

# Doom and Demography

*Decades ago, many population statistics seemed to point toward global calamity. Today, the world's population is indeed much larger—but it is also much healthier, better educated, and richer. Therein lies a lesson in the use and misuse of numbers.*

BY NICHOLAS EBERSTADT

For decades, the world has been haunted by ominous and recurrent reports of impending demographic doom. In 1968, Paul Ehrlich's neo-Malthusian manifesto, *The Population Bomb*, predicted mass starvation in the 1970s and '80s. *The Limits to Growth*, published by the global think tank Club of Rome in 1972, portrayed a computer-model apocalypse of overpopulation. The demographic doom-saying in authoritative and influential circles has steadily continued: from the Carter administration's grim *Global 2000* study in 1980 to the 1992 vision of eco-disaster in Al Gore's *Earth in the Balance* to practically any recent publication or pronouncement by the United Nations Population Fund (UNFPA).

What is perhaps most remarkable about the incessant stream of dire—and consistently wrong—predictions of global demographic overshoot is the public's apparently insatiable demand for it. Unlike the villagers in the fable about the boy who cried wolf, educated American consumers always seem to have the time, the money, and the credulity to pay to hear one more time that we are just about to run out of everything, thanks to population growth. *The Population*

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*Bomb* and the Club of Rome's disaster tale both sold millions of copies. More recently, journalist Robert D. Kaplan created a stir by trumpeting "the coming anarchy" in a 2000 book of the same name, warning that a combination of demographic and environmental crises was creating world-threatening political maelstroms in a variety of developing countries. Why, of all people, do Americans—who fancy themselves the world's pragmatic problems-solvers—seem to betray a predilection for such obviously dramatic and unproved visions of the future?

Perhaps this American fascination is just a cultural foible—a penchant for a certain type of vicarious entertainment, no different in kind from, say, the famous British love of the murder mystery, and every bit as harmless. On the other hand, Miss Marple's British devotees did not actually believe that Britain was in the grip of a crime wave being stymied by little blue-haired ladies, whereas many Americans appear to take quite seriously each new warning about imminent and catastrophic fallout from a global population explosion.

But maybe the obsession has to do, rather, with America's hunger for—at times, near worship of—numbers. After all, the United States was a country of statistical pioneers. One of the very first acts of the newly formed U.S. government was a

national population count. Yet this fondness for figures can veer from the pragmatic to the preposterous. Pitirim A. Sorokin, the Russian émigré who became the first chairman of Harvard University's newly formed sociology department in the early 1930s, had a term for the problem. He called it "quantophrenia," a psychological compulsion to grasp for the numeric. Victims of quantophrenia, in Sorokin's wry diagnosis, obsess over numbers as descriptors, no matter how dubious their basis or questionable their provenance.

Perhaps we should chalk up America's fixation on Malthusian menace to the public's underdiscussed and still unacknowledged quantophrenia problem. Even in the land of the free, all numbers (and their interpretations) are *not* created equal. We can see this quite clearly if we reflect on the number-laden predictions about the purportedly devastating toll of the "population explosion" in the century that has just concluded.

**A**larmist assessments of the portending impact of the tremendous surge in humanity's numbers have been issued from all sorts of authoritative quarters: the United Nations, the World Bank, the U.S. Department of Agriculture, even the Central Intelligence Agency. Differing mainly in their presentation of details, the members of this grim chorus commonly asserted that the burgeoning number of mouths on the planet meant that more scarcity, poverty, and hunger were just around the corner—with the most severe suffering predicted for the rapidly reproducing Third World. In these predictions, in tandem with the ascending schedule of total human numbers, the human condition (at least in material terms) was always envisioned to decline. Food and everything else would become more dear, malnutrition more acute, desperate poverty more difficult to escape.

Yet these data-brandishing studies not only got their own numerical projections wrong, they even missed the basic direction of change. Troubled as the world may be today, it is incontestably *less* poor, *less* unhealthy, and *less* hungry than it was 30 years ago. And this *positive* association between world population growth and material advance goes back at least as far as the beginning of the 20th century.

Let us consider—or rather, reconsider—what took place in the 20th century's "population explosion." The basic story is well known. A precise count is impossible, but between 1900 and 2000 human numbers almost quadrupled, from around 1.6 billion to more than six billion; in pace or mag-

nitude, nothing like that surge had ever occurred. But why exactly did we experience a world population explosion in the 20th century?

It was not because people suddenly started breeding like rabbits—rather, it was because they finally stopped dying like flies. Between 1900 and the end of the 20th century, the human life span likely doubled, from a planetary life expectancy at birth of perhaps 30 years to one of more than 60. By this measure, the overwhelming preponderance of the health progress in all of human history took place during the past 100 years.

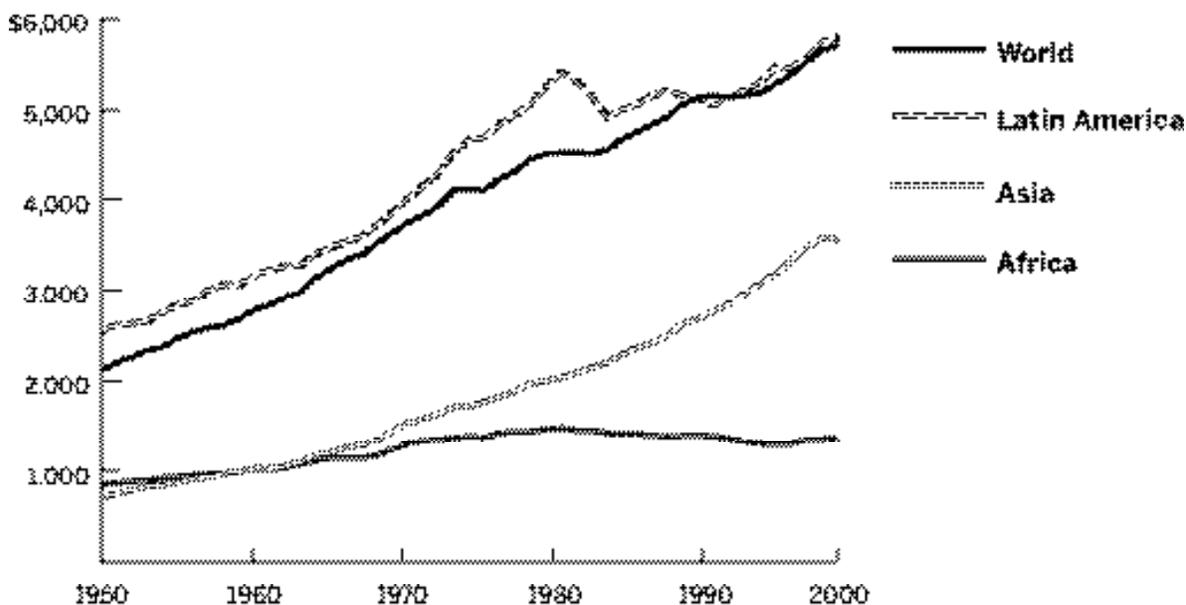
Over the past half-century, the reduction of death rates worldwide was especially dramatic. Between the early 1950s and the first half of the current decade, according to estimates by the United Nations Population Division (UNPD—not to be confused with UNFPA), the planetary expectation of life at birth jumped by almost 19 years, or about two-fifths, from under 47 years to more than 65 years. For the low-income regions, the leap was even more dramatic. Average life expectancy in these areas, taken together, surged upward by well over two decades, a rise of more than 50 percent. Even troubled sub-Saharan Africa—despite its protracted post-independence political and economic turmoil and the advent of a catastrophic HIV/AIDS epidemic—is thought to have enjoyed an increase in local life expectancy of more than one-fifth. (Practically the only countries to register no appreciable improvements in life expectancy over this period were the handful of "European" territories within what was once the Soviet Union; in the Russian Federation in particular, gains over these four and a half decades were almost negligible.)

Among the most important proximate reasons for the global stride forward in life expectancy was the worldwide drop in infant mortality rates. In the early 1950s, again according to UNPD estimates, 156 out of every 1,000 children born around the world did not survive their first year; by the beginning of the 21st century, that toll was down to 57 per 1,000. In "developed" countries, the infant mortality rate is thought to have fallen by more than 85 percent during those same decades, and by nearly 70 percent in the collectivity of "developing" countries. Even in troubled regions, great advances in infant survival were achieved. In sub-Saharan Africa, for example, the infant mortality rate is thought to have declined by nearly half, and Russia's infant mortality rate probably fell by more than 80 percent.

This worldwide drop in mortality literally transformed the life chances of the human species. So profound are these

## The Prosperity Explosion

(GDP per capita, in 1990 dollars)



Source: Angus Maddison, *The World Economy: A Millennial Perspective* (2001)

During the 20th century, especially its second half, the world's population surged but its wealth grew even more rapidly, as reflected in data on gross domestic product (GDP) per capita. One reason for the prosperity explosion: Population grew chiefly because people were becoming healthier, and thus more productive.

changes that life expectancy and infant mortality rates in the Third World today now approximate the levels prevailing in the rich countries shortly after World War II. The plunge in worldwide mortality, furthermore, is entirely responsible for the increase in human numbers over the course of the 20th century. This is a simple arithmetic fact. The "population explosion," in other words, was really a "health explosion."

The implications of a health explosion—of *any* health explosion—for economic development and poverty alleviation are, on their face, hardly negative. Healthier people are able to learn better, work harder, engage in gainful employment longer, and contribute more to economic activity than their unhealthy, short-lived counterparts. Whether that potential translates into tangible economic results naturally depends on other factors, such as social and legal institutions, or the business and policy climate. Nevertheless, the health explosion that propelled the 20th century's population explosion was an economically auspicious phenomenon rather than a troubling trend.

All other things being equal, the health explosion could be expected to contribute to the acceleration of economic growth, the increase of incomes, and the spread of wealth.

And, as it happens, the 20th century witnessed not only a population explosion and a health explosion, but also a "prosperity explosion." Estimates by the economic historian Angus Maddison, who has produced perhaps the most authoritative reconstruction of long-term global economic trends currently available, demonstrate just that.

Between 1900 and 2001, by Maddison's reckoning, global gross domestic product (GDP) per capita (in internationally adjusted 1990 dollars) nearly quintupled. Gains in productivity were globally uneven: In both relative and absolute terms, the developed nations enjoyed disproportionate improvements. Nonetheless, every region of the planet became richer. Africa's economic performance, according to Maddison, was the most dismal of any major global region over the course of the 20th century; yet even there, per capita GDP looks to have been roughly three times higher in 2001 than it was in 1900.

Suffice it to say that the 20th century's population explosion did not forestall the most dramatic and widespread improvement in output, incomes, and living standards that humanity has ever experienced. Though severe poverty persists in much of the world, its incidence has been markedly



Once seen as a catastrophe in the making because of its rapid population growth, India is now a rising Asian power and a rival to China. While population is still growing, political and economic changes have made entrepreneurs such as Sabeer Bhatia, one of the creators of Microsoft's Hotmail, the emblems of a new India.

curtailed over the past 100 years.

Maddison's estimates of global economic growth highlight another fundamental problem with the entire "overpopulationist" family of predictions about the future. With a near quadrupling of the human population in the 20th century, and a virtual quintupling in planetary GDP per capita over those same years, global economic output took a gargantuan leap. Maddison's own figures suggest that world GDP might have been more than 18 times higher in 2001 than it was in 1900. But GDP is a measure of economic output—and for the world as a whole, economic output and economic demand must be identical. If the demand for goods and services multiplied nearly twentyfold during the 20th century, humanity's demand for, and consumption of, natural resources must also have skyrocketed. Yet the relative prices of virtually all primary commodities *fell* over the course of the 20th century—in many cases, quite substantially.

Despite the tremendous expansion of the international grain trade over the past century, for example, the inflation-adjusted, dollar-denominated international price of each of the major cereals—corn, wheat, and rice—fell by more than

70 percent between 1900 and 1998. By the same token, *The Economist* magazine's industrials price index—a weighted composite for 14 internationally traded metals and non-food agricultural commodities—registered a decline, in inflation-adjusted dollars, of almost 80 percent between 1900 and 1999.

This 20th-century paradox—exploding demand for resources paralleled by pronounced declines in real resource prices—must not only be recognized as a basic phenomenon defining life in that era, but understood for what it tells us about how our modern world system actually works. After all, price data are meant to convey information about scarcity. These data would seem to indicate that the resources that humanity makes economic use of grew *less scarce* over the course of the 20th century.

There are explanations for this remarkable paradox. They are to be found, among other places, in the "knowledge explosion" that has helped to recast the operation of both business and society over the past century. Such explanations, however, are outside the "zero-sum" framework in which the "death by population" mindset is trapped. Indeed, in the worldview of

demographic doomsayers, the 20th century should never have occurred at all.

As we begin a new century, we can be fairly confident that we will hear plenty of new predictions about the coming “world population problem.” By some mysterious law of public discourse, “population” is *always* a “problem.” But just what kind of problem, this time? Though they are numerical products generated by precise and elegant mathematical techniques, long-term population forecasts have always at heart been a guessing game. The central uncertainty in such projections is not death rates—within normal peacetime limits, these can be predicted fairly well. (That, after all, is why life insurance companies can stay in business.) Rather, the problem is that science lacks any reliable method for anticipating future childbearing patterns—and birthrates happen to drive population change. Neither the postwar “baby boom” in rich countries nor these countries’ subsequent and continuing “baby bust” was accurately anticipated by demographers, and there is little reason to expect the profession’s prescience to be any better for other parts of the world, or in the years immediately ahead.

At this juncture, it may well be that more than half of the world’s population lives in countries with “sub-replacement” fertility—that is to say, places where current childbearing patterns, if continued indefinitely without migration, would lead ultimately to population decline. Some of today’s largest developed nations are expected to see population declines during the next 30 years, ranging from four percent in Germany to 12 percent in Japan (and even higher in Russia). But the great majority of current sub-replacement populations are in Third World states. Since desired family size is the single best predictor of a society’s fertility (at least in countries without involuntary population-control programs), this also means that a growing number of poor people the world over are *choosing* to have small families.

The degree to which sub-replacement fertility has become the norm today in low-income areas may still surprise the unprepared reader. According to national or international estimates, virtually all of East Asia is sub-replacement now,

and most of South America. So, too, are impoverished Vietnam and Myanmar (Burma). In India, incredible as it may seem, Calcutta, Mumbai (Bombay), and New Delhi (a visit to which city initially prompted a shocked Paul Ehrlich to write *The Population Bomb*) are all areas where child-bearing rates are below replacement levels. And in the Islamic expanse, sub-replacement fertility already prevails in such places as Algeria, Tunisia, Lebanon, and Iran.

How low can fertility rates go? We simply don’t know. Hong Kong, Macau, and Singapore all have birth patterns today that, if sustained, would imply barely one child per woman per lifetime. In northern Italy and other parts of Europe, fertility levels consonant with less than one child per woman are now evident. Some sociobiological theorists confidently assert that there is a lower limit to human fertility—that a majority of women will want to nurture and raise at least one offspring. But even if correct, that formulation would leave open the possibility of a world with an average of just over one half of one birth per woman per lifetime. On that schedule—bar-

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ring the manufacture of human beings—the global population would decline by nearly 75 percent each successive generation.

To be sure, unless we suffer a cataclysm of the sort dear to the global predictions market, world population is set to increase for some time to come. But the era of the “population explosion” is clearly over. As best we can tell, world population growth rates peaked in the late 1960s and are barely half as high now. The inexorable corollary to sub-replacement fertility is population graying and, absent immigration, population decline. Get ready to read lots more about them.

Aren’t you glad to know that another “population crisis”—endangering our prosperity and the future of the globe—looms just around the corner? ■