

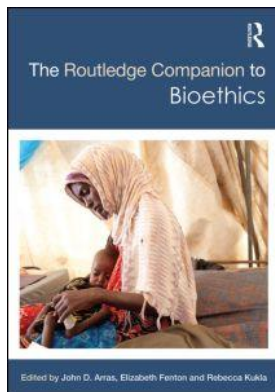
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POPULATION GROWTH AND DECLINE

Issues of Justice

Margaret P. Battin

Let's start with what is supposed to be the solution to population issues, but is actually part of the problem. That's the figure at the end of many of the classic population projections, the so-called "leveling off" point at which population growth will cease to be a threat to the globe. The question is whether "leveling off" is a realistic prediction or an unsupported and dangerous fantasy, and if it's the latter what we can do to transform it into the former with a reasonable degree of justice.

"Levelling Off"

The "leveling-off" assumption relies on projections concerning what has been known as the demographic transition, a pattern of four distinct stages that a society is said to go through in moving from an undeveloped, agrarian economy to an industrialized, developed one. In the first stage of the demographic transition, that characterizing premodern, undeveloped, non-industrial, agrarian economies, birth rates are high, but so are death rates: In the absence of modern medicine and many other factors, life is hard, infant mortality is high, maternal mortality in childbirth is also high, and the average lifespan is short. Thus population size remains comparatively stable: There are many births, but many early deaths. In the second stage, the introduction of immunization programs, clean water supplies, antibiotics, and other developments from the technologically advanced nations leads to a sharp drop in death rates, but traditional social patterns continue to favor high birth rates. With high birth rates and low death rates, the population soars. With increasing development, however, a third stage begins: As women are increasingly educated, as infant mortality drops and families find they do not need many children born to ensure that a few survive, as social insurance systems mean that parents do not need to rely on their children for support in their old age, and as additional children no longer mean an additional source of labor in tasks like wood gathering, water hauling, and farm work but instead begin to represent a liability in schooling costs, clothing costs, entertainment, and supervision in an urban environment, birth rates begin to decline; thus population growth rates slow. In the fourth stage, which characterizes industrialized nations like those of Europe and North America, both birth and death

rates are low—births are fewer but lifespans longer—and population size “levels off” or stabilizes.

Paul Ehrlich raised a global alarm with the publication of *The Population Bomb* in 1968, pointing out that the global population was increasing at an unsupportable rate. Indeed, it doubled from 3 billion in 1959 to 6 billion in 1999; the 7 billion mark was reached just a dozen years later, the 8 billion mark forecast for 2025. But various projections showed the global total leveling off at some 9, or 10, or as high as 12 billion at the middle of the twenty-first century or the beginning of the twenty-second. Whenever growth leveled off, it was widely assumed, the population problem would then be solved.

Indeed, in many countries fertility rates have dropped dramatically. Some have had sub-replacement fertility rates, and fertility rates in others—Japan, Germany, and Lithuania, for example—have dropped so low as to cause population decline. Indeed, some observers believe the population problem will be reversed: “In 2050,” claim Noriyuki Takayama and Martin Werding (2011: cover blurb), “world population growth is predicted to come almost to a halt. Shortly thereafter it may well start to shrink.”

“Leveling off,” or even global population decrease, may seem to be an attractive picture. But are the measures designed to achieve leveling off, or even population decline, just? Many questions of justice arise. For instance, leveling off assumes that every woman, on average, will have at most 2.1 children—so for any woman who has three children, there must be another woman who has only one; and for every woman who has four, there must be another who remains childless altogether. Are the various forms of population “control” even workable solutions? Are alternative strategies, like enhancing development, fairer as a way to achieve population stabilization? By inquiring into the seemingly pie-in-the-sky assumption about eventual leveling off, we can unearth some of the most troubling issues about population and justice.

Most nations now have family-planning programs, though these vary tremendously in character, methods, and effectiveness; some are governmental, some are conducted by non-governmental organizations; and some rely entirely on local private groups. They vary in nearly every aspect of their existence: Funding, level of education, services provided or denied, and rhetoric used. Yet despite their enormous variety, virtually all of these family-planning programs face several basic ethical dilemmas about the strategies they employ.

Issues of Justice in the Early Programs of Population Control

Concern with runaway population growth erupted in the mid-1960s, as the development of public health measures, preventative measures, effective therapies, and other modern medical techniques meant that death rates (especially among infants and young children) began to fall while birth rates remained high. India and then China, each home to about a fifth of the world’s population, were among the first to respond, and their population-control programs—India’s male sterilization program and China’s one-child policy—exhibit some of the most vivid questions of justice.

Incentives and Disincentives

Perhaps most notorious for its use of problematic incentives was India’s vigorously pursued population-control policy of 1975–6. Though this may well be a myth and no

documentation of the practice is apparently available, Indian officials were widely believed to offer a transistor radio to any man who would consent to a vasectomy on the spot. Financial incentives were offered to local officials who could persuade villagers to accept sterilization, often at the mobile “vasectomy camps” created around the country. At the same time, disincentives were also used to secure compliance: Fines, denial of benefits, denial of medical treatment for government officers, denial of governmental quarters for civil servants, denial of accommodations in housing projects for the public, and disqualification for most government scholarships.

China’s one-child program, initiated in 1979 and imposed in the early 1980s, also used a wide range of incentives (better jobs, better housing, better pay) for couples with one child only, together with disincentives (fines, demotions, penalties, forcible abortions and sterilizations, even house-burnings) to discourage those having more than the permitted number of children. Incentives and disincentives to influence reproductive behavior have been used in many other societies: The Nazis used bronze, silver, and gold medals to reinforce large family size for Aryan (but not Jewish) women: Four, six, and eight children, respectively; Ceaușescu’s Romania used a variety of harsh disincentives and penalties for abortion or failure to have an adequate number of children, set at five; and Singapore’s 1983 combination pronatalist/antinatalist program provided a wide array of benefits and preferences to encourage educated women to have large families, but also used incentive payments for sterilization to decrease fertility among uneducated women.

Both incentives and disincentives can violate fundamental principles of autonomy if they undermine someone’s ability to rationally deliberate or are coercive in some way. Basic principles of reproductive liberty require informed, voluntary choice about matters relevant to procreation, and the voluntariness of such choices can quite easily be infringed. India’s notorious transistor radios, even if fictional, compromise voluntary choice in two ways: Not only might they have been too attractive to resist for poor villagers, but the way in which they were allegedly offered would have undercut the possibility of reflective deliberation for a man as well as the possibility of consultation with his wife.

Contraception Mandates versus Family Size Ceilings

India’s vasectomy program emphasized promoting contraception, targeting larger families; China’s program, however, promulgated a family size limit, coupled with the supply and surveillance of contraception to maintain this limit. While in practice contraception mandates and family size ceilings are often intertwined, they are conceptually different. Contraception mandates may alter the decisional structure of childbearing choices but still recognize individual preferences in choices about family size; family size limits impose a ceiling but allow the couple to determine how to prevent childbearing. Contraception mandates seem particularly problematic when the contraceptive poses health risks to the user, involves unacceptable side effects, or, as in sterilization, is irreversible. Family size limits are problematic where they are very severe (as in a one-child policy), are inequitably imposed, or are not necessitated by a country’s demographic situation. Contraceptive mandates tend to impose burdens of restricted childbearing on just some individuals; in contrast, family size limits affect everyone and in this sense are more just, but they typically function by punishing violators after the fact, even those where pregnancy is unintended, and in this different sense appear unjust.

But both contraceptive mandates and family size limits may be viewed as just in other ways. Under its one-child policy, China effectively mandated contraceptive use, used fertility surveillance, and limited birth permits, but it in principle imposed these mandates on *all* women. Simultaneously, its family size ceiling has been comparatively egalitarian: One child for all couples (with the exception of two in some rural provinces and no ceiling for the tiny populations of the non-Han ethnic areas), not, say, five children for Party members and no children for non-members. This policy came to be seen by the populace as a demographic necessity and therefore understandable and normal (Nie 2005; Nie and Wyman 2005), and thus, it can be claimed, not unjustly imposed. Although officially still in force, the one-child policy is now beginning to erode, as well-to-do couples sometimes elect to pay large fines for having additional children; it is also being deliberately relaxed as China considers ways to move away from the one-child policy to a more stable, long-term population management plan compatible with “leveling off.” In 2013 it announced a further incremental reform in the one-child policy that would allow couples to have two children if just one of the parents was an only child, and further relaxations can be expected in the future.

Targeting

Even in countries with less acute population problems, issues of justice may arise in family-planning programs. For example, programs may target groups segregated by income, ethnicity, or race that are perceived to be at higher risk of excess childbearing. Even if targeted contraceptive programs do not violate canons of voluntary choice, they may be unjust because they approach people identified primarily as members of specific, often stereotyped subgroups (e.g., black inner-city teenagers), making assumptions about the members of a subgroup that are not true of all individuals in it. Access to programs can be discriminatory both in terms of whom it excludes and whom it targets. Other issues include adherence to veiled family size limitations: Target ceilings entertained by program officials or governments, but not known to recipients of family-planning services or available for public discussion. And family-planning programs may also violate informed consent by withholding information, such as risks, reversibility, and side effects of the contraceptives involved.

Population Stabilization Over Time

The issue of “leveling off” involves not just how high population growth can climb or how far it can decline, but what population size can be sustained over time. Since population control measures—disincentives, incentives, mandates, etc.—work at the individual level—just one reproductively capable couple at a time—they cannot guarantee long-term results. Population stabilization, thus, requires ongoing, long-term, indeed permanent attention; there is no “end point” at which population problems are definitively solved.

Declines in fertility in developed and many developing countries have lulled many thinkers into concluding that there is no real problem. However, population futures are not easy to predict (Caldwell 2004; Demeny 2004). As John Bongaarts pointed out, fertility measures in many developed countries may be temporarily depressed by a rise in the mean age of childbearing: As women procreate in later ages, a drop in total fertility may turn out to be only a postponement, corresponding to increases in apparent fertility rates when social patterns of postponement end and the timing of childbearing stabilizes

or shifts back to earlier ages (Bongaarts 2002, 2008). Societal framing may also play a role in reproductive behavior: For example, with the most recent relaxation of China's one-child policy, some couples reported that although they would now be permitted a second child, they still planned to remain at one: Such preferences are clearly subject to societal expectations and the behavior of other couples in the same age cohort. Thus the sense that the population "explosion" is over may be misinformed in several ways: It does not account for population pressures in the still-developing world; it over-interprets its own current "birth dearth" (Vallin 2002); and it overlooks the vicissitudes of family size preferences within populations.

Some observers have been concerned that "population entrapment" in societies now experiencing high growth rates would mean failed societal infrastructures as the population outstrips their capacity, something most likely in the least developed nations with most rapid population growth and greatest population momentum. In these countries, it was argued, the demographic transition may not take place after all, leading to famine, war, and overall die-back—that is, human death or non-reproduction on a widespread scale, whether from starvation, water and resource depletion, global pollution or climate change, or other population-size related causes. However, enshrined in the strategies explicitly favored in the U.N. Millennium Development Goals, economic development has been a strategy actively pursued as a means of population growth control. Goals associated with it have included increased education for both women and children, especially female children; lowering infant mortality rates, enhancing the status of women, the creation of jobs for women, etc. These measures have been supplemented by greater involvement of the wealthy nations in matters like infectious disease control, especially in malaria and HIV/AIDS, leading to reduced mortality. Personal incomes in many developing nations have increased; so has the gross domestic product of many countries. Yet economic development brings with it dramatic increases in rates of consumption: Diets consisting of more fats and meats (less efficient foodstuffs than grains), more extensive energy uses, more uses of consumer and industrial products that pollute or exhaust environmental resources. The specter here is sometimes pictured as more than a billion inhabitants of China (a fifth of the world's population), all having just one child, maybe two, but, like the inhabitants of the United States, all wanting refrigerators and automobiles. For "lean" developing countries, emulating Western economic models may also mean emulating "fat" Western domestic models as well, with low family size but huge uses of resources. Not only is economic development typically uneven in its benefits for individuals, but in the absence of other alterations in human behavior, it risks increasing, rather than decreasing, strains on the earth's carrying capacity. Thus economic development is hardly a panacea to population stabilization, and without other limitations offers a problematic and in many ways patently unjust solution to population problems.

The Malthusian Warning: An Issue of Justice

Part of what raises these issues of justice was voiced, though perhaps less noticed from an ethical point of view, by Thomas Malthus in his classic 1798 work on population. Malthus warned that human beings, like other species, may reproduce at a rate that outstrips the carrying capacity of the site they inhabit and so doom themselves to destruction. Malthus posited that the growth of the human population tends to be exponential, but their food resources are ultimately limited by the productive capacity of the

land. When a species exceeds the carrying capacity of its site, it “crashes” or dies back, either partially or completely. Widespread starvation, epidemics of disease exacerbated by the poor nutritional status of the population, pathological or aggressive behavior aggravated by overcrowding, and other factors lead to dramatic, involuntary population loss. “Die-backs” were to be expected, in Malthus’s view, the foreseeable consequence of humans’ inability to restrain themselves in matters of procreation.

Of course, Malthus lived in an era in which, although infant mortality was high and death rates in general high, people had few reliable methods of controlling procreation. There was abstinence and withdrawal; and while various forms of condoms had been used at much earlier times in history, the latex condom, the contraceptive pill, and safe methods of sterilization were yet to be developed. With these and other medical developments, however, it has become much more possible to control reproductive outcomes. Early population-control programs relied heavily on permanent sterilization, either male or female; newer family-planning programs have stressed reversible contraception, including condoms, oral contraceptives (the Pill), depot injectables (Depo-Provera and related forms), transdermal patches, intrauterine devices (IUDs), subdermal implants (Norplant and Implanon, its single-rod successor), and other forms of fertility regulation, using contraception both to delay the onset of childbearing and yield greater spacing between children as ways of decreasing total family size.

Thanks both to development and to family planning programs, population growth rates have declined substantially in many parts of the world. But slowed growth is still growth and, due to population momentum as large numbers of young people reach reproductive age, especially in the developing world, total global population is still increasing. Population projections for the year 2050 have ranged from the U.N. low of 7.78 billion (likely to be surpassed by the time this chapter is published), to the 2012 estimates of 9.4 billion (U.S. Census Bureau) or 9.6 billion (U.N. Population Division), to a high-variant estimate of almost 11 billion if fertility rates are just half a child higher per woman than the medium estimate. What is often overlooked is the narrowness of this margin: At just half a child higher per woman on average, population growth would continue to climb and keep climbing indefinitely until, presumably, either some form of global behavior change occurred or there were catastrophic die-backs.

Population Control and Its Critics

Religious Critics

Among religious groups, two have conspicuously opposed population limitation, Catholicism and Islam, though in somewhat different ways.

Drawing on earlier roots but articulated in response to the development of the Pill, Catholic teaching, which permits sex only within marriage, insists that the marital act must be both “unitive” and “procreative”—that every act of sexual activity must be open to the transmission of new life (Paul VI 1968). The use of all forms of “artificial” contraception is forbidden, as is sterilization. Catholics may licitly use only “natural family planning,” that is, only rhythm methods which rely on abstinence during the woman’s fertile period. The teaching in *Humanae Vitae* (it is a teaching, not doctrine, and is not articulated as infallible) has heavily influenced public policy in Latin America, the Philippines, and elsewhere, where family-planning programs, abortion, sterilization, and the distribution of contraception have been prohibited, underfunded, or in other ways

impeded by governments. In the U.S. and much of Western Europe it has been largely ignored: Catholic women practice contraception at about the same rate as non-Catholic women. Yet Catholic opposition to population control has played a major role in both international and domestic policy in two ways: It has at times influenced governments to discontinue funding for family-planning programs and has blocked contraceptive coverage by the insurers of employees at Catholic institutions at home; this has been said by many to be unjust. Nevertheless, Catholic teaching also directs attention to issues of unequal distribution of resources and disparate levels of development as a way of understanding how economic injustice can contribute to population pressures.

Islam has traditionally strongly emphasized the importance of procreation. It too has been concerned about the permissibility of “artificial” contraception, though it clearly accepts the Holy Prophet’s endorsement of *azl*, male withdrawal during intercourse. Some authorities allow modern contraception; some prohibit it; and some adopt a position of conditional acceptance, permitting it, for instance, only with the wife’s consent or if a diaphragm or IUD is fitted by a woman physician. Spermicides and oral contraceptives or other hormonal methods are considered permissible only if it can be shown that they do not harm the woman.

Both Catholicism and Islam are undergoing considerable evolution in response to population issues. Although Catholicism still prohibits all “artificial” contraception and sterilization, it places increasing emphasis on responsible planning of family size, especially through the use of the rhythm method of timed abstinence and contemporary fertility-awareness based methods. Some Islamic countries, like Iran, Tunisia, Turkey, Bangladesh, and Indonesia, have had very successful family-planning programs, with dramatic drops in average family size. Others, particularly in the Middle East, have begun to introduce family-planning programs that seek to introduce concepts of condom use and responsible family-size planning to men, rather than women, on the assumption that this is more in accord with basic Islamic religious teachings and with the realities of reproductive choice in male-dominated societies.

Feminist Critics

Meanwhile, feminist critics, among them Betsy Hartmann, have examined the nature and methods of programs designed to control population growth (Hartmann 1995 [1987]). Controlling population growth means controlling people, they have argued, and it means especially controlling women. Population programs have typically targeted “acceptors”—women who can be pressured into accepting contraception or sterilization—and have paid little or no attention to women’s subordinate situations in patriarchal societies, their precarious economic circumstances, their lack of education and familiarity with modern medicine, their compromised nutritional status, and their desperate need of other health care (Dixon-Mueller 1993; Women’s Global Network for Reproductive Rights, multiple newsletters). For instance, some programs encouraged the implantation of various kinds of long-acting contraceptives, especially the IUD and the subdermal implant, without regard to side effects and with no provisions for removal of the device should the woman experience side effects or wish to have a child: Once it was in, there was nowhere to go to get it removed. Contraceptive testing, feminist critics have also claimed (though this is not documented), sometimes lacked informed consent or used placebo controls (some women got dummy pills, risking a pregnancy they did

not want). Other contraceptive testing has been conducted, the feminist critique continues, with drugs whose long-term effects are not known, like the antifertility vaccines, or modalities easily abused, like quinacrine sterilization. Compounding the damage, feminists have argued, population-control programs seem to have committed a conceptual error as well: These programs appear to *blame* poor, uneducated women in the third world for unrestrained, “excess” fertility, as if problems of global population growth, including environmental degradation and immigration pressures on wealthy nations, were exclusively their fault.

Another target of continuing criticism has been China’s effectively imposed one-child policy, condemned by feminists and others for its policies of required contraception, forced abortion, and mandatory sterilization (Gu et al. 2007). In addition, in a cultural tradition with pronounced son preference, China has seen widespread selective sex-based abortion, concealment and abandonment of female children, and in some cases, female infanticide, all contributing to a stark imbalance in male:female gender ratios. Feminist critics of China’s policy have focused largely on individual abuses; supporters focus largely on apparent social consent and dramatic economic gains.

Cornucopian Critics

A third school of researchers, usually dubbed the cornucopians, has attempted to show that supposed limits on population growth are not well founded and hence that population control is not needed. Julian Simon was particularly vocal among this group, pointing out there is no agreement on the actual “carrying capacity” of the globe and insisting that human ingenuity can be counted upon to develop new food production techniques and new ways of exploiting and conserving resources (Simon 1981). It is sometimes also said that Malthus’s pessimistic predictions were wrong, since they were followed by the Green Revolution, a vast expansion of agricultural productivity increasing the carrying capacity of the earth.

Many cornucopian researchers have focused on specific areas such as agriculture, fisheries, fresh water, fuels, air quality, and so on to try to demonstrate that substantial increases in global population can still be accommodated. But, as critics point out, even if it were possible to produce food for 1,000 billion people, this does not mean that it is possible to dispose of the domestic and industrial wastes of 1,000 billion people and their engines; and even if there were adequate agricultural water supplies, there may not be sufficient resources for fertilizer. The Green Revolution has been a one-time event, critics point out, and cannot be counted on for indefinite expansion. Cornucopianism is limited by the weakest essential link.

Critiques of Population Programs Per Se

Although more than half a century has passed since the initial concern with global population arose in the 1960s with Paul Ehrlich’s talk of “population explosion,” and as public perceptions in the developed world to some degree shifted away from these issues, several further lines of criticism have emerged in very recent years. In one, a handful of contemporary critics are combining religious, feminist, cornucopian, and other concerns into a much more severe critique of population control. The claim is that the population-control movement itself over the past half-century was or has become both practically and morally problematic. For example, Matthew Connelly launches a “withering” critique of “a

humanitarian movement gone terribly awry” (Connelly 2008: back cover). Stephen Mosher identifies policies he takes to have been “wrong-headed” and counterproductive, saying that it is “too late to simply call off the dogs of population control” where fertility is below replacement; he argues that the “entire edifice of institutions, policies, and programs” which form the “population control juggernaut” should be scrapped, along with the “nasty theory” that there are “*too many people*” (Mosher 2008: 256–7; 3). The Christian Right is said to see international population policy as “a horror story of devastation and destruction visited upon women and the ‘natural family’” (Buss and Herman 2003: 63); the Christian Right movement has consistently opposed population-control programs.

The arguments of many of these critics share an underlying commitment to value-of-life and family-values principles, a mistrust of government and of targeted programs, and the view that population increase is necessary for economic growth; but they also exhibit a tendency to exaggeration, to fail to see issues of unwanted fertility and its particular impact on poor women, to confuse a decline in growth rates with an absolute decline in total population, and to fail to consider what would have happened to global population had family-planning programs not been instituted in the first place. They also fail to recognize what may be the consequences of politically motivated declines in foreign aid for family planning, which dropped precipitously from \$723 million in 1955 to \$442 million in 2004 before easing up again to \$648.5 million in 2010, and the implications that may have both for future fertility rates and for the precarious situation of women in severe economic or personal straits facing an unwanted pregnancy. These critics develop an almost paranoid view of “population controllers,” according to which they have over the past half century, as Mosher puts it, “perpetrated a gigantic, costly and inhumane fraud upon the human race, defrauding the people of the developing countries of their progeny and the people of the developed world of their pocketbooks” (Mosher 2008: ix).

At the same time, continuing a theme first developed by Zero Population Growth (founded by Paul Ehlich in 1968) and strengthened by Negative Population Growth (founded in 1972), those who are primarily concerned with the practical implications of increasing global population and consumption, both for social issues like immigration and aging but particularly for environmental sustainability, assert that the globe is already seriously overpopulated and that we must reduce the global numbers if it is to survive. Negative Population Growth (NPG) makes the case for fewer people, encouraging:

every country in the entire world, to put into effect national programs with the goals of first achieving a negative rate of population growth, then eventually stabilizing population size at a far lower level than today’s—a size that would be sustainable indefinitely in a sound and healthy environment.

(Grant 2006: iv)

Optimal Population Size: Fewer with More, or More with Less?

Dire predictions about overpopulation, unsustainable patterns of consumption, future generations, and the threat of die-back and crash presuppose a set of theoretical reflections concerning justice most vigorously pursued in philosophy by Derek Parfit (Parfit 1984), and in related versions in social-choice theory by Blackorby and collaborators (Blackorby et al. 2005). Although Parfit’s concern is presented in a philosophically sophisticated form, the question he poses is simple: Which is to be preferred, when speaking of populations, a situation which yields the highest average level of welfare, or

that which yields the greatest aggregate total of welfare? Put in another way, which is to be preferred, a situation in which there are fewer people though their quality of life is high, or one in which there is just as much happiness altogether, but more people with a lower quality of life? Such questions of course raise issues, like those framed by Amartya Sen and Martha Nussbaum (Sen 1992; Nussbaum 1999; Nussbaum and Glover 1995), about how human wellbeing should be measured and what factors “quality of life” assessments should consider, such as adequate nutrition and housing; freedom from exploitation, abuse, or grinding labor; adequate health, including reproductive health; personal autonomy and leisure; and whatever else contributes to human happiness and flourishing. But the central theoretical problem is about numbers: When we think about population size in general, should there be fewer people better off, or more people, but worse off? After all, the sum total of welfare or happiness in the world might be the same.

Translated into the context of the actual world, with wide gaps between rich nations and very rich population subgroups within them, and desperately poor nations with populations enduring chronic hunger or starvation, the problem might look like this: Is it better to have a world in which a small population lives as the global rich now do, with ample houses, automobiles, and the generous use of resources? Or, as a matter of justice, is it better to have more people, even if they must live at the subsistence levels of the global poor? Then, there could be many, many more people who have life, with just the same use of resources. Take any two people in absolute poverty: Would it be better if there were just one of them, poor, but not on the edge of starvation? Instead of any five in absolute poverty, one who was rich? Or instead of one comfortable, well nourished, well equipped person, three who are poor, but surviving? There is no easy answer to these questions, but they are central to issues of justice in population theory and policy.

In the eyes of Alan Weisman, a *global* one-child policy is our last, best hope for a future on earth—presumably a policy to be instituted *now*, and only relaxed as the global population declines enough and it is possible to stabilize the population at an acceptable level indefinitely. There would be procedural questions of justice about how a policy would be developed and enforced, whether it should be attentive to the special claims of population groups that had been the victims of genocide or natural disaster, and whether “credits” from women who did not want or could not have even one child could be “traded” to other women who wanted more. A global one-child policy—one child per woman—would be at least *prima facie* just when applied equally to the entire human population. It is, however, difficult to imagine how such a policy could realistically be imposed on a global scale anytime in the near future, so enormous would be the enforcement structures required and so great the limitations of reproductive freedom it would involve.

A Thought Experiment about a Solution to the Population Problem

I think there is at least a partial solution (Battin 1995, 1996, 1997). What if, instead of continuing reproductive patterns in which fertile individuals either accept pregnancy as the consequence of sexual intercourse, decide whether and how to practice contraception, or resort to abortion if unwanted pregnancy occurs, the default mode of human biology were such that conceiving or fathering a child required a *positive* decision, followed by deliberate action intended to allow pregnancy to occur? This shift already

occurs with long-acting reversible contraception, or LARC—like the IUD and the subdermal implant—which maintains a condition in which a woman is not open to pregnancy unless she has the contraceptive neutralized or removed.

Let us thus entertain a conjecture: What if *everybody*, both male and female, used long-acting, reversible, “automatic” contraception, LARC, such that sustaining or contributing to pregnancy required a positive choice, rather than a negative choice to prevent it? This conjecture is morally tolerable only with two essential guarantees: No-targeting universality, and no-questions-asked reversibility. The two principal technologies now available for women are not perfect, and such technologies are not yet available for men, though research on long-term contraception for men progresses in many countries, especially India and China (Turok 2007; Male Contraception Information Project, ongoing). We can nevertheless imagine the further development of safe, reliable, and reversible contraceptive technologies, free of substantial side effects, nuisance, or risks, for all reproductively fertile human beings.

This thought experiment is not advanced as a practical proposal, and it sidesteps the question of how it might come to be that way. If it were framed as a proposal, half the discussion would focus on how to get from here to there, and on what sorts of (repressive) measures would be required to make it be the case that everyone used “automatic” contraception. That’s not the interesting part. What’s interesting is the question of what it would be like *if* we were already there—if long-acting reversible contraceptive were simply routinely and uncontroversially used by everybody—except when they wanted to have a child. That’s the interesting question: What would the world be like?

This thought experiment poses a powerful challenge, eliciting a picture that seems far preferable to our current difficulties with unwanted and unintended fertility. If *everyone* routinely used automatic contraception, then all childbearing would require a simultaneous choice by both male and female to try to conceive a child. This would be to make family planning as fully voluntary as possible: Both parents must want the children they have, though they may have as many as they want. Nevertheless, since people will *accept having* more children than they would *choose to have*, reversing the default would give people of all backgrounds and educational and wealth levels everywhere in the world the freedom to make their own decisions about the size of their families—but it would still lower fertility. It would virtually eliminate all unintended or unwanted pregnancy—most teen pregnancy; most pregnancy following incest, rape, mass rape, and other sexual violence; most ill-timed pregnancy in serious maternal illness; and, of course, most call for abortion, even as it also reduced population growth rates. This change might not solve all population problems, and would not bring as dramatic a decline as Weisman’s hypothetical global one-child policy, but it would reduce greatly growth without infringing reproductive rights. After all, an estimated 40 percent of pregnancies worldwide are unintended, as are almost 50 percent in the U.S.

The alternative, it might be feared, would be some variant of China’s imposition of severe birth limits. Whether imposed birth ceilings in other countries would be as comparatively egalitarian as China’s originally were and whether they would involve as great a degree of apparent popular assent is hard to predict; but the likelihood is that stark population control policies could be enforced in far more biased ways in other countries if the perception of population “emergency” resurfaces. China’s policy has involved dramatic infringements of reproductive liberties in some cases; other nations, still more threatened by population pressures, might move to enforce population control—especially of disfavored minorities—in more ruthless ways.

The third alternative is no population control. It is potentially starker and more cruel since it risks widespread crash and die-back. The neo-Malthusian advocacy of population control is to some degree rejected by religious, feminist, and cornucopian thinkers, but the wholesale rejection of attention to population size at all may invite still worse consequences, though it often seems to be the direction in which we are headed.

At the same time, population “emergencies” in the other direction could also occur, whether sharply declining birthrates or major die-offs, including both slow processes like declining fertility due to environmental toxins and rapid catastrophes like high-mortality infectious-disease pandemics, or global nuclear or biological warfare. Population policy in many countries has emphasized permanent methods of fertility discontinuation—starting with India’s emphasis on vasectomies for men and many other countries’ reliance on tubal ligation or quinacrine cauterization for women. Voluntary sterilization has been the single most popular method in both the U.S. and the U.K. But these permanent methods are typically difficult and expensive to reverse, so they cannot be favored if it is uncertain whether population growth or population decline is the more serious risk.

Thus the universal use of long-acting *reversible* contraception, envisioned in this thought experiment, has a dramatic advantage in the contexts of both population growth and population decline: With it, childbearing rates can be expected to decline, but childbearing can also be resumed in the event not only of a personal tragedy like losing a child, but if some form of negative population emergency occurs. The thought-experiment presented here concerning long-acting, always-reversible, “automatic” contraception, in continuous use for both men and women except when they actively choose to have a child, can, I believe, go a long way toward showing us a route between two undesirable alternatives, uncontrolled population growth and catastrophic population decline, a route that can survive close ethical scrutiny in that it serves both essential objectives but at the same time protects individual reproductive rights.

Related Topics

- Chapter 10, “Moral Responsibility for Addressing Climate Change,” Madison Powers
 Chapter 26, “Conscientious Refusal and Access to Abortion and Contraception,” Carolyn McLeod and Chloë FitzGerald
 Chapter 28, “Regulating Reproduction: A Bioethical Approach,” Isabel Karpin

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