Earth's population is approaching seven billion at the same time that resource limits and environmental degradation are becoming more apparent every day. Rich nations have long assured poor nations that they, too, would one day be rich and that their rates of population growth would decline, but it is no longer clear that this will occur for most of today's poor nations. Resource scarcities, especially oil, are likely to limit future economic growth; the demographic transition that has accompanied economic growth in the past may not be possible for many nations today. Nearly 220,000 people are added to the planet every day, further compounding most resource and environmental problems. The United States adds another person every eleven seconds. We can no longer wait for increasing wealth to bring down fertility in remaining high fertility nations; we need policies and incentives to stop growth now.

Much has been written about population growth since the first edition of Malthus's famous essay was published in 1798. However, an underlying truth is usually left unsaid: Population growth on Earth must cease. It makes more sense for humans to bring growth to a halt by adjusting birth rates downward in humane ways rather than waiting for death rates to move upward as the four horsemen reappear. Those who think it inhumane to control human fertility have apparently never experienced conditions in Third World shanty towns, where people struggle just to stay alive for another day.

In 1970 Norman Borlaug won the Nobel Peace Prize for his work on developing new plant strains that formed the basis for the Green Revolution that began in the 1960s. However, in his Nobel acceptance speech Borlaug perceptively commented that "There can be no permanent progress in the battle against hunger until the agencies that fight for increased food production and those that fight for population control unite in a common effort. Fighting alone, they may win temporary skirmishes, but united they can win a decisive and lasting victory to provide food and other amenities of a progressive civilization for the benefit of all mankind." That was four decades ago. During that time the world's population increased by more than three billion and the struggle to feed, clothe, house, and educate ever-growing numbers of people continues. "Temporary skirmishes" seem persistent, if not permanent.

Writers sometimes confuse population issues. For example, in his post, The Population Bomb: Has It Been Defused?, Fred Pearce wrote that "The population bomb is being defused at a quite remarkable rate." He conflates rates of growth with actual numbers. It is true that the rate of population growth worldwide has declined since 1970. However, the base population has grown...
by more than three billion; thus we currently add 80 million or more people to the planet each year. That is hardly "defusing" population growth!

Writers may sometimes have short memories when they write about population growth. Fred Pearce's post at "Consumption Dwarfs Population as Main Environmental Threat," is one example. George Monbiot's post on "The Population Myth," is another. Both authors seem to have discovered that our rate of consumption is an issue, so both play down population numbers and focus on our consumption habits. Neither mentions the work of Paul Ehrlich and his I = PAT equation, where I represents our impact on the Earth, P equals population, A equals affluence (hence consumption), and T stands for technology.

Both population and consumption are parts of the problem--neither can be ignored and both are exacerbating the human impact on Earth. More distressing, however, is that many among us don't even see that there are problems created by both growing populations and increasing affluence bearing down on a finite planet. To pretend that another 80 million people added to the planet each year is not a problem because they are all being added to the world's poor nations makes no sense at all. Many of them will end up in rich nations by migrating, legally or illegally, and all will further compound environmental problems, from strains on oil and other fossil fuel resources to deforestation and higher emissions of CO2 and other greenhouse gases. As Kenneth Boulding noted decades ago, "Anyone who believes that exponential growth can go on forever in a finite world is either a madman or an economist."

Population, consumption, and greenhouse gas emissions will continue to grow until we either face up to the fact that there are limits on our finite Earth or we are confronted by a catastrophe large enough to turn us from our current course. If Chinese, Indians, and others in the poorer world had consumption levels that rose to current western levels it would be like Earth's population suddenly increasing to 72 billion, according to Jared Diamond, who then wrote that, "Some optimists claim that we could support a world with nine billion people. But I haven't met anyone crazy enough to claim that we could support 72 billion. Yet we often promise developing countries that if they will only adopt good policies--for example, institute honest government and a free-market economy--they, too, will be able to enjoy a first-world lifestyle. This promise is impossible, a cruel hoax: we are having difficulty supporting a first-world lifestyle even now for only one billion people."

This promise is often made by people who believe that that alone will stop population growth via the demographic transition, conveniently forgetting about such exceptions as China. As Tom Athanasiou argued, in Divided Planet: The Ecology of Rich and Poor, "In a world torn between affluence and poverty, the crackpot realists tell the poor, who must live from day to day, that all will be well in the long run. Amidst deepening ecological crisis, they rush to embrace small, cosmetic adaptations."

The widespread acceptance and political influence of modern neoclassical economics is a central part of our global problem. In one widely used economics textbook, Principles of Economics, Greg Mankiw wrote that “A large population means more workers to produce goods and services. At the same time, it means more people to consume those goods and services.” Speaking for many neoclassical economists, Tim Harford concluded, in The Logic of Life, that “The more of us there are in the world, living our logical lives, the better our chances of seeing out the next million years.” The absurdity of Harford's statement must be recognized and challenged.

Economists do not deserve all the blame. As Thomas Berry noted, in The Great Work: Our Way.
"Into the Future," "Western civilization, dominated by a cultural arrogance, could not accept the fact that the human, as every species, is bound by limits in relation to the other members of the Earth community." On his Archdruid blog, John Greer added his observation that "Our culture's mythology of progress envisions the goal of civilization as a utopian state in which poverty, illness, death, and every other aspect of the human predicament has been converted into problems and solved by technology." We don't want to hear about limits.

Nowhere is acceptance of the twin towers of economic growth and increased consumption more apparent than in the United States, where "growing the economy" is still paramount, despite the leftovers of a financial meltdown created by banking and shadow banking systems run amok and a Gulf fouled by gushing oil. As Andrew Bacevich noted, in *The Limits of Power: The End of American Exceptionalism*, "For the majority of contemporary Americans, the essence of life, liberty, and the pursuit of happiness centers on a relentless personal quest to acquire, to consume, to indulge, and to shed whatever constraints might interfere with those endeavors." Yet evidence that modern economics has let most people down is abundant.

More than two decades ago Edward Abbey wrote, in *One Life at a Time, Please*, that "[W]e can see that the religion of endless growth--like any religion based on blind faith rather than reason--is a kind of mania, a form of lunacy, indeed a disease," adding that "Growth for the sake of growth is the ideology of the cancer cell." He expressed his concern about modern economics as follows: "Economics, no matter how econometric it pretends to be, resembles meteorology more than mathematics. A cloudy science of swirling vapors, signifying nothing." Similarly, Nassim Taleb wrote, in *The Black Swan: The Impact of the Highly Improbable*, that "Economics is the most insular of fields; it is the one that quotes least from outside itself!" Gus Speth argued, in *The Bridge at the End of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability*, that "In the end, what has to be modified is the open-ended commitment to aggregate economic growth--growth that is consuming environmental and social capital, both in short supply." Barbara Ehrenreich wrote, in *This Land is Their Land: Reports from a Divided Nation*, that "The economists' odd fixation on growth as a measure of economic well-being puts them in a parallel universe of their own...the mantra of growth has deceived us for far too long." Whether in local areas, the United States, or the world, no problem that I can think of will be more easily solved with additional millions of people.

Future oil production will come at an increasing cost, if it comes at all. As Bill McKibbin noted, in *Deep Economy: The Wealth of Communities and the Durable Future*, "Cheap and abundant fossil fuel [mainly oil] has shaped the farming system we've come to think of as normal; it's the main reason you can go to the store and get anything you want at any time and for not much money." More expensive oil will eat into world food production, especially if we continue to use foodstuffs to help fill gas tanks.

Scientists need to encourage a deeper and more realistic interest in population growth on a finite planet and its effect on many of the major issues of our time. We ignore the implications of further population growth at our peril. In 1971 Wilbur Zelinsky, in an article entitled "Beyond the Exponentials; The Role of Geography in the Great Transition," fretted that "The problem that shakes our confidence in the perpetuation and enrichment of civilized human existence or even our biological survival is that of growth: the rate, volume, and kinds of growth, and whether they can be controlled in intelligent, purposeful fashion."

Continued population growth is unsustainable, as is continued growth in the production of oil and other fossil fuels. As Lester Brown argued, in *PLAN B: Rescuing a Planet Under Stress and a*
Civilization in Trouble, "If we cannot stabilize population and if we cannot stabilize climate, there is not an ecosystem on earth we can save." As Alan Weisman wrote, in The World Without Us, “The intelligent solution [to the problem of population growth] would require the courage and the wisdom to put our knowledge to the test. It would henceforth limit every human female on Earth capable of bearing children to one.” Started now, such a policy would reduce Earth’s population down to around 1.6 billion by 2100, about the same as the world population in 1900. Had we kept Earth’s population at that level we would not be having this conversation.

**Discussion Questions**

1. Are there things we can do to get the population issue more into public discussion?

2. Are there other approaches to limiting population that might be more salable?

3. If Social Security is not sustainable, having fewer children will increase the likelihood that older adults will have no way of taking care of themselves. How does one deal with this issue?

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