

The Environmental Impact of Overpopulation

The Ethics of Procreation

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Chapter 5 Policies that promote smaller families

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5 Policies that promote smaller families

If we accept the conclusion of the Population Reduction Argument, then we have a moral duty to pursue actions that reduce global population. In the short term, that means trying to hasten the deceleration of population growth and ensure that the population peaks sooner and at a lower number than what is currently projected. In Chapter 2, I mentioned that the United Nations Department of Economic and Social Affairs (2019) estimates that the global population will be about 10.9 billion people in 2100. But there is some good news about this estimate. This figure originates from the medium variant of their projections, and there is a much wider range of possible outcomes. Their upper 95 percent prediction interval points to a global population of almost 12.7 billion people in 2100, and their lower 95 percent prediction interval estimates the global population at just above 9.4 billion in 2100. That means that the medium-variant estimate of 10.9 billion is not fixed: decisions that we make during the next 80 years could alter the size of the global population in 2100 by several billion people. Now we can consider what should be done to reduce the rate of population growth over the next few generations and provide the groundwork for population reduction in the generations that follow.

Part of population growth has been caused by an increase in the life expectancy of people around the world, particularly in Africa (Johnson 2016; Kweifio-Okai and Holder 2016). While reproductive rates have declined overall, decreases in the rate of population growth have been muted because of the decrease in death rates. However, since the increases in life expectancy are a result of better medical care and a significant reduction in human misery, we should not deliberately aim to lower life expectancy.¹ A far better way to reduce the population is to bring fewer people into existence.

The concern about trying to lower fertility is that doing so will involve morally problematic coercion. These worries are not unfounded: the implementation of policies in China, India, and Peru aimed at reducing fertility rates resulted in forced abortions and sterilizations (Alvarado and Echegaray 2010; Mosher 2008, chs. 3 and 5). These practices are widely regarded as human rights violations and thought morally indefensible. Whatever we do in response to the population problem, we must avoid a repeat of these

inhuman practices. We need to slow population growth as swiftly as we can while also respecting people's personal freedoms. Thus, we should attempt to implement the least coercive set of population policies possible that will still address the problem effectively.

In the remainder of the chapter, I will examine various policy measures to see which ones could help us make progress in halting population growth without being objectionably coercive. I divide these into three broad categories: autonomy-enhancing measures, semi-coercive measures, and severely coercive measures. Overall, I will argue that autonomy-enhancing measures and semi-coercive measures are worth pursuing and that severely coercive measures should be avoided.

Autonomy-enhancing measures

In this section, I will focus on the means of lowering fertility rates that involve *increasing* people's autonomy. The first of these is increasing access to contraception and family planning services. Doing so increases reproductive autonomy by giving prospective parents greater control over their reproductive choices. Because increasing the availability of these services is both effective and non-coercive, this strategy for lowering fertility enjoys near-universal support among those who have addressed our rising population size (e.g., Cafaro 2012; Hickey, Rieder, and Earl 2016; Kukla 2016; Mazur 2010; Ryerson 2010). Since improving access to contraception and family planning is also rather cheap, this means of lowering fertility generates a significant environmental benefit while enhancing procreative freedom and remaining cost-effective (Bongaarts and Sinding 2011).

Much progress could be made in lowering fertility rates if we were to provide contraception to all who have an unmet need for it. Worldwide, only 56 percent of married women between the ages of 15 and 49 use modern methods of contraception, and in Africa, this figure dips to 30 percent (Population Reference Bureau 2016). About 12 percent of the women in the world want to delay or prevent childrearing but are not using any methods of contraception; in the developing world, this figure rises to 22 percent (UN Department of Economic and Social Affairs 2015). These figures highlight how increased funding for family planning programs could make a significant difference in slowing population growth. Just meeting the contraceptive needs of Africa could decrease the global population in 2030 by as much as one billion (Ford 2016).

Of course, we also have evidence that increased access to family planning services is not enough. Globally, 40 percent of pregnancies are unplanned (Sedgh, Singh, and Hussain 2014), and a significant portion of pregnancies remain unplanned even in parts of the world where contraception is readily available. Thus, measures must be taken to improve people's awareness of how to use contraceptives effectively and the risks associated with not using them. The most straightforward way to accomplish this feat is to improve the

availability and quality of sex education. What this entails may vary from nation to nation according to their educational system, but whatever education is provided should include information on how to use contraception effectively. Abstinence-only programs, which promote abstinence until marriage and do not cover contraceptive use, have been in place in certain regions in the United States for decades. These programs have consistently received federal funding during the last 20 years, but they have proven utterly ineffective in reducing rates of unintended pregnancies and sexually transmitted infections compared to comprehensive sex education (Advocates for Youth 2007; Breuner and Mattson 2016; Stranger-Hall and Hall 2011). Of course, the United States is no model for how to educate the youth about sex: only 29 states mandate sex education of any kind, and only 20 states require sex education that includes content related to the use of contraception (Gutmacher Institute 2019). Given these facts, we should not be surprised that the United States has the highest rates of unintended pregnancy in the developed world.

Comprehensive sex education improves people's autonomy by making them more aware of both the choices available to them and the consequences of those choices and also results in lower fertility through fewer unintended pregnancies. Pursuing gender justice in a broader sense yields similar results. Fertility rates drop significantly when women are not blocked by various social and cultural factors from exercising control over their reproductive decisions (Crist 2019, ch. 8; Roudi, Fahimi, and Kent 2007). Countering patriarchal norms and other influences that strip women of their procreative autonomy can play a significant role in reversing population growth.

The case for improving access to contraception, improving sex education, and pursuing gender equity is compelling. Doing so will enhance people's freedom (especially the reproductive freedom of women in the developing world) and improve their quality of life (since they will have fewer unwanted children) while also lowering fertility rates. These policies have, as Rebecca Kukla (2016) puts it, "no significant moral downside" (p. 845). The real question is whether or not these measures would be enough to effectively respond to population growth. Suppose we give everyone in the world ready access to contraception, improve sex education significantly, and make substantial gains in gender equity across the world. Under such circumstances, would the population problem be solved?

Unfortunately, it is difficult to know what the precise effects of meeting these conditions would be. It would certainly be convenient if these changes alone solved the problem: then we would not need to worry about answering the more difficult ethical questions about coercive policies. Some do genuinely believe that improved access to contraception and increased awareness of how to use it effectively will solve the problem. In the introduction to her edited volume on the population problem, Laurie Mazur (2010) states, "It is not necessary to control anyone to slow population growth: Birthrates come

down where individuals have the means and power to make their own reproductive choices” (p. 16).

Despite Mazur’s optimism, I think it is naïve to believe that improvements in access to family planning, sex education, and gender justice would be sufficient to solve the problem for three reasons. First, the data on population suggests that unmet contraceptive needs are not the only major contributor to population size. Consider a few examples based on recent population data (Population Reference Bureau 2016). In Morocco, 57 percent of the married women aged 15–49 use modern contraceptive methods, and the fertility rate is 2.4; in Malawi, 58 percent of married women in this age range use modern contraceptive methods, and the fertility rate is 4.4. In Libya, only 20 percent of these women use modern contraceptive methods, but the fertility rate is only 2.4. Women of the same demographic in Senegal use modern contraceptives at almost the same rate as those in Libya (21 percent), and yet the fertility rate in Senegal is 5.0. Something other than contraceptive access must be playing a large role in fertility rates, and a plausible culprit is the family size desired by the country’s citizens (Ryerson 2012, pp. 241–243). Economist Lant Pritchett (1994) went so far as to claim that the desire for children was the primary determinant of fertility rates and that “contraceptive access (or cost) or family planning effort more generally is not a dominant, or typically even a major, factor in determining fertility differences” (p. 39).

Additionally, even under a best-case scenario where we implement these measures to increase access to contraception, improve sex education, and pursue gender justice, we will not reduce fertility rates quickly enough to deal adequately with the environmental problems we now face. According to recent demographic models, the human population in this scenario would still closely approximate the nearly 11 billion that we will otherwise have on Earth in 2100; substantial reductions in the population are unlikely to occur until the following century (Bradshaw and Brook 2014, pp. 16611–16612). We must take significant action this century to avert the most severe climate change and biodiversity loss, so these actions, though important, will not be enough by themselves.

Finally, because developed nations have the largest per capita ecological footprints, they are the places in the world where population reduction would be most beneficial. While these countries often already have fertility rates lower than replacement levels, decreasing the fertility rate a bit more in developed nations could make a much larger difference to our overall environmental impact than greater reductions in developing nations. Hickey, Rieder, and Earl (2016) offer a succinct encapsulation of this reasoning:

While reducing fertility in developing nations is important, since their per capita GHG emissions are projected to increase significantly (and should be allowed to do so) over the next several decades, it is not nearly as critical as near-term reductions in the numbers of the world’s wealthy. Although it would be difficult to lower the fertility rate in the United

States from 1.9 to, say, 1.4, such a reduction would have a massive impact on both near-term and long-term global GHG emissions – much more even than proportionally larger fertility reductions in sub-Saharan Africa.

(pp. 855–856)

Given the gravity of the problem and the need to act quickly, we must consider the ways in which we can lower fertility rates in the developed world even more, particularly in countries like the United States and the United Kingdom where the per capita ecological footprint is high and fertility rates are still close to two children per woman (CIA 2019). In most cases, citizens in these nations already have access to family planning services and do not confront the same issues with gender justice that exist elsewhere.² Thus, we need to consider some other measures to aid fertility reduction in these nations. However, before discussing some alternative strategies for lowering fertility rates, I must address an important question about what increased access to family planning services would entail.

Does the population problem justify a liberal abortion policy?

Readers may suspect that increasing access to family planning services entails that women should have the right to abort unwanted pregnancies and that this service should be readily available to them. There is no question that increasing access to abortion services increases women's reproductive autonomy, so it would be an autonomy-enhancing measure. But abortion is a more controversial procedure than the use of contraception. I do believe that women should have the ability to obtain abortions during the first trimester of pregnancy (and in some circumstances later in the pregnancy), but my reasons for holding this view are not tied to the problem of population growth.

To reiterate an earlier point, we should not strive to lower population by causing existing people to die. One important implication of that principle is that it would be wrong to abort a fetus to reduce population *if the fetus is a person*. In this context, a person is an entity with a moral status equivalent to that of an adult human being. If a fetus is a person from the moment of conception, then abortion will be morally equivalent to murder, and so it will not be a permissible means lowering fertility rates. Thus, whether we should increase access to abortion as part of increasing access to family planning services hinges significantly on whether the fetus is a person.

The morality of abortion and the issues concerning fetal personhood are too complex to discuss at length here, but I will make a few general remarks to clarify my position. As an important initial observation, even assuming that the fetus is a person from the moment of conception, there are compelling arguments that abortion remains permissible in certain circumstances (Thomson 1971). One such circumstance is when pregnancy occurs as a result of rape. When a woman is impregnated against her will, it is unfair to

demand that she endure the burdens of pregnancy, and while it is unfortunate that the fetus will die as a result, we do not typically require people to endure substantial burdens to save the lives of others when they are not responsible for the other person being in life-threatening circumstances. A woman completing a pregnancy that results from rape goes well beyond what morality requires. The other commonly recognized exception is when the continuation of pregnancy endangers the mother's life. In this case, the mother's right to self-defense justifies her ending the fetus's life to preserve her own.

As a second general point, it is implausible to regard a fetus as being a person from the moment of conception. As Mary Anne Warren (1973) argues, an early term fetus does not have *any* of the qualities that we typically associate with personhood. She identifies the following features as being typical components of personhood: consciousness and the capacity to feel pain, the ability to reason, engagement in self-motivated activity, the ability to communicate, and the presence of self-concepts and self-awareness (Warren 1973, p. 55). An early term fetus does not have *any* of these features. An entity probably does not need all of them to be a person, but it surely needs *at least one* of them. An early term fetus does not possess any level of conscious awareness, which seems like a prerequisite for possessing the other features of personhood. Thus, at least early in the pregnancy, its moral status should be similar to that of other living things that lack the capacity for consciousness (e.g., plants).

The moral picture gets more complicated as pregnancy progresses, however. Sometime during the pregnancy, the fetus becomes sentient, which means that it acquires the capacity to feel pleasure and pain. The precise time at which the fetus becomes sentient is a subject of controversy. Some have placed the threshold for sentience about 30 weeks after conception (Lee et al. 2005; Tawia 1992) while others contend that the fetus can feel pain closer to 20 weeks after conception (Grossu 2017). Regardless, once the fetus becomes sentient, it acquires an interest in avoiding pain, and this new capacity results in an elevation in its moral status. The fetus now has one feature of personhood and appears to be in the same moral category as a wide assortment of nonhuman animals. Past this point, the justification for an abortion must be significantly stronger than the justification offered for aborting a non-sentient fetus. In practice, recognizing the significance of sentience might result in a policy of permitting the abortion of fetuses during the first trimester (when the fetus is clearly not sentient) and only allowing abortions in exceptional circumstances after the first trimester (Sumner 1981, ch. 4). Such circumstances could include, for instance, a threat to the mother's health or the discovery of significant genetic defects in the fetus.³

Admittedly, there is one significant objection to this approach to the morality of abortion. In one of the most widely anthologized papers on abortion, Don Marquis (1989) argues that abortion is wrong because it deprives the fetus of future experiences. Marquis believes this is the same reason killing an adult human being is wrong, so he views abortion as being just as

wrong as murdering an adult human being. At first glance, this argument appears to provide a reason to oppose abortion that does not rely on the claim that the fetus is a person. However, Marquis's argument only establishes that the fetus has a valuable good that it can lose – namely, its future. This fact alone does not establish that the fetus is the kind of entity that has a right to its future or that there is anything morally wrong with depriving it of this good (Sinnott-Armstrong 1999). For it to have this kind of moral status, it would have to be a person (or something similar). So Marquis does not actually succeed in bypassing the issue of fetal personhood.⁴

I believe that increasing access to family planning services should also entail giving women greater access to abortion services during (at least) the first trimester, but this position does not result from thinking that the imperative to reduce population automatically warrants allowing more women to receive abortions. Rather, it follows from my views about the moral status of the fetus. Even if someone held all my views regarding the need to reduce population, they could reach a different conclusion about whether we should make it easier for women to obtain abortions if they held a different view about the moral status of fetuses.

Semi-coercive measures

Autonomy-enhancing measures are the least controversial way to lower fertility because they give people *greater* reproductive freedom. I now want to consider a range of measures that are neither autonomy-enhancing nor severely coercive. I start with two strategies that are widely used in other contexts and generally regarded as permissible: preference adjustment and incentivization. In this context, preference adjustment involves trying to lower fertility rates by changing cultural norms or individual desires, and incentivization involves providing incentives for people to have fewer children. Incentives can be either positive or negative. Positive incentives are those that provide benefits to those who have few children, and negative incentives are those that impose penalties on people who have too many children. Both these strategies are often regarded as permissible in other contexts and not thought to constitute rights violations. We use them to protect people from harm and advance public interests. Some examples include influencing people's dietary habits and sexual behavior to lower public health costs, creating incentives to make certain careers more attractive, and encouraging certain behaviors that generally make people safer (e.g., wearing seatbelts). These practices are widely accepted but not thought to violate anyone's rights or prevent them from living autonomously (Hickey, Rieder, and Earl 2016, p. 857). Given the general acceptance of these other practices, we ought to consider the effectiveness of them in the realm of procreation.

The primary means of adjusting people's preferences would be through the use of mass media – radio, television, poster campaigns, billboards, advertising on popular online video media (e.g., YouTube, Twitch, Hulu), and so on.

Sometimes, preference adjustment takes the form of rational persuasion, which involves objective presentation of factual information. Other times, the persuasion is more subtle and involves trying to change behavior through tactics like appeals to emotion, celebrity endorsements, or presentation through a narrative. Although some might worry that these latter strategies constitute undesirable manipulation, this objection is weak. These strategies are already widely employed in a variety of these contexts without causing controversy, and they do not need to present false information or to be undertaken covertly. Moreover, some cultures are dominated by pronatalist values. In these cultures, it is normal and expected that people will have children. Preference-adjusting campaigns could serve to counter this pronatalism and make it more socially acceptable for people to remain childless. In doing so, they would enhance individuals' autonomy by alleviating the social and cultural pressure to have children (Hickey, Rieder, and Earl 2016, p. 860).

Preference-adjusting interventions have been implemented before, and they have proven effective. Television shows that promoted family planning and small family size aired in Mexico during the 1970s and 1980s, and similar programs were later launched in India. Kenya and Tanzania promoted the same values through radio programs. In all these cases, the launch of these media programs was followed by a decline in fertility rates and an increase in contraceptive use (Ryerson 2012, pp. 244–248). These programs often shifted their audience's beliefs about the acceptability of family planning and their perceptions of family size. As a result, viewers became more likely to use contraception, delay childbearing, and have fewer children (Rogers et al. 1999; Singhal and Rogers 1989). William Ryerson (2012) estimates that expenses of \$35 million per year would be sufficient to fund similar programs in all the world's major developing countries (p. 448). That financial estimate might be too optimistic, but it is clear that media-driven preference adjustment could be an effective policy tool with respect to reducing family size.

The use of incentives would be trickier because some incentives creep uncomfortably close to the threshold of unacceptable coercion. Negative incentives, such as severe fines or increased hospital delivery fees, may be indistinguishable from outright coercion when they are imposed on people who are in financially precarious circumstances. Moreover, some negative incentives in the past have been imposed in ways that are clearly objectionable. China's incentive-oriented policies often pressured mothers to abortion and infanticide (Hesketh and Xing 1997; Thomas 1995, p. 10), and India's incentives – clothing, electronics, and monetary payments designed to encourage sterilization or delayed childbearing – exploited the low literacy rate among the poor to sterilize thousands without their informed consent (Repetto 1968). Given their morally repugnant nature, these incentivizing strategies must be avoided. At the same time, a blanket dismissal of incentivization would be too hasty. Incentives can be effective in lowering fertility rates despite differences in cultural norms and resource availability (Heil, Gaalema, and Herrmann 2012), so they could be worth

using if we could minimize the extent to which they would lead to injustice.⁵

Fortunately, some measures can be taken to reduce the risk that incentives will be exploitative or objectionably coercive (Hickey, Rieder, and Earl 2016). First, we can be transparent about the political goals behind the incentives, the methods that are used, and the actual outcomes that result from them. Second, we can restrict payment for incentives to the actual would-be procreators. In China, local and regional officials were offered incentives to reduce the fertility rates of their constituents (Hesketh and Xing 1997; Thomas 1995, p. 7), and in India, incentives were offered to various intermediaries to encourage other people to be sterilized (Repetto 1968, p. 13). These practices increase the risk that would-be procreators will be pressured by others into altering their reproductive behavior rather than it resulting from their own voluntary decisions. Third, we can take precautions to try to reduce the impact of incentive-based interventions on vulnerable groups. One means of doing this would be to direct positive incentives toward these vulnerable groups and reserve negative incentives for other, less vulnerable groups. For example, we could offer cash payments and tax breaks to the poor and levy fines against the wealthy (Hickey, Rieder, and Earl 2016, p. 868). On such a scheme, the poor would not be made worse off by a decision to have a large family; they would simply have to forego benefits that they would otherwise be able to obtain.

Directing positive incentives toward vulnerable groups has the added advantage of avoiding scenarios where children are heavily disadvantaged by the actions of their parents, a worry raised by Cripps (2016, p. 382). If the poor were subjected to fines, then there might be circumstances where a child's welfare is threatened because the parents are heavily fined for giving birth to the child. Such scenarios seem deeply unjust because the child who is born and that child's siblings will be the ones most adversely affected by the fines, and these children have no control over the circumstances of their birth.

Another incentivization strategy worth considering is the use of procreation entitlements (Bognar 2019; de la Croix and Gosseries 2009). Suppose that we want to lower fertility rates in the United States to about 1.5 births per woman. We might grant everyone in the United States a sellable entitlement of 0.75 children. Now imagine that this couple has a child, so each of their individual entitlements drops to 0.25 children. These new parents would now have a choice. If they do not want to have any more children, then they could put their entitlements on an open market and sell them. If they wanted to have more biological children, then they could purchase additional entitlements on this marketplace. In effect, this would create an additional economic incentive for people to have fewer children, since they would have to both forego the income they could get from selling their entitlements and purchase additional entitlements if they want a large family. This entitlement scheme could potentially be used in

conjunction with other economic incentives. Perhaps a penalty for having more biological children than a person's entitlements allowed would be to forego certain tax exemptions that a person normally qualifies for by having dependents.

Undoubtedly, a procreative entitlement scheme would confront some significant logistical challenges. One question would be how we determine precisely what number of entitlements a person has by default. Perhaps the entitlements would need to be context sensitive depending on the ecological footprint of the country's citizens. An average person living in Niger, for example, has an ecological footprint that is less than one-fifth of the ecological footprint of an average person living in the United States (Global Footprint Network 2019). It appears unreasonable for those living in Niger to have the same entitlement scheme as people in the United States. Such a policy would disproportionately restrict the freedom of people who are contributing relatively little to the environmental problems that motivate the policy.⁶ Perhaps those in the United States should only have an entitlement of 0.5 children per person whereas those in Niger should have an entitlement of one child per person. The specific numbers are debatable, of course, but the point is that some variability in the limits on reproduction is appropriate given the radical difference in ecological impact that the citizens in these countries have. In any case, the bigger challenge would probably be one of political feasibility. It is hard to envision this particular proposal gaining traction in the immediate future, no matter how much we fine-tune its specifics. That may change in the future, but in the short term, this measure looks unlikely to make our list of viable policy responses.

One final semi-coercive measure to consider is the implementation of mandatory long-term contraception (Bognar 2019, pp. 320–324). In the status quo, contraception is something that must be purchased and intentionally used in order to prevent pregnancy. Procreation is the default result of sexual activity. Levonorgestrel and etonogestrel contraceptive implants already exist, though they can only be used by women and last for only a few years. It is not too farfetched to imagine longer-lasting versions of these contraceptives and versions that are useable by men. If these contraceptives were effective and lasted for a long enough period of time, they could virtually eliminate unintentional pregnancies. Pregnancy would, in Greg Bognar's words, "entirely be a matter of choice, rather than chance" (p. 322). In this respect, the use of long-term contraception appears to enhance procreative liberty rather than restricting it. Nonetheless, I consider this measure semi-coercive because it would require an initial infringement on autonomy to achieve this long-term benefit to procreative liberty. That infringement may be acceptable, however. As Bognar (2019) mentions, we do not typically regard certain public health initiatives, such as mandatory immunizations, to be objectionable even though they are coercive to some degree.

The moral case in favor of mandatory long-term contraception is fairly strong, but since the contraceptive implants available are currently limited in

their longevity and cannot be used by men, implementing this strategy for responding to population growth is not yet viable. Even so, should it become a viable option in the future, it may be worth considering – especially if other attempts to reduce population growth are insufficiently successful.

We can now draw a few conclusions from the discussion so far. First, autonomy-enhancing measures could make a significant impact on reducing population growth while also increasing people's reproductive autonomy. These measures include making contraception and family planning services more widely available, improving sex education, and promoting gender equity. All of these strategies should be pursued to the fullest extent possible. Second, preference adjusting interventions – mainly done through use of mass media – should play a role in countering pronatalist values and encouraging people think more critically about their procreative choices. So long as they are not done in deceptive ways, these strategies will be morally analogous to a variety of other preference-adjusting interventions that we routinely permit. Third, the implementation of incentive-based schemes to lower fertility rates would be more morally treacherous than most other options and require significant efforts to guard against injustice. For these reasons, the use of these schemes should only be considered after other options have been exhausted.

We also need to recognize that the best strategies for responding to population growth will vary depending on the context. Autonomy-enhancing measures and preference-adjustment interventions should be the main strategies for reducing fertility in the developing world. If incentivization schemes are implemented, they should be restricted to the developed world for the moment. Incentivizing measures are the most coercive of those under consideration, and it is morally appropriate to exert more pressure on wealthier individuals to lower fertility rates than on others (Hickey, Rieder, and Earl 2016, p. 868). Moreover, those who are making larger contributions to the environmental problems under discussion should bear larger burdens with respect to addressing the problems.

There is, of course, one final class of measures we could consider. Rather than just trying to incentivize people to procreate less, we could simply mandate it – that is, impose strict legal penalties on people who have more than a certain number of children. China's one-child policy is the clearest recent example of such a scheme. Policies of this sort do not tend to be popular, but that is not in itself a reason to reject them. We should consider if there is a moral case to be made for these policies in light of the long-term impacts of our growing population size.

Severely coercive measures

Everyone will readily agree that coercive population policies involve a serious infringement on a person's procreative autonomy. The main justification

for implementing them appeals to their long-term benefits. Coercive policies can be effective in limiting population growth: the one-child policy in China prevented at least 500 million births between 1970 and 2000 (Lee and Liang 2006). That is a sizeable benefit, but as I have mentioned previously, these policies have often involved severe human rights violations in the form of forced abortions or sterilizations. They are also often associated with sex selection: in cultures where men are valued more than women, they create an incentive to abort fetuses identified as female and have another child in the hope that it is a boy.⁷

Now some regard these historical injustices as so serious that coercive population policies could never be deemed permissible, but that conclusion does not follow. If circumstances are dire enough, otherwise impermissible actions can become permissible. Killing an innocent person is one of the worst crimes one can commit, but if killing one innocent person is required to save the lives of ten other innocent people, then such a killing may well be morally permissible. In this manner, few (if any) broad moral principles are absolute. So while we recognize that the human rights violations that took place as a result of coercive population policies in the past were heinous and deplorable, there are at least *possible* circumstances in which the risk of these abuses would be worth taking.

We should also note that a strict and coercive population policy could take many forms. Sarah Conly (2015, 2016) provides the most in-depth recent defense of coercive population policies, but her proposal involves different enforcement mechanisms than mandatory abortion or sterilization. While she thinks that a one-child policy is permissible when the harms caused by overpopulation are severe enough, she believes it should be enforced through economic penalties and not by bodily invasions (Conly 2016, ch. 4). Even so, given the other options that have been discussed so far, any policy that imposes serious financial penalties for procreating would have to be a last resort – a final measure implemented solely for the sake of avoiding catastrophe after we have exhausted our other options. Even then, I believe that we would have compelling reasons not to consider such a policy.

For one, it is not clear that a one-child policy, even if enacted globally, would be the best means of lowering fertility rates. Citing data from Bradshaw and Brook (2014), Conly (2016) notes that dropping the fertility rate to one per woman by 2045 through full or nearly full compliance to a global one-child policy would shrink the population to 3.45 billion by 2100 (p. 219). That would indeed be a drastic reduction in human population, but a global one-child policy would never decrease the fertility rate to that extent. As Travis Rieder (2016) mentions, the one-child policy in China, which was more extreme than the kind of policy that Conly would endorse, only lowered fertility rates to an average of 1.6 children per couple (p. 33). Moreover, the fact that many European countries already have fertility rates comparable to this figure indicates that other strategies for reducing fertility rates can be just as effective.

A global one-child policy, or something approximating it, faces other objections as well, even if coercive bodily invasions are completely avoided. One of these is that applying a one-child policy to everyone would be unfair. Conly (2016) stresses the importance of equality in the context of exercising our rights, and on this basis, she argues that the constraints on procreation “must apply equally to everyone – not more children for some and fewer for others” (Conly 2016, p. 92). The problem with this position is that the constraints on procreation are being proposed in response to a problem where the contributions to it are *not* equal. Restricting everyone’s procreation equally suggests that everyone has made a roughly equal contribution to the problem, and that is just not the case.⁸ A fairer way to impose constraints on procreation will impose harsher constraints on those who have made larger contributions to the problem and lighter constraints on those who have made smaller contributions.⁹

A further objection is that a global one-child policy would be racist in its practical application.¹⁰ The countries with the highest fertility rates in the world tend to be in Africa whereas the countries with the lowest fertility rates tend to be in Europe and North America. Thus, it would generally be far harder for people living in Africa to comply with a one-child policy than it would be for those in Europe and North America to do so. Perhaps more troubling than the racial inequality in the implementation of this policy would be the message that it might carry – namely, that African populations are in greater need of being controlled or regulated than those in whiter nations. Even if this result is unintentional, its moral significance cannot be ignored.

There is also a compelling practical reason not to pursue a one-child policy or anything resembling it: doing so will almost surely be counterproductive to the general goal of reducing population. Coercive population policies have been widely condemned, and the repulsion people feel toward them has played a considerable role in silencing discussion about population. In democratic societies existing at this stage of the twenty-first century, coercive population policies are not viable because they will never garner the necessary support among citizens. The only likely result of pushing for them is that people will become more reluctant to discuss population at all, which would reduce the likelihood of getting people to seriously consider other measures that could aid in reducing fertility rates. In this manner, advocating for severely coercive population policies with the aim of reducing population is self-defeating.

For all the reasons listed in this section, one-child policies and similar overtly coercive measures of regulating fertility cannot be part of our response to rising population. We will have to use other strategies to decelerate population growth.

Moral tragedies and difficult decisions

Even if we avoid coercive measures to reduce population growth, the transition toward population reduction still presents moral challenges. One of the

unfortunate realities of our predicament is that it is probably impossible to respond to the population problem in a way that avoids all unjust outcomes. We know that failing to act will lead to substantial harm to future people – a great injustice. But there are also effects of pursuing the path to population reduction that may also result in significant injustice. Call these kinds of scenarios *moral tragedies* – situations where we cannot perform any action that avoids all unjust outcomes. I have already highlighted the wrongs that will befall future people if no efforts are made to constrain our burgeoning population size, but so far, the only notable cost to presently existing people that I have mentioned is a reduction in their procreative autonomy – a cost that might not even fully materialize if the autonomy-enhancing measures discussed earlier are successful. We should pause to consider some of the other costs to those in the present.

One short-term concern about decreasing population is that there will be too few young members of the population relative to the number of elderly people (Last 2013, ch. 5). One consequence of having a smaller working population is that the tax base declines, decreasing government revenue. Another is that there is an increased demand for medical care, which requires the government to spend more on health coverage. This combination of effects creates a significant dilemma: either the young, working members of society must bear a greater burden to support the elderly, or medical care to the elderly must be more strictly rationed. Independent of any connection to population reduction, some have argued that we ought to ration life-extending health care on the grounds that medical resources are limited and that keeping the very old alive for a bit longer through expensive procedures is an inappropriate use of limited resources (Callahan 1995, 2012).¹¹ The need to reduce population would seem to make the case for such rationing even stronger, but of course, doing so means that some older members of society will not receive treatments that could extend their lives. We may also confront more direct conflicts between the pursuit of population reduction and the maintenance of adequate medical care, such as if we must choose whether to fund family planning or health care (Mosher 2008, ch. 6).

A related concern is that a reduction in population growth will stifle or deter economic growth. Lower population growth, the thought goes, will lead to fewer consumers and fewer workers, and the result will be decreased economic activity. This line of reasoning is somewhat intuitive, but the empirical reality of the relationship between population and economic growth is not as straightforward as it suggests (Peterson 2017). Economic growth is affected by many factors beyond the fertility rate, and some recent evidence suggests that lower fertility is compatible with both lowering carbon emissions *and* increasing income per capita (Casey and Galor 2017). Additionally, a goal of endless economic growth is incompatible with existing in a world of finite resources. At some point, we must transition to an economic model grounded in the sustainable use of resources rather than one based on ceaseless expansion and consumption (Cafaro 2015, pp. 170–171;

Daly 1991). Given the environmental degradation that is taking place around the world, the evidence is mounting that we should begin that transition sooner rather than later.

Population policies also raise significant concerns about equality. Women bear a much larger role in reproduction than men, and so these policies may have a disproportionate impact on them. Rebecca Kukla (2016) argues that these policies “will likely enhance an already problematic pattern of gender inequality, and intensify our interventionism and moralism then it comes to women’s bodies and reproductive practices” (p. 876). The main fear is that women will be subject to substantial pressure from others regarding their reproductive decisions and that, particularly in societies where their reproductive freedom is already compromised, their autonomy will be undermined. These concerns will be most pronounced if we are considering incentivization schemes, and some of these concerns can be mitigated by avoiding certain types of incentives. To offer one illustration, Hickey, Rieder, and Earl (2016) discuss paying women to attend family planning classes or visit a gynecologist (p. 867). Such incentives might be effective, but they seem to target women exclusively, suggesting that it is primarily a woman’s responsibility to limit her fertility. Incentives should strive to be gender neutral. Even so, given the prevailing view that women are the ones who are primarily responsible for their reproductive activities, it is probably naïve to think that these types of population policies could *completely* avoid having a disproportionate impact on women.

Another concern about inequality stems from the disproportionate impact certain policies may have on the poor. Those who occupy lower socioeconomic classes will be heavily incentivized to have smaller families to procure financial benefits (or avoid penalties), so the fear is that large families may become common only among the very wealthy. Wealthier people would be more easily able to cope with foregone financial benefits or purchase entitlements for additional children. In this manner, family size might become associated with social class. More worryingly, since the poor are disproportionately likely to be people of color, these policies could “end up enacting a kind of indirect eugenics” (Kukla 2016, p. 877). The extent to which this outcome would actually manifest is debatable – in practice, more affluent people usually choose to have *fewer* children than other people (Bognar 2019, p. 326). Even so, this implication does give us further reason to hesitate in our adoption of incentivization schemes.

It is clear that taking serious measures to reduce population growth will impose some costs on present people and that not doing so will impose some significant costs on future people. So how do we decide what to do in this morally tragic situation? It is not possible to do justice to all parties involved or protect all parties from harm, so the best we can do is to minimize the injustice that occurs and the harm that is suffered.

One way to pursue this strategy is adopting a consequentialism of rights, a strategy discussed by Darrel Moellendorf (2014) in the context of climate

change mitigation. He recognizes the possibility that some people who will not have their human rights violated under business-as-usual scenarios will have their human rights violated if we undertake mitigation measures (Moellendorf 2014, pp. 231–232). If this picture is accurate, then one may wonder how a rights-based approach could favor a policy of mitigation rather than business-as-usual. After all, rights are being violated in both scenarios. Moellendorf (2014) entertains the possibility that this problem might be resolved by pursuing “the course of action that is likely to lead to maximal satisfaction of rights” (p. 232).¹²

One complication to this consequentialism of rights is that some rights violations are worse than others. Violating someone’s right to life is a more serious moral wrong than violating someone’s right to bodily autonomy, though both rights are significant. The rights that will be violated as a result from unimpeded environmental degradation will be among the most severe (e.g., the right to life, the right to health, the right to physical security). These rights violations could be experienced by hundreds of millions of people this century. Given the staggering numbers and the severity of the rights violations under discussion, we should prioritize reducing population to avoid these rights violations and accept that some rights violations – perhaps in the form of inequality or unintentional coercion – will be experienced by present people as a result, despite our best efforts to avoid these outcomes. These results are regrettable, but it would be morally worse for us to *not* take these measures to respond to population growth.

This resolution may sound dissatisfying. It would be preferable to arrive at a solution in which all parties can be treated fairly and protected from harm. But our circumstances have made such a solution impossible, and we do ourselves no favors by denying this fact. Moreover, as the survey in this chapter shows, we still have some fairly good non-coercive options that we can employ to reduce population growth. But the longer we wait to act, the harder it will be to make the reductions in our collective ecological footprint in time to avert serious harms. If things get significantly worse, then the need to seriously consider more coercive measures could arise. This is just a further reason why the better option is to pursue population reduction *now*.

What should be done

We have a wide array of policy measures we could pursue in response to population growth. Among the options available, autonomy-enhancing measures are the least controversial and most beneficial. We should make every effort to increase access to contraception and family planning services, improve sex education, and promote gender equality: these measures would lead to lower fertility rates while also increasing procreative autonomy. Preference adjusting interventions through media campaigns, so long as they are not done deceptively, should also be undertaken to counteract pronatalist values and encourage greater reflection on procreative choices.

Incentive-based schemes, even if they are effective, encounter a number of obstacles – both moral and practical. Since there is so much variance in how these schemes could be designed, it would be too hasty to rule out all of them, but we would need to exercise a great deal of caution in how they were implemented. Proposals for incentive-based schemes would have to be evaluated on a case-by-case basis, and I suspect few of them could be designed in ways that sufficiently minimized the injustices that could result from them. Overall, I favor a cautious approach toward incentivization: we should exhaust our other permissible options first, and even after that, we should subject any proposed incentive-based scheme to substantial scrutiny before we consider implementing it.

Finally, we should not implement outright coercive options that involve strict, government-mandated limits on how many children people can have. These policies run a high risk of causing severe harm and injustice, and they are not likely to be more effective than the myriad of other options that are available to us. Moreover, presenting serious proposals to implement these policies would be counterproductive: it would likely push people away from the subject of population growth in the same way it did in the past.¹³

Notes

- 1 As I will discuss later, however, we may face circumstances where we must seriously consider rationing health care to the elderly.
- 2 As revealed by some of the information about the United States, there is room for improvement with respect to sex education in some developed nations.
- 3 In cases where pregnancy results from rape, the woman would have plenty of time to determine that she was pregnant, deliberate about whether to carry the fetus to term, and then get an abortion (if she chooses) within the first trimester. Thus, allowing abortions in response to involuntary pregnancy may not require any special provision that extends beyond the first trimester.
- 4 Additionally, Lovering (2005) questions whether a fetus really has a future prior to being conscious. He reasons that only psychologically continuous entities appear to have futures in a morally relevant sense, and consciousness is a prerequisite for this kind of psychological continuity. If Lovering's view is correct, then Marquis' position may not turn out to be much different than the view I have sketched above – where abortions are permissible in the first trimester but often prohibited afterward. Abortions would be permissible during the portion of the pregnancy where the fetus lacks consciousness and impermissible thereafter (since the fetus would then have a future that warrants protection).
- 5 Ideally, we would eliminate the possibility of injustice altogether, but very few social policies can be constructed in ways such that they *never* lead to injustice.
- 6 It is still important to encourage lower fertility in the developing world so that their ecological footprints do not balloon dramatically as they develop, but this can be done without ignoring the disparity in per capita ecological footprint between these countries and the world's wealthiest nations.
- 7 Conly (2016) points out that the main cause of sex selection is the prevalence of sexist attitudes in the background culture of these societies rather than coercive population policies as such (pp. 193–204). Even so, in practice, the fact that a

- strict limit on the number of children a couple can have could exacerbate gender inequality remains a strong reason to oppose the implementation of coercive population policies.
- 8 Chen (2017) also suggests that Conly's one-child policy may be unfair if it is applied globally (p. 453).
 - 9 In this manner, our population policies should strive to be consistent with the Polluter Pays principle – the notion that those who contribute to the problem should bear the burdens of solving the problem or compensating the victims, at least in cases where the pollution is not caused by excusable ignorance. For a critical appraisal of the Polluter Pays principle in the case of Climate Change, see Caney (2010).
 - 10 I have raised this same concern elsewhere. See Hedberg (2017b).
 - 11 For a recent overview of the issues involved in rationing health care, see Morreim et al. (2014).
 - 12 This maximizing approach to human rights does run the risk of not according strong enough protections to the rights of minorities: the rights of the majority would appear to always trump the rights of minorities in rights conflicts between these groups. This may justify sometimes giving the rights of minorities disproportionate weight in the calculation. Fortunately, this consideration is not relevant to the case we are addressing because the interests of minority groups will be jeopardized in both of the scenarios we are considering – whether we take deliberate action to reduce population growth or whether we avoid doing so.
 - 13 Significant portions of this chapter are derived from chapter 6 of my doctoral dissertation. See Hedberg (2017a).

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