

Pollyannas of Population Growth: Fooled by the Culture Gap

Casting doubt on the seriousness of climate disruption is now a major front in the Republican war on science. It is grounded in an ideology that opposes regulation of industries that might limit the growth of profits, even if society adopts regulations in order to avert possible future disasters. Those who try to mislead the public about the science of climate change are financed in large part by the fossil fuel industry and supported by propaganda from a fleet of conservative think tanks. The anti-regulation ideology has been promulgated by a shameless group of pundits, some of whose careers trace back to being flacks for the tobacco industry, trying to persuade the public that evidence of smoking being harmful was “equivocal”.

But there is another equally serious assault on science and humanity—the systematic claiming that population growth is either beneficial or at least not seriously harmful.

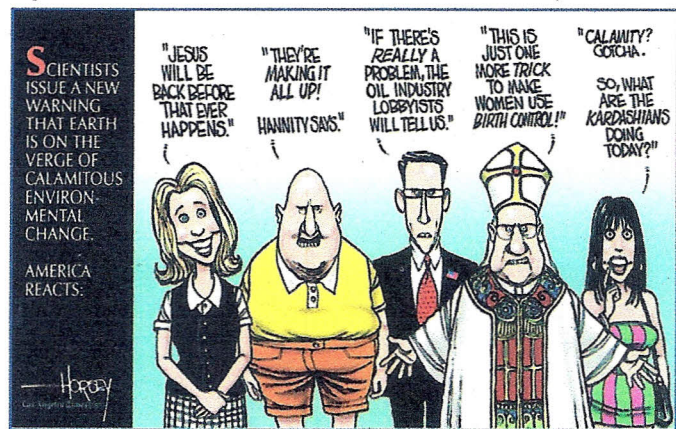
There is a major difference between the two assaults, however, in that those who think the population can and should grow forever are not united by greed or even ideology, but by a lack of understanding of basic science.

Roman Catholic bishops fight contraception (and abortion) to protect their ideological base—to do otherwise would be to lose more power by admitting the Protestants were right all along. In so doing, their main damage has been to cripple U.S. government efforts to spread family planning overseas by misleading and intimidating politicians of other persuasions. Their actions have tragically condemned millions of women to injury and death in unsafe abortions and helped to perpetuate poverty in developing nations. If the bishops understood human sexuality and the unrecognized perfect storm of problems civilization now faces, one would hope that if they were moral men they would quickly see through the Church’s antique and immoral notions and desert from the trenches of its war on women. It is noteworthy that Catholic laypeople generally use contraception and abortion at about the same level as non-Catholics in the same nations. Indeed, mainly Catholic nations in Europe are among those with the lowest birth rates on the planet.

Moreover, many of those unfazed by the population explosion are not Catholic, including multitudes of businessmen and economists who imagine that ever-increasing numbers of people are

necessary for economic prosperity (yes, greed is one element along with doctrine!).

To a large extent, refusal to recognize that continued population growth is a serious threat to the future of civilization can be blamed on the failure of educational systems to bridge key parts of the culture gap, the growing chasm between what we each know as individuals and all of the knowledge society possesses corporately. That gap leaves many well-educated people ignorant of today’s crucial environmental problems.



What do people need to know to build the necessary bridges? First, population growth is one of three major drivers of the deterioration of human life-support systems. This is hardly rocket science; the pressures that a population places on the environment are a product of the number of people, multiplied by average per-capita consumption, multiplied in turn by how efficiently that consumption is serviced.

Thus the amount of greenhouse gases that flow into the environment from energy use are a product of how many people there are, multiplied by the average energy use per person, in turn times a “technology” factor that measures the greenhouse gas yield of the energy-mobilizing system used (solar vs. coal or oil, carbon captured or not, Hummer vs. Prius, commuting by car vs. mass transit, etc.).

People need to know that it's all tied together: the more people there are, the more food society needs, and the agricultural system is a major emitter of greenhouse gases from fossil fuel use, land use practices, livestock production, and other factors. Thus agriculture is a contributor to climate

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change, which in turn is a serious threat to food production. With temperature and precipitation patterns now committed to more than a millennium of change, including increasingly severe storms, droughts and floods, maintaining—let alone expanding—food production will be ever more difficult. Agriculture itself is a leading cause of losses of biodiversity and the critical ecosystem services that biodiversity supplies to agriculture and other human enterprises. Indeed, the human-caused hemorrhage of life-forms now underway, the Sixth Great Extinction event in Earth's 4.6 billion-year-long history, is likely to be accelerated by climate change and is itself a deadly danger to civilization.

Misunderstanding of how demographic and environmental connections interact is common even among people who are interested in population problems. For instance, environmental reporter Fred Pearce is convinced that overconsumption is a much larger contributor to environmental deterioration than overpopulation. This is roughly like being convinced that the length of a rectangle is a much larger contributor to its area than its width.

History has shown that rapid population growth in most circumstances prevents the successful “development” of societies and retards increasing per-capita consumption. What typically happens is that a nation's population grows rapidly for a period, followed by a period of slackening population growth and rising growth of per capita consumption. The fact that rapid growth of population and consumption do not occur simultaneously is small consolation, since the end result is a gigantic amount of consumption and the destruction of our life-support systems.

China is the most obvious recent example of this as its *previously* skyrocketing population growth combined with its *current* skyrocketing growth in per capita consumption make it a champion in wrecking the environment on local, regional, and global levels. Yet, China's population growth is slated to end and even reverse by mid-century. India, on the other hand, is projected to add almost 500 million people by then and seems bent on following the super-consumption path. Similarly, an additional 100 million Americans by 2050 will enormously add to the already huge U.S. assault on human life-support systems.

By contrast, consider the situation in sub-

Saharan Africa where more than 1.1 *billion* people are expected to be added to the present 900 million by 2050, more than doubling the population. As Africans struggle to increase their inadequate levels of consumption, they will greatly increase the damage to the natural capital and ecosystems they utterly depend upon.

This entire situation is made worse by “non-linearities” in the population-consumption growth picture. Being clever, human beings use the easiest, most accessible resources first. This means that the richest farmland was plowed first and the richest ores mined first. Now each additional person must be fed from more marginal land and use metals won from poorer ores. Thus, on average, each person added to the population disproportionately increases the destruction of environmental systems.



The other oil spill - from intensive agriculture using petroleum-based fertilizer. Rosario, Argentina. Photo by F. A. Fernandez/Flickr/©creative commons

The non-linearities involved in resource extraction were dramatically underlined by the 2010 BP Deepwater Horizon blowout disaster in the Gulf of Mexico. The first commercial oil well in the United States was drilled in Pennsylvania in 1859. It started at the ground surface and struck oil at 69.5 feet. The Deepwater Horizon drill rig, 150 years later, started a well for BP in the Macondo concession in the Gulf of Mexico. Drilling began under almost a mile of water and had penetrated almost three miles below the sea floor when the explosion occurred. The difference between the Pennsylvania and Gulf wells is just one sign of the diminishing returns that Joseph Tainter suggested is one of the

main harbingers of societal collapse. Such diminishing returns are now evident everywhere, affecting the resources civilization needs to persist.

In addition, as the population grows, efforts to keep people supplied with consumer goods release more toxic compounds into the global environment. The toxification of Earth may be an even more dangerous trend than climate disruption or the extinction crisis.

People also should understand that population size is a major factor in the deterioration of the human epidemiological environment. The larger the human population (and the more hungry and thus immune-compromised people there are), the greater the chance of vast epidemics. And as people struggle for resources in a deteriorating environment, the odds of a nuclear resource war increase, although even a “small” one between India and Pakistan would likely end civilization.

Many people think that the population can be kept growing by improving the “technology” factor (which includes socio-political issues of how consumption is supported and allocated). There is, of course, much room for improvement in both efficiency and equity. For instance, largely abandoning personal vehicles for commuting, and manipulating the economic system to reduce inequities (especially in food distribution) could greatly improve the human prospect. But the history of claims that technological innovation will save us is instructive. When *The Population Bomb* was published, the global population was 3.5 billion people, and we were assured that technological innovation would allow society to give rich, fulfilling lives to 5 billion or more people. They would be fed by algae grown on sewage, whales herded in atolls, leaf protein, or the production from nuclear agro-industrial complexes.

That, of course, never happened. The population now exceeds 7 billion, and the number of hungry and malnourished people today is roughly equivalent to Earth’s entire human population when we were born in the 1930s. As we did after *The Bomb*, we challenge the population growth enthusiasts to arrange for proper care for all extant human beings before providing more estimates of how easy it will be to feed, house, educate, and provide health services to billions more.

How do those demographic growth enthusiasts view the catastrophic expansion of human numbers? With the culture gap wide open, they celebrated the U.S. population rocketing through

300 million people—well over double the number that could provide a safe and secure nation. They bragged about the global human population size passing through 7 billion, even though careful analysis estimated this to be about 50% more people than could be supported permanently, even with today’s level of misery for billions, and 7 billion people would require several more Earths if everyone were to live like citizens of industrial nations now live. (see <http://www.footprintnetwork.org>) .

David Brooks, generally viewed as one of the more thoughtful conservative pundits and holder of a degree in history from the University of Chicago, could be a poster boy for the culture gap. He recently published a column on “the fertility implosion”, joining a number of clueless European politicians, demographers, and pundits worried about a trend that could lead in a salutary population direction. They fear the aging of the population that inevitably occurs when population growth ends. All of Brooks’ arguments have long been exposed as spherically senseless—uninformed from every viewpoint. But all one really needs to appreciate the silliness of fearing an aging population is realizing that the only way to avoid it is to keep the population growing *forever*.

Of course, not only conservatives are relaxed about continuing population growth. Many liberals also suffer from the culture gap separating them from the realities of the world. Betsy Hartmann, a professor at Hampshire College and director of its population and development program, has many valid concerns about racism and the treatment of women in connection with population issues. But her writings also clearly show that nothing in her education has allowed her to bridge the culture gap. She has degrees in Asian and development studies, disciplines traditionally isolated from the basics of the constraints of nature. Brooks and Hartmann share their ignorance of how the world works with the majority of “educated” people, a problem partly traceable to the educational failure of environmental science. But one might expect them to learn a little before publishing misinformation.

This is not to say that there are no hopeful signs and programs. We have strong evidence that giving women *real* equal rights and opportunities everywhere (they have them nowhere yet), and giving every sexually active person access to modern contraception and back-up abortion, would mostly

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solve the problem of fast population growth and perhaps even set human numbers into the needed global pattern of gradual decline. We know that consumption patterns can be changed virtually overnight when urgency requires it and the political will exists. There are many hopeful small-scale efforts to deal with important parts of the human predicament: efforts to protect biodiversity and ecosystem services, deploy renewable energy systems, and work to unite academics and civil society in developing the necessary foresight intelligence, as in the Millennium Alliance for Humanity and the Biosphere (MAHB – <http://mahb.stanford.edu>). Grassroots efforts such as Occupy Wall Street (<http://occupywallst.org>), the Movement to Solve the Climate Crisis (www.350.org), and many other civil society groups are gaining some traction.

Happily, there are now efforts to counter the utter and complete failure of the media and the political system to deal with the perfect storm of environmental problems facing humanity. Perhaps the bravest of these is embodied in the movie

“GrowthBusters” (www.growthbusters.org), which actually had the nerve to point out that the emperor is indeed stark, staring naked—that physical growth of the economy is the disease, not the cure. But all of these are still too fragmentary and small-scale to get the job done; paradoxically they need to grow exponentially if the human enterprise as a whole is to undergo the necessary careful and humane shrinkage. More steps like GrowthBusters must be taken to close the culture gap in every society.

*Paul Ehrlich is an entomologist and the Bing Professor of Population Studies in the department of Biological Sciences at Stanford University. Anne Ehrlich is the associate director and policy coordinator of the Center for Conservation Biology at Stanford University. Together they have written numerous books on population and resource issues. Perhaps the most famous is *The Population Bomb* (1968). Source: This article was originally posted at <http://www.GrowthBusters.org/> If you are concerned about the prospects for a ‘growth-forever’ civilization please consider taking the “Think Small” pledge at <<http://www.change.org/petitions/pledge-to-think-small>> Reprinted with permission.*

