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# The Sum of Averages: An Egyptology-Proof Average View

Kalle Grill 

Umeå University, Sweden  
Email: [kalle.grill@umu.se](mailto:kalle.grill@umu.se)

## Abstract

Contemporary population ethics is dominated by views that aggregate by summing, whether of well-being or of some construct based on well-being. In contrast, average well-being is generally considered axiologically irrelevant. To many of us, however, the number of future people does not seem important, as long as it is sufficient to enable rich and varied life experiences, and as long as the population continues throughout time. It therefore seems relatively plausible to aggregate future well-being by averaging. In particular, it seems plausible to value high average well-being at any particular time, and to do so for all future times. I present a time-sensitive version of the Average View that underpins such axiological intuitions. I also address a series of issues and objections that confront such a view.

## 1. Introduction

In *The Methods of Ethics*, Henry Sidgwick noted that his fellow utilitarians had overlooked one important aspect of utility maximization: our present actions will affect not only how people are doing in the future, but also how many people there are (Sidgwick 1907: 414–16). For a constant population, such as all lives existing at any particular moment, maximization of either average or total well-being entails the same normative recommendations. For future scenarios, however, the two aggregation methods often give divergent recommendations. When this happens, Sidgwick proposed, the utilitarian should prefer the scenario(s) with the highest *total* well-being.

To this day, the Total View is a general reference point in population ethics. Few accept it outright, but most alternatives include its core feature of summing – either of individual well-being or of some value derived from individual well-being. Almost no one accepts the Average View, nor any other view that includes averaging individual well-being.<sup>1</sup> The dominant position is that average well-being may at best be an acceptable heuristic in politics and economics, but to ascribe final value to an average is philosophically “absurd,” as Derek Parfit indicated (1984: 420–22; cf. Temkin 2012: section 10:4). While there are reasons to be skeptical of averaging, I will try to show that such complete dismissal is not warranted.

<sup>1</sup>One notable exception is Pressman (2015), who defends the Average View.

The appeal of the Average View, as I see it, is that it treats well-being as a truly collective property of a population, while at the same time capturing something important about the well-being of the individual members of the population. If we learn that some population has a total well-being of some great sum, we don't know whether that is because all members are doing great, or because there are just very many of them, all living lives barely worth living. If, in contrast, we learn that some population has a very high average well-being, then we know that many of them must be living great lives and that, in general, this population is flourishing. A high average is of course consistent with a very unequal distribution, and equality of well-being may matter morally, but the Total and the Average View are equally insensitive to equality.<sup>2</sup>

In this contribution, I propose one modification to the classical Average View: instead of averaging over all lives ever lived, we should consider the average well-being at particular times, and then sum the values of these local averages to get the total population value. Call this the Sum of Averages View (SAV). Unlike the time-sensitive version of the Average View discussed by Hilary Greaves (2019), SAV accepts the mainstream assumption in contemporary population ethics that the value of a life is based on its lifetime well-being. This assumption raises a series of issues pertaining to the association of lives with times, which I will address. Based on my investigation of these issues, my proposal is that we associate each life with the time at which it starts.

Philosophers reject the Average View for different reasons, but typically appeal to one or more of four objections, each based on an allegedly unacceptable implication of the view. First, the objection that I will simply call "Early Death": the Average View implies that it is better if currently existing below-average lives end immediately. Second, the objection that has become associated with "Egyptology": the Average View can imply that whether or not it is good that a life starts depends on the quality of lives at other times, including the distant past (such as ancient Egypt). Third, the objection from "Minimalism": the Average View implies that a very small population is better than a very large one even when well-being is high. Fourth and finally, there is "Sadism": the Average View implies that it is sometimes good that lives start that are not worth living.

As I will explain, Early Death is easily avoided by basing population value on lifetime rather than momentary well-being. Avoiding Egyptology is one of the main reasons for substituting SAV for the Average View. So far, so good. However, this move will not do anything to mitigate either Minimalism or Sadism. Nor will it dissolve all the intuitive power of Egyptology, even if it does completely avoid this objection in the formulation just stated. It might seem pointless to improve on a theory that will continue to face such serious objections. But such pessimism presupposes that no further improvements are possible. As it happens, I believe there are further improvements to be made and, in the conclusion, I will briefly indicate which.

My modification of the Average View will face a new objection not faced by the classical version: a version of the Repugnant Conclusion formulated by Thomas Hurka (1982) in the early days of contemporary population axiology. Hurka's objection, however, is an unavoidable flip side of what is really a feature of SAV: that it ascribes value

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<sup>2</sup>As is well known, the Total View can accommodate egalitarian concerns by going prioritarian. But so can the Average View. Just as a prioritarian total view sums values generated by prioritarian weighting of individual well-being, a prioritarian average view can average over values generated by prioritarian weighting.

to the survival or longevity of the population. I do not find this repugnance objection convincing but I will propose some ways of mitigating it for those who do.

I have structured the material as follows. I first explain why Early Death is not a valid objection to the Average View if we value lives based on their lifetime well-being. I then explain how SAV avoids Egyptology and is a more promising view than the classical Average View. I move on to address the issue of associating lives with times. After that, I discuss the value of time periods with which no lives are associated. Finally, I address whether an analogue of the Repugnant Conclusion is damaging to SAV and, if it is, how the view can be modified to mitigate this. The conclusion, as mentioned, contains some wider reflection on the potential of modifying the Average View further.

## 2. Early death and lifetime well-being

If we average over some set of numbers, removing any number that is below average will increase the average. The Average View averages over numbers describing levels of well-being enjoyed by people. Therefore, removing a person with below-average well-being will increase the population average. Assuming hedonistic utilitarianism, Thomas Hurka takes this to imply that the Average View “requires us to kill people who will feel less than the average amount of happiness from now on into the future” (1982: 66). Parfit also phrases the objection in terms of killing people (e.g., 1984: 386). However, killing people typically has substantial negative side-effects. It is therefore unfortunate to state the objection in such terms. Moreover, the Average View is in the first instance an axiological view, not a normative one. From an axiological perspective, the objection can be stated as follows:

*Early Death:* For any person whose future momentary well-being is consistently (or on average) below the population average, her immediate death would increase the population average and so make things better. This is implausible when the population average is positive, and especially implausible when it is high.

Early Death is still being levelled against the Average View. For example, Hilary Greaves argues that, on the Average View, “it would constitute an improvement if anyone whose instantaneous well-being is consistently below average died sooner rather than later” (2019: 51). Greaves is explicit that the objection should be formulated in terms of “instantaneous well-being,” or, as I will call it, *momentary* well-being. However, as Greaves also points out, the dominant assumption in contemporary population ethics is that the value of a population should *not* be based on an aggregate of the momentary well-being of its members, but rather on an aggregate of their *lifetime* well-being. Like Greaves, I endorse this assumption.

Apart from making population axiology more plausible in various ways, the preference for lifetime well-being over momentary is also motivated by considerations of the nature of individual well-being. I agree with Ben Bramble that it is doubtful whether momentary well-being is a meaningful notion at all, since what seems to matter is only lifetime well-being, including of course momentary experiences as contributors (Bramble 2018). Even if momentary well-being is independently meaningful and relevant, it is not clear how candidate components of well-being such as relationships and accomplishments should be distributed in time. Even for hedonists, it may seem to matter for the goodness of living a life how pleasure is distributed within it (see Broome 2004: chapter 7).

Given that we average over lifetime well-being, Early Death is not a valid objection to the Average View. The early death of a person with below-average momentary well-being will typically reduce her lifetime well-being, and so reduce the population average. There are exceptions, most obviously when a person's momentary well-being is and will remain so low that each moment of additional life has an overall negative impact on her lifetime well-being. In such cases, however, it is quite intuitive that an early death would make things better (which is not to say that death should be actively induced). Early Death can therefore be easily rejected given that we average over lifetime well-being. The objection is nevertheless worth this brief treatment because of the attention it has attracted in the literature and because it further motivates a theoretical preference for lifetime over momentary well-being.

### 3. Egyptology and local averages

According to the Average View, any life with above-average well-being will pull the average upwards and so make things better, while any life with below-average well-being will pull the average downwards and so make things worse. Since the Average View averages over all lives there will ever be, average well-being is in part determined by the well-being of people who lived a long time ago, such as the ancient Egyptians. This circumstance and its counter-intuitive implications were originally pointed out by Parfit (1984: 420). As with Early Death, Parfit assumes a normative reading, but our focus here is on axiology. The objection is therefore better formulated along these lines:

*Egyptology*: Whether the creation of a life makes things better or worse (or neither) depends on how the well-being of this life compares with average well-being. Average well-being depends in part on the well-being (and number) of people in the distant past (and the distant future), such as the ancient Egyptians. Therefore, new discoveries in Egyptology could reveal that a contemporary life whose existence we believed to be making things better is actually making them worse, or the other way around. This is implausible.

SAV avoids Egyptology by summing over time-indexed local population averages, where these local averages are based on the lifetime well-being of individuals associated with that time only, not on the well-being of all who ever live. Let us describe this formally. The classical Average View can be defined as follows:

$$V(P) = \frac{1}{n} \sum_{i=1}^n w_i$$

$V(P)$  is read as 'the value of a population  $P$ ' and  $w_i$  is the well-being of the  $i^{\text{th}}$  member of the population, which includes  $n$  lives in total. To define SAV, let  $m_t$  be the number of members of the population that we assign to a time  $t$  and let  $a_t$  designate the average well-being of lives assigned to that time. Then:

$$a_t = \frac{1}{m_t} \sum_{i=1}^{m_t} w_i$$

And the population value is the sum of the local averages over all times, 1 to  $n$ :

$$V(P) = \sum_{t=1}^n a_t$$

It seems to me that this view is superior to the classical Average View and should be a contender in contemporary population axiology.

While SAV avoids Egyptology, it does not avoid a related, more general objection that I believe is partly driving intuitions that support Egyptology. This objection turns on the fact that, from a population ethics perspective, the value of a life is simply its contribution to the value of the population of which it is a member. This is why I have formulated Early Death and Egyptology in terms of what makes things better and what makes them worse. Now, it seems implausible that anyone else's well-being should make a difference to the value of some person's life, regardless of their distance in time, or in any other dimension. It seems implausible, for example, that my life has less value the happier my brother is, or the more happy brothers I have. Yet this is an implication of both the Average View and SAV, since whether my life makes things better depends on the (local) well-being average, which depends on the well-being of all other (contemporary) people.

Wise people can have different intuitions on this objection, I believe, but let me share mine. I find the objection quite convincing for currently existing people, that is, people who are alive today, or people who have been alive at some earlier time.<sup>3</sup> It seems implausible that the value of improving some current person's well-being would be relative to the general well-being. It seems implausible, for example, that if we discover that the (current) population is actually twice as large as we supposed, it follows that improvements made to some existing people's well-being have only half the value we thought they had. More generally, it seems that the value of a currently existing person's well-being is intrinsic, and therefore cannot be relative to the population to which that person belongs.<sup>4</sup>

I find the general objection less convincing for *future* people. I believe averaging may capture widespread intuitions to the effect that this class of lives has value only collectively or generically: it has no value that some extra future life is lived at some unexceptional positive level, but it does have value that future *generations* live good lives or have good life prospects. If this is how we should think about the value of future lives, then the objection has little bite for them. Suppose, for example, that we set in motion some process that will provide a benefit to a person who will be born in 2207 (perhaps we set up a trust fund for someone's descendants). It does not seem implausible to me that if we discover that the population in 2207 will be double what we expected, the benefit we create is worth half of what we first thought.

Be this as it may. SAV does avoid Egyptology, namely, the objection that it is particularly implausible that something as distant as ancient Egypt could have relevance for the value of a life now. Ancient Egypt is just an example, of course; the same goes for any distant age, in the past or in the future. Even if we bracket the perhaps more abstract and more difficult-to-judge issue of the dependence of the value of my life on the well-being of other people quite generally, it does seem incredible that lives that are so distant from mine, and that I have such weak causal connections with, should influence the value of my life.

There has been very little discussion of time-sensitive averaging views in the literature, as far as I know. The economist J. D. Pitchford (1974) considers a time-distributed

<sup>3</sup>I have no reason to deny that well-being can be affected by posthumous events.

<sup>4</sup>This more general objection underpinning Egyptology applies to several other views in population axiology, such as Ng's (1989) theory X' and the Rank-discounted critical-level generalized utilitarianism proposed by Asheim and Zuber (2014).

modification of the Average View from an economics perspective. Partha Dasgupta (2005: 420) mentions it as an alternative but rejects it as *ad hoc*. Both Pitchford and Dasgupta assume that the units over which timed averages should be measured are generations (and, quite implausibly, that generations are discrete). As noted, Greaves (2019) more recently considers and rejects a similar modification, based on momentary population well-being rather than on generations, but takes for granted that a momentary population average must be based on individual momentary well-being, which, as she notes, invites Early Death and other objections pertaining to the distribution of momentary well-being over a person's lifetime (Greaves 2019: 51).

#### 4. What people at what times?

As far as I am aware, no axiology based on local population averages of the lifetime well-being of their members has been defended. This may be, at least in part, because it faces a serious challenge: many people live for a rather long time, such as 80 or more years, while some only live for seconds. In light of this, for any given time period  $t$ , which lives should be attributed to that time for the purposes of calculating an average  $a_t$ ? In other words, which individuals  $i$  belong in the range 1 to  $m_t$ ?

I propose that we divide time into periods of substantial length, for example one year. We then attribute to each time period all those lives that *start* in that period. As I will explain, this solution avoids a number of problems that attach to alternative solutions.

It may seem that a life should count towards the population average for its full duration and not only when it starts. However, there are at least two potential problems with such an approach. Consider the perhaps most obvious idea of this kind, to attribute to each (year-long) time period all the lives that exist during some part of that period. First, this would imply that longer lives are attributed to more time periods and so in one way count doubly, which may be problematic. Let me explain. The length of a life must reasonably be one of the factors that affect its lifetime well-being – lives are typically better if they last for at least a full species-typical lifespan. The double counting would consist in longer lives both leading to higher well-being and, at the same time, counting in more time periods. For example, a life that only lasts for 8 years and, partly for that reason, has the relatively low lifetime well-being of 10, will affect the local average for each of those 8 years. In contrast, a life that lasts for 88 years and, partly for that reason, has a high lifetime well-being of 90, will affect the local average for all 88 years. The well-being of the longer and better life thereby counts for eleven times as much as the well-being of the shorter life in calculating population value.

I find this double counting problematic for currently existing people, for the same reasons that I find the general objection behind Egyptology convincing for currently existing people – a currently existing person's well-being is important intrinsically and so its value should not depend on the well-being of other people. Admittedly, SAV already has this problem. Double counting would, however, aggravate it. If longer lives count in more time periods, this means that shorter lives in those time periods have less relative impact on population value. Hence, whether a shorter life increases or reduces the population average, the impact it has will be crowded out by the well-being of longer lives, relative to a measurement of population average that does not allow double counting.

For future people, in contrast, I am open to the possibility that the point of a time-sensitive average view is only to capture some collective property of populations at

times, for example the value of there being, at any given time, mostly people with fairly good lives. On this perspective, it is not a problem that longer lives count towards more time periods. For some readers, however, I expect that double counting for future lives will also seem to skew population value in an implausible way.

Second, and more importantly, attributing to each time period all the lives that exist during some portion of it reinvents Early Death, since it implies that it is a benefit if below-average lives end early and so count towards fewer time periods. That an early death typically decreases lifetime well-being need not cancel out this impact of early deaths on population value, since the negative impact of the decrease in well-being may be smaller than the positive impact of having a poor life count towards fewer time periods. For example, consider a population of two people. One lives until 80 with a high lifetime well-being of 90. The other will either live until 80 as well, with a mediocre lifetime well-being of 50, or will face an early death at 70, which decreases lifetime well-being to 48 (a rather small loss, since the ten last years would otherwise not be very good, though overall positive). In tables, the situation looks as in Tables 1 and 2, with total population value as the sum of averages.

**Table 1.** Sum of Averages View, modified to associate lives with each year during which they exist. Person 2 lives for 80 years.

Years	1 ... 70	71 ... 80
Well-being of Person 1	90	90
Well-being of Person 2	50	50
Average well-being	70	70
Partial sum of averages	4,900	700
Sum of averages	<b>5,600</b>	

**Table 2.** Sum of Averages View, modified to associate lives with each year during which they exist. Person 2 lives for 70 years.

Years	1 ... 70	71 ... 80
Person 1	90	90
Person 2	48	-
Average well-being	69	90
Partial sum of averages	4,830	900
Sum of averages	<b>5,730</b>	

On the view under consideration, the scenario in which Person 2 lives for 70 years is better than the scenario in which they live for 80 years, by 130 units of value. This is an instance of Early Death. While the double-counting of the well-being of longer lives need not be unacceptable, Early Death seems to me very difficult to accept.

Another option for counting the well-being of a life towards the population average for its full duration is to distribute its well-being evenly over all the time during which it is lived, so as to avoid double counting. This would mean, however, that a life that is prolonged and thereby improved can have *less* value than it would otherwise have

had. For example, consider a population of many people, all but one of whom live to age 90 with a lifetime well-being of 180, for an average of 2 units of well-being per year. The one other person, in the absence of some medical intervention, will live to age 80, also with an average of 2 units of well-being per year. Thus, the population will have an average of 2 units of well-being per year for each of its 90 years. Now suppose the medical intervention would enable the one other person to live an extra decade, to age 90, but with an average of only 1.8 units of well-being per year in those last ten years. Although this inarguably makes this person’s life better, it would have a negative impact on population value, since it would lower the population average for the last ten years under consideration, and thus make the 90-year sum of averages lower than under the scenario without the medical intervention. In effect, this example is another instance of Early Death and so an inversion of the desired relationship between individual well-being and population value.

These are the two most obvious ways of counting the well-being of a life towards all the times during which it exists. There are an indefinite number of ways. I cannot prove that all will be equally unacceptable, but I see very little promise in any method that implies substantial spread of well-being over time. Examples will be possible to construct where the same inverse relationship holds between lifetime well-being and population value.

If well-being cannot be spread over time, the only alternative is to assign it to some specific time. As noted, I propose that we use the time a life starts, or the time of “birth” for short. One might think that competing alternatives should include the time a life ends, or its “death.” However, this would again invite Early Death – a life that is shortened such that its lifetime well-being decreases could mean a higher population value. Consider an example with two possible years of death “1” and “2,” described in [Tables 3](#) and [4](#). Assuming that the years are consecutive, the example involves a person losing 10 units of well-being by dying one year earlier.

**Table 3.** Sum of Averages View, modified to associate each life with the year of its death. Person 3 dies in the second year.

Year of death	1	2
Well-being of Person 1	10	
Well-being of Person 2		90
Well-being of Person 3		90
Average well-being	10	90
Sum of averages	<b>100</b>	

**Table 4.** Sum of Averages View, modified to associate each life with the year of its death. Person 3 dies in the first year.

Year of death	1	2
Well-being of Person 1	10	
Well-being of Person 2		90
Well-being of Person 3	80	
Average well-being	45	90
Sum of averages	<b>135</b>	

On the view now under consideration, the scenario in which Person 3 dies one year earlier is better than the scenario in which they live a full life, by 35 units of value.

For thoroughness, let me note that Early Death will also arise if we associate the well-being of a life with the midpoint between its birth and its death, which may seem another intuitive option. Tables 3 and 4 can illustrate this as well. With consecutive years, consider, for example, a person losing 10 units of well-being by dying at age 2 rather than 4 (and so pushing the midpoint from year 2 to year 1). Again, on the view under consideration, the scenario in which Person 3 dies earlier is better by 35 units of value.

The time of birth is the only specific time that is immune to Early Death. If the value of a life is associated with the time of its start/birth, then the timing of other life events, including its time of death, can only influence its value by affecting its well-being.

Admittedly, using the time of birth does mean that the timing of *this* event can affect population value, as is easily shown with another example, described in Tables 5 and 6.

**Table 5.** Sum of Averages View. Person 3 born in year 1.

Year of birth	1	2
Well-being of Person 1	90	
Well-being of Person 2		10
Well-being of Person 3	90	
Average well-being	90	10
Sum of averages	<b>100</b>	

**Table 6.** Sum of Averages View. Person 3 born in year 2.

Year of birth	1	2
Well-being of Person 1	90	
Well-being of Person 2		10
Well-being of Person 3		90
Average well-being	90	50
Sum of averages	<b>140</b>	

It may seem unintuitive to some readers that mere timing should matter, axiologically.<sup>5</sup> I speculate that such reactions may depend on either of two intuitions. First, the general objection that I speculated may be driving Egyptology may arise, since the reason that time matters on SAV is that different times contain different local well-being distributions. I have already discussed this concern and how it seems to me pressing for currently existing but not for future people. Second, the axiological appraisal of a life may be confused with other forms of appraisal. A life is equally admirable, it may be thought, regardless of when it is lived. However, it is not the purpose of population axiology to appraise lives in this sense. Our ordinary notion of a great life may refer

<sup>5</sup>Parfit at one point asks rhetorically how an outcome could be better than another if it “differs only with respect to *when* people live,” indicating that to see this as relevant involves “absurdity” (1984: 411).

to a life with high well-being (great for the person living the life), a life that contributes much to the well-being of others (great for her community/society), or one that contributes much to other values (great for nature, culture, etc.). This notion of a great life does *not* correspond to the value of the well-being of lives that we focus on in population axiology. Population axiological value affects neither whether lives should be admired nor how people should be treated. To the extent that such normative issues are determined by axiology, they are determined by relative *differences* in population value between different courses of action and their associated outcomes, not by the absolute value of lives.

The purpose of population axiology is, I propose, to inform our deliberation about what outcomes to aim for when it comes to future people.<sup>6</sup> Therefore, that the value of lives is tied to their time of birth according to SAV only means that it matters, in terms of outcomes, how lives of different levels of well-being are distributed over time. This does not seem at all implausible to me. To the contrary, it seems better that all generations are doing well, than that some are doing well and some not, even if the same lives are lived in both scenarios. A few lives with low well-being starting each year, along with a majority of great lives, means that all future generations are doing well. In contrast, if all lives that start during some epoch in human history have low well-being, that would make that epoch a tragic one.

Collective or patterned properties of populations such as their distribution in time do not, of course, matter on the Total View, according to which all that has value is the sum total of well-being, whatever its distribution, in time or in any other dimension. If one's intuitions are that these properties do not matter axiologically (all positive well-being may for example just as well belong to one and the same generation), this speaks for the Total View. However, my focus here is on the Average View and how it can be somewhat improved. As I said from the outset, the Average View has some appeal relative to the Total View in that it captures how a population is doing, collectively, while being sensitive to the well-being of individuals. From this collective perspective, it may matter that all time periods or all epochs are rich with good lives.

## 5. Empty time periods

I proposed above that we let time periods be equivalent to years and I will stick to that proposal. However, a problem arises for empty periods, which, it seems natural to assume, have no or neutral value. One or a few years without births seems quite unproblematic if there are plenty of people alive. In any case, it seems to me counter-intuitive that such a period would have zero value. I have different intuitions about long stretches of time with no births, resulting, perhaps, in epochs empty of conscious life. Such stretches may occur in the future due to cryonic freezing of embryos scheduled for later de-freezing and development (perhaps in the face of some catastrophe). It seems intuitive to me that such periods would have no value, along with the times before and after the existence of humanity.<sup>7</sup>

<sup>6</sup>From this perspective, it makes sense that Parfit often expresses himself in normative terms. For example, in formulating Egyptology, his concern is that "research in Egyptology cannot be relevant to our decision whether to have children" (1984: 420).

<sup>7</sup>Larry Temkin (2019: 4) defends similar intuitions, for example stating that "it is a very good thing for different time periods to be filled with a significant number of sentient beings with high quality lives," and explaining why the same does not go for regions of space.

We might reconcile these intuitions by introducing a time threshold for the disvalue of birth intermissions. However, there is something problematic about sharp lines between time periods, whatever their length. If an empty period is preceded by a period with plenty of happy people, one of whom is born at the very end of the period, then delaying her birth by a few moments would mean that the empty period changes from neutral in value to quite positive. This seems arbitrary. Tables 7 and 8 provide an illustration of this possibility, with an empty period in scenario A and one delayed birth, relative to A, in scenario B.

**Table 7.** Scenario A. 100 births in years 1 and 3, and none in year 2.

Year	1	2	3
Number of births	100	0	100
Average well-being	100	0	100
Sum of averages	200		

**Table 8.** Scenario B. 99 births in year 1, one birth delayed until year 2, and 100 births in year 3.

Year	1	2	3
Number of births	99	1	100
Average well-being	100	100	100
Sum of averages	300		

To avoid sharp lines while reconciling intuitions about empty periods, I propose that we employ a moving average such that the well-being value of each time period is the average well-being not for lives starting in that time period only, but for some longer duration centered around the period, say 30 additional years, 15 in each direction. Moving averages are frequently employed in statistics, partly to smooth out extremes and better convey a general tendency.<sup>8</sup> With this tweak, an empty time period has a neutral average only when at least 31 consecutive time periods are empty: 40 empty periods will yield ten periods of neutral value, and so forth. This seems more plausible to me. The length of the moving average is of course easily adjusted. The use of moving averages also means that the length of each time period is inconsequential, which reduces the arbitrariness of defining a period as exactly one year long.

## 6. Repugnance and population longevity

Summing local averages over all time rather than taking the global average of all lives that ever exist fundamentally changes the Average View. On SAV and other time-sensitive views, population longevity has positive value, as long as averages are positive. Whether this is an advantage or a disadvantage depends on axiological intuitions. For my part, I intuitively prefer a longer existence for humanity, and would, *ceteris paribus*, judge a population to be better if it existed longer, given positive average well-being.

<sup>8</sup>The neutral value of empty periods speaks against any view on which local averages are defined as momentary rather than as time periods with duration and population value is determined by integrating over those local averages rather than adding them up.

However, Hurka (1982: 67) has pointed out that summing local averages over time implies an analogue to the so-called Repugnant Conclusion.<sup>9</sup> Hurka's objection can be stated as follows:

*Repugnance:* For any population with a consistently high average lifetime well-being over time, there is a better population, existing longer, with average lifetime well-being just above neutral. This is implausible.

The objection is based on the observation that, over time, even very small local averages add up to a large sum. Even if we confine ourselves to realistic time spans, this is a serious objection. Let us take the expected remaining lifetime of our sun as the maximum lifetime of our population – approximately 5 billion years by current estimates. Assume further a scale of well-being such that level 1 is very close to neutral, while level 1,000 is an extremely good life, perhaps the best possible life. Now, a population where all enjoy well-being level 1,000 could exist for 5 million years and still have no more value than a population where all have well-being level 1 that exists for the full 5 billion years. This may indeed seem implausible.

For those of us who hold that population longevity has value, Repugnance forces us to consider how much value it has. We should not be prepared to sacrifice the existence of thousands of generations of positive lives for a slight increase in the average well-being of one generation. Hence, the value of a high local average can be traded off against the value of population longevity; it is only a matter of defining the correct exchange rate or exchange formula.

I see two ways to respond to Repugnance. One is to accept the conclusion but object to its repugnance, using arguments similar to those used to defend standard additive views in population ethics such as the Total View, which imply the standard Repugnant Conclusion. These arguments include variations of the Large Numbers Argument, which states that we are not well equipped to intuitively evaluate large quantities of goods or lives (proponents include Tännsjö 2002, Broome 2004, and Huemer 2008; for overview and criticism, see Gustafsson 2022). It may seem that 5 million years of fully flourishing humanity is such a good thing that it would be absurd to trade it off for any amount of time of just slightly positive average well-being. However, if we are prepared to accept that 10 million years of humanity at some high level of average well-being is as valuable as 5 million years at double that level, then we should also be prepared to accept the logical end point of similar exchanges.<sup>10</sup>

Arguments against the repugnance of Repugnance scenarios also include the argument from quality of life, which starts from the observation that lives at minimal levels of well-being need not be so bad, or not so far from the lives most of us lead. Perhaps most of us live minimal-level lives (Tännsjö 2002: 345–46). We should not presume that lives near neutral are dull or uninteresting. They may well contain rich experiences, be interesting and diverse, and so on, while also including hardships. If our own lives are not minimal, then minimal lives could be like our lives but with some brief periods of

<sup>9</sup>The Repugnant Conclusion is introduced and seminaly discussed by Parfit 1984: chapter 17. There are precursors, including Hurka, though Hurka credits Parfit with pointing out some of the problems he discusses.

<sup>10</sup>At least, we should be so prepared given that we endorse what Larry Temkin calls the Internal aspects view, according to which the evaluation of outcomes depends only on internal properties of those outcomes and not on how they compare to other outcomes (Temkin 2012: 369–70).

intense pain. From this perspective, it arguably does not seem so implausible that populations at barely positive averages are quite valuable and so that a very long epoch of barely positive local averages may be very good, and better than a relatively short time of very high local averages.

The other way to respond to Repugnance is to grant it as a valid objection and to modify SAV accordingly. If long epochs of low local averages do not seem very valuable compared to shorter periods with high averages, this may be because we care much more about the first generations of humanity. Perhaps the more we have of humanity, the less we value having more of it. In other words, the continued existence of humanity has decreasing marginal value. Just like there are so-called “number-dampened” additive population axiologies (Ng 1989), SAV could be number-dampened in terms of its constituent local averages. I do not find this very plausible. I fail to see why people in an earlier generation would have stronger good-promoting reason to ensure one additional but final generation of human beings than would a later generation. It seems to me that another generation is always equally valuable and important (which leaves it open that the very first generation may be especially valuable).<sup>11</sup>

A less myopic modification would be, I propose, to introduce a form of reverse prioritarianism, or a priority for high local averages. We could define the exchange rate between the average well-being in each time period and the longevity of the population as strictly increasing (linearly or exponentially) such that for any level of average well-being, the positive value of an increase of 1 unit is larger than the negative value of a decrease of 1 unit. Such priority for high average well-being levels would mean that we value high local averages more than is captured by their simple summation. Hence, longer, potentially much longer, time periods of low averages are needed to match shorter periods of high averages. I see no reason for why the exchange rate between averages should be constant, other than simplicity, and so have no objection to reverse prioritarianism for local averages if this suits anyone’s axiological intuitions.

Unless we impose some restriction on what scenarios are relevant, the longevity of a population can be increased towards eternity, and so any finite value of local averages can be outweighed by increased longevity. The more we approach eternity, however, the more we stretch our arguably limited ability to intuitively evaluate large quantities. If we should still find it unacceptable that an eternity of low local averages outweighs any finite epoch of high local averages, we can invent more sophisticated ways of attributing value to high local averages or limited sets of them. For inspiration, we can again look to discussions of the Total View and the standard Repugnant Conclusion.

Whereas the Total View is vulnerable to the objection that it would trade off some number of very good lives for a sufficiently large number of lives barely worth living, SAV is vulnerable to the objection that it would trade off some number of time periods with very high averages for a sufficiently large number of time periods of near zero averages. In late work addressing the standard Repugnant Conclusion, Parfit (2017) proposed that, while it is better if the total sum of well-being is higher, it is also in another way better if fewer people share in that sum so that they each receive a greater benefit. This is analogous to saying that while it is better if the sum of local averages is

<sup>11</sup>John Broome (2004) defines populations, for the purposes of population axiology, in part in terms of when lives are lived. However, he never seriously considers that the longevity of a population may have value. On the other hand, Broome seems quite inclined to believe that a first generation is especially valuable: “If humanity has a separate value, the first few people will be especially valuable, since without them there will be no humanity” (2004: 197).

higher, it is in another way better if that sum is divided over fewer local averages, so that each of them can be higher. Parfit does not address the difficult issue of how exactly to weigh the two values or the two ways in which things can be better, but he does say that sufficiently high well-being for a restricted number of people may be more valuable than any amount of well-being spread over a larger number such that the well-being for each of them is low (Parfit 2017: 157). We could say the same for local averages.

To summarize this section, SAV implies a version of the Repugnant Conclusion such that for any population with a consistently high average lifetime well-being over time, there is a better population with average lifetime well-being just above neutral, existing for very much longer. This implication can either be accepted or avoided by modification. Accepting it may be easier than accepting the standard Repugnant Conclusion for those of us who feel that population longevity is a more intuitive value than population size. For those who crave modification, one particularly promising alternative is reverse prioritarianism applied to local averages. Another possible modification is number-dampening. There may be others.<sup>12</sup> These modifications address the issue of the proper exchange rate between on the one hand quality, in the form of high local averages, and on the other hand quantity, in the form of population longevity (at positive levels). This quality vs. quantity problem is analogous to the problem that additive views such as the Total View face for people with Parfit's intuition – that high well-being in some lives cannot be straightforwardly outweighed by a greater sum of well-being that is spread over many more lives such that they each have quite low well-being. I see no reason why these issues cannot be resolved by defining an appropriate exchange rate or exchange formula. However, readers who want to hold me to one specific view may assume that I accept the allegedly repugnant scenario but reject its repugnance, and so do not invoke reverse prioritarianism, number-dampening for local averages, or any less specific and potentially more sophisticated exchange formula.

## 7. Conclusion on the prospects for averaging

Population axiology has its main application in the consideration of future scenarios with various well-being distributions. The appeal of the Average View lies in its ability to capture the well-being of future people in a collective, generic sense – how well future people will be doing collectively, where it does not matter how many they are at any particular time. The Sum of Averages View isolates future times so that they are evaluated independently of how they compare to the past and the present. The view also ascribes value to population longevity such that the future of humanity is brighter (more valuable) the longer it lasts. In both of these ways, SAV is superior to the classical Average View.

Like the Average View, SAV faces the Minimalism objection – it has no consideration for population size and so a very minimal population could be more valuable than a very large one. In one extreme scenario, a single person is alive at any given time, cloning herself on her deathbed, after living happily alone. Perhaps, to make the scenario more realistic, this person has artificial companionship, not qualifying as persons.<sup>13</sup> To some extent, this objection can be dealt with by accepting the implication while rejecting the alleged implausibility. People who are attracted to the Average

<sup>12</sup>I believe Rank-discounted critical-level generalized utilitarianism (Asheim and Zuber 2014) could be adopted to apply to local averages.

<sup>13</sup>Parfit presents Minimalism in terms of the hypothetical happy and childless lives of Adam and Eve, being the first and only people (Parfit 1984: 401–2).

View will likely have rather neutralist intuitions when it comes to the value of increasing population size by adding more people. It may be that a small population with great lives is equally as good as a larger population with equally great lives. If the single-person scenario does not seem maximally valuable, this may be because the person's life is not optimal according to the correct theory of well-being.

Accepting the minimalist implication is easier if one acknowledges the independent value of such things as culture, diversity, and complexity. A larger population may be instrumental to the promotion of such values, which are almost entirely lacking in scenarios with very small populations. And it may be easy to confuse the well-being value of a large population with its instrumental contribution to these impersonal values. To consider the value of individual well-being independently, we might try to imagine adding to the world exact copies of existing lives, which do not contribute to other values (unless the existence of several copies adds its own form of complexity and diversity). The value of such copies will be a value of well-being, rather than some other value. If one intuitively ascribes higher value to normal, unique lives than to copies, this indicates that one does not only value well-being. The impression that a minimal population has low value may then be due to its lack of these other values.

For those who still feel that a minimal population is lacking something of value, one solution may be to ascribe independent value to there being a sufficiently large population at any given time. In alignment with SAV and with the lack of value of empty time periods, population size could be defined in terms of number of births, so that local averages are more valuable if they contain a higher number of births, up to some level of sufficiency. The value of sufficient population size need not be tied to the precise well-being of the people making up that size, except perhaps that their well-being must be positive for them to count at all towards sufficient population size. For example, the first million positive lives starting in any time period may each contribute to population-size value, perhaps with contribution per additional birth linearly decreasing with an increasing number of births. Total population-size value will be the sum of the population-size value of each period. This total will be an independent value to be added to or otherwise aggregated with the value that SAV assigns to the population.

SAV faces two further serious objections. First, Sadism: lives with negative well-being can make the population better (whenever the average well-being without them is even more negative).<sup>14</sup> This is implausible. Arguably, lives with negative well-being always and intrinsically have negative value. Second, as I have stated repeatedly, the well-being of currently existing persons is important intrinsically and so should not depend on the well-being of other people. If the value of an existing person's well-being is captured only by its impact on the population average at the time, then we have good-promoting reasons to direct any individual well-being-promoting efforts to people who are born in time periods with smaller populations. This too seems implausible.

I believe that, in light of these objections, averaging is only appropriate for future lives with positive well-being. Currently existing lives and future lives with negative well-being must be valued in some other way. If SAV is accepted for future positive lives, the most pressing concern is to develop a pluralist population axiology that accommodates this

<sup>14</sup>I refer to Parfit's argument against the Average View, involving sadistic tyrants (1984: 422). In recent literature, "the sadistic conclusion" typically refers to a similar but distinct objection formulated by Gustaf Arrhenius and Krister Bykvist (1995: 85), namely that some population axiologies imply that the addition of a negative life can be better than the addition of some number of positive lives (even if it is not intrinsically positive).

diversity of well-being values. If such an axiology can be provided, it would arguably capture how many of us think intuitively about the value of future well-being. We hope that the people who are born in the year 2100 will face good life prospects, or that the people of our grandchildren's generation will be happy and virtuous. In contrast, we do not hope that the people born in 2100 will be numerous, or that our grandchildren's generation will be large. We also hope that humanity will survive long into the future, but typically only on the condition that it will include at least some people with good lives. Survival by suffering has no value. In brief, the better people are doing in each future generation, the better, and the more generations there are of people doing fairly well, the better.<sup>15</sup>

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