

1. Introduction

Pummer (2014) ingeniously wraps together issues from the personal identity literature with issues from the literature on desert. However, I wish to take issue with the main conclusion that he draws, namely, that we need to *rethink* the following principle:

Desert. When people culpably do very wrong or bad acts, they deserve punishment in the following sense: at least other things being equal they ought to be made worse off, simply in virtue of the fact that they culpably did wrong—even if they have repented, are now virtuous, and punishing them would benefit no one. (Pummer, 2014: 43-44)

Pummer offers an argument that is intended to show that this principle, along with widely-held views about personal identity, entails an inconsistent triad of propositions. I agree. But I think Pummer's argument attacks a straw man. I believe that no-one holds Desert, at least as it is stated, and that once the principle is stated correctly it is easy to see that no inconsistent triad follows from it. So, Desert does not need *rethinking*. It just needs to be stated correctly.

Pummer's argument is somewhat involved, and takes many twists and turns. So in section 2 I present Pummer's argument in four stages by outlining just those parts of it that are needed to reach his main conclusion. In section 3 I reformulate Desert as Desert* and rerun the four stages of the argument. I will show that the argument falters at the third stage, and that as a consequence it fails at the fourth stage. I discuss and consider objections to my argument in section 4. I briefly conclude in section 5.

2. Pummer's Argument in Four Stages

First stage. Pummer asks us to consider cases of fission and fusion familiar from the personal identity literature, but with the added twist that (some of) the persons involved have culpably committed acts for which they deserve punishment. He first asks us to consider a case in which a person (we shall call her A) has culpably committed murder, but who undergoes fission such that two persons result (we shall call them B and C). Pummer argues that if we suppose that A deserves X amount of punishment, then B and C deserve X amount of punishment *each* (and so the total amount of punishment deserved increases from X to 2X). This is so, Pummer argues, whether or not we think that either B or C is identical with A. This is because, in the absence of C, B would have been identical with A, and so would herself deserve X amount of punishment (*mutatis mutandis* for C). So the mere existence of C might make a difference to whether B is identical with A, but this is only due to a 'technicality involving the logic of identity', and so it is implausible that the mere existence of C can make a difference to how much punishment B deserves (*mutatis mutandis* for C). (Pummer, 2013: 52)¹ It is obvious that this case generalises. No matter how many times A fissions, each of

¹ Pummer is clear that this argument fails for a limited number of views about personal identity, e.g. the Simple view according to which there is a (brute) fact in cases of fission about which of the resultant persons is identical with the original. But Pummer assumes for the sake of argument that any such view is false. (Pummer, 2014: 46) At any rate, his argument should be endorsed by anyone who holds one of a wide variety of views on personal identity, including the views advanced by Shoemaker (1984), Parfit (1984), Lewis (1976) and Olson (1997). So Pummer's argument has a wide scope.

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

the resultant persons will deserve however much punishment A deserves.

Pummer thus endorses:

Division Multiplies Desert. When a person who deserves punishment undergoes division, each product of division deserves the same amount of punishment this person deserves. (Pummer, 2014: 50)

Second stage. Pummer asks us to consider a case of fusion in which two qualitatively identical persons (we shall call them D and E) have each committed an independent culpable act (suppose again it is murder) but who then undergo fusion such that a single person results (we shall call her F). He argues that if we suppose that D and E each deserve X amount of punishment, then F deserves X amount of punishment (and so the total amount of punishment deserved decreases from 2X to X). This is so, Pummer argues, whether or not we think that F is identical with either D or E. This is because ‘punishing a fusion product [in this case, F] is, from the point of view of Desert, tantamount to punishing each of the fusion ingredients [in this case, D and E] in the same way and to the same extent’, and so there is ‘just as much desert-based reason to make the fusion product of [D] and [E] worse off to degree X (as there is to make [D] and [E] each worse off to degree X)’. (Pummer, 2014: 60-61) Again, it is obvious that this case generalises. No matter how many fusion ingredients we start with, the resultant fusion product will deserve however much punishment each of the fusion ingredients deserve.

Pummer thus endorses:

Fusion Divides Desert. If n people who each deserve m years of punishment fuse, the fusion product deserves m years of punishment. The total prefusion punishment deserved is m times n years, and the total

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

postfusion punishment deserved is m times n years divided by n —or just m years. (Pummer, 2014: 62)

Third stage. Pummer asks us to consider ordinary (by fission and fusion standards) cases of punishment in which n persons deserve X amount of punishment and one person deserves $Y < X$ amount of punishment, but such that we can, for some reason, only give each of the persons exactly the same amount of punishment. When comparing some cases, he argues, there is some number n such that the amount of punishment we should give to each person is higher than it would be were n equal to 1. He gives one such comparison in which he thinks this is true. In a case in which one single person deserves twenty years of punishment and another single person fifteen, he thinks, we should give each a lesser sentence to each person than in a case in which one-million persons each deserve twenty years of punishment, and another single person fifteen years of punishment. For the sake of argument, I allow that Pummer is right about this. He then argues that this conclusion carries across to cases of tragic fusion, i.e. those in which persons deserving of X amount of punishment fuse with persons deserving $Y < X$ amount of punishment. He thus endorses:

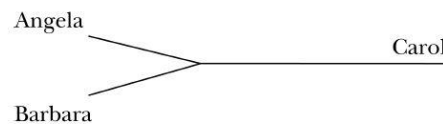
Numbers Matter FUSION. There is some finite number n such that P2 [the fusion product of n persons deserving twenty years punishment and one deserving fifteen] deserves more punishment than P1 [the fusion product of one person deserving twenty years of punishment and one deserving fifteen] . (Pummer, 2014: 69)

In addition, he assumes that n is sufficiently large if it is at least one-million.

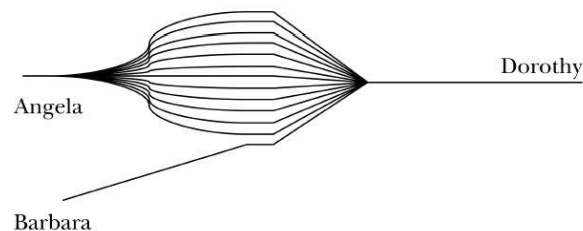
The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

Fourth stage. Pummer asks us to consider two cases of tragic fusion. The first, *Ordinary Fusion*, is a simple case in which a single person deserving twenty years of punishment fuses with a single person deserving fifteen. The second, *First Angela Divides*, is a more complicated case in which a single person deserving twenty years of punishment first undergoes fission such that one-million persons result, and subsequently the one-million resultant persons fuse with a single person who deserves fifteen years of punishment. He gives the following diagram to illustrate the two cases:

Ordinary Fusion



First Angela Divides



Pummer's contention is that Carol and Dorothy deserve the same amount of punishment. Again, for the sake of argument, I agree. But this, Pummer argues, cannot be maintained if Division Multiplies Desert and Numbers Matter_{FUSION} are true. Division Multiplies Desert entails that each of the one-million persons that result from Angela's fission in First Angela Divides deserve twenty years of punishment each. Then Numbers Matter_{FUSION} entails that Dorothy deserves more punishment than Carol. Thus, finally we obtain:

Fusion Problem. We must deny either

- (i) Dorothy deserves no more punishment than Carol; or,
- (ii) Numbers Matter FUSION; or,
- (iii) Division Multiplies Desert (Pummer, 2014: 72)

3. Rerunning Pummer's Argument with Desert*

To see the flaw in Pummer's argument we need to return to the beginning and consider his statement of Desert:

Desert. When people culpably do very wrong or bad acts, they deserve punishment in the following sense: at least other things being equal they ought to be made worse off, simply in virtue of the fact that they culpably did wrong—even if they have repented, are now virtuous, and punishing them would benefit no one. (Pummer, 2014: 43-44)

The problem with this statement of Desert is that it does not adequately distinguish between what are known as the *ingredients* of desert. On the standard view of desert any particular case involves at least three ingredients: a basis, a subject, and an object. The subject is simply the person who deserves punishment, the object is the punishment they deserve, and the basis is the thing they deserve to be punished for.² It is the latter of these ingredients that will be of importance in what follows.

² See McLeod (2013) for an excellent overview of the literature on desert. McLeod's review contains references to seventy-two philosophers nearly all of who explicitly endorse the view that desert has at least these three ingredients.

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

Often, when we claim that a person deserves punishment, the basis upon which they deserve it can remain unspecified, because it is obviously determined by particular contextual factors. For example, if I see Suzy commit a murder and claim immediately afterwards that she deserves to be sent to prison, it is obvious that it is on the basis of the murder that I make my claim. And if I claim at my local abstinance meeting that some well-known philanderer deserves a harsh punishment, it is obvious that it is on the basis of their well-known philandering that I make my claim.

In other cases the basis upon which one makes a claim of desert is not obvious, and needs stating. This is especially important in cases in which there are a number of potential bases upon which one is making one's claim. For example, consider a case in which there is some person about which it is known that he either committed punishable act α , or punishable act β , but it is not known which. Suppose further that act α is worse than act β and so is such that most would consider a harsher punishment to be appropriate for committing α than β . If I claim that this person deserves a particular punishment, it would be proper to ask me upon which of these acts I base my claim. Furthermore, in cases where a person performs more than one punishable act, one can differentiate between those acts and claim that the person in question deserves separate punishments for each. So, for example, I might claim that Suzy deserves to go to prison for twenty years on the basis of the murder she committed, and deserves to go to prison for a further six years on the basis of the robbery she committed the day before. As we will see, in fission-fusion cases it will be important to keep track of the bases of desert, so in order to do so, we should formulate Desert explicitly in terms of such bases as:

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

Desert*. When people culpably perform a very wrong or bad act α , they deserve to be punished on the basis of α in the following sense: at least other things being equal they ought to be made worse off, simply in virtue of the fact that they culpably performed α —even if they have repented, are now virtuous, and punishing them would benefit no one.

To see why it is important that we formulate the principle in this way when considering cases of fission and fusion we need to trace the effect of so formulating it through the various stages of Pummer's argument.

First stage. At this stage the effect of Desert* is minimal. Person A culpably commits an action α before undergoing fission such that persons B and C result. A deserves X amount of punishment on the basis of α . B and C, as continuers of A, each deserve X amount of punishment on the basis of α . Each is appropriately connected to the punishable act α , and so each should be punished by amount X on its basis. The case generalises so we ought to endorse:

Division Multiplies Desert*. When a person who deserves punishment on the basis of an act α undergoes division, each product of division deserves the same amount of punishment on the basis of α as this person deserves.

Second stage. At the second stage the effect of Desert* is more palpable, but still makes little difference. Person D has committed act α and deserves X amount of punishment on the basis of α . Person E has committed act β and deserves X amount of punishment on the basis of β . D and E undergo fusion such that a single person F results. Person F, as a continuer of both D and E, deserves at least some amount of punishment on the basis of α and some amount of punishment on the basis of β .

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

But punishing F by giving her X amount of punishment is tantamount to punishing each of D and E in the same way and to the same extent, and so F should be given X amount of punishment on the basis of α and β . This case generalises, so we should endorse:

Fusion Divides Desert*. If persons p_1, p_2, \dots, p_n who each deserve m years of punishment for respective actions $\alpha_1, \alpha_2, \dots, \alpha_n$ fuse, the fusion product deserves m years of punishment on the basis of $\alpha_1, \alpha_2, \dots, \alpha_n$.

Third stage. Here the effect of Desert* becomes significant. We are to consider cases of punishment in which persons p_1, p_2, \dots, p_n deserve X amount of punishment on the basis of performing respective individual punishable acts $\alpha_1, \alpha_2, \dots, \alpha_n$, and one person p_0 deserves $Y < X$ amount of punishment on the basis of a punishable act β . We can, for some reason, only give each of the persons exactly the same amount of punishment. In some comparisons of such cases, I have allowed, there is some number n such that the amount of punishment we should give to each person is higher than it would be were n equal to 1. Nothing changes here with the introduction of Desert*. In a case in which one single person deserves twenty years of punishment on the basis of an act α and another single person fifteen years on the basis of an act β , we should give each a lesser sentence than in a case in which persons $p_1, p_2, \dots, p_{1000000}$ each deserve twenty years of punishment on the basis of one-million respective individual punishable acts $\alpha_1, \alpha_2, \dots, \alpha_{1000000}$, and another single person p_0 fifteen years on the basis of a punishable act β . But it is at this stage that Pummer's argument falters. With Desert* in play rather than Desert, it is implausible that the conclusion here carries across to all cases of tragic fusion.

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

It is plausible that the conclusion carries across to *some* cases of tragic fusion. Our base case is a case in which one single person who deserves twenty years of punishment on the basis of an act α fuses with another single person who deserves fifteen years on the basis of an act β . Call the resultant person in this case G. Now consider a case (that we shall call 'Multi Fusion') in which one-million persons $p_1, p_2, \dots, p_{1000000}$, who each deserve twenty years of punishment on the basis of one-million respective individual punishable acts $\alpha_1, \alpha_2, \dots, \alpha_{1000000}$, fuse with another person p_0 who deserves fifteen years on the basis of a punishable act β . It is plausible that we should give a harsher sentence than we give to G to the person who results in Multi Fusion. But is *not* plausible that we should give a harsher sentence than we give to G to the person who results in a case like First Angela Divides in which one-million persons $p_1, p_2, \dots, p_{1000000}$, who each deserve twenty years of punishment on the basis of a *single* punishable act α , fuse with another person p_0 who deserves fifteen years punishment on the basis of a punishable act β . In the base case G is due punishment on the basis of two distinct punishable acts (i.e. α and β). In Multi Fusion when $p_1, p_2, \dots, p_{1000000}$ fuse with p_0 the punishment is due to the resultant person on the basis of one-million-and-one distinct punishable acts (i.e. $\alpha_1, \alpha_2, \dots, \alpha_{1000000}$ and β) and so it is plausible that we give this person a harsher punishment than we give G in the base case. But in cases like First Angela Divides when $p_1, p_2, \dots, p_{1000000}$ fuse with p_0 the punishment is, like in the base case, due on the basis of only two distinct punishable acts (i.e. α and β). We thus have a perfectly good reason to treat the second case as we treat the base case, and give the resultant person in each the same amount of punishment. So, we have a perfectly good reason to modify Numbers Matter FUSION to exclude cases like the second case here, i.e. as follows:

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

Numbers Matter FUSION*. There is some finite number n such that P2 [the fusion product of n persons deserving twenty years punishment and one deserving fifteen] deserves more punishment than P1 [the fusion product of one person deserving twenty years of punishment and one deserving fifteen], *except in cases in which the punishment is due to P2 on the basis of only two punishable acts, and in such cases P2 deserves the same amount of punishment as P1.*

Fourth stage. It can now easily be seen that the fourth stage of Pummer's argument fails. No inconsistent triad of propositions can be generated simply because Division Multiplies Desert* together with Numbers Matter FUSION* does not entail that Dorothy deserves more punishment than Carol. Angela, in First Angela Divides, deserves twenty years of punishment on the basis of a single act α . Consequently, by Division Multiplies Desert* when Angela undergoes fission each of the resultant one-million persons are punishable on the basis of that single act α . Barbara deserves fifteen years punishment on the basis of a single act β . So, when the one-million fuse with Barbara such that Dorothy results, Dorothy is punishable on the basis of only two punishable acts, viz. α and β . As Carol in Ordinary fusion is also punishable on the basis of only two distinct punishable acts, Numbers Matter FUSION* entails that they should receive the same amount of punishment as each other.

4. Discussion³

³ Each of the objections discussed in this section are due to an anonymous referee, who I thank unreservedly for making me think harder about the dialectical situation that my argument gives rise to.

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

I have taken pains to distinguish Desert from Desert*. I have done so because Desert, unlike Desert*, fails to make it clear that people only deserve to be punished on the basis of the culpable acts they have committed (or, perhaps, are otherwise responsible for). My claim is that only Desert supports Numbers Matter FUSION, and so only Desert leads to the Fusion Problem. Desert*, by contrast, supports a *restricted* version of Numbers Matter FUSION (i.e. Numbers Matter FUSION*) from which the Fusion Problem does not arise. Have I done enough to show *why* the unrestricted version of Numbers Matter FUSION is false? I think I have, but a few further words of explanation are in order to make this clear. The concept of desert is a relational concept. One cannot deserve *simpliciter* a certain amount of punishment – one can only deserve a certain amount of punishment *for a particular act or acts*. In First Angela Divides each of Angela's one million fission products deserves a certain amount of punishment *for an act performed by Angela*. When they fuse together with Barbara, the resultant fusion product (Dorothy) deserves a certain amount of punishment *for an act performed by Angela*, and a certain amount of punishment *for an act performed by Barbara*. So there is just a single person present, Dorothy, and there are two considerations which are relevant to what punishment she deserves. In a case in which one million and one persons p_1, p_2, p_3 , etc, each deserving certain amounts of punishment on the basis of one million and one separate acts fuse together there is again a single person present, but the considerations that are relevant to how much punishment this person deserves are far more numerous. The resultant fusion product deserves a certain amount of punishment *for an act performed by p_1* , a certain amount of punishment *for an act performed by p_2* , a certain amount of punishment *for an act performed by p_3* , etc. Given that different considerations bear in the two cases, we

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

shouldn't expect the punishment deserved in these two cases to be equal. Moreover, consider that in the case of Ordinary Fusion there is again a single person present (i.e. Carol, the fusion product of Angela and Barbara) who deserves a certain amount of punishment *for an act performed by Angela*, and a certain amount of punishment *for an act performed by Barbara*. These are exactly the same considerations that are relevant in First Angela Divides, and so we *should* expect the punishment deserved in these two cases to be equal.

I have argued that Numbers Matter_{FUSION} is false, and that only a restricted version of the principle is true, on the basis that it does not take into account the bases of desert. But what cannot be denied is that Numbers Matter_{FUSION} (i.e. in its unrestricted form) has at least a claim to intuitive support. Consider once more First Angela Divides and suppose that one confronts the situation pre-fusion (i.e. after Angela has undergone fission resulting in one million fission products, but before those fission products have fused with Barbara to produce Dorothy). Barbara, remember, deserves fifteen years of punishment on the basis of a single culpable act performed by her, and each of Angela's fission products deserves twenty years of punishment on the basis of a single culpable act performed by Angela (this is implied by Division Multiplies Desert* as well as its unstarred counterpart). Compare this situation with Multi Fusion (i.e. the case in which a single person deserving of fifteen years of punishment on the basis of one culpable act fuses with one million persons each deserving of twenty years of punishment on the basis of one million culpable acts) and suppose one confronts this situation pre-fusion too. I claim that the correct thing to say here is this: when the fusions take place the resultant person in the first case (i.e. First Angela Divides) will deserve less punishment than the resultant person in the second case (i.e. Multi

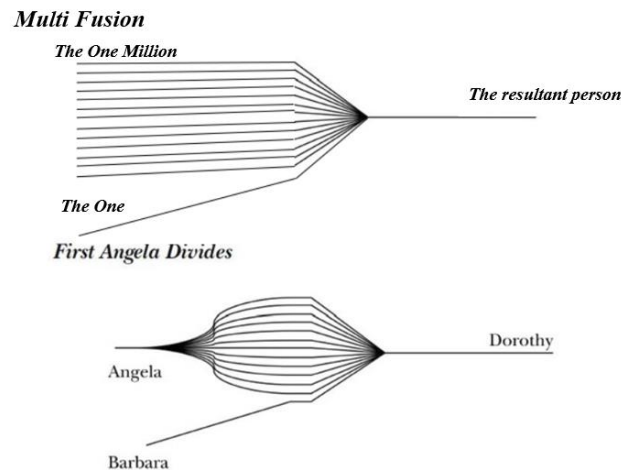
The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

Fusion). But isn't this intuitively implausible, when considering the cases pre-fusion like this? After all, considered at that time, the cases are exactly parallel, so shouldn't the resultant persons receive the same amount of punishment after all? Why should it matter that in the first case the one million persons were *previously* co-located but in the second they were not? Isn't it the case that the only thing that matters is how things stand *now*? If so, then Numbers Matter_{FUSION} must be true after all.

I admit the force of the intuition that the only thing that matters when considering the cases pre-fusion is how things stand at that time, and I admit that if that intuition were a good one then it would offer strong support for Numbers Matter_{FUSION} in its unrestricted form, which would mean that giving it up is a significant cost. However, I think there is a good reason for thinking the intuition is faulty. Our world is one in which fission and fusion do not occur, and so when we learn at a particular time that people in our world deserve a certain amount of punishment, they invariably deserve it on the basis of an action that they, and they alone, performed in the past. And so I think it is plausible that when we consider cases from a particular temporal perspective our intuitions are skewed – we have the intuition that all that matters is how things stand *now*, because in our world when considering cases of desert, invariably, all that does matter is how things stand *now*. In other words, I think the intuition is faulty precisely *because* it fails to take proper account of the past and so the bases of desert, but why we have such a faulty intuition has a natural explanation.

That the above contention is correct is bolstered, at least if my intuitions are anything to go by, by comparing the two cases atemporally, i.e. side-by-side in diagrammatic form:

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>



The picture depicts the very same situation that we just now considered from a temporal perspective, yet it is certainly not clear to me when considering this picture that Dorothy and the resultant person in Multi Fusion deserve the same amount of punishment; the intuition has lost its strength. It seems to me that when we consider this case from the temporal perspective we lose sight of the importance that keeping track of the bases of desert has, and considering the diagram helps us in this respect. If this hypothesis is right, it should also hold in the comparison between First Angela Divides and Ordinary Fusion. And it does indeed seem to hold.

Earlier we saw that a crucial part of Pummer's argument is that Dorothy and Carol deserve the same amount of punishment. He establishes this by presenting First Angela Divides and Ordinary Fusion atemporally, side-by-side in diagrammatic form. In effect, he asks us to share his intuition that in the two cases, presented in such a manner, both of the resultant persons deserve the same amount of punishment. But now consider this situation from a temporal perspective, pre-fusion once more. Considered as such, First Angela Divides is one in which there are one million and one persons present, one million of whom

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

deserve twenty years of punishment and one of whom deserves fifteen, and ordinary Fusion is a case in which there are two persons present, one of whom deserves fifteen years of punishment and one of whom deserves twenty. What is the correct thing to say, from this particular temporal perspective? Pummer's answer is: when the fusions take place the resultant person in First Angela Divides (i.e. Dorothy) will deserve the same amount of punishment as the resultant person in Ordinary Fusion (i.e. Carol). But here we can raise analogous questions to those we raised above when comparing First Angela Divides with Multi Fusion from a temporal perspective: Isn't this intuitively implausible, when considering the cases pre-fusion like this? After all, considered at that time, the cases are not at all alike – in the first case there are one million persons who deserves twenty years of punishment, but in the second there is only one person, so shouldn't the resultant person in the first case be given more punishment than the one in the second? Why should it matter that in the first case the one million persons were previously co-located but in the second they were not? Isn't it the case that the only thing that matters is how things stand *now*?

The intuitions that we have, then, when comparing cases from a temporal perspective conflict with those we have when considering them atemporally. In such cases at least one intuition must be faulty, and I have given reasons for thinking the fault is with the temporal intuitions. So replacing Numbers Matter FUSION with Numbers Matter FUSION* comes at the cost of giving up on an intuition that is plausibly faulty anyway, which is very little cost at all.⁴

⁴ Incidentally, Numbers Matter FUSION (which, remember, is (ii) of the Fusion Problem) implies both (1.) Dorothy deserves the same punishment as the resultant person in Multi Fusion, and (2.) Carol deserves less punishment than the resultant person in Multi Fusion. But (1.), (2.) and (i) of the Fusion Problem (i.e. Dorothy deserves the same punishment as Carol) are mutually inconsistent. So, no matter

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

There is one last matter that is worth considering. In the course of giving his argument Pummer also considers cases in which we must (for some reason) give an equal amount X of punishment to each member of a set in which one member deserves fifteen years of punishment and each of the other n members deserves twenty years each. He endorses the following principle (from which Numbers Matter_{FUSION} is derived):

Numbers Matter. There is some number n such that X should be greater than what X should be if instead n were 1.

In rejecting Numbers Matter_{FUSION} in favour of Numbers Matter_{FUSION*} must I also reject Numbers Matter?⁵ One might think the answer is yes if we allow Numbers Matter to apply in every range of possible cases. Consider one such range, *viz.* those cases involving a person $p\theta$ who deserves fifteen years of punishment on the basis of a single act β and n other persons each of whom deserves twenty years of punishment on the basis of a single act α (First Angela Divides, pre-fusion, is such a case). In the actual world, where fission never occurs, n is always equal to 1. But if we consider cases in which a single person performs an act deserving of 20 years

what one says regarding (iii) of the Fusion Problem (i.e. Division Multiplies Desert), if one maintains Desert one must reject either (i) or (ii).

⁵ Incidentally, I don't think Numbers Matter actually has anything to do with Desert. I am inclined to say that in the cases that it applies to each person *deserves* exactly the same amount of punishment as they would deserve were we able to give them as much individual punishment as we wanted (so, no matter how large n is, each n still deserves *twenty* years of punishment). It is just that, in such cases, we have no way to give everyone the punishment they deserve. The issue here, then, seems to me to be one of fairness, i.e. the issue is how to punish each fairly *given* that each deserves a certain amount of punishment. Cases like First Angela Divides, by contrast, concern how much punishment we should give to a *single* person, and so do concern issues of desert. At any rate, I here concede for the sake of argument that Numbers Matter does concern Desert, i.e., I concede for the sake of argument that our intuitions about how much punishment we should give to each person are intuitions not about fairness but about how much punishment they deserve.

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

of punishment and then divides into n fission products, n can be arbitrarily large.

I believe that in cases like this, if n is high enough, the amount of punishment we should give to each member of the set is greater than it should be if $n=1$ (i.e. in a case in which fission does not take place). But shouldn't I deny this given that in this case too there are only *two* wrong acts (i.e. α and β) committed in the past? The answer is no. This case is entirely different from cases like First Angela Divides. In cases like First Angela Divides, post-fusion, there is only a *single* person present, and we must decide how much punishment she deserves (thus, the only relevant considerations are which acts she deserves punishment for). In the cases presently under consideration, by contrast, there are *many* persons present, and we must decide how much punishment each of them deserves based not only on the wrong acts *they* are responsible for, but also on the basis of the wrong acts that *others* are responsible for. And these are *additional* relevant considerations. In short, numbers really do matter, but the number that matters is the number of *persons* we are considering as being due punishment. In the cases under consideration that number can be arbitrarily high. But in cases like First Angela Divides, that number is always equal to 1.

5. Conclusion

In his conclusion Pummer states that he has given us some reason to rethink Desert. He says:

A possible conclusion to draw is that the division and fusion cases I have discussed here reveal the fact that we simply ought to deny Desert. It is not clear that this is the right conclusion to draw, but it does seem to be a

The final publication is available at Springer via <http://dx.doi.org/10.1007/s11406-015-9650-2>

mistake to claim that it is easily avoided, or avoided at no cost. (Pummer, 2014: 74)

On the contrary. As I have shown, the conclusion can be avoided quite easily and, whilst perhaps not without any cost, at least with very little cost. One simply has to state Desert correctly and carefully follow through the consequences. Once one does so, it becomes apparent that there is a well-motivated restriction that should be made to Numbers Matter FUSION that blocks the disagreeable conclusion that Dorothy deserves more punishment than Carol. I thus conclude that Pummer gives those who endorse Desert no reason for concern.

References

- Lewis, David. 1976. "Survival and Identity." In *The Identities of Persons*, ed. Amelie Rorty, 17–40. Berkeley: University of California Press.
- Locke, John. 1975 [1694]. *An Essay concerning Human Understanding*, ed. Peter Nidditch. Oxford: Oxford University Press.
- McLeod, Owen, "Desert", *The Stanford Encyclopedia of Philosophy* (Winter 2013 Edition), Edward N. Zalta (ed.), URL=<<http://plato.stanford.edu/archives/win2013/entries/desert/>>.
- Olson, Eric. 1997. *The Human Animal: Personal Identity without Psychology*. Oxford: Oxford University Press.
- Parfit, Derek. 1971. "Personal Identity." *Philosophical Review* 80: 3–27.
- Pummer, Theron. 2014. "Does Division Multiply Desert?" *Philosophical Review* (2014) 123(1): 43–77
- Shoemaker, Sydney. 1984. "Personal Identity: A Materialist's Account." In *Personal Identity*, ed. Sydney Shoemaker and Richard Swinburne, 67–132. Oxford: Blackwell.