

Procreation vs. Consumption: Harms and Benefits

Kalle Grill

Recently, it has been argued by several scholars that we have moral reasons to limit our procreation due to the harmful environmental consequences it entails. These calls for procreative restraint are typically made in relation to other lifestyle choices, such as minimizing driving and air travel. In such comparisons, it is assumed that the environmental impact of procreation encompasses the lifetime consumption of the child created, and potentially that of further descendants. After an overview of these arguments, I go on to provide an examination of the main benefits of procreation, in relation to those of consumption, i.e., other lifestyle choices. My normative assumption is that benefits hold moral relevance, alongside harms. Procreation may benefit procreators and may provide more collective benefits. Some benefits tend to preempt the environmental impact associated with procreation. I conclude that the benefits of procreation are substantial and typically greater than those of consumption.

INTRODUCTION

The environmental impact of procreation has attracted renewed interest recently, as scholars are again recognizing overpopulation as a driver of our ongoing environmental crises—climate and others. In this contribution, I aim to support this development by providing a survey over the effects of procreation, relative to those of consumption, for individuals as well as for societies. This is an ambitious aim, and the survey will have to be cursory, but I hope to point out some central areas of consideration and important lines of thought.

Several philosophers have argued that we ought to abstain from or limit our procreation because of the environmental impact of adding more people to a world that is already suffering an overwhelming pressure from human activity. Thomas

Kalle Grill is Associate Professor in the Department of Historical, Philosophical and Religious Studies at Umeå University, Sweden, where he directs the BA program in Philosophy and Society. Grill writes on paternalism, nudging, population axiology, public health ethics, family ethics, and the ethics of technology and AI. Work on this article was supported by Funding from FORMAS, the Swedish research council for sustainable development, under grant 2016-01535. Earlier versions of this material were presented at the Umeå University Higher Seminar in Philosophy, the Swedish Congress of Philosophy, the Institute of Future Studies in Stockholm, the Mancept Workshop on Individual Responsibility and Climate Change, and the International Society for Environmental Ethics Summer meeting. Kalle wishes to express his gratitude for helpful comments on those occasions, from three anonymous reviewers for this journal, and from Lars Samuelsson. Department of Historical, Philosophical and Religious Studies, Umeå University, Biblioteksgränd 3, 901 87 Umeå, Sweden. kalle.grill@umu.se.



Young (2001) in particular is a contemporary starting point for this debate. Others include Cafaro (2012), Overall (2012), Brake (2015), MacIver (2015), Conly (2016), Rieder (2016), Hedberg (2020), and Burkett (2021). While their approaches differ in their details, these authors are united in urging procreative restraint in light of the tendency of procreation to increase population size and the tendency of population size to increase consumption. Let us call this group of authors *procreative limitarians*.¹

Procreative limitarians conceive of procreation as akin to consumption, in the sense that it is a life-style choice that has environmental impact, if less directly than one's own consumption of goods and services. Many of them highlight lifestyle advice put forth by environmental scientists, based on the greenhouse gas emissions caused by various activities. In particular, Murtaugh and Schlax (2009) emphasize that having fewer children has much greater impact than more established eco-friendly lifestyle choices such as recycling, reducing one's driving, or improving the energy efficiency of one's household appliances. Therefore, "ignoring the consequences of reproduction can lead to serious underestimation of an individual's long-term impact on the global environment." (18) I conduct my survey in the spirit of such life-style advice, with the belief that ignoring the *positive* consequences of reproduction can lead to serious underestimation of an individual's long-term impact on global human wellbeing.

Procreative limitarians' focus on consumption aligns with the widespread assumption that it is mainly consumption that is causing our environmental crises. This assumption in turn aligns with a market-oriented understanding of society, where consumer demand drives production and largely determines production methods. I conduct my survey of the effects of procreation and consumption under these widely shared assumptions.²

To be clear, the relevance of comparing procreation to consumption is not that these activities are strict alternatives to each other. Obviously, we can both procreate and consume. The relevance rather builds on the life-style advice context. As we decide how to spend our ecological budget or make our ecological footprint, we should consider both the costs and the benefits of various such investments.³

I will restrict my comparison to such consumption as is non-essential, i.e., not necessary to satisfy basic needs. Procreative limitarianism is animated by comparisons between procreative restraint and restraint in such areas of life as travel, comfortable commuting, and food preferences. Most people on the planet have few

¹ This name is apt because of the close analogue to the recent debate on limitarianism as applied to income and wealth. Limitarianism in that context is the principle that "it is not morally permissible to be situated above a certain threshold in the distribution of a desirable good" (Robeyns 2017: 4). I have not seen the exact phrase 'procreative limitarianism' used, but Christine Overall names a subsection in her (2012) book *Why have children?: The ethical debate*, "A Proposal for Procreative Limitation" (180).

² There are, however, some reason to question these assumptions. An obvious alternative is to focus on the environmental impact of *production*, and to see production as under the control of the owners of the means of production rather than under the control of consumers.

³ See Pinkert and Sticker (2021) for a thorough argument that procreative limitarians are committed to footprint thinking.

options in these regards. I follow the authors I discuss and criticize in addressing only the richest people on the planet, perhaps the richest one fifth or so, who are the ones that contribute the bulk of global environmental impact.

In the following section, I will discuss the harms of procreation, first from an aggregate perspective and then from the perspective of individual actions. This section is in large part a summary of the motivation for procreative limitarianism. I will then move on to discuss different kinds of benefits of procreation, sometimes in direct comparison with those of consumption, in three sections, before I conclude. Throughout, my approach is a form of cost-benefit analysis, in a wide, moral sense, where I assume that both the negative and the positive consequences of our actions are morally relevant. I presume such an analysis should be helpful to moral deliberation about procreation. The analysis does not exclude that other aspects than consequences may be morally relevant as well, such as rights and liberties.

HARMS

Procreation can harm the procreated, it can harm procreators, and it can harm third parties. Harms to the procreated are discussed in the field of reproductive ethics, typically with a focus on technology and medical contexts, as well as in population ethics, with a focus on the aggregation of wellbeing over existing, future, and potential lives. Harms to the procreator are perhaps less morally significant when procreation is voluntary, but should not be neglected when considering pronatalist social policies and techno-medical innovation (see, e.g., Smajdor 2012). The starting point for procreative limitarians, in contrast, is harms to third parties, in particular harms to human beings mediated by environmental impacts.

Procreative limitarians hold that procreation causes harm on an aggregate level and that individuals should respond to this fact by abstaining from or limiting their procreation. However, there is some controversy within this group over whether or not individual acts of procreation cause harm or even make harm more likely. In this section, I will first briefly consider the aggregate harms of procreation, though they may be well known. I will then discuss how these aggregate harms provide reasons for individuals to limit their procreation.

AGGREGATE HARMS

Our natural environment is deteriorating rapidly on a global scale because of human activity, in particular consumption, prominently of heating, transportation (mainly fuels), consumer goods (clothes, home decoration, electronics, etc.), and food (especially from animals).⁴ This development is aggravated by population

⁴ For more details, see, e.g., Conly (2016): Chapter 1; Rieder (2016): Chapter 1; Hedberg (2020): Chapter 2. Some procreative limitarians, like Rieder (2016), focus mainly on climate change. Young (2001), writing before climate change overshadowed other environmental concerns in the public debate, mostly discusses environmental impact generically, but briefly mentions waste and resource depletion as examples. As Hedberg notes, loss of biodiversity is another very important and partly independent environmental problem. I follow Young in adopting a generic approach, using the generic term “environmental impact.”

growth, as, *ceteris paribus*, the more people who live and consume, the higher the aggregate consumption.⁵ World population is rapidly increasing, by about 81 million people in 2020 (Worldometer 2023). The population division of the United Nations (2022) predicts global population will increase from the current 8.0 billion (according to Worldometer) to 10.4 billion people by 2100, an increase from today of 30 percent. The number 10.4 is deceptively exact; predictions are of course difficult to make. It is more useful to focus on the estimate that with a 0.95 probability the global population in 2100 will be somewhere between 8.9 and 12.4 billion (UN 2020: 27), that is an 11–43 percent increase from today.

That the UN prospects focus on the year 2100 is quite arbitrary (though 2100 is a nice round number). Admittedly, global fertility (live children per woman) is falling rapidly, with an expected further fall from the current 2.3 to 2.1 by 2050, approaching replacement (at 2.0, Ibid: 13). In that sense, population *increase* is expected to be a passing trend. However, there is great uncertainty in this regard, which is the main reason for the wide range in the 2100 population prediction. Even if fertility approaches replacement, furthermore, population *size* may remain a problem. As long as the global population is too large to be sustainable, environmental and other problems will aggregate over time even without further population increase. If fertility is reduced faster than predicted, this could have very substantial effects on population size.⁶

That the natural environment is rapidly deteriorating is arguably an immense loss in itself. However, procreative limitarians tend to focus on the ensuing harm to human beings, a less controversial disvalue. The tendency is to describe concrete horrors induced by environmental degradation, such as disease, undernourishment, wars, and mass migration, without confronting difficult issues in population axiology such as whether it might be worthwhile to have a larger population at a lower level of average wellbeing as long as the total sum is larger. The assumption seems to be that it is sufficient to note that *currently existing* people will be harmed.

It has been emphasized by critics of population control that the problem with a large population is not in the number of people *per se*, but rather in how these people live and consume (e.g., Princen et al. 2002, Chapter 1). As long as the average person has a negative impact on the environment, however, it is important *both* how we live and consume *and* how many we are. Admittedly, there could be causal interdependencies that make it the case that population size is not an important determinant for total environmental impact. In discussing the benefits of procreation below, I will consider some possible interdependencies. I agree,

⁵ As emphasized by the IPAT equation (Impact = Population \times Affluence \times Technology, Ehrlich and Holdren 1972: 20).

⁶ In a previous version of the World Population Prospects, with the slightly higher median projection of a 11.2 billion 2100 population, it was calculated that if the fertility rate of each country would turn out 0.5 children per woman lower than expected, the adjusted 2100 mean prediction would be 7.3 billion people, i.e., below current size. On the other hand, if the fertility of each country would turn out .5 *higher* than expected, the adjusted 2100 mean prediction would be a global population of 16.5 billion people (UN 2017: 12).

however, with the basic assumption amongst procreation limitarians that, *ceteris paribus*, every additional life means an additional strain on the environment, approximately the size of other lives in the same context (country, income bracket, etc.). In that sense, procreative decisions have great impact on the environment in the long run, and much larger impact than decisions on other lifestyle issues such as how to live and travel.⁷

INDIVIDUAL CONTRIBUTIONS TO HARMS

While procreative limitarians agree on what the aggregate harms are, they disagree over why these aggregate harms generate moral reasons for individuals to restrict their procreation. Some (Young 2001, Conly 2016, Burkett 2021) adopt a straight-forward consequentialist or common-sense approach, according to which small contributions to a large problem aggravate the problem and make it more likely that harm will occur. For example, the higher the concentration of greenhouse gasses in the atmosphere, the greater the expected harm of climate change, *ceteris paribus*. We have moral reason not to aggravate problems and not to increase the likelihood of harm to others, and so we have reason to limit our procreation (cf. Broome 2019). This happens to be my own view, as well.

Some other procreative limitarians, however, have been impressed with a general skepticism regarding the possibility that individual actions impact global environmental problems. Such skepticism has been expressed by a number of philosophers, in particular regarding climate change (Sinnott-Armstrong 2005; Sandberg 2011; Cripps 2013: section 5(ii); Jamieson 2014: 163–164, 179–182; Kingston and Sinnott-Armstrong 2018; Nefsky 2021). With several subtle variations, the main idea is that the impact of individual actions is very small, very uncertain, and in practice impossible to trace.⁸ It might seem that such skepticism would undermine any moral recommendations to abstain from either consumption or procreation for environmental reasons. However, skeptical procreative libertarians insist that the environmental impact of procreation still grounds moral reasons. They do so by

⁷Young notes that procreation also tends to lead to higher population density, resulting in overcrowding. However, population density is determined by many factors other than population size. Also, Young's description of this issue seems to include mainly transitional problems that can be solved by better city planning: "overcrowded lakes, hiking trails, roadways, shopping malls, and backcountry" (2001: 188). I will therefore leave this issue to one side.

⁸Another skeptical line of argument is that one individual's contribution would not be harmful were it not for other people's behavior. Hedberg (2020: 86) gives credit to this argument. It is of course not generally true that an action is morally unproblematic if it leads to harm only because of the earlier (or simultaneous) actions of others. Suppose Arthur's firing a gun at Beverly would not have been harmful if Caesar had not loaded the gun. Still, it is morally wrong of Arthur to shoot Beverly. Curiously, some authors seem to disagree. Douglas MacLean (2019: 5) provides the example of a bridge in serious need of repair and proposes: "People may be killed if the bridge collapses. Nevertheless, if I drive a car across the bridge every day, I may be causally but not morally responsible for making a collapse more likely." This seems outrageous. Surely one has some moral reason to avoid driving on such a bridge, potentially causing it to collapse and kill people? If this is not true for environmental impact, there must be some additional premise. I do not see what it would be, though, and so this line of argument only warrants discussion in a footnote.

identifying some way in which individual actions “contribute” to the aggregate problem, even if it makes no causal or probabilistic difference to it.

Travis Rieder concedes that procreation is (or is likely to be) “causally impotent” and that its outcome—another person existing—“doesn’t make a moral difference” (2016: Chapter 2).⁹ However, in perfect alignment with the common-sense view, Rieder holds that the strength of our moral reasons to abstain from procreation correspond to the size of its environmental impact. These reasons are grounded in a general “[d]uty not to contribute to massive, systemic harms” (2016: 29). Rieder’s argument for why we contribute to aggregate harms even though we do not make a difference to them is somewhat complex and need not occupy us here.¹⁰

Trevor Hedberg (2020: 86) finds the idea that small environmental impacts make harm more likely relies on a contentious notion of harm. Like Rieder, he finds the idea that small environmental impacts *contribute* to systemic harms less problematic and concludes that our duty not to so contribute grounds reasons to “limit our individual carbon footprints” (2020: 87). This duty is bolstered by a duty not to contribute to injustice, and by considerations of integrity, which is instrumental to cooperating with others towards a collective solution to environmental problems (2020: 86–93).

Having acknowledged these disparities among procreative limitarians, what is important for present purposes is that they agree the environmental impact of procreation gives us reason, in one way or other, to limit procreation. Whether this environmental impact causes harm, increases the expectation of harm, or merely contributes to aggregate harms in some non-causal and non-probabilistic way, it is a moral cost to be considered in relation to procreating, weighing against any benefits.

Before I move on to consider those benefits, let me note the surprising unity among procreative limitarians on another issue, which might have invited more controversy: how to appraise the environmental impact of an individual act of procreation. In Young’s seminal article, he assumes the moral cost of procreation is measured by the lifetime environmental impact of the procreated.¹¹ Young also mentions, in response to a hypothetical objection he considers, that the cost is actually much higher, as our children are likely to have children in turn, and so on (2001: 188). Murtaugh and Schlax very similarly assume that each person is morally responsible for her own lifetime carbon emissions plus the sum of the lifetime carbon emissions of all her descendants, weighted by their genetic relatedness to her. Whereas Young confines his discussion to couples, Murtaugh and Schlax

⁹ It is not entirely clear what Rieder’s considered view is, as he never comes down hard in favor of this causal skepticism, but he concludes that a successful case for procreative limits must rest on other moral reasons than those that might arise from individually risking harm to others.

¹⁰ Rieder also endorses two other reasons to limit procreation—procreation exposes the created to danger and procreation in the rich part of the world contributes to global injustice. These reasons are more controversial and less susceptible to cost-benefit analysis. I will leave them to one side.

¹¹ Young’s assumption is in line with a more general position on distributive justice, namely that procreators should bear the costs incurred on society from the creation of another member that will have to share in its resources, see Rakowski (1991: 152–155).

in this way divide up the moral costs among individuals. Most of the procreative limitarians I have mentioned (Cafaro 2012, Overall 2012, Brake 2015, Conly 2016, Rieder 2016, Hedberg 2020) refer to either Young and/or Murtaugh and Schlax as authorities on the environmental impact of procreation, and so presumably endorse their assumptions about its size. MacIver (2015) and Burkett (2021) both consider limiting what should be considered the environmental impact of procreation to whatever is necessary for a child's living a minimally decent life, but move on to conclude that the relevant measure is instead all the impact that is foreseeable, which aligns rather well with the Youngian assumption.

The size of the environmental impact of procreation is of course crucial for how procreation compares to consumption. As we move on to consider the benefits of procreation compared to those of consumption, we must keep in mind that, in the final analysis, it matters a lot how much consumption one can get, so to speak, for one procreation, in terms of its environmental impact.

BENEFITS

From a cost-benefit perspective, it is incomplete to consider only the moral cost of some alternative, without considering its benefits. Admittedly, many procreative limitarians invoke a non-consequentialist duty of harm-avoidance. However, the harmfulness of procreation is parasitic on the harmfulness of future consumption, and so it would seem our own consumption would also violate such a duty (and more directly). If two actions or types of action are both (equally) harmful, benefits may matter also on this non-consequentialist perspective. At the end of the day, the moral relevance of benefits will depend on what moral theory is correct. I propose, however, that benefits are morally relevant in some sense on any plausible theory.

Though there are exceptions, e.g., Young (2001), procreative limitarians typically acknowledge that having and raising children can be very rewarding and deeply meaningful. This is the main reason for why they rarely conclude we should abstain completely from procreation but instead tend to recommend or require that we limit ourselves to one or two children per person, or per couple, or simply urge restraint.¹²

In this section, I will consider benefits to people that exist independently of our procreating. There are on the one hand individual and direct benefits to the procreator or consumer herself and on the other more collective benefits. I will consider these in turn. In the next section, to anticipate, I will consider the possibility that procreation entails the creation of inherent value in the form of human life.

¹² Procreative limitarians differ in what limits they propose and how precise they are in those proposals. Young's conclusion is that we should "oppose human reproduction" (2001: 183). Sarah Conly holds that we "don't have a right to more than one biological child" (Conly 2016: 2). Rieder proposes there is a "moral burden to have small families," preferably of one child (Rieder 2016: 66). Hedberg concludes that "For many couples, the permissible number of children will be one." (2020: 97). Philip Cafaro proposes that having more than one child "seems excessive, even unjust" (2012: 53). Overall argues that "every individual adult has a moral responsibility to limit himself or herself to procreative replacement only" (2012: 183). Elisabeth Brake finds that "it is not clear how it can be permissible for members of the developed world to have even one child" (2015: 132). Daniel Burkett holds that "we have strong moral reasons to refrain from choosing to procreate altogether" (2021: 790).

Some of the benefits I will consider in this section are strictly speaking not benefits of procreation as much as benefits of parenting. However, procreation is necessary for parenting, certainly on a collective level, but also for most individuals. I will therefore count the benefits of parenting as benefits of procreation in this context.

SUBJECTIVE HAPPINESS

Taking my cue from Young, I will start by considering the effects of procreation and consumption on individual subjective happiness. Young invokes empirical evidence in this domain only anecdotally (2001: 187–188). However, there is much research on the subjective happiness effects of both consumption and procreation, and more now than when Young wrote his article. Admittedly, happiness research is quite controversial, for several reasons: self-reports on happiness are unreliable and it is not clear what they measure, nor how what they measure relates to the sort of happiness that is morally valuable (which is a matter of philosophical controversy, see Haybron 2020: section 3.2). However, both life-satisfaction and momentary “mood” happiness are arguably either constituents of wellbeing, or at least indications of wellbeing, and well-conducted happiness studies capture at least one of them. When discussing empirical happiness research, one should be aware of the strong heritability of subjective happiness, though this does not undermine the importance of life choices (see, e.g., Nes and Røysamb 2015).

Procreation

Does having children make us happier? Empirical findings point in different directions and the overall tendency varies among countries (Hansen 2012). The only thing we seem to be able to say for sure is that whether or not we have children does not seem to have strong or lasting influence on our subjective happiness. Hedberg (2020) cites several sources he claims indicate that having children decreases happiness. However, all studies in that sample that univocally indicate this negative correlation consider only young children, with no regard for lifetime effects. As noted by Clark et al. (2019: 83–85) in an overview, there is a general lack of studies of the happiness effects of having adult children. Moreover, some high-quality studies indicate having (young) children *increases* happiness (e.g., Myrskylä and Margolis 2014).

Consumption

In general, consumption follows income, and higher income most often indicates higher subjective happiness. However, the details are complicated and there are surprising empirical findings such as the Easterlin paradox—whereas richer people are happier than poorer people at any given time, there is, in relatively rich societies, no positive effect on subjective happiness from everyone becoming richer (Easterlin 1995). There are fewer studies of the happiness effects of consumption itself, as distinct from income (Stanca and Veenhoven 2015). The theoretical and empirical findings we have are often contradictory (Dumludag 2015: 166–167). It seems likely that the subjective benefits of consumption depend very much on

what is consumed, rather than the monetary cost of that consumption (Dunn and Norton 2014).

To complicate matters, consumption costs money. Money for consumption will either come from income or from savings. For most people, their main income and the income they can control comes from working. For them, consumption has a cost either in terms of more work or in terms of less savings, relative to non-consumption. More paid work entails spending less time on leisure activities and on unpaid productive work. This will typically reduce one's happiness. It may also have a negative effect on other people, who benefit from that unpaid work or are engaged in those leisure activities. Less savings, on the other hand, entails less financial security, which also typically reduces happiness. Hence, whatever benefit in terms of subjective happiness is achieved by consumption must be large enough to outweigh the likely loss of happiness due to more work or less financial security.

In sum, we do not know very much about how consumption impacts subjective happiness. Many meaningful and pleasurable activities require consumption. Many others do not. Consumption costs money, so the alternative to consumption is to either work less or save more, which typically will increase subjective happiness.

Overall Assessment of Subjective Happiness

Cases can be made for both consumption and procreation tending to contribute positively to subjective life-satisfaction over time, though much less than other factors such as whether or not one is living with a partner (see e.g., Argyle 2003, Clark et al. 2019). Very likely, subjective benefits depend much more on individual circumstances and preferences, on what one consumes, and on how one conducts one's family life, than on how many children one has or the net monetary value of one's consumption.¹³ I therefore believe no general conclusions can be drawn as to whether procreation or consumption is more beneficial in terms of subjective happiness. This is contrary to some procreative limitarian claims to the effect that procreation reduces subjective happiness.

OBJECTIVE HAPPINESS

Subjective happiness research is inspired by subjective theories of wellbeing. Such theories are controversial, and hedonism is a minority position in the philosophy of wellbeing. The two main contenders are preferentism and objective list theories (Bradley 2015).

Preferentist theories say our lives go better when we get what we want, or what we would want if we were more informed and more rational. While there are fewer studies of subjective preference satisfaction than of subjective happiness, I speculate patterns are similar so that individual circumstances overshadow any general trends. Preferentist theories of wellbeing generally employ some degree of idealization, however, and idealized preferences are more difficult to estimate. Indeed, the best way to approximate them may be to consider objective list theo-

¹³ As Hedberg (2019: 15) indicates in footnote 31.

ries, i.e., pluralist theories that list the main contents of a good life. Objective list theories are also arguably the most relevant theories, in their own right, when we consider the possible objective value of parenting, as their focus is precisely on identifying valuable life content.

Objective list theories tend not to include any items that require more than minimal consumption. For one prominent example, James Griffin lists five items: Accomplishments, The components of human existence (i.e., agency, autonomy, liberty), Understanding, Enjoyment, and Deep personal relations (1988: 67). Griffin does not say much about any of these items. Accomplishment is not mere achievement; it must be meaningful. However, it can be simply living a “rich, rewarding personal life.” This may require some consumption, though one gets the impression that Griffin’s idea of a rich life is not one of extravagance (64–65). Autonomy and understanding also require some but not much consumption. Enjoyment may seem to be more reliant on consumption, but what Griffin has in mind—appreciation of beauty, nature, and “the day-to-day textures of life”—typically does not require spending much money or owning many things (67).

There are many competing objective lists, but none that I am aware of include items that require much consumption, even if list items like autonomy, understanding, and enjoyment may be more fully realized with high consumption, depending on one’s preferences and circumstances (see also Fletcher 2016). In contrast, personal relationships are often listed, and sometimes raising children specifically (e.g., Parfit 1984: 499). In family ethics, where the value of parenthood has been discussed more thoroughly, Brighouse and Swift (2014: 88) convincingly argue that for many people, perhaps most, being a parent is a necessary ingredient in a fully flourishing life. Robeyns (2022: 652–653) references some further explorations of the uniqueness and value of parenting and argues that the capability to engage in procreative parenting is incommensurable with other capabilities. No similar value claims have been made by philosophers for eating meat, staying in fashion, or vacationing in exotic countries.

Based on this brief survey, I conclude that enriching one’s life with the valuable life content identified on objective lists may require procreation but does not require much consumption. To be clear, this claim does not preclude that people in fact realize much value by their current consumption. It does presuppose that those who do could change their lives so as to consume less, without significant loss of value.¹⁴

In sum, objective list theories are the theories of objective wellbeing most relevant for guidance on the value of consumption and of procreating, respectively. Some of these theories include parenting as a non-reducible value, whereas others include personal relationships as a wider category, in which parenting is one unique subcategory. Influential positions in family ethics confirm parenting is valuable. Typical items on objective lists tend not to require much consumption, as long as we focus, as I have done, on people who are relative rich, globally speaking.

¹⁴ Thanks to an anonymous reviewer for requesting clarity on this point.

COLLECTIVE BENEFITS

In addition to the possible benefits to procreators and consumers, acts of procreation and consumption can have wider consequences. These include effects on economic activity, on culture and innovation, on demographics, and on the regeneration of society.

Consumption

The potential collective benefit of individual consumption is that it creates demand and enables profits, which stimulate further economic activity. The details of these dynamic effects are debated among economists, but clearly depends on the state of the economy as a whole. For example, if supply cannot keep up with demand, inflation threatens. Hence, though individual acts of consumptions are more often positive for the economy, they are sometimes negative. For the environment, on the other hand, the further economic activity stimulated by consumption is quite generally harmful. Hence, the typical collective benefit of consumption—economic activity—regularly comes with a collective harm. It is therefore very difficult to assess whether or not the collective effect of consumption is overall positive or negative. One way to think about this is to consider whether additional consumption on the margin would be beneficial at any given moment, given both its positive impact on human wellbeing and its negative environmental impact. This is a very complex issue, of course, where one important perspective is that of the ecological limits to economic growth (Meadows et al. 1972, Meadows et al. 2004, Rockström et al. 2009). Overall, I tentatively conclude that, though there are collective benefits of consumption, these are likely more or less balanced out by the associated harms given the current and near-term future state of the environment.

Procreation

In contrast to consumption, procreation has several collective benefits that are not associated with counter-balancing harms. Toby Ord notes that a larger population can include more people producing and consuming “information goods” such as culture, innovation, and research. This means there is more demand for such goods and hence larger budgets available, and also there will be more supply and so hopefully higher quality products, to be enjoyed by more people (Ord 2014: 48–49). Because increased specialization is possible with more people, and because information goods are immaterial and so can be multiplied at little or no additional costs, environmental or otherwise, there are, Ord suggests, increasing benefits from these goods with increasing population size. Procreation contributes to this positive trend, which is a collective benefit.

As noted, information goods include innovation and research. Technical innovation may decrease the environmental impact of consumption by, e.g., increased energy efficiency. Social innovation may decrease average consumption by, e.g., getting people to socialize with their neighbors instead of driving across town or using streaming services. Therefore, procreation may contribute to lower per capita environmental impact, mitigating the environmental impact of the added capita

(Cf. Aligica 2009 on Julian Simon's work, Greaves 2022). Admittedly, pessimists propose technical innovation that leads to more efficient use of energy or resources only results in higher production, keeping environmental impact constant (e.g., Alcott 2010). However, even if this argument is sound, it need not apply, or not to the same extent, to social innovation that explicitly aims to decrease consumption.¹⁵

Another collective benefit of procreation is demographic. Most rich countries are now aging societies, in which procreation contributes to a more favorable demographic spread. There has been substantial debate on the extent to which children are a public good and, relatedly, to what extent the costs they entail should be borne by their procreators, and to what extent they should rather be borne by all (people, citizens, etc.).¹⁶ While there is reasonable disagreement on these issues, the debate has made clear that children are a collective good.¹⁷

That procreation makes possible the regeneration of society, and ultimately of humanity, also has more subtle psychological benefits. If no more children were born, we would face not only the practical problem of designing robots to care for us as we age, but the existential problem of being the last generation. Samuel Scheffler (2013, 2018) has argued that the existence of future generations is a precondition for almost all of our values, since what we now hold precious and important would lose its meaning if we knew our projects would end with us. Whether or not we are convinced by Scheffler's particular arguments, it seems likely most people would be depressed if they knew they were the last generation of human beings.¹⁸

As long as there is no risk of society or humanity coming to an end by lack of members, it may be questioned whether *individual* acts of procreation provide any benefit in this regard. From a more individualistic perspective, such as that of act consequentialism, they do not. From a more collectivist perspective, such as rule consequentialism, they do. For example, on Brad Hooker's (2002) version of rule consequentialism, a prerogative to procreate should be part of the ideal moral code because of the benefits of the general internalization of such a prerogative.

As discussed above concerning the harms of procreation, Rieder (2016) and Hedberg (2020) hold that there is a moral duty not to contribute to massive, systemic harms. Those of us that find benefits morally relevant might posit a corresponding moral duty to contribute to massive, systemic benefits, such as the preservation of society. If we have a duty to benefit others when we can do so at little or no cost to ourselves, which seems plausible (see Singer 1972), then, if we adopt the systemic perspective of Rieder and Hedberg, it makes sense to endorse a duty to benefit on

¹⁵ To recognize that innovation may reduce environmental impact is not, of course, to advise relying on innovation to solve our environmental crises all by itself. Hedberg considers and rejects such techno-optimism at length (2020: 55–59).

¹⁶ For overviews as well as important contributions, see Olsaretti (2013, 2017). This debate is largely independent of the recent calls for procreative limits for specifically environmental reasons. However, the collective benefits discussed in this section may be relevant to the cost of children debate.

¹⁷ While there is a general lack of discussion of collective benefits in the procreative limitarian debate, Brake (2015: 132) notes that procreation contributes to replenishing the workforce.

¹⁸ This scenario is powerfully depicted in the P.D. James' novel *Children of Men*, as well as in Alfonso Cuarón's movie adaptation.

this systemic level as well. From a more rudimentary perspective of common-sense, consequence-oriented morality, it should make some moral difference whether or not environmentally harmful actions contribute, together with the like actions of many others, to the great benefit of ensuring posterity, and so avoiding widespread depression and potential loss of meaning.¹⁹

In sum, the collective benefits of consumption are uncertain, whereas the collective benefits of procreation are clear, at least in expectation. A larger population means more people who can contribute to innovation and, in rich countries, to a more favorable demography. If one counts benefits that are produced jointly with others, then the collective benefits of procreation are even more substantial, as they include the regeneration of society, and ultimately of humanity.

OVERALL ASSESSMENT OF BENEFITS

To conclude, it is very difficult to assess the benefits of consumption and procreation because of both empirical and moral uncertainty. Individual circumstances will matter a lot, including taste and preference. It seems to me that procreation more typically contributes to a fully flourishing life, whereas consumption beyond the essential only does so in special cases. On the other hand, we must remember that one may get a lot of consumption for the same environmental impact as the procreation of any one child. Especially if we accept the measure of the environmental impact of procreation that most procreative limitarians assume—that which includes the life-time impact of all of one's descendants, even if weighted by genetic relatedness. Such massive consumption is likely to include some that contributes to flourishing, as well as to subjective happiness.

On the collective level, procreation has some important benefits that are not shared by consumption: its contribution to sustain society and humanity, and its potential to increase quality of life and decrease average environmental impact via the synergy effects of information goods, including innovation.

More could no doubt be said for the value of different sorts of consumption. I nonetheless tentatively conclude that for the richest one fifth or so of the global population, who have the greatest environmental impact, the benefits of procreation may be larger than those of a corresponding amount of harmful non-essential consumption, even if we accept Murtaugh and Schlax's assumption about the environmental impact of procreation, and certainly if we instead adopt some more modest estimate, such as the environmental impact needed for living a minimally decent life.

¹⁹ Goldman (1999) argues that one casually contributes to election outcomes one supports by voting for them, even when one's vote makes no difference to these outcomes. Similarly, perhaps, one casually contributes to the regeneration of society and humanity by procreating, even if one does not make a difference to this outcome.

INHERENT VALUE

Recent procreative limitarians seem largely unaware of the philosophical field of population axiology, which deals with the inherent value of future people. Sarah Conly (2016: 161–169) considers the non-identity problem and rejects person-affecting restrictions: “it is a better world in which there are happy people rather than miserable people, even if no particular person’s position is improved in the better world” (168). Conly does not, however, consider so called different-number cases, i.e., whether *more* people with good lives might make the world even better.

Among philosophers who have written on population axiology specifically, procreation is widely believed to entail the creation of inherent value (for an overview, see Greaves 2017). Irrespective of its effects on already existing people, a new life typically adds positive value to the world, the thinking goes, because of the positive wellbeing it contains, i.e., the content of that life, its experiences and achievements. Some philosophers endorse this position based on its alignment with their intuitions—they agree with J. J. C. Smart that any “humane and sympathetic person” will ascribe greater value to a larger population, as long as its members live good lives (Smart 1961: 18). Other philosophers lack such intuitions but find themselves forced to accept that new lives have inherent value in order to avoid incoherence. In particular, many have thought denying inherent value for new lives must imply a denial of the claim that it is best that any new life be as good as possible. This claim they have found to be inescapably true (see Broome 2004: 143–149).

Young addresses the possibility that procreation entails the creation of a being with inherent value (2001: 188). His two-fold response to this objection is that i) even if human beings have inherent value, there is no non-arbitrary way of restricting the bearers of such value to human beings only, and ii) the creation of new human beings cause the loss of other valuable beings. This is not a good response. Neither part of the response has any bearing on the claim that procreation entails the creation of inherent value, whereas consumption does not. Regarding the first part of the response, the claim that human beings have inherent value in no way implies that non-human animals lack inherent value (as it happens, authors on population axiology typically acknowledge that non-human wellbeing may have inherent value). Regarding the second part, if human beings cause the loss of other valuable beings, this downside is not tied to the creation of inherent value but to the resulting consumption. Consumption is the more direct cause of harm both in the case of current consumption and in the case of procreation-induced future consumption. The relevance of inherent value to the comparison between procreation and consumption is, or should be, that if one can have the same environmental impact either with or without the creation of an entity with inherent value, then the former is preferable.

As far as I know, only one more recent limitarian, Christine Overall, addresses the argument that procreation adds value to the world (2012: 71). Unfortunately, Overall’s discussion of inherent value occurs entirely in the context of her criticism of maximizing consequentialism. Overall notes that this family of moral views can

imply that we have a moral duty to procreate (2012: 72–74). Her discussion of this duty, however, seems to presuppose that it would necessarily override other duties, even other consequence-based duties, such as the duty to further the interests of one's existing children. Overall also seems to presuppose that a duty to procreate would imply that others have the right to compel performance of the duty. She concludes that consequentialists would endorse applying social pressure on women to procreate, and even political coercion (2012: 72–75). This seems unfair to consequentialism, but, more importantly for present purposes, Overall seems to assume that the potential of procreation to create inherent value can be relevant only for maximizing consequentialists, and so if we reject such moral views we need not consider population axiology any further. This assumption is not warranted.

Whether the inherent value of future lives gives us moral reason to procreate, and if so how much reason, depends on the vexing and much-debated question of whether the potential wellbeing of contingent future people counts towards the moral requirement to promote the good, and if so whether it should count to the same degree as the wellbeing of existing people (see, e.g., Arrhenius and Rabinowicz 2015). If we have such reasons, they seem relevant to any morality that includes consideration of the consequences of our actions, whether or not there are also other moral considerations. In particular, they seem relevant to any morality that holds that the consequences of our actions must not be too harmful.

One might speculate that the lack of (detailed) concern with population axiology among procreative limitarians is due to their intuitive sense that there is no value in adding lives to a world that is already as densely populated as ours. Some population axiologists have tried to capture such intuitions. One proposal, from Thomas Hurka, is that the value of new lives decreases with the number of already existing lives, perhaps to the point where additional lives have negligible value (Hurka 1983). Such views are often called “variable value views.” Another proposal is that only the wellbeing of presently existing people have full moral value, whereas for future people it only matters morally that lives are not created that have negative wellbeing, i.e., are not worth living (Grill 2017). This view is sometimes called “presentism.”

Even presentists, however, believe a future full of mostly rather happy people is inherently better than a future devoid of human life (though for presentists this must be explained some other way than by invoking the individual wellbeing of potential future lives). Similarly, variable value views ascribe great value to the existence of a sufficient number of lives at any given future time.²⁰ Even on these more neutralist views about future wellbeing, therefore, procreation contributes to the very valuable inherent collective good of human survival or continuation over time. While this value is under no apparent threat at present, neither is it guaranteed; it must be continuously sustained by each generation. Hence, if benefits include those that are produced jointly with others, then the preservation of humanity is a

²⁰ This is true for the variable value views formulated by Hurka (1983), though it is not true for similar views that do not distinguish between the times at which lives are lived, notably Ng (1989).

benefit of procreation not only because of the hope and meaning it gives those of us that currently exist, but also because of its inherent value.

As for consumption, there may be some instances where consumption is necessary for the creation of inherent value. One case may be the creation of great art. If so, the consumption of the necessary art supplies is integral to creating final value. However, it is controversial whether art has final value, and even if it does, creating inherently valuable art by one's consumption is rare. The bulk of consumption has whatever value it has by virtue of its contributions to the wellbeing of independently existing human beings, as discussed in the previous section. Therefore, it seems the creation of inherent value is a likely benefit of procreation that is very rarely, if ever, shared by consumption. This conclusion reinforces the conclusion of the previous section that the benefits of procreation may be larger than the benefits of consumption. In fact, I think they likely are larger, especially if we count benefits that are produced collectively.

BENEFITS THAT PREEMPT HARMS

My survey of the effects of procreation relative to those of consumption was made from a wide cost-benefit perspective according to which both harms and benefits are morally relevant. However, as noted from the start, many procreative limitarians invoke non-consequentialist harm avoidance principles. In everyday morality, as well, it has greater priority to avoid harming others than it has to benefit them, and benefits will not morally compensate for harms even if they have corresponding size. It is therefore important to note that some of the benefits of procreation preempt rather than compensate for harms.

The environmental impact of procreation is distributed over future time. If I have a child today, she will most likely start to have substantial influence on the economy only once she is an adult and starts to earn a substantial income of her own and make impactful consumption choices (previous to that she will only influence how I and my co-procreator spend our income). My child will keep consuming throughout her perhaps 80-year-long life. If my environmental impact also includes the consumption of my further descendants, the time frame is even longer. Over this time, the collective benefits of procreation—culture, innovation, and research, as discussed above—will materialize and may lead to marginal decreases in both the environmental impact of consumption and in the extent to which people realize their goals and promote their own happiness via consumption. If so, the same action that leads to harm will also lead to decreasing that very harm, along with all other harm of the same type.

Consider the close analogy of off-setting carbon emissions. John Broome (2012) has argued that off-setting greenhouse gas emissions should not be seen as compensation for harm done but rather as a way to avoid doing harm. As emissions cause harm only via increasing the concentration of greenhouse gasses in the atmosphere, and because off-setting decreases this same concentration, the combined action of emitting and off-setting does not make harm more likely. In

the same way, the combined action of creating a future consumer and creating a future contributor to eco-friendly innovation may not make harm more likely. Note that it need not be my child or descendant that innovates for my procreation to contribute, on the margin, to innovation. My child or descendant may promote innovation indirectly, in some professional capacity, or simply by being an early adapter to positive change. The environmental impact of any one person is very small and so will be outweighed by small benefits.

There are objections to this line of thinking. H. Orri Stefánsson (2022) argues that while off-setting may prevent or reduce harm to some persons(s), the emissions that are off-set are very likely to cause harm to some other person(s). This objection presupposes an actualist perspective on outcomes. As pointed out by Christian Barry and Garrett Cullity (2022), if the off-setting occurs in the same system as the emission (e.g., in the atmosphere considered as one system), and if the emissions are fully off-set, then no one's prospects are worsened, i.e., no one is harmed in expectation. The emitting may affect who is in fact harmed, but so may any action, including the most innocuous ones (e.g., greeting a person in the street may cause her to pause for a moment, which may lead to another person being involved in a traffic accident, instead of her).

I believe the case for seeing the benefits of procreation as preempting rather than compensating for harms is at least as strong as that for off-setting. Unlike most off-setting, the preemptive effects are clearly causally upstream. If my procreation contributes to the massive systemic benefit of technological and social innovation and if such innovation means my future child's 50th birthday trip to La Gomera will go by eco-friendly boat rather than by eco-destructive plane, then the harm that would have been caused by the plane trip in the absence of innovation is no longer relevant. The environmental impact I have caused or contributed to is only that of the boat trip. Like any action, the boating may have complex side-effects and so affect who is harmed and benefitted in the future, but it will not worsen anyone's likelihood of being harmed, which is what matters morally.²¹

I do not believe the harms of procreation in the aggregate, for all procreation, will be preempted by its aggregate benefits. However, the fact that some benefits of procreation preempt harm rather than only compensate makes the failure on part of procreative limitarians to discuss and consider these benefits more serious.

CONCLUSION

I have surveyed the harms and the benefits of procreation, relative to those of consumption. I have argued that consumption and procreation differ in their benefits in a way that overall tends to favor procreation. For an individual consumer or procreator, the differences within each action type matter more than the category. However, procreation has collective benefits and contributes to the creation and

²¹ Consequentialists, who have most thoroughly considered these matters, tend to agree that on an everyday, pragmatic level, it is the expected rather than the actual consequences of our actions that matter for moral decision-making (see, e.g., Mason 2019).

preservation of inherent value in the form of human life. These differences in benefits are not properly considered by procreative limitarians when they call for procreative restraint.

That procreation has larger benefits than consumption does not mean that we have no reason to restrain our procreation, nor that procreation is all things considered justified. We arguably have reason to limit our procreation to the extent that doing so leads to better outcomes than its alternatives. We may also have reason to do so to avoid risking harm to others. As we show procreative restraint, however, we should be aware of the benefits we forego.

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