The moral imperative to reduce global population

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During the last decade, increased scrutiny of ecological disasters such as biodiversity loss and climate change has led some philosophers and environmentalists to examine the connection between population size and environmental degradation. Excessive consumption is clearly a central contributor to our eco-social predicament, but the sheer number of people on the planet also plays a substantial role in its severity. The paper highlights how both anthropocentric and non-anthropocentric ethical perspectives converge on the conclusion that we ought to reduce global population. It then considers what policy measures could be permissibly implemented to achieve this goal.

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Earth's human population is approaching 8 billion. While the annual growth rate has been declining since its peak of 2.2 per cent in the early 1970s, the current growth rate of just above 1 per cent still translates to about 80 million people being added to the planet annually. The most recent projection by the United Nations Department of Economic and Social Affairs (2019) suggests that population growth will continue for the remainder of the century, and that our numbers will peak at nearly 11 billion.

An increase in human population size is not an intrinsically bad thing, but more people require more resources and produce more waste. Thomas Malthus (1798) and later Paul Ehrlich (1968) famously raised concerns about the potentially disastrous intersection of population growth and available food supply, but technological developments in agriculture have made it possible to feed far more people than anticipated. (Tragically, under-nutrition and malnutrition still affect hundreds of millions of people, but this is due not to the unavailability of food but to poverty – that is, the lack of purchasing power to acquire food or high quality food.)

During the last decade, however, concern about human numbers has resurfaced. Although ongoing environmental impacts such as climate change and biodiversity collapse are often viewed as solely the result of excess consumption (especially by inhabitants of the developed world), a significant factor driving the ecological crisis is the sheer numbers of people engaged in consuming activities. One million people polluting is bad, but 100 million people polluting to the same extent is 100 times worse. Population has aptly been called the "multiplier of everything" (Ryerson, 2010). All other things remaining equal, an increase in population size will proportionally increase environmental drawdown and degradation.

The connection between population size and environmental malaise has incited a flurry of recent work focused on the ecological and moral implications of ongoing population growth, and exploring the appropriate policies and personal procreative decisions in response.[1] Here, I survey two lines of reasoning that both lead to the conclusion that we ought to act to stop population growth and slowly reduce global population. One focuses on moral considerations tied to human interests and values; the other examines moral considerations in relation to nonhuman species and the natural world. I then turn to the policies we ought to enact in pursuit of long-term population reduction.

Anthropocentric moral reasons to reduce population

A basic ethical tenet is that it is wrong to cause unnecessary harm. When possible, we should avoid doing things that bring suffering to others. Unfortunately, we are on course to cause a massive amount of unnecessary harm to present and future people if current levels of environmental degradation continue unabated. Let me briefly list a few sources of that harm. First, the UN Food and Agriculture Organization projects that food production will need to increase by up to 70 per cent by 2050 (over 2010 levels) to meet the demand for food (Alexandratos and Bruinsma, 2012). Second, groundwater is being depleted at about 3.5 times the sustainable rate, and 1.7 billion people reside in areas where available groundwater or the ecosystems that depend on this groundwater (or both) are threatened (Gleeson *et al.*, 2012). Third, global climate change is menacing the life and welfare of people via sea level rise, increased frequency of severe weather events, ocean acidification (poised to reduce food productivity of the oceans) and increased vulnerability to disease as the liveable range of disease-carrying insects expands (Intergovernmental Panel on Climate Change, 2014a, 2014b). Fourth, biodiversity loss jeopardizes the existence of valuable ecosystem benefits – resources and other goods naturally provided at low cost by the natural world – and various other 'goods,' such as aesthetic appreciation and knowledge acquisition, that nonhuman species offer. The rate of species extinctions has accelerated so dramatically over the last century that scientists warn we are living through the Earth's sixth mass extinction event (Barnosky *et al.*, 2011; Ceballos *et al.*, 2017).

One of the central causes of the environmental degradation that leads to these harms is excessive consumption, especially by those in the wealthiest, most developed parts of the world. However, the number of people engaging in

environmentally-destructive consumer behaviours is part and parcel of that equation. Moreover, in some regions of the world, countries must be supported to further develop – thus increasing their rates of harmful consumption – if they are going to supersede poverty and achieve a reasonable standard of living. The seeming intractability of reducing rates of destructive consumption – despite general agreement that this must be done – points to a further obstacle: people are often resistant, or at a loss as to how, to cut back on their consumption patterns. Intriguingly, this last obstacle is less daunting in the case of procreation. People voluntarily reduce their family sizes when certain sociocultural and economic conditions are met, with the low fertility rates of the countries in the European Union and elsewhere providing ample evidence of this fact.

Instead of focusing only on lowering consumption rates – an imperative that, practically speaking, appears insufficient to address the crises we face – I propose that we also do what we can, locally and globally, to lower fertility rates. To be clear, it is still urgent that we keep working to reduce waste, transition to sustainable energy, move to more plant-based diets and otherwise reduce overconsumption. My claim is simply that these endeavours, alone, will be insufficient, especially as a globally growing and wealthier population stands to overwhelm any gains in consumption behaviour we see. The superior approach to our ecological predicament is working to reduce *both* excessive consumption around the world *and* the number of people engaging in these behaviours.

Non-anthropocentric moral reasons to reduce population

The ethical argument sketched above – one that I have presented in greater detail elsewhere (Hedberg, 2020: 33–62) – is an anthropocentric argument, in that it appeals exclusively to human values and interests. But Earth's moral community is not limited to the human species. Numerous non-anthropocentric moral considerations lead to the same conclusion reached in the previous section.

As an initial example, consider the moral gravity tied to people's desire to eat meat, fish and dairy. Every year, over 70 billion land animals are slaughtered for human consumption (United Nations Food and Agricultural Organization, 2021). The overwhelming majority of these animals suffer substantially before their premature death. Since most human beings are not vegetarian, an increase in the number of people on the planet is leading to an increasing demand for meat and other animal products, which means more animals suffering and dying in confined animal feeding operations. The same population trends and dietary predilections mean more fish being harvested from the global ocean. When fish are extracted, they are counted by their weight (as a group) rather than individually, but the number of individual fish killed annually – suffering premature and violent deaths – may well be in the trillions.

Farm animals and fish are not the only living creatures on Earth. When we add to our consideration other wild animals affected by our oversized impact,

then the moral weight of our actions grows dramatically. How many wild species will go extinct due to agricultural expansion and climate change? What will be the fate of coral reef biodiversity by century's end? How many rainforest species will be lost – many even before we know of them – if humanity does not drastically change course? It is clear that the number of individual beings and life-forms affected adversely by our actions is staggering.

What's more, ecosystems themselves are morally considerable, both as homes ('habitat') for living beings and as unique creations via the interrelations between living beings and the abiotic environment. The conversion, fragmentation and disruption of ecosystems, as such, represents another wrongdoing in the wake of increasing numbers of excessively consuming human beings.

In sum, as we place greater moral weight on the lives of nonhuman creatures and the natural world more broadly, the severity of our moral wrongdoing grows. The imperative to respond to these environmental impacts becomes stronger, and so the need to reduce global population becomes even more urgent.

What can we do?

Whether reasoning about global population through an anthropocentric or non-anthropocentric lens (or both), the moral need to stymie population growth is evident. The challenge is how we achieve that without our efforts yielding morally unacceptable results. As mentioned earlier, concerns about population growth are not new. Unfortunately, part of the history of responding to population growth is tainted by instances of insidious eugenics programs, coerced abortions and forced sterilizations. The fraught history of these policies has led many to fear that it is impossible to respond to population growth without re-treading this trail of human rights abuses. The good news is that our options for responding to population growth are a far cry from being that bleak.

In considering possible ways of responding to population growth, I have found it helpful to group policy options into those that are *non-coercive*, *semi-coercive* and *coercive*. Non-coercive policies are those that do not infringe on people's autonomy; in fact, as I will explain, these policies increase people's autonomy. Coercive policies, in contrast, severely restrict people's autonomy, and cause harm, by imposing penalties for failing to engage in compliant behaviour. The human-rights abuses tied to certain previous efforts to address population growth are extreme examples of coercive policies. The third category is semi-coercive policies – policies that endeavour to steer people's behaviour to some extent but not in the same way, or to the same degree, as outright coercive measures.

Coercive responses to population growth are generally opposed due to the history tied to their use. (Conly [2016] is a notable exception: she supports the use of fines for noncompliance with a global one-child policy.) The lessons of the past do carry significant moral weight, but I also believe there is a practical reason to oppose coercive policies. Putting such population measures on the

table for public debate is very likely to be counterproductive: it would cause backlash against any population-oriented discourse and invite dismissal of the issue rather than political action. A better strategy is to pursue non-coercive and semi-coercive measures that people may well be willing to implement.

Fortunately, the greatest strides on population can be made through a range of non-coercive policies. Perhaps the most impactful would be to increase access to contraception, particularly in areas where fertility rates are high and many women lack reliable access to family-planning services. Globally, 40 per cent of all pregnancies are unintended (Sedgh *et al.*, 2014). Significantly reducing this percentage would have an incredible impact on global population. As one illustration, some UN officials reported in 2016 that meeting the contraceptive needs of Africa could reduce global population by 1 billion people by 2030 (Ford, 2016). Another non-coercive step would be to improve education in two ways. First, sexuality education could be improved, and instituted where it is absent, so that participants have a better sense of what methods of contraception are available, the importance of using them and the ways in which they can be used effectively. Second, we could enhance environmental education by including knowledge and discussion about the connection between family size and ecological footprint. Improving access to contraception would improve procreative autonomy by making it easier for people to decide when they want to have a child or children, if indeed they do. Providing people with accurate information about contraception and the effects of their procreative choices would also increase their autonomy because they would be able to make better-informed decisions. Pursuing gender justice by countering patriarchal norms and removing socio-cultural barriers that prevent women from exercising control over their reproductive decisions yields similar results: these women experience increased autonomy and choose to procreate at lower rates (on average) than they otherwise would (Crist, 2019: 185–213). Overall, there is an array of moral reasons to support these non-coercive policy measures and no moral downside to their implementation.

It remains an open question whether non-coercive measures alone would suffice to steer humanity toward population reduction with the swiftness that is necessary. Changes in fertility rates take a significant amount of time to translate into large-scale effects on population size, and our most robust responses to environmental problems like climate change and species extinctions need to occur as soon as possible if truly disastrous outcomes are to be avoided (or at least minimized). Thus, we should consider what semi-coercive measures would be morally acceptable to implement under the dire circumstances we find ourselves in.

One of the simplest and least controversial semi-coercive measures would be the use of media campaigns to raise awareness of the population issue and encourage more reflective deliberation about procreative decision-making. We already accept the use of similar campaigns to influence people's dietary habits, make certain careers more appealing or promote public safety. The aim of these initiatives is to influence or adjust people's preferences so that they will make different decisions than they otherwise would. So long as these

campaigns do not use deception to advance their aims, and the aims are morally good to pursue, there should be nothing objectionable about their use. Efforts to promote smaller families and the use of family-planning services via television and radio have led to lower fertility rates and increased uptake of contraception (Ryerson, 2012: 244–8), so optimism about their ability to shift people's preferences is warranted. Furthermore, such campaigns could also be directed to counteract pro-natalist stigmas, and related cultural coercion, that likely prompt women to have more children than they would if they had real choice. Both women and men often face a variety of sociocultural pressures that cause them to have more children than they otherwise would. Working to lessen those pressures may, as in the case of non-coercive measures, actually lead to enhanced procreative autonomy for many people.

A more controversial semi-coercive strategy for reducing fertility rates is incentivization. This strategy involves instituting policies that create incentives (*e.g.* tax breaks, direct financial compensation) for people to have smaller families. The recently proposed Uttar Pradesh Population (Control, Stabilisation and Welfare) Bill 2021 would be a clear example of an incentivization scheme aimed at lowering fertility rates. If this law is enacted, then people living in India's state of Uttar Pradesh who have more than two children will be ineligible for state government jobs, excluded from benefits provided by dozens of government schemes and unable to obtain further promotions if employed in state government at the time the law passes. Non-government workers who abide by the two-child limit will also be eligible for rebates on taxes, utility bills and home loans (Kuchay 2021). Would these policies be morally justifiable? An unambiguous answer is perhaps hard to determine.

Incentivization schemes, such as the above law, clearly run closer to being objectionably coercive than media campaigns, but they are also clearly less coercive than severe forms of one-child policies (where non-compliance might result in extreme fines, jail time or forced abortion). The bill also faces pushback concerning how effective it would actually be at lowering fertility rates and its potential unintended consequences (such as increased gender imbalance). Even so, India is one of the nations in the world most in need of policy measures that address its extraordinary population size. Given the severity of the problem – in a country that faces imminent freshwater scarcity – this policy proposal might be morally acceptable if its unintended negative consequences could be minimized.

As I have discussed at greater length in prior work (Hedberg, 2020: 75–8), the mandate to decelerate population growth may present us with a case of moral tragedy. It may be that there is no available course of action that avoids all unjust outcomes. If the population problem grows severe enough that it can only be managed through harsh incentivization programs, then responding adequately to the problem may inevitably lead to undesirable impositions. Has India reached that point? Without knowing the viability of other, less coercive, policy responses, it is hard to be certain. What is certain, however, is that complacency in responding to ongoing global population growth will

inevitably lead to morally tragic circumstances – ones where the only policies that prevent serious environmental degradation are those that cause some people to be victims of injustice. This serves to highlight the need to act sooner rather than later.

Given their potential moral downsides, incentivization schemes should not be our first move in trying to reduce global population. Such strategies can run uncomfortably close to coercion depending on who they impact and how they are implemented. Yet dismissing their use altogether would be a mistake. Some incentivization schemes may pose lower risks of causing injustice than others, especially those that involve merely bestowing benefits to certain groups of people or empowering women to make their own choices. Providing a tax rebate to small families is nowhere near as coercive as imposing a fine on parents with several children or jeopardizing those parents' employment. The latter measures penalize the parents of large families. A new tax break for parents in smaller families, however, does not impose a burden on the parents of large families: rather than creating an incentive by making the parents of large families *worse* off, it creates an incentive to have fewer children by making parents of small families *better* off. On the whole, I propose evaluating incentivization schemes on a case-by-case basis and resorting to them only when non-coercive means of responding to the population quandary have been attempted, or it can be determined that such means are insufficient to adequately address looming threats.

Human numbers will not start decreasing overnight, but we have the means to stabilize global population well before the end of this century. Once that is accomplished, our goal should be to reduce our numbers further. Doing so will play a crucial role in our ability to pass on a biodiverse world to future generations.

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Note

1 See, for example, Cafaro (2012), Cafaro and Crist (2012),Weisman (2013), Conly (2016) Rieder (2016), Coole (2018), and Crist (2019).

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