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Can Parfit's Appeal to Incommensurabilities Block the Continuum Argument for the Repugnant Conclusion?

Blocking the Continuum Argument for the Repugnant Conclusion by an appeal to incommensurabilities in value, as suggested in Parfit (2016), is an attractive option. But incommensurabilities ('imprecise equalities' in Parfit's terminology) that need to be posited to achieve this result have to be very thoroughgoing – 'persistent' in the sense to be explained. While this persistency is highly atypical, it can be explained if incommensurability is interpreted on the lines of the fitting-attitudes analysis of value, as permissibility of divergent attitudes towards the items that are being compared. More precisely, it can be interpreted as *parity* – as the permissibility of opposing preferences with respect to the compared items. This account makes room for the persistency phenomena. Nevertheless, some of Parfit's substantive value assumptions must be given up, to avoid implausible implications. In particular, his Simple View regarding the marginal value of added lives cannot be retained.

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1. Introduction

Starting with *Reasons and Persons* (1984), Parfit repeatedly grappled with the Repugnant Conclusion. His last published attempt, “Can We Avoid the Repugnant Conclusion?,” was published as late as in 2016, in a special issue of the Swedish international philosophy journal *Theoria*. The issue collected contributions from a symposium held in Stockholm in 2014 on the occasion of Parfit being awarded the prestigious Rolf Schock Prize in Logic and Philosophy. Having chaired the prize symposium I have long been drawn to the idea of commenting on Parfit’s proposal. This Festschrift in his memory provides a welcome opportunity to do so.

In his *Theoria*-paper, Parfit attempts to block the “Continuum Argument” for the Repugnant Conclusion by an appeal to “imprecise equalities” in value.² My aim is to assess this attempt. By imprecise equality Parfit means something very close to *incommensurability* – a relation that holds between two items if (and only if) none of them is better than the other nor are they (precisely) equally as good.³ Or, at least, imprecise equality is meant to entail incommensurability.

Precisely equal is a transitive relation. [...] But if X and Y are imprecisely equally good, so that neither is worse than the other, these imprecise relations are not transitive. [...] Two things are imprecisely equally good if it is true that, though neither thing is better than the other, there could be some third thing which was better or worse than one of these things, though not better or worse than the other. (Parfit 2016, pp. 14f)

Is the comparison with “some third thing” intended to be a part of the definition of imprecise equality? Or is it just meant to be a useful (partial) test that allows us to identify this relation, as it implies that X and Y aren’t precisely equal in value? Here, I will assume the latter. Indeed, I will assume that imprecise equality is the same as

² The ‘continuum’ label, which is Parfit’s own, is not really adequate. The argument doesn’t involve a continuum but only a discrete sequence of larger and larger populations, with gradually decreasing wellbeing level.

³ To prevent misunderstandings, the reader should be warned that this definition of incommensurability, while nowadays quite common among value theorists (probably due to the influence of Raz 1986), is very different from how this notion has been traditionally understood. On the traditional understanding, two items are commensurable in value if their respective values can be measured on a common cardinal scale. They are incommensurable otherwise. Now, obviously, cardinal measurability of value is a strong requirement. It is therefore not surprising that Chang (2016), who interprets incommensurability in this traditional way, denies that Parfit’s imprecise inequality is the same thing as incommensurability. Two items might well be incommensurable in this traditional sense without being imprecisely equal. On my definition, only a common *ordinal* scale is required for commensurability: it has to be that one of the items is better than the other or else they are equally good. If neither is the case, they are incommensurable.

thing as incommensurability.⁴ Like Joseph Raz (1986), I take the comparison with “some third thing” as a test, or “mark” of incommensurability (Raz 1986: 326).

A test of incommensurability between two options [given that it is known that neither is better than the other], which yields a sufficient but not necessary condition of incommensurability, is that there is, or could be, another option that is better than one but is not better than the other. (Raz 1986, abstract of ch. 13, “Incommensurability”)

The Continuum Argument is meant to establish that for any population, however large, that consists of people with excellent lives, there is a better population in which everyone has a drab life, barely worth living. It proceeds by constructing a finite sequence of populations of rapidly increasing size, with a slowly decreasing quality of life, the same for all individuals in a given population. As one moves along the sequence, the lives of the individuals get worse and worse, but they remain worth living. The argument makes an assumption, which is not questioned by Parfit, that:

Adding people with lives worth living always makes the world better, if the added lives are of the same quality as those of all the others.⁵

Indeed, Parfit accepts what he calls the Simple View, according to which the marginal value of such additions not only always is positive, but it is never diminishing (Parfit 2016, p. 112).

Let’s go back to the Continuum Argument. The first population in the sequence is large (as large as one pleases, according to the argument) and consists of people with excellent lives. Each succeeding population is much larger than the preceding

⁴ I think Parfit would agree. In the quote above, in order to establish that imprecise equality need not be transitive, he points out that “some third thing”, Z, could be better or worse than only one of the imprecisely equal X and Y, but neither better nor worse than the other. He obviously implicitly assumes that Z would then be imprecisely equally as good as the other item. Otherwise the existence of such Z would be irrelevant to the transitivity issue. But if Z is imprecisely equally as good as Y, this implies that imprecise equality is not transitive, since Y is imprecisely equally as good as X but Z is not imprecisely equally as good as X. (It is either better or worse than X.) Parfit’s implicit assumption, which otherwise could be questionable, is necessarily satisfied if imprecise equality is nothing but incommensurability. It holds for all mutually incommensurable X and Y, and for all Z, that if Z is better or worse than, say, X, but neither better nor worse than Y, then Y cannot be precisely as good as Z. For then Y would have been better or worse than X (by the transitivity of these relations across precise equal goodness), contrary to the hypothesis. This means that Z must be incommensurable with Y: neither better nor worse than Y, nor (precisely) equally as good.

⁵ Personally, I am not at all sure this view is correct. It is arguable that such additions might be axiologically neutral: they need not make the world either better or worse (see Rabinowicz 2009a). Here, however, I am willing to go along with Parfit and take this assumption as given.

one, but the lives of its members are slightly worse. The large increase in size is meant to compensate at each step for a small decrease in life quality: Each population is thus supposed to be better than the preceding one. The last, huge population consists of people with drab lives, of the muzak-and-potatoes variety, still worth living but only barely so. By the transitivity of betterness, this last population is better than the first one.

For Parfit, this is a repugnant conclusion. Indeed, he believes that a sufficiently large population of people with excellent lives is better than any population, however large, of people with drab lives.

To block the argument, Parfit suggests that, at some points in the population sequence, we will encounter an incommensurability (an 'imprecise equality'): the next population will be incommensurable with the immediately preceding one, instead of being better, as the Continuum Argument requires.

However, as we shall see, blocking the argument in this way carries considerable costs. The kind of incommensurability Parfit needs to posit has to be very thorough-going: It must be persistent in the sense to be explained. As we shall see, this persistency, while highly atypical, can be accounted for if incommensurability is interpreted, following Rabinowicz (2008, 2012), on the lines of the fitting-attitudes analysis, as permissibility of divergent attitudes regarding the compared populations. But even if the worry about persistency can be allayed, the conclusion will be that some of Parfit's substantive value assumptions – in particular, his Simple View regarding the marginal value of increases in population size – need to be rejected.

2. Preparing the ground – informal discussion

The following principle expresses the key idea behind the Continuum Argument:

Compensation: Small losses in quality can always be compensated, and indeed outweighed, by sufficiently large increases in quantity.

Or, somewhat more precisely: For all positive levels of quality, if the move from one level to the other only involves a small quality loss, then there is an increase in quantity that would outweigh this loss.

In the Continuum Argument, as one moves forward in the population sequence, small losses in life quality are supposed to be outweighed, at each step, by increases in quantity – in the population size. Each population in the sequence is therefore supposed to be better than the immediately preceding one.

On the other hand, the argument's conclusion contravenes the intuition that

Large losses in quality cannot always be compensated by increases in quantity.

There are positive levels of quality such that the loss involved in the move from one level to another cannot be compensated by any increase in quantity, however large. This intuition lies behind the claim that the starting-point of the population sequence is better than its end-point.

In particular, large quality losses cannot be compensated by increases in quantity in cases of *weak superiority*, i.e., when there is some quantity of the good of a higher quality that is better than any quantity of the good of a lower quality. In the case Parfit focuses on, the higher good is an excellent life, while the lower good is a drab life.

'Weak superiority' as the label for this relationship between types of good was introduced in Arrhenius and Rabinowicz (2005, 2015). Other names that have been in use for the same relation are 'discontinuity in value' (Griffin 1986), 'radical superiority' (Handfield and Rabinowicz 2017) and 'lexical superiority' (Parfit 2016). Parfit's label – 'lexical superiority' – is potentially misleading, which is why I here abstain from using it. To say that a type of good is lexically superior to another type of good, might suggest that *any* quantity of the former would be better than any quantity of the latter. In Arrhenius and Rabinowicz (2015), the latter relation is referred to as *strong superiority*. Griffin (1986) calls it 'trumping'. Strong superiority is not at issue in the case we consider: Parfit doesn't suggest that even a single excellent life would be better than any number of drab lives. Indeed, I think he would balk at such a claim. His perfectionism doesn't go that far.

To block the Continuum Argument we have three options:

- (1) deny that it is possible to construct the required sequence of types of lives;
- (2) deny the transitivity of betterness for the sequence of populations;
- (3) deny that small quality losses can always be compensated by increases in quantity.

Option (1): One might question whether the large gap between an excellent life and a drab life can be scaled in a finite number of small decreases in life quality. Small relative to what? What counts as a small decrease diminishes in absolute size as the

quality of a life goes down. But then we might never reach a drab life, barely worth living, from an excellent life, in a finite number of small steps.

This point can also be put in another way: It might be that for every population of people with lives of any given quality there is *some* decrease in this quality that can be outweighed by a sufficient increase in quantity – in the population size. But if we start with a population at a high quality level and then at each step decrease the quality by some amount that we can simultaneously outweigh by an increase in quantity, we might in this way go on for ever and still never be able to reach a population of low quality lives.⁶

This objection is plausible but not absolutely compelling. Defenders of the Continuum Argument might respond that even if decreases in life quality, as one moves along the life sequence, must be regarded as small at each step, they might still get us all the way down to a life that is barely worth living. Suppose, for example, that each decrease in quality, from one life to the next one, is of the same absolute size but this size is chosen in such a as to be counted as small even in the last step, at a point when the quality of a life is already very low. Then such decreases will be counted as being even smaller in all the previous steps. This construction would guarantee that a drab life can be reached from an excellent life in a finite number of small steps of equal size, provided that the quality distance between these two types of life is not infinitely large. Admittedly, this response makes strong assumptions about measurability of life quality: Unless the latter can be measured on an interval scale, it is meaningless to talk about equal-sized quality decreases.⁷ But still, such a

⁶ More generally, assume that

(i) For every life quality L and for every quantity k , there is some lower life quality L^- and (higher) quantity k^+ such that a population of $k^+ L^-$ -lives is better than a population of $k L$ -lives.

From this it does *not* follow that

(ii) For every life quality L and quantity k and for every quality L' lower than L , but still positive, there is some quantity k' such that a population of $k' L'$ -lives is better than a population of $k L$ -lives.

Assumption (i) allows us to construct a sequence of populations of decreasing quality and increasing quantity in which every element is better than its immediate predecessor: $kL, k^+L^-, k^{++}L^{--}, k^{+++}L^{---}, \dots$. But even if we extend this sequence to infinity, all qualities in the sequence might be higher than L' . Indeed, even the quality to which this sequence converges in the limit might be higher than L' .

⁷ This measurability assumption is especially problematic in view of the fact that for Parfit life quality is not reducible to wellbeing level. While the latter is a component in life quality, life quality is a broader concept. When we consider the Repugnant Conclusion, reducing the quality of a life to its wellbeing level would have unwelcome consequences. Parfit allows that a drab life might have the same overall level of wellbeing as, say, a “roller-coaster” life in which highs alternate with lows, if in such a life the highs only barely outweigh the lows. In Parfit’s view, the Repugnant Conclusion is truly repugnant only when it is a claim about drab lives – which “contain nothing bad, but very little that was good.” What’s repugnant is that a population of drab lives could be better than a population of excellent lives. An analogous claim about roller-coaster lives or about happy lives of extremely short duration (stretching over “one happy day, or one ecstatic hour”) would not be (so) repugnant (Parfit 2016, p. 118). He emphasizes that “there are important differences between the quality of people’s lives and the amount of well-being per person” (ibid.). He apparently allows that two lives can have the same “amount of

reply cannot be dismissed out of hand. To the extent that we do have intuitions about life quality losses or gains being small or large as compared with others, we do seem to be prepared to measure such losses and gains on something like a (rough) interval scale.

Option (2): One might want to deny the transitivity of betterness. Larry Temkin, who champions this proposal, suggests that, in all-things-considered value comparisons, we should interpret betterness as an “essentially comparative” concept (see, for example Temkin 2012). Therefore, in comparing alternative outcomes, we should not start with assessing how good or bad each outcome is in itself. We should not evaluate outcomes in isolation, but only relative to each other. Given this Essentially Comparative View, there is no guarantee that betterness is going to be transitive. Temkin contrasts this perspective with the Internal Aspects View, according to which value comparisons are secondary to intrinsic evaluations of outcomes. On that view, the transitivity of betterness is guaranteed. (Cf. Temkin 2012, sections 7.6, 7.7.) But then, if it is the essentially comparative conception that should be used in evaluating outcomes, such as alternative populations, we can block the Continuum Argument by denying transitivity. Indeed, we can then accept that the argument’s population sequence forms a betterness cycle: Each population in the sequence is better than its immediate predecessor, but the last population is worse than the one we have started with.

In a posthumously published paper (Parfit 2017), Parfit willingly admits that betterness can be understood in these different ways, but he suggests that (something like) the Internal Aspects View still is appropriate when it comes to evaluating and comparing alternative outcomes:

Temkin rightly assumes that the phrase “better than” can be used in different senses, which refer to different relations. Temkin argues that, though some outcomes are intrinsically better than others in a sense that is transitive, such claims may apply to only a “severely limited part of the normative realm.” I believe that many outcomes, and many other things, are intrinsically good or bad, in ways that make them better or worse than others. Such goodness or badness is not essentially comparative, since it does not consist in being related in certain ways to other things. (Parfit 2017, p. 139)

Option (3): This is Parfit’s preferred alternative. The other two options are discarded; he assumes that the relation of betterness between populations is transitive

wellbeing”, but still the quality of one of them might be higher. He also seems to allow that the the quality of one life (of the roller-coaster type) might be higher than that of another life (of the muzak-and potatoes variety) even though the average wellbeing is the same in both.

and that it is possible to construct a finite slowly decreasing life sequence that leads from an excellent life to a drab life. What he instead denies is that small quality losses can always be compensated by increases in quantity. At some points in the Continuum Argument's population sequence $X_1, \dots, X_n$, we will encounter an incommensurability according to Parfit: For some $i < n$, the next population X_{i+1} will not be better than the immediately preceding X_i , as is required by the Continuum Argument. Instead, the two populations will be incommensurable with each other. This makes it possible to reject the repugnant implication that X_n must be better than X_1 , and indeed to insist on the opposite being the case: X_1 , a population of people with excellent lives, is better than X_n , a population of people with drab lives, barely worth living, however large the latter population might be.

As an aside, it should be pointed out that bringing incommensurability in at just one point in the population sequence, between, say, X_i and X_{i+1} , is not a viable option. If for every $j < n$ distinct from i , X_{j+1} were better than X_j , the transitivity of betterness would imply that (i) X_i is better than X_1 and (ii) X_n is better than X_{i+1} . Since Parfit claims that (iii) X_1 is better than X_n , it follows from (i), (iii) and (ii), again by the transitivity of betterness, that X_i is better than X_{i+1} , contrary to the assumption that that these two populations are incommensurable.

As was shown in Handfield (2014), this inconsistency can be avoided if we postulate that there are *at least two* points of incommensurability in the sequence.⁸ And indeed, Parfit seems to think that incommensurability ("imprecise equality") might well come in at *every* point in the population sequence:

[Continuum] arguments assume that [...] any slight loss of quality could be outweighed by a sufficient gain in quantity. If we assumed precision, it would be hard to reject these arguments. We would have to claim that *any* slight loss of quality would outweigh any gain in quantity.⁹ As several writers claim, that would be very implausible. Compared with the existence of some number of people, it would not always be worse if instead there existed many more people who would have a slightly lower quality of life. But we should deny that such truths would be

⁸ A simple example shows that two such points can suffice for a sequence of an arbitrary length $n > 2$: Suppose that, for some i such that $1 < i < n$, X_i is incommensurable both with X_{i-1} and with X_{i+1} . With these two exceptions, there are no other points in the sequence at which incommensurability intervenes between adjacent populations: For all other adjacent pairs, the second population in the pair is better than the first, as in the Continuum argument. But still the first population in the sequence is better than the last one. By the transitivity of betterness it then follows that X_{i-1} is better than X_{i+1} , but this implication does not create any inconsistency. To complete the construction, assume that X_i is incommensurable not only with its immediate neighbors but also with all the other populations in the sequence. (This makes the example rather unrealistic in case of long sequences, but more realistic examples could perhaps be constructed if needed.)

⁹ This is a *non-sequitur*. See my comment below.

precise. We should then claim that *no* slight loss in quality would either be outweighed by, or outweigh, any such gain in quantity. It would not be better if there existed many more people whose quality of life would all be lower, since two such worlds would at most be imprecisely equally good. (Parfit 2016, p. 120, my emphasis)

Parfit's suggestion that *no* slight loss in quality can be outweighed by any gain in quantity seems unnecessarily radical. It is not needed to block the Continuum argument. As I pointed out above, it is enough if incommensurability intervenes at just two points in the population sequence. At other points, the next population may well be better than its immediate predecessor.¹⁰

But let's put this matter aside. Parfit's central suggestion, I take it, is that at least some adjacent populations in the Continuum Argument's population sequence, will be mutually incommensurable. To assess this proposal, we first need to develop a simple formal framework. This will be done in the next section.

3. Preparing the ground – formal framework

The domain we going to consider consists of populations in which everyone's life is worth living and which are homogeneous in life quality – everyone has the same type of life. We refer to types of life as $L, L', \dots$, and to quantities – population sizes – as $k, k', \dots$, etc. Thus, in what follows, kL will stand for a population of k people with lives of type L . We do not distinguish between populations on the basis of the personal identity of its members. This is not needed for the discussion that follows.

For any L such that the domain contains some L -population, we take it that any quantity of L is possible: If the domain contains a population kL for some k , then it contains populations kL for every k . There is no upper limit on population sizes.

There are two kinds of betterness relations we need to consider: one between types of life and the other between populations. To distinguish between them we use the subscript T for the former relation. Thus, $L >_T L'$ stands for the claim that L is a better type of life than L' , while $kL > k'L'$ states that a population of k people with lives of type L is better than a population of k' people with lives of type L' .

¹⁰ Parfit might have been driven to this radical suggestion by his mistaken assumption that, given precision, i.e., given the absence of incommensurabilities, critics of the Continuum Argument "would have to argue that *any* slight loss of quality would outweigh any gain in quantity" (see the quote above, my emphasis). That is, the critics' claim would have to be, according to Parfit, that every step in the population sequence is a worsening. This assumption is incorrect. Clearly, it would be enough, given precision, if only some steps in the sequence were worsenings. This would be sufficient for the Continuum Argument to crumble.

We assume that, *ceteris paribus*, i.e., keeping the size of population constant, lives of a better type make better populations:

Principle of Quality: For all L, L' and all quantities $k, kL > kL'$ iff $L >_T L'$.

Thus, the two relations are closely connected.

Indeed, the relation between types can be defined in terms of the relation between populations:

$$L >_T L' \text{ =}_{\text{df}} 1L > 1L'.$$

In other words, a type of life L is better than another type of life L' whenever a life of type L is better than a life of type L' .¹¹ Therefore, in what follows, we shall freely move from betterness claims regarding types of lives to betterness claims regarding lives.

Given this definition, Principle of Quality follows if we impose the following constraint on $>$:

Quality Constraint: For all L, L', k and k' , if $kL > kL'$, then $k'L > k'L'$.

And conversely, the Principle of Quality in its turn implies both this Quality Constraint and the above definition.

Along with the Principle of Quality, I am going to assume the corresponding Principle of Quantity. Since we only consider populations of people with lives worth living, I assume, following Parfit, that larger populations are better, if life quality is kept constant:

Principle of Quantity: For all k, k' and L , $kL > k'L$ iff $k > k'$.

Here, $>$ stands for the relation “greater than” between quantities.

As for the relation of betterness among populations, I assume that this relation is asymmetric and transitive.

¹¹ Analogously, L and L' can be defined as being equally good if and only if $1L$ is equally as good as $1L'$, and as incommensurable if and only if $1L$ is incommensurable with $1L'$. It is often assumed that wellbeing levels form a linear ordering: if two such levels are distinct, then one is higher than the other. But, as we have seen above, the type (= quality) of a life is not reducible to its wellbeing level. Thus, it should be possible for distinct L and L' to be equally good or even incommensurable.

Asymmetry: If $kL > k'L'$, then $k'L' \not> kL$.

Transitivity: If $kL > k'L'$ and $k'L' > k''L''$, then $kL > k''L''$.¹²

Indeed, I shall also assume that betterness and worseness (= the converse of betterness) are *transitive across equal goodness*, i.e. that whatever is better (worse) than kL must be better (worse) than $k'L'$ if kL and $k'L'$ are (precisely) equally good. Thus, letting $\approx$ stand for the transitive, symmetric and reflexive relation of equal goodness, I assume, as part of the condition of Transitivity, that

(i) if $k''L'' > kL$ and $kL \approx k'L'$, then $k''L'' > k'L'$
and

(ii) if $kL > k''L''$ and $kL \approx k'L'$, then $k'L' > k''L''$.¹³

According to Parfit, an excellent life is weakly superior (“lexically superior”, as he puts it) to a drab life. The relation of weak superiority between types of life can easily be defined in our framework:

L is *weakly superior* to L' =_{df} For some k , $kL > k'L'$ for all k' .

That is, L is weakly superior to L' if some (sufficiently large) quantity of L is better than every quantity of L' .

Let me now introduce another concept that will be useful in what follows.

L is *exchangeable* for L' =_{df} For every k , there is some k' such that $k'L' > kL$.

That is, L exchangeable for L' if for every quantity of L there is a quantity of L' that is better.¹⁴

¹² By the Principle of Quality, this implies that the betterness relation between types of life is also asymmetric and transitive. Note, by the way, that the transitivity of the latter relation has not been questioned in the discussion of the Continuum Argument. It is the transitivity of the betterness relation between populations that has been a matter of dispute.

¹³ A much more economical representation that entails all these standard conditions on $>$ and $\approx$ starts from a relation $\geq$ of being at least as good. This relation is assumed to be reflexive and transitive. Betterness and equal goodness as then defined as the asymmetric and the symmetric parts of $\geq$, respectively:

$kL > k'L' =_{df} kL \geq k'L' \text{ but not } k'L' \geq kL$; $kL \approx k'L' =_{df} kL \geq k'L' \text{ and } k'L' \geq kL$.

¹⁴ Note that exchangeability, as here defined, is a non-symmetric relation (which might not be how we use this term in ordinary language). If L is exchangeable for L' , it doesn't follow that L' is exchangeable

As we have seen, the main idea behind the Continuum argument is Compensation: Small losses in quality can always be outweighed by sufficiently large increases in quantity. For this outweighing to be possible, the type of life of a higher quality must be exchangeable for the type of a lower quality.

Now, suppose there is a sequence of types of life, $L_1, L_2, \dots, L_n$, such that L_1 is weakly superior to L_n . Thus, for some quantity k_1 , k_1L_1 is better than any quantity of L_n . (Think of L_1 as an excellent life and of L_n as a drab life.) Then it *cannot* be true that every type L_i in this sequence is exchangeable for its successor L_{i+1} . Otherwise, it would be possible to construct a sequence of populations starting with k_1L_1

$$k_1L_1, k_2L_2, \dots, k_nL_n$$

in which each population is better than the immediately preceding one. By the transitivity of betterness, it would then follow that k_nL_n is better than k_1L_1 . Which, given the asymmetry of betterness, is incompatible with k_1L_1 being better than any quantity of L_n .

But if L_i is not exchangeable for L_{i+1} , how can these types be related instead?

One possibility is that L_i is weakly superior to L_{i+1} .¹⁵ But how can this be if we suppose that at each step in the sequence the next type is only slightly worse than its immediate predecessor?

To explain this, we might appeal to the idea of *the diminishing marginal value of quantity*. It might be that k_iL_i is better than every quantity of L_{i+1} because increases in the quantity of L_{i+1} steeply diminish in marginal value. As a result, no quantity of L_{i+1} can ever reach the value of k_iL_i , even though L_i is only slightly better than L_{i+1} . (Cf. Arrhenius & Rabinowicz 2005, 2015. See also Jensen 2008.)

Parfit (2016, p. 112) finds this option implausible; he rejects the Diminishing Value View. The argument he uses appeals to the analogy between goodness and badness:

The existence of [...] wretched people would not have a badness that would diminish as the number of such people grew, so that it mattered less and less whether more such people exist. The badness of more such suffering would never decline. [...] we cannot plausibly either apply some Diminishing Value View to lives that are bad, or restrict this view to lives that are good.

for L .

¹⁵ Indeed, it is the only available possibility as long as the betterness relation between populations is supposed to be *complete*, i.e., as long as we do not allow for incommensurabilities. In Arrhenius and Rabinowicz (2005, 2015) it is shown (using a somewhat different formal framework) that given this completeness condition on $>$, any sequence $L_1, \dots, L_n$ such that L_1 is weakly superior to L_n must contain some L_i that is weakly superior to its immediate successor in the sequence.

But is it a convincing argument? Why can't we restrict the Diminishing Value View to good lives only, i.e. accept diminishing value but reject diminishing *dis*value? Indeed, Parfit himself admits that "there are some asymmetries between suffering and happiness, and some of the other things that can make lives good or bad" (ibid.). So why cannot there be an asymmetry between goodness and badness in this respect as well?

Nevertheless, Parfit is not willing to entertain this possibility. He accepts what he calls the *Simple View*:

the Simple View claims: Anyone's existence is in itself good if this person's life is worth living. Such goodness has non-diminishing value, so if there were more such people, the combined goodness of their existence would have no upper limit. (ibid.).¹⁶

This leads him to reject the suggestion that at some point in the slowly decreasing life sequence $L_1, \dots, L_n$, we could encounter a type of life, L_i , that is weakly superior to the next type L_{i+1} , in spite of it being only slightly better than the latter.

As the Simple View is literally stated, it only denies that the marginal value of added lives can diminish. But what about the possibility that this marginal value could sometimes *increase*? For example, that the value of a population could radically increase upon reaching a certain size, perhaps even increase to infinity? I believe, however, that Parfit would reject this possibility as well. He seems to disallow any holistic value effects of increases in population size. On his view, if I understand him correctly, the value added by a life to a population is simply its intrinsic value. Thus, if the added life does not affect the life quality of other population members, it can never add more value to the population, or less value, than what it is intrinsically worth. Therefore, I take it that the Simple View should be understood as the claim that increases in the population size have a *constant* marginal value. I will come back to the Simple View later, in the last section, but right now let us simply take it as given that Parfit is not prepared to allow that a type of life can be weakly superior to another type of life that is only slightly worse.

But then, if none of the types of life in the gradually decreasing type sequence leading from an excellent life to a drab life can be exchangeable for its immediate successor, as this would lead to the Repugnant Conclusion, and if none of these types can be weakly superior to its immediate successor, what else is left?

¹⁶ Note though that earlier in the paper Parfit provides a different, much weaker formulation of the Simple View: "the *Simple View*: Anyone's existence is in itself good, and makes the world in one way better, if this person's life is good to live, or worth living." (Parfit 2016, p. 110)

4. Enter incommensurability

What is left is the possibility that for some pairs L_i and L_{i+1} of adjacent types in this gradually decreasing type sequence stretching from an excellent life to a life barely worth living, the relation between L_i and L_{i+1} admits *incommensurability*. And indeed, admits incommensurability of a very thoroughgoing kind, which I will call *persistent incommensurability*. By this I mean that some quantity k_i of L_i is such that L_{i+1} is worse than $k_i L_i$ in smaller quantities and incommensurable with $k_i L_i$ in *all* larger quantities. Thus, if $k_i L_i$ isn't better than $k_{i+1} L_{i+1}$, then these two populations are incommensurable and this incommensurability would persist however much the quantity of L_{i+1} were increased. This would mean that we cannot repair the Continuum Argument by increasing the quantity of L_{i+1} . No quantity of L_{i+1} would do the job required by the Continuum Argument, since no such quantity is better than $k_i L_i$.

Here's the definition of this relation between types of life:

L admits *persistent incommensurability* with L' =_{df} Some quantity k of L is incommensurable with every quantity of L' at least as large as some k' .

This quantity k of L will then be better than every quantity of L' smaller than the threshold k' .¹⁷ Thus, no quantity of L' will be better than kL . Which means that L is not exchangeable for L' .

As for weak superiority, if L admits persistent incommensurability with L' , this certainly does not imply that L is weakly superior to L' , but it does not exclude it either: Even if kL is incommensurable with every sufficiently large quantity of L' , there might be some quantity of L larger than k that is better than any quantity of L' . We can however exclude this possibility if we stipulate that persistent incommensurability with L' extends to all quantities of L at least as large as k . We can define this more demanding relation as follows:

L admits *strictly persistent incommensurability* with L' =_{df} For every quantity of L at least as large as some k , this quantity of L is incommensurable with every quantity of the other type L' at least as large as some k' .

¹⁷ Obviously, kL cannot be worse than or equally as good as some quantity of L' that is smaller than this incommensurability threshold k' . For then, by the Principle of Quantity and by Transitivity, kL would have to be worse than $k' L'$, contrary to the hypothesis.

But does the incommensurability between two adjacent types of life have to be so thoroughgoing, if we want to block the Continuum argument by an appeal to incommensurability? The answer is yes. The following can be proved:

Trilemma: For any two types of life L and L' , exactly one of the following three relations must obtain: (i) L is exchangeable for L' , (ii) L is weakly superior to L' , or (iii) L admits strictly persistent incommensurability with L' .

The proof of the Trilemma (see Appendix) relies on Transitivity and the Principles of Quality and Quantity.¹⁸

Thus, to block the Continuum Argument by an appeal to incommensurability, Parfit needs to postulate a very radical form of incommensurability.

Let's consider for a moment the dialectics of a hypothetical debate between Parfit and an adherent of the Continuum Argument.¹⁹ Parfit, who wants to insist that an excellent life (L_1) is weakly superior to a drab life (L_n), might be asked to specify a number k_1 of L_1 -lives that in his view would be better than any number k_n of L_n -lives. If he does come up with a definite answer, which might not be that easy, the adherent of the Continuum Argument needs to counter this proposal. Thus, she needs to specify an appropriate population sequence: a sequence of (what she claims) better-and-better populations of people with worse-and-worse lives which starts with k_1L_1 and ends with k_nL_n . k_n may be as large as she pleases. To come up with a plausible sequence of this kind might not be easy. But, if this demand is met, then it is up to Parfit to try to find a fault in his opponent's proposal: He needs to point to some specific types of life in the offered sequence that instead of being exchangeable for their successors, as the opponent claims, admit strictly persistent incommensurability with the types that immediately follow.²⁰ This might not be easy. But even if Parfit would do it, it would not be the end of the matter. The pro-

¹⁸ In Handfield & Rabinowicz 2017, a very similar trilemma, though formulated in somewhat different terminology and with weak inferiority replacing weak superiority, was proved for bad types more specifically, for types of harm. Here, I prove it for good types – types of life worth living.

¹⁹ I am indebted to John Broome for making me think harder about this issue.

²⁰ Alan Hájek has questioned this (in private communication). Why should there be this requirement on Parfit? To give an analogy, a critic of the *sorites* need not point to the specific number of grains of sand at which heaps begin. I think though that there is an important dialectical difference between these two cases: While everyone agrees that the conclusion of the *sorites* is absurd, the Continuum Argument has its adherents. The critic of the *sorites* is therefore in a stronger dialectical position. He need not be as specific in his critique as the critic of the Continuum Argument. Still, while imperfect, this analogy is instructive. In both cases, it might be *indeterminate* where exactly the relevant break point in the sequence is located. In particular, it might be indeterminate which types of lives is the Continuum Argument's life sequence admit of strictly persistent incommensurability with their immediate successors. I do not consider the possibility of indeterminacy in this paper, but the general issue of how indeterminacy, or vagueness, can interact with incommensurability is discussed in Rabinowicz (2009b).

ponent of the Continuum Argument might come back and offer *another* population sequence (starting with k_1L_1 and continuing all the way to k_nL_n , for an appropriately large k_n), which Parfit in his turn would then again need to find a fault in, and so on. It is not clear how this debate could ever be conclusively resolved. Note that both sides have burdens of proof, as both come up with positive – but opposing – claims.

In what follows, I gloss over the complexity of this dialectics. Instead, I focus on the very concept of persistent incommensurability. What I am going to say will also apply to the stronger notion of strictly persistent incommensurability.

5. Assessing the costs

Persistent incommensurability is a strange animal. In the standard cases used in the literature to illustrate incommensurability, on one of the compared items is better than the other in some relevant respects and worse in some others. The same applies to the case we focus on, in which the compared items are (homogeneous) populations and the relevant respects, or dimensions of comparison, are quality and quantity: type life and population size. However, in the standard cases of multi-dimensional comparisons, if two items are incommensurable, this incommensurability is not supposed to be persistent: A sufficiently large improvement (worsening) of one of the items in a relevant dimension will eventually make it better (worse) than the other item.

In the well-known *small-improvement argument* for incommensurability, one starts with two items, X and Y, none of which is better than the other. The aim is to prove that they are not (precisely) equally good either and they therefore must be incommensurable. To achieve this aim, one considers a small improvement of one of the items, say Y, in some relevant respect. This slightly improved variant of Y, Y^+ , is better than Y, but it still is not better than X. This shows that X and Y cannot be equally good, since betterness is transitive across equal goodness.

It is significant that this argument involves a *small* improvement. Given that X isn't better than Y, it would strain credulity to think that *no* improvement of Y in the relevant respect, however large, could make the improved variant of Y better than X. Therefore, if k_iL_i isn't better than $k_{i+1}L_{i+1}$, it might strain credulity to think that no increase in the quantity of L_{i+1} , however large, could make this quantity of L_{i+1} better than k_iL_i . This is especially worrisome if, as the Simple View has it, the marginal value of added lives never diminishes. But even if this value is allowed to diminish, it's still possible that large increases in quantity can considerably increase the value of L_{i+1} -population. Thus, to put it cautiously, it seems that persistent incommen-

surability which Parfit needs to block the Continuum Argument is highly atypical. This puts his proposal under stress.²¹

Let me develop this line of thought a little bit further. Ruth Chang has made an influential suggestion that in cases of multidimensional comparisons, if neither item is better than the other and they are not equally good, the two items can be assumed to be *on a par*. They are mutually incommensurable (in the sense in which I use the term), but still in the same league, so to speak.²² They are not incomparable: for Chang, parity is a form of comparability. It is plausible to suppose, I think, that when Parfit's "imprecise equality" is just another name for parity. Now, it is often taken to be a feature of parity, as opposed to outright incomparability, that if two items, X and Y, are on a par, and it is possible to considerably improve one of them, say, Y, in one or several relevant respects, then this considerably improved version of Y will be better than X. In other words, parity isn't supposed to be persistent.

Indeed, Qizilbash (2018) takes such impersistency to be "the mark of parity". On his interpretation of that relation, parity is what he calls "rough equality":

On this view [= the rough equality view], when parity holds between items [...] while some slight change in value may not tilt the balance in favour of one of them, any significant increase in the value of one of the items will make it better, and any significant reduction in the value of one will make it worse, than the other. This feature of parity is the 'mark of parity' on the rough equality view. [...] this mark [...] is implied by a central component of the rough equality view: the assumption that while parity is a form of equality and a distinct relation, it is not precise equality. The mark of parity also distinguishes parity from 'incomparability'. If there were 'incomparability', on this view, while one is not better than the other even some significant increase (or reduction) in the value of one option would not make it better (worse) than the other. (Qizilbash 2018, p. 90)

²¹ This worry about persistency of incommensurability was first raised in Handfield and Rabinowicz (2017), in connection with the Spectrum Argument against the transitivity of betterness. (In that paper, strictly persistent incommensurability was referred to as "radical" incommensurability.) To block the Spectrum Argument by an appeal to incommensurabilities also requires these incommensurabilities to be strictly persistent. Which is not surprising since that argument is a close cousin of the Continuum Argument. In the next section, I am going to suggest how the worry about persistency could be put to rest. Thus, the present paper might be seen as an attempt to solve the problem posed in my earlier joint work with Toby Handfield.

²² "Parity typically holds between items that bear very different aspects of V [V refers to the covering value, or covering consideration, with respect to which the items are being compared; aspects of V are different relevant respects] and yet are nevertheless 'in the same neighbourhood' of V-ness." (Chang 2016, p. 193) Different "aspects of V" are different dimensions of V – different relevant respects of comparison.

He contrasts this rough-equality account of parity with the one I myself have put forward in Rabinowicz (2008, 2012) and suggests that the latter account fails to entail that parity must have this mark of impersistency. He is right, as I am now going to show. My account takes its departure from the *fitting-attitudes analysis* of value but interprets fittingness as permissibility rather than requiredness, i.e., it allows that there sometimes might exist a range of different fitting (permissible) attitudes towards an item. Here is a short sketch of my proposal:

Value relations are analysed in terms of the class, K, of permissible preference orderings of the domain of items under consideration. An item X is *better* than another item Y if and only if it ought to be preferred to Y, i.e., if and only if every permissible preference ordering (= every ordering in K) ranks X above Y. They are *equally good* if and only if every K-ordering ranks them equally. Or, what amounts to the same, if and only if one ought to be indifferent between X and Y. Incommensurability arises when it is permissible for preferences to diverge. In particular, X and Y are *on a par* if and only if some orderings in K rank X above Y, but some other K-orderings rank Y above X. That is, they are on a par if and only if it is permissible to prefer X to Y but also permissible to have the opposite preference.

The orderings in K might, or might not, contain gaps in some places. X and Y are *incomparable* if and only if every permissible ordering contains a gap as far as the comparison between these two items is concerned. That is, if and only if it is impermissible to prefer one of them to the other or to be indifferent. Needless to say, this account makes incomparability a rare phenomenon.

Orderings in K are meant to represent permissible *overall* preferences, i.e. preferences that take into account all the relevant respects of comparison. Parity will typically arise in cases of multidimensional comparisons, if one item, X, ranks higher than the other, Y, in some respects and lower in other respects. The overall preference as regards these items will then depend on how the different respects (dimensions) are weighted against each other. It is unrealistic to expect that there is a unique correct assignment of weights to dimensions. Different weight assignments will normally be admissible. Therefore, it might well be the case that an overall preference for X over Y and an overall preference for Y over X might both be permissible – one based on one admissible assignment of weights to the relevant dimensions and the other based on another admissible weight assignment. As a result, X and Y will be on a par.

Now, Qizilbash suggests that this account, unlike his own, does not *entail* that parity cannot be persistent. He is right, of course. However, even on my proposal, parity typically is not going to persist if one of the items that are on a par gets more-and-more improved in some relevant respect. Sooner or later, when the improve-

ment becomes large enough, the preference for the other item will typically stop being permissible, which will put an end to parity.²³

Nevertheless, it is an important feature of my account that it at least in principle allows for persistent (and indeed strictly persistent) parity. I will demonstrate how this possibility can arise in the next section.

6. Accounting for persistence

First, let me sketch how my approach applies to value comparisons between populations.

The domain of items we consider is, as previously, a set of possible populations with different sizes k and different types of life, L , the same for every person in a population and worth living. There is no upper limit on size. K is the class of permissible preference orderings of that domain. Every such ordering P of populations induces the associated ordering P_7 of types of life by the definition: P_T ranks L higher than L' =_{df} P ranks $1L$ higher than $1L'$. We take it that all K -orderings induce the same ordering of types of life: for all such orderings, P and Q , $P_T = Q_T$.²⁴ We also assume that K -orderings satisfy the preferential versions of the conditions previously imposed on the relation of betterness between populations. Thus, permissible preferences are asymmetric and transitive (also across indifferences) and they satisfy the preferential versions of the Principles of Quality and Quantity:

Preferential Principle of Quality: For all K -orderings P , all k, L and L' , P ranks kL above kL' iff P_T ranks L above L' .²⁵

Preferential Principle of Quantity: For all K -orderings P , all L, k and k' , P ranks kL above $k'L$ iff $k > k'$.

²³ Impersistence of parity is also to be expected on another recent account of that relation, due to Ursula Andreou (Andreou 2015). On that account, two items are on a par with respect to some covering value V if and only if they belong to the same category (the same 'league') with respect to V , but nevertheless are mutually incommensurable with respect to V , i.e., neither is a better V nor are they equally good specimens of V . Categories of a given value are supposed to be linearly ordered from higher to lower: excellent specimens of V , good specimens, mediocre ones, etc. Unless the categories are very broad, if X and Y are on a par, a significantly improved (worsened) version of Y will belong to a higher (lower) category than X . Thus, it won't be on a par with X . (Indeed, it won't anymore be incommensurable with X .) Which means that even on this account parity typically isn't going to persist.

²⁴ In a more general framework, this assumption can easily be given up, though. Indeed, there are good reasons to give it up if we think of life types as being multi-dimensional. Rankings of life types can then be expected to differ from one permissible preference ordering to another.

²⁵ Just as the betterness ordering of types of life can be defined in terms of the betterness ordering of populations, the P_T -ordering of types of life is definable in terms of P : P_T ranks L above L' if and only if P ranks $1L$ above $1L'$.

Given my analysis of betterness and equal goodness in terms of permissible preferences, these conditions on K imply the corresponding conditions on betterness and equal goodness: betterness is asymmetric and transitive (also across equal goodness), and it satisfies the Principles of Quality and Quantity.

Let me now define two preferential relations that will be useful in the following discussion: the preferential variants of weak superiority and exchangeability. Suppose that P is an ordering of possible populations:

L is *P-exchangeable* for L' iff for every quantity of L there is a quantity of L' that P ranks higher.

L is *weakly P-superior* to L' iff there is some quantity of L that P ranks higher than every quantity of L' .

It is now easy to show how strictly persistent incommensurability can arise in my model.

Lemma: If K contains an ordering P such that L is weakly P -superior to L' and another ordering Q such that L is Q -exchangeable for L' , then L admits strictly persistent incommensurability with L' , and indeed strictly persistent parity with L' .

Proof: If L is weakly P -superior to L' , then for some k , (i) P ranks kL higher than every quantity of L' . But if L is Q -exchangeable for L' , then (ii) for some k' , Q ranks $k'L'$ higher than kL . By the properties of permissible orderings (more exactly, by the transitivity of permissible preferences and the Preferential Principle of Quantity), these implications can be extended to every quantity k^+ of L at least as large k : (iii) P ranks k^+L higher than every quantity of L' ; but (iv) for some k' , Q ranks higher than k^+L every quantity of L' at least as large as k' . (iii) and (iv) together entail that L admits strictly persistent parity with L' .

It is not difficult in this model to provide an example of a sequence of types, $L_1, \dots, L_n$, in which each type is better than but not weakly superior to its immediate successor, while L_1 is weakly superior to L_n . Clearly, if the latter holds, then it cannot be that every type in this sequence is exchangeable for its immediate successor. Therefore, by Trilemma, for some L_i in $L_1, \dots, L_n$, L_i must admit strictly persistent incommensurability with L_{i+1} .

Indeed, there must be at least two types of life in this type sequence that admit of

strictly persistent incommensurability with their immediate successors. If there was only one such type, then – by the Trilemma – all other types in the sequence would be exchangeable for their immediate successors. But then it would be possible, on the basis of this type sequence, to construct a sequence of populations in which incommensurability would appear at just one point while at every other point the next population would be better than its immediate predecessor. But we already know that this is impossible if betterness is transitive (see above, section 2).

To provide a model with the simplest possible type sequence of this kind, a sequence that consists of just three types, L_1 , L_2 , and L_3 , suppose that for some permissible orderings P and Q ,

both P_T and Q_T rank L_1 higher than L_2 and L_2 higher than L_3 ,

L_1 is weakly P -superior to L_2 , while L_2 is P -exchangeable for L_3 ,

L_1 is Q -exchangeable for L_2 , while L_2 is weakly Q -superior to L_3 .

By the Lemma above, these conditions imply that L_1 admits strictly persistent parity with L_2 and L_2 admits strictly persistent parity with L_3 . By the transitivity of permissible preferences, they also imply that L_1 is weakly P -superior to L_3 and that it likewise is weakly Q -superior to L_3 .²⁶

If we in addition suppose that orderings P and Q exhaust class K of permissible orderings, it will follow that L_1 is better than L_2 and L_2 is better than L_3 , and that L_1 is weakly superior to L_3 , just as required.²⁷

It might be noted that nothing would change if we allowed for yet another permissible preference ordering, R , which is cautious and avoids adjudicating

²⁶ Proof: (i) Since L_1 is weakly P -superior to L_2 , there is some k such that P ranks kL_1 above every quantity of L_2 . Consider any quantity k' of L_3 . Since P_T ranks L_2 higher than L_3 , Preferential Principle of Quality implies that P ranks $k' L_2$ above $k' L_3$. But then, by the transitivity of permissible preferences, P ranks kL_1 above $k' L_3$. Thus, L_1 is weakly P -superior to L_3 . (ii) Since L_2 is weakly Q -superior to L_3 , there is some k such that Q ranks kL_2 above every quantity of L_3 . Since Q_T ranks L_1 higher than L_2 , Preferential Principle of Quality implies that Q ranks kL_1 above kL_2 . But then, again by the transitivity of permissible preferences, Q ranks kL_1 above every quantity of L_3 . Thus, L_1 is weakly Q -superior to L_3 .

²⁷ Proof: To prove that L_1 is weakly superior to L_3 , we need to show that some quantity of the former is better than every quantity of the latter. Since L_1 is weakly P -superior to L_3 , there is some k such that (i) P ranks kL_1 above every quantity of L_3 . Similarly, since L_1 is weakly Q -superior to L_3 , there is some k' such that (ii) Q ranks $k' L_1$ above every quantity of L_3 . Now, either $k = k'$, or one of these two quantities is larger than the other. Without loss of generality, assume that $k \geq k'$. Then, by the transitivity of permissible preferences, (ii) implies that (iii) Q ranks kL_1 above every quantity of L_3 . So, by (i) and (iii), both P and Q rank kL_1 above every quantity of L_3 . Since P and Q exhaust class K , this implies that kL_1 is better than every quantity of L_3 .

between P and Q. It can be defined as the intersection – the common part – of P and Q. Allowing for such cautious orderings seems reasonable. But if R is the common part of P and Q then adding it to K wouldn't affect any the conclusions we have reached above.

Thus, our modeling makes room for type sequences of the kind Parfit requires. In principle, we could have a type sequence which starts with an excellent life and ends with a drab life, in which no type of life is weakly superior to its immediate successor but the first type is weakly superior to the last. This becomes possible if we allow some pairs of adjacent types in the sequence to admit strictly persistent incommensurabilities.

7. Are we home then?

Not quite, I am afraid. While the abstract model described in the preceding section makes room for type sequences of the required kind, I don't think that there is a way to square this model with some of Parfit's substantive value assumptions, and in particular with his Simple View. According to the latter, adding lives of the same type to a population has a non-diminishing marginal value. Parfit relies on this view when he denies that a type of life can be weakly superior to another type that is only slightly worse. In the slowly decreasing life type sequence that leads from an excellent life to a drab life, no type of life is supposed to be weakly superior to its immediate successor. But, in my modeling of such sequences, I still had to postulate the existence of permissible orderings in which some types are *preferentially* weakly superior to their immediate successors. (See the preceding section; a type is preferentially weakly superior to another type in an ordering P if and only if it is weakly P-superior to that type.) Can orderings of this kind be *permissible* if it is out of the question that the value of added lives could sometimes diminish? This may well be denied.²⁸

However, Parfit's Simple View is highly questionable: It can be shown to have counter-intuitive implications. In a recent paper, Karsten Klint Jensen has proved the following result: If an excellent life is weakly superior to a drab life, as Parfit

²⁸ Actually, there seem to be two different ways of accounting for a type L being preferentially weakly superior to another type L', despite it being only slightly better than L'. If L is weakly P-superior to L', this might be either because the marginal impact of adding more and more L'-lives steeply decreases and converges to zero as the number of these lives goes to infinity, or because the L-population becomes radically upgraded in P-ranking upon it reaching a certain size. If this upgrade means that the L-population upon reaching the size in question becomes 'infinitely' more preferred in P than L'-populations, this would also account for P ranking this L-population higher than any L'-population, however large. But in the latter case we would still have to assume, I think, that a *further* increase in the size of the L-population would have a lower marginal impact. Which would again imply that, on P, the marginal impact of added lives (L-lives, in this case) will at some point diminish.

assumes, then the Simple View implies that no population of drab lives, however large, could be better than even a *single* excellent life (Jensen 2018).²⁹ It is an implication that is difficult to accept unless one adheres to a rather extreme form of perfectionism in population axiology. To be sure, Parfit did adhere to a perfectionist view, but it is doubtful that he would have been willing to commit to such a radical version of this position. Therefore, Jensen's advice to Parfitians is that they should give up the Simple View.

Thus, the following seems to be a fair assessment of Parfit's proposal: His appeal to incommensurabilities is a suggestion worth serious consideration. Arguably, any plausible attempt to block the Continuum Argument might need to bring in incommensurabilities at some point. As we have seen (cf. the Trilemma above), these incommensurabilities will have to be strictly persistent and thus highly atypical. Still, their persistency can be accounted for if we rely on the modeling of value relations in which incommensurabilities are analyzed in terms of divergent permissible preferences. But if in some of the permissible preference orderings we then need to postulate a life type can be preferentially weakly superior to another life type that is only slightly worse, then we have to give up Parfit's Simple View. We can no longer insist that the marginal value of added lives never diminishes.³⁰ This, however, we have reason to do anyway. As Jensen (2018) has shown, we need to discard the Simple View if we want to avoid excessive forms of perfectionism in population axiology. Thus, we must allow for some holistic value effects that can arise when population size increases. We need to allow for diminutions in the marginal value of added lives and perhaps also for its increases in some cases. What sorts of phenomena of this kind it might be plausible to assume remains to be seen.

²⁹ In this proof, Jensen does not directly rely on the Simple View, as that view is stated. Instead he formulates a condition which appears to follow from the Simple View, but which unlike the latter avoids the controversial assumption that values of lives and of populations can be expressed numerically on a cardinal scale – an assumption which Parfit himself otherwise rejects. To formulate this condition, Jensen considers a larger class of possible populations than I have done; the domain of his framework also includes non-homogeneous populations, in which people have lives of different types. His condition can then be formulated as follows:

For any L and L' , if L is better than L' , then for every k , adding another person with an L -life to kL results in a better population than adding to kL a person with an L' -life.

Intuitively, if the value of adding L -lives were diminishing, then at some point it could be better to add an L' -life to an L -population instead of yet another L -life, despite the fact that L is a better type of life than L' .

³⁰ This doesn't mean that we should switch to the contrary claim that the marginal value does diminish in a way that makes it possible for a life to be weakly superior to a slightly worse type of life. We need not allow for types of life that in *all* permissible preference orderings are preferentially weakly superior to slightly worse types. As we have seen in the preceding section, what is required for strictly persistent incommensurability between L and L' is that the former is preferentially weakly superior to the latter in some permissible preferences orderings but preferentially *exchangeable* for the latter in other such orderings.

We need to know more about the range of permissible preference orderings of the domain of populations. Thus, there is still work that remains to be done.³¹

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³¹ Earlier versions of this paper were presented in 2018 at a conference in the memory of Derek Parfit, held in Oxford in May, at a conference on climate change and population axiology held in Stockholm in September, at the School of Philosophy of the Australian National University in Canberra in November and at my own philosophy department at Lund university in December. I am much indebted to the audiences at these events for many useful suggestions. As the Parfit conference provided me with the impetus to write this paper, I'd like to thank its organizers, Joseph Carlsmith, Jeff McMahan and Ketan Ramakrishnan. I am grateful to John Broome, Alan Hájek, Toby Handfield and Karsten Klint Jensen, who have all sent me challenging but very helpful written comments. Apart from making several substantive points, Alan has taken the trouble of hunting down my numerous typos and linguistic inadvertencies. Toby Handfield deserves special thanks; the worry about persistency of incommensurability, which I address and try to dispel in this paper, was first raised in my earlier work with Toby.

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Appendix

Trilemma: For any two types of life L and L' exactly one of the following three relations must obtain: (i) L is exchangeable for L' , (ii) L is weakly superior to L' , or (iii) L admits strictly persistent incommensurability with L' .

Proof:

We want to prove that if L is neither exchangeable for L' nor weakly superior to L' , then it admits strictly persistent incommensurability with L' .

(This will establish that these three horns of the Trilemma are jointly exhaustive. That they are mutually exclusive is trivial.)

If L is not exchangeable for L' , here must be some quantity k of L such that

(1) No quantity of L' is better than kL .

But if L is not weakly superior to L' , then there is some quantity k' of L' such that

(2) kL is not better than $k'L'$.

There are three possible cases to that fall under (2):

(i) $k'L'$ is better than kL .

But this contradicts (1).

(ii) $k'L'$ is equally as good as kL .

Let k'' be any quantity larger than k' . By the Principle of Quantity, $k''L'$ is better than $k'L'$. But then, by the transitivity of betterness across equal goodness, (ii) implies that $k''L'$ is better than kL . This, however, again contradicts (1).

(iii) $k'L'$ is incommensurable with kL .

Only (iii) is compatible with both (1) and (2).

So, $k'L'$ is incommensurable with kL . What about quantities of L' that are larger than k' ? How do they relate to kL ?

Given (1), for any quantity k'' larger than k' , $k''L'$ is not better than kL . Nor can it be equally as good as kL (cf. the reasoning above for case (ii)). Can kL be better than $k''L'$?

Surely not, given the transitivity of betterness, since by the Principle of Quantity, $k' \cdot L'$ is better than $k' \cdot L$, and kL is incommensurable with $k' \cdot L'$.

So, kL is incommensurable not just with $k' \cdot L'$ but also with every quantity k'' of L' larger than k' .

This means that

(3) kL is incommensurable with every sufficiently large quantity of L' (and better than all smaller quantities).

The same conclusion can be established for any quantity k^+ of L larger than k . By the Principle of Quantity and the transitivity of betterness,

(1⁺) No quantity of L' is better than k^+L .

For then this quantity of L' would also be better than kL , which contradicts (1).

And, since L is not weakly superior to L' , there must be some quantity k' of L' such that

(2⁺) k^+L is not better than $k' \cdot L'$.

But then, by the same argument as above, k^+L must be incommensurable with $k' \cdot L'$ and with every quantity of L' that is larger than k' .

Thus,

(4) For all k^+ larger than k , k^+L is incommensurable with every sufficiently large quantity of L (and better than all smaller quantities).

(3) and (4) imply that

(5) L admits strictly persistent incommensurability with L' .

Q. E. D.