggins's general ideas about identity' (see Wiggins, 1980). Objections to four-dimensionalism (as developed by Wiggins himself, for example) are thus not immediately applicable to the multiple occupancy view.

Neo-Lockeans distinguish psychological connectedness and psychological continuity. Any *causal* links between past psychological facts and present ones can be subsumed under the notion of psychological connectedness and can be relevant to the obtaining of personal identity. By psychological continuity they mean the obtaining of overlapping chains of psychological connectedness, and to ensure conformity with the transitivity of identity, they use this in their account of personal identity.

At this point, the problem of fission arises. Consider the variant of the Brown-Brownson case in which only half of Brown's brain is transplanted, the other half being destroyed. Call this 'one-sided fission'. The neo-Lockean must say that this case preserves personal identity. But now consider the case of (two-sided) fission, in which both hemispheres are transplanted but into different heads. Both later people cannot be the one original. But there is nothing to choose between them. So neither is. But then psychological continuity (even with connectedness) is not sufficient for personal identity.

The standard response to this problem is to revise the psychological continuity account to say that psychological continuity suffices for personal identity only in the absence of an equally good candidate for identity. This is to reject the principle, the Only x and y principle (Noonan, 2019), implicit in a seminal argument by Williams (1956-7) (see also his 2014: Chap. 39), that to put it roughly, whether an individual x is identical with an earlier individual y can depend only on facts about them and the relations between them; no facts about any individuals other than x or y can be relevant (for less rough formulations see Noonan, 2019).

This revised psychological continuity account is the neo-Lockean paradigm presented by Shoemaker.

Now to see the intuitive objection to this consider the fission case again. Suppose I am told that this is to happen to me. Then, according to the neo-Lockean paradigm, I will cease to exist, and two new people will come into being. However, if someone destroys the right hemisphere before it is transplanted, thereby eliminating the plurality of candidates, I will continue to exist and be the owner of the left-hemisphere. Thus, according to the neo-Lockean paradigm, in this case my continued existence is logically dependent on the non-existence of someone, the person resulting from the right-brain hemisphere transplant, who would not be me *even if* he were to exist.

Parfit is thus led by reflection on fission to his remarkable thesis that identity is not what matters in survival, and thus, relating this to the previous thought, that my continued existence is not what matters ( I continue to exist iff I exist at two times, i.e., if someone *identical with* me exists at two times), and hence, to the conclusion that the neo-Lockean account can be retained as an account of personal identity, of continued existence, just because that is *not* what matters.

This leads quickly to the thought that the neo-Lockean account is inconsistent with some of our common-sense ethical intuitions, and in particular, with the principle of the moral necessity of agency. But so much the worse for common-sense ethics, followers of Parfit say.

To get clear about this we need first to see what Parfit's thesis means.

This is that, *contrary to what we are all inclined to believe*, we do not have a non-derivative concern for our own future existence and well-being. What is of fundamental importance to us is first that there be in the future people related by

psychological continuity to ourselves as we are now – I call these our ‘Parfitian survivors’<sup>2</sup> – and secondly, that our Parfitian survivors have happy, or at least, not miserable, lives. Parfit’s thesis is that, given our fundamental desires and concerns, we *would have no reason*, faced with a choice of fission or not, to prefer a situation in which we continued to exist to one in which we had a multiplicity of equally well-off Parfitian survivors, and we *would have no reason* to prefer ceasing to exist via fission to a continued existence of unending unbearable torture, if the fission products would likewise have equally unending unbearable existences. Hence we *should* not, when confronted with the prospect of fission, be concerned about questions of continued existence and identity.

Intuitively this thought, that our own continued existence and well-being is not of fundamental concern to us, is very implausible.

Parfit’s argument for it, implicit in his discussion, but made explicit by others (in particular, Shoemaker, in e.g., Shoemaker & Swinburne, 1984) comes from reflection on the fission case. To understand it we need to make a distinction between two types of opinion reflection on such cases generates. First, there are opinions about how the language of identity is to be applied to the case, what the true statements of personal identity to be made about it are. These opinions reflect our mastery of our language and particularly those parts of it which are expressive of the concept of personal identity. In short, they reflect our semantic intuitions. But puzzle cases about personal identity generate opinions of a second sort. These are opinions about how it is rational for the people whose identity is at issue in the case to behave (how they should behave), given the beliefs they are described as holding. These opinions reflect our fundamental desires. For we arrive at them by imagining ourselves to be involved in the case and asking how *we* should rationally behave.

Parfit’s arguments for his thesis can now be explained as follows. First, he describes a fission case. Next, he argues that (a) in this case the original person ceases to exist but would not have done so if only one of the fission products had existed, and that the fission products are new existents (in accordance with the neo-Lockean paradigm), but that (b) it would be quite irrational, if you were the original in the case to think that you could gain anything, if you were given the choice, by preventing the fission by ensuring a ‘one-sided fission’, i.e., that only one hemisphere was transplanted, even though it is true that were you to do so you *would* ensure your own future existence. The conclusion is then that this *combination* of opinions can be explained only by accepting that the fundamental desires we have are not the ones we think we have and do not include a desire for our own future existence.

A similar argument can be given that we do not have a fundamental desire for our own future well-being. Suppose the fission situation I am facing is one in which the fission products will both face terrible torture and if I choose to prevent the fission by ensuring that only one hemisphere is transplanted that person will be equally terribly tortured. The description of the case the neo-Lockean must accept is that I will cease to exist if fission occurs but will continue to exist if only one hemisphere is

<sup>2</sup> Parfit does not. I do so as a reminder of Parfit’s contention that it is psychological continuity that matters ‘in survival’.

transplanted. But intuitively it would be quite irrational for me, facing this choice, to think that I could gain anything by choosing that both hemispheres be transplanted, even though it is true that if I were to do so I would avoid a torture-filled future. The conclusion again is that this combination of opinions can only be explained by accepting that the fundamental desires we have are not the ones we think, and do not include a desire for our own future well-being.

The argument can be resisted in both cases by denying the description of the fission given by the neo-Lockean account. An alternative is to say that no one ceases to exist when the fission takes place. In accordance with the multiple occupancy view it is simply that two people who have been spatially coincident continue to exist but become spatially separate. So it must be absurd to view fission as death – whether viewed as the tragic truncation of an agreeable existence or the welcome alternative to a life of endless suffering. The multiple occupancy view is the straightforward consequence of accepting Bernard Williams's Only x and y principle, which entails that what happens elsewhere and has no causal impact on what goes on within a particular spatio-temporal region cannot alter how many distinct people there are in that region. If we set it aside and accept Parfit's conclusion the conflict with our everyday ethical thinking is evident. For we must abandon the principle of the moral necessity of agency as fundamental.

In fact, fission does not happen. But imagine a society in which it does – and frequently occurring and can voluntarily chosen. And suppose that in this society people do not have a non-derivative desire for their continued existence and well-being. Then a legal system and societal norms in accordance with the principle of the moral necessity of agency would be wholly inappropriate since quite purposeless. For people would not be much motivated to act well by the prospect of reward given only to the doers of good since fission would too often occur before any reward was possible; nor would they be motivated to refrain from wrongdoing by the prospect of future punishment meted out only to evildoers since they could easily avoid it by choosing fission. Thus, if Parfit is right, the principle of the moral necessity of agency is not, contrary to our beliefs, a fundamental part of our ethical thinking, intimately connected to our fundamental concerns, but merely a rule of thumb the utility of which depends on the absence from our society of fission cases, perhaps due merely to the present limited state of medical technology.

But this can be denied if the multiple occupancy view is accepted. The Parfitian argument can be resisted by instead rejecting the description of the fission case as one in which a person ceases to exist. Thus, the multiple occupancy theorist is not, by way of Parfit's arguments, shown to be forced to acknowledge any conflict between his metaphysics and commonsense ethical intuitions.

This is where Ross come in. He argues that additional arguments arising from reflection on fission cases show that the multiple occupancy theorist too cannot avoid counterintuitive ethical implications. I dispute this.

**Single Torture**

There occurs a left-preserving semi-replacement operation in which  $R_1$  is replaced with  $R_2$ . Then whoever emerges from the operation experiences 10 years of torture before being destroyed.

**Double Torture**

There occurs a fission operation from which Lefty emerges with  $L_1$  and  $R_2$  and Righty emerges with  $L_2$  and  $R_1$ . Then Lefty experiences 10 years of torture before being destroyed, whereas Righty experiences 9 years of torture before being destroyed.

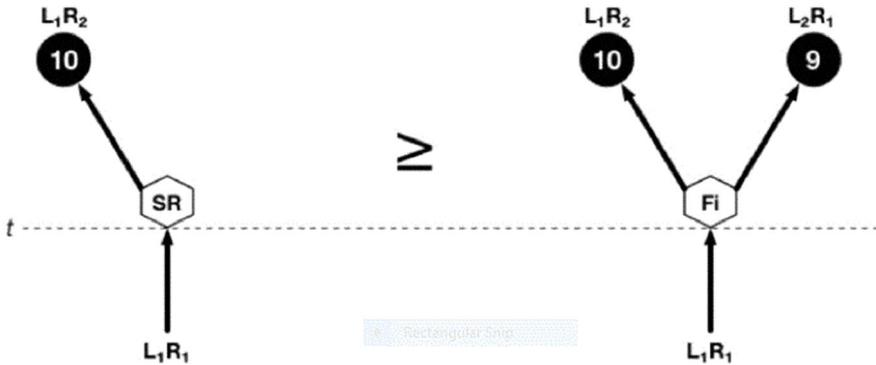


Fig. 1 The first puzzle

**3 Ross’s First Argument**

Ross begins his first argument by setting out a puzzle case similar to the one already considered in which I am presented with a choice between one-sided fission (which he calls ‘a left-preserving semi-replacement operation’ because the left hemisphere is kept and the right destroyed and replaced by a new one) and full fission, and whichever alternative is chosen the future persons are tortured. As we have seen, in this case the multiple occupancy theorist, unlike the neo-Lockean, need not say that if we are fundamentally concerned about our future existence and well-being I have a reason, self-interest, to opt for fission as a way of evading torture. For the neo-Lockean fission is suicide, for the multiple occupancy theorist it is not, and there is nothing I can do in the situation to evade torture, since whatever happens everyone now alive, at the moment of choice, will survive and be tortured.

However, Ross adds a crucial detail to the description of the choice situation which, he thinks, allows its employment to establish that not only neo-Lockeans, but all metaphysical theorists of personal identity must reject what is, from an ethical viewpoint, intuitively the correct thing to say.

He supposes that in the left-preserving semi-replacement situation (‘Single Torture’) the resultant person is given ten years of torture and in the fission situation (‘Double Torture’) Lefty is given 10 years of torture and Righty 9. Before the choice, he specifies, the original person experiences nothing but torture.

He pictures this as follows (Fig. 1):

He then argues that it is intuitively clear that in this situation the original person has no important reason to prefer Double Torture to Single Torture. This is correct and

**Stochastic Single Torture**

Depending on the outcome of a fair coin toss, there occurs either a left-preserving semi-replacement operation in which  $R_1$  is replaced with  $R_2$  (if the coin comes up heads) or a right-preserving semi-replacement operation in which  $L_1$  is replaced with  $L_2$  (if the coin comes up tails). Then whoever emerges from the operation is tortured for 10 years before being destroyed.

**Stochastic Double Torture**

There occurs a fission operation from which Lefty emerges with  $L_1$  and  $R_2$  and Righty emerges with  $L_2$  and  $R_1$ . Then, depending on the outcome of a fair coin toss, Lefty and Righty are tortured either for 10 and 9 years respectively (if the coin comes up heads) or for 9 and 10 years respectively (if the coin comes up tails).

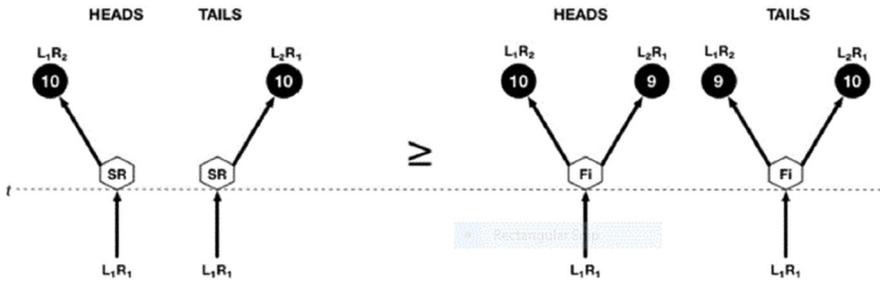


Fig. 2 The second puzzle

something the multiple occupancy theorist must endorse. After all, according to him in Single Torture there is one person living a life not worth living, a life filled with nothing but pain, and in Double Torture there are two such people. The single person in Single Torture still exists in the Double Torture situation and is no better off there; all that is different is that there is also another person with a life not worth living. No one not insanelly evil, given the choice of which situation to bring about, could prefer the second.

So far this does not take us beyond Parfit’s argument, but Ross now introduces a further modification which is the main focus of his argument.

He imagines a situation in which my choice is between *Stochastic Single Torture* and *Stochastic Double Torture*, as pictured below Fig. 2):

*Stochastic Single Torture* is a situation in which there occurs either a left-preserving semi-replacement operation in which the right hemisphere is replaced with a duplicate or a right-preserving semi-replacement in which the left hemisphere is replaced by a duplicate, depending on a coin toss, and then the person who emerges is tortured for ten years, the original having been tortured throughout his existence until the operation.

*Stochastic Double Torture* is a situation in which there occurs a fission operation from which Lefty emerges with the left hemisphere and a replacement right hemisphere and Righty emerges with the right hemisphere and a replacement left hemisphere. Then, depending on the outcome of a coin toss, Lefty and Righty are tortured for ten and nine years respectively (if the coin comes up heads) or for nine and ten years respectively (if the coin comes up tails). Again, the original experiences nothing but torture until the fission operation.

Ross then argues that in this more complicated situation, just as in the simple scenario in which the choice is between *Single Torture* and *Double Torture*, there is no important reason before the fission to choose the double torture, but that in this more complicated case the multiple occupancy theorist, so long as he accepts that we have a fundamental concern for our own future existence and well-being, *must* say that ‘contrary to intuition Clive [the original person] has an important kind of reason to prefer *Stochastic Double Torture* to *Stochastic Single Torture*’ (2014 – 228). This is so because Ross thinks it legitimate to speak of Clive’s *expectation* of torture: if he chooses *Stochastic Single Torture* he can expect ten years, if he chooses *Stochastic Double Torture* he can expect 9.5 years. Hence, he has an important kind of reason pre-choice to choose *Stochastic Double Torture* if we all (including Clive) have a fundamental interest in our own continuing existence and well-being.

To see where this reasoning goes wrong we need to consider in more detail what the multiple occupancy theorist should say about fission. From his point of view in *Double Torture*, as we noted, there have been two people all along, so there is no single chooser. In *Single Torture* there is just one chooser. In *Double Torture* neither of the people can pick himself out in singular first person thought before the operation. Each can only think ‘We ...’, where this is ambiguous between ‘all of us ...’ and ‘some of us ...’ (Lewis, 1976). In *Single Torture* there is just one chooser, who can make a determinate singular first-person reference to himself. But the situation of the person in *Single Torture* is epistemically equivalent, before the choice is made, to the situation of the two people in *Double Torture* before the choice is made. So the single person in *Single Torture* does not know he can, although he can, make singular first-person reference to himself. In both situations before the choice the thinkers present can only knowingly make a first-person plural reference, which can be thought of as analogous to ‘the surviving sons of Katie Elder’, used by someone who does not know whether Katie Elder has just one surviving son, or more.

Now the difference between *Single Torture* and *Double Torture* from the point of view of a multiple occupancy theorist is that in the first there is just one person who suffers ten years of torture after the operation and in the second there is one person who then suffers ten years of torture and one who suffers nine. None of these people, who suffered nothing but pain before the operation, have lives worth living. So it is clear, as already said, that there can be no reason to choose *Double Torture* over *Single Torture* when the choice is presented. But the multiple occupancy theorist, who retains the opinion that we have a fundamental concern for our own future existence and well-being,<sup>3</sup> need not say otherwise. He need not say that pre-operation in this situation *Double Torture* is a reasonable choice. For the person who exists in *Single Torture* does not have a better life in *Double Torture* and the second situation differs from the first only by the presence of someone else with a life not worth living. It is true that in *Double Torture* Righty (since his life is shorter) suffers less than Lefty. So post-operation Righty can say correctly (if his utterance is understood in a

<sup>3</sup> This may be thought of as a disposition to think about, and be motivated by, thoughts about ourselves. The multiple occupancy theorist must say that in certain situations (for example, fission) we lack the capacity for such first-person singular thought and then gain it. Before the fission the people present only have the capacity for what Lewis calls the strong and weak *plural* first-personal thoughts ‘some of us ...’ and ‘all of us ...’.

counterpart-theoretic way)<sup>4</sup> ‘If Single Torture had occurred, I would have suffered more (and been identical with Lefty)’, since the single person in Single Torture is *the* counterpart therein of both Righty and Lefty in Double Torture. But this provides no reason, pre-operation, to choose Double Torture since pre-operation this post-operative singular first-person thought is unavailable to Righty.<sup>5</sup> So the multiple occupancy theorist can deny that that he is rationally required to make this choice. Ross would not disagree. His challenge to the multiple occupancy theorist concerns what he can say about the choice in the more complex situation where the possibilities are Stochastic Single Torture and Stochastic Double Torture. But now the multiple occupancy theorist can also deny that he has reason, pre-operation, to prefer Stochastic Double Torture to Stochastic Single Torture.

Ross disputes this. But his argument that confronted with the choice between Stochastic Single Torture and Stochastic Double Torture the multiple occupancy theorist does have such a reason rests on his assumption that it is legitimate to speak of Clive’s expectation of torture: if he chooses Stochastic Single Torture he can expect ten years, if he chooses Stochastic Double Torture 9.5. He writes that on the Cohabitation View [i.e., the multiple occupancy view] ‘if Stochastic Double Torture were chosen, then Clive would await an expected 9.5 years of torture’ (2014: 230). His argument for this is, ‘Lefty and Righty are the only candidates for being counterparts of Clive in worlds in which Stochastic Double Torture is chosen. And Lefty and Righty each experience either 9 or 10 years of torture after  $t$ , depending on the outcome of a fair coin toss. Hence, in all worlds in which Stochastic Double Torture is chosen, every counterpart of Clive awaits an expected 9.5 years of torture after  $t$ ’.

This is wrong. In the choice situation Ross is considering between Stochastic Single Torture and Stochastic Double Torture according to the multiple occupancy theorist there is no single person, Clive, if Stochastic Double Torture is chosen and neither of the two people pre-operation in that situation is ignorant of what will happen. Each knows exactly what will happen once Stochastic Double Torture is chosen: One of us will be tortured for ten years and one for nine. Neither can ask the question: ‘Will I be the one who is tortured for ten years?’ Each is uncertain only whether the person who will have the left hemisphere will be tortured for ten years. So neither of the two people in Stochastic Double Torture expects/awaits an expected 9.5 years of torture after  $t$ . But these are the only available individuals in Stochastic Double Torture who are counterparts of Clive. So it is not true that every counterpart of Clive in the situation ‘awaits an expected 9.5 years of torture after  $t$ ’. So it is not true that if Stochastic Double Torture were chosen, then Clive would await an expected 9.5 years of torture after  $t$ . Hence it is not true that the multiple occupancy theorist must allow that there is a reason to prefer Stochastic Double Torture to Stochastic Single

<sup>4</sup> Which it is reasonable to think it should be from a multiple occupancy theorist’s viewpoint. Both Robinson and, of course, Lewis are counterpart theorists. (But a multiple occupancy theorist need not be a counterpart theorist. The dispute over the multiple occupancy theory can be between theorists who do not accept the intelligibility of *de re* modal ascriptions at all.)

<sup>5</sup> To the self-addressed question, posed before the operation, ‘Supposing Double Torture is what occurs would it have been worse if Single Torture had occurred?’ the answer, from a multiple occupancy theorist’s standpoint, cannot be ‘Yes’. And to the self-addressed question, posed before the operation, ‘Supposing Single Torture is what occurs would it have been better if Double Torture had occurred?’ the answer, from a multiple occupancy theorist’s standpoint, must be ‘No’.

Torture. Ross's argument thus does not expose a commonsensically counterintuitive ethical consequence of the multiple occupancy theory.

#### 4 Ross's Second Argument

Ross has a further argument that the multiple occupancy theorist, along with other metaphysical theorists, cannot deny counterintuitive ethical implications if he retains the view that we are fundamentally self-interested (i.e., have a fundamental concern for our own continued existence and well-being, as well, of course, as caring in a non-derivative way about other things). He argues that this is so by identifying five metaphysical claims about fission and semi-replacement and arguing that a theorist committed to the view that we are fundamentally self-interested, if he maintains that any of these propositions is false, is committed to counterintuitive ethical implications. I will argue that the multiple occupancy theorist should simply deny one of the propositions listed (number 4) but is not thereby committed to counterintuitive ethical implications.

The five propositions are:

P1 anyone who chooses to undergo semi-replacement (one-sided fission) survives the operation.

P2 Whenever semi-replacement is chosen whoever emerges from the operation already exists at the time of choice

P3 Whenever fission is chosen, whoever emerges with the original left half would have existed at the time of choice if left preserving semi-replacement had been chosen instead

P4 Whenever fission is chosen whoever emerges with the original left half would not have existed if right-preserving semi-replacement had been chosen instead

P5 Whenever left-preserving semi-replacement is chosen, whoever chooses the operation would have existed at the time of the operation if right-preserving semi-replacement had been chosen instead.

The multiple occupancy theorist will be happy to accept all of these except P4. But there is a perfectly natural way for the multiple occupancy theorist to reject P4. It is natural for the multiple occupancy theorist to say the following (we have already noted this). In the fission situation there are two people who exist all along: Lefty who emerges with the left hemisphere and Righty who emerges with the right. In the situation of right-preserving semi-replacement there is just one person who emerges with the right brain hemisphere. This person is a counterpart of Righty in the first, fission, situation. He is *also* a counterpart of Lefty in the fission situation. What would be true of something is what is true of its counterparts. So Lefty would have existed in the second situation and been the owner there of the right brain hemisphere after the operation (there is only one person in this situation). That is what a multiple occupancy theorist should say and what he *can* say employing subjunctive conditionals interpreted in the appropriate counterpart theoretic way.

Ross's argument that the multiple occupancy theorist must accept P4 is a *reductio* argument resting on what he calls 'Intuitive Claim 4' and 'Support for Intuitive

**Fission<sub>7</sub>**

Immediately after  $t$ , whoever consists of  $L_t$  and  $R_t$  undergoes fission. Then whoever emerges with the original left half experiences 9 units of torture before being destroyed, and whoever emerges with the original right half experiences 10 units of torture before being destroyed.

**Right-Preserving Semi-Replacement<sub>8</sub>**

Immediately after  $t$ , whoever consists of  $L_t$  and  $R_t$  undergoes right-preserving semi-replacement. Then whoever emerges experiences 10 units of torture before being destroyed.

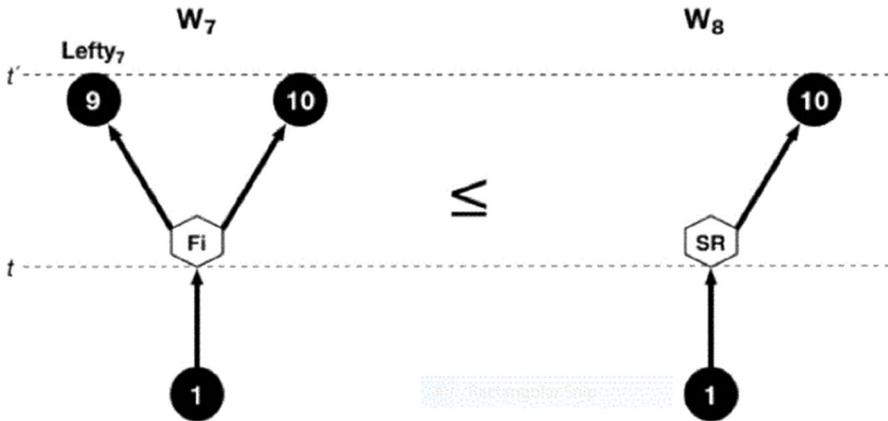


Fig. 3 The third puzzle

Claim 4'. These refer to a pair of situations he names 'Fission<sub>7</sub>' and 'Right-Preserving Semi-Replacement<sub>8</sub>', occurring respectively in world  $w_7$  and world  $w_8$ , pictured below (Fig. 3). The line labelled ' $t$ ' is the time at which the choice between the two is made. The line labelled ' $t'$ ' is the time is immediately before the people cease to exist. In Fission<sub>7</sub> the original undergoes fission, then the possessor of the left hemisphere, Lefty<sub>7</sub>, is tortured for nine years, and the possessor of the right hemisphere is tortured for ten years. In Right-Preserving Semi-Replacement<sub>8</sub> immediately after  $t$  the right hemisphere is preserved, and the left hemisphere is destroyed and replaced by a duplicate; the person is then tortured for ten years.

*Intuitive Claim 4* is then the claim: 'It is not the case that Lefty<sub>7</sub> has, at  $t'$ , an important kind of reason, namely self-interested reason, to prefer  $w_7$  to world  $w_8$ '.

*Support for Intuitive Claim 4* is the claim: 'Note  $w_7$  can be derived from  $w_8$  by adding 9 years of torture-filled existence. And surely no one should regard this difference as counting in favour of  $w_7$ '.

This seems to me entirely unconvincing. God, assuming both 10 years of torture and 9 years of torture added to the pre-operation existence could make a life not worth living, could reasonably not regard this difference as counting in favour of  $w_7$ .<sup>6</sup> But Lefty<sub>7</sub> is not God and at  $t'$ , i.e., after the fission, he is capable of singular

<sup>6</sup> But he might. He might prefer a world in which *someone* is only tortured for nine years to one in which *everyone* is tortured for ten. Who knows His Ways?

first-personal thought. So he is capable of thinking ‘I would have been tortured for ten years in  $w_8$  (*Right-Preserving Semi-Replacement*<sub>8</sub>)’ and given that he is self-interested he has good reason, *at t’*, after the fission, when he is capable of this singular first-personal thought, to prefer  $w_7$  to  $w_8$  (neither gives him a life worth living but 9 years of torture is better than 10). So Ross’s *Intuitive Claim 4* seems to me one a multiple occupancy theorist should reject. Hence, he should reject Ross’s subsequent *reductio* argument.

I conclude then that this argument also leaves unrefuted the claim that a multiple occupancy theorist can accept that we are fundamentally self-interested beings and is not committed to any common-sense counterintuitive ethical implications. As I indicated at the beginning many have doubts about the metaphysics of the multiple occupancy view, but that is not Ross’s target.

## Declarations

**Conflict of Interest** The authors declare that they have no conflict of interest.

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