

Malthus and the Twenty-first Century

Rightly understood, he was right after all

by Virginia Deane Abernethy

Malthus knew that no population explosion would last. And he knew why. Checks, both positive and preventive (to use Malthus' terms), assure that population size and growth rates do not long exceed the carrying capacity of the environment.

Human ingenuity and social arrangements may expand the carrying capacity, but limits to expansion are bound to exist on a finite planet in a finite solar system and universe. More than that, population size sometimes outruns the inventiveness of humans; therefore, pockets of humans find themselves living under conditions which even the crassest cornucopian would likely describe as "over-populated." A threat that many populations, globally, could find themselves in this state simultaneously cannot be ruled out. Can one take comfort in knowing that the condition would be "temporary," on the scale, say, of 40 or 50 years?

The adjustments might include rising mortality from the rebound of infectious diseases, new diseases emerging as organisms jump the species barrier where large human populations live in close proximity to other species, limited clean water in some densely populated areas, worsening malnutrition, and political upheavals. In parts of Africa and other countries severely afflicted with the HIV/AIDS epidemic, AIDS is expected to slow growth enough to stabilize the population by about 2020. In Southeast Asia, especially Thailand, the growth rate may turn rapidly into negative territory.

A difference between the two regions is the

fertility rate, the number of children that the average woman is expected to have over her lifetime. In parts of Africa this rate is still very high (over four children per woman) whereas in Thailand the fertility rate is under two, that is, less than the replacement rate even if mortality were not rising. A fertility rate in the neighborhood of 2.1 is commonly referred to as *replacement level fertility*. The population stabilizes after about 70 years of replacement level fertility, assuming no confounding influences such as emigration or immigration, or change in mortality rates.

The difference in regional fertility rates suggests a stronger operation of *preventive checks* in Thailand. Whereas rising mortality rates are *positive checks*, Malthus attributed a decline in the fertility rate to *preventive checks*. These operate when people fear a decline in their standard of living and therefore exercise reproductive caution.

Malthus also realized that the fertility rate could rise if people believed that their means of subsistence was increasing. The optimism caused by food and housing subsidies, the redistribution of wealth, decades of international assistance with development, and other interventions are likely causes of the world population explosion, amplifying the effects of better medicine and public health.

For decades, not only the numbers added each year but also the world population's *rate of increase* was rising rapidly. That much can be inferred from the compression of doubling time: 100 years to go from 1 to 2 billion; and about 45 years to go from 2 to 4 billion. *Doubling* times are going to lengthen because the *growth rate* began to decline in the late 1970s.

Nevertheless, the fifth billion was reached in 1987, in 13 years; and the sixth probably in 1998, after just 11 – this is the effect of population momentum caused by the large number of women just entering their reproductive period. But the next

Virginia Deane Abernethy, Ph.D., an anthropologist, teaches in the Department of Psychiatry at the Vanderbilt University Medical School and edits the journal Population and Environment.

billion should take longer because the fertility rate is declining and the mortality rate may be rising, despite the very young average age of the world's population.

Decline in a rate does not necessarily mean decline in the absolute numbers. In the case of world population, 80 to 90 million more people are born than die each year, an increment that has been about constant for nearly a decade. The population will not stabilize until the *number* added each year — births minus deaths — is *zero*.

In fact, the population will not decline until fewer are born than die each year; this is a *negative* annual growth rate. Russia may have had a few years of negative growth in the mid-nineteen nineties. So far, no other region of the world exhibits "negative" growth. Nor should one wish on anyone a rapid shift into this negative territory, because it indicates that profoundly Malthusian processes, positive checks, are at work.

Discouragement which promotes suicide, alcoholism, disease, political upheaval, and virtual refusal to carry a child to term is not particularly good news, however much one thinks that population must decline in the long run if human society is to be sustained.

Population Effects in America

Trumpeting a benign world "population implosion" as Nicholas Eberstadt (1997) and Ben Wattenberg (1997) now are doing is a farce. One suspects a motive for such distorted interpretations of fact. Wattenberg, one knows, is an advocate for high levels of immigration. Is the intended lesson from the population implosion pronouncement that, 60 years from now, a good immigrant may be hard to find?

Immigration advocates appear to assume that the United States is not and never could be overpopulated. Many environmentalists maintain, on the contrary, that the United States is the most overpopulated nation on the planet.

The fact is that the United States produces more pollution, including emissions of carbon dioxide said to cause a "greenhouse effect," than any other nation. Moreover, the per capita production of pollutants is greater than elsewhere, so each American added is a disproportionate burden on the Earth. U.S. population growth, whatever its source, is the root cause of rising

energy use, this country's draw-downs on underground aquifers which exceed the replenishment rate by 25%, loss of topsoil at a rate 18 higher than replacement under agricultural conditions, urban and highway congestion, and rapid loss of species diversity. Indeed, one acre of agricultural or open land (habitat for countless species) is lost for every person added to the U.S. population.

Population growth has economic and fiscal, as well as environmental costs. For example, each new residence in Oregon adds approximately \$25,000 to public expenditures for the construction of facilities for schools, roads, sewers, storm

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drainage, roads, water service, parks and recreation and fire protection. These are capital costs of growth which must be paid for by the community (Fodor, 1997). This 1997 study by Eben Fodor assumes that each residence accommodates three people for a cost of \$8,300 per added person. If the Oregon cost-per-person is applied nationally, every one million increase of the population adds \$8 billion to the tax burden born by the public.

Oregon's building costs are neither the highest nor the lowest in the nation. A study by Carrying Capacity Network (April 1997) suggests that each added person leads to an additional public cost ranging from \$4,400 in Ocala, Florida, to \$18,700 in a San Francisco.

Although many Americans feel uneasy — "the country is on the wrong track" — and appear to sense that former prosperity, security, and pride in country is fading, few articulate their difficulties in terms of population growth. The tendency is to blame known villains rather than question whether population has outrun the capacity of the economy to fulfill the expectations that most held - the American dream. Malthus would have seen in the new national cynicism the conditions fostering preventive checks on further population growth.

The 1973-74 OPEC oil embargo, rising levels

of immigration, globalism, and decades of stagnant real, personal disposable income affecting approximately 80% of the working age population cannot fail to have been among the factors that encouraged extreme caution in undertaking marriage and the responsibilities of parenthood (Abernethy 1993). In fact, the U.S. fertility rate fell below replacement level in the 1970s and there it remains. Today, the fertility rate for whites is about 1.8 children per woman; for blacks, approximately replacement level; and for the immigrant sector, significantly higher than replacement.

What Drives U.S. Population Growth?

In a nutshell, population growth is the result of more births than deaths, and more immigrants than emigrants. The immigration impact is annual immigration, plus births to the foreign-born, minus deaths and emigration of immigrants. The native born account is births minus deaths, and emigration of this sector.

The annual immigration share of U.S. population growth rises continuously as births to recent (post-1969) immigrants are added to the flow of new arrivals. In 1994 immigration and the children of recent immigrants accounted for over 60 percent of U.S. population growth. Mexico and the combined flow from the republics of the former Soviet Union (coming mostly as “refugees”) are the two largest sources of legal immigrants.

The annual flow and first generation births do not fully represent immigration’s long run impact on national population size. The difference with and without immigration can be apprehended, nonetheless, from a National Academy of Sciences (NAS) projection for the year 2050. Zero immigration beginning in 1995 would have let the population peak a few years before mid-century and thereafter decline to 307 million (which is about 37 million more than today); “very high” immigration projects a 2050 population of 463 million with no end to growth in sight.

Note that these are only projections, not predictions. Other demographers (eg. Alburgh and Vaupel 1991) estimate that if current trends continue, the most likely number in 2050 AD is well in excess of one-half billion. Agreement that

population growth in the twenty-first century would be almost entirely due to immigration, if present trends continue, is widespread. By the year 2050, post-1970 immigrants and their descendants will account for about 90% of U.S. population growth, if present trends continue.

The likely effect of immigration on the fertility rate of native-born Americans is another issue. If immigration is a burden, on balance, then Malthusian preventive checks should further depress fertility. Therefore, one turns to studies that break out the immigration component of the fiscal and economic costs associated with population growth.

In 1997, both the National Academy of Sciences and the Rand Corporation released estimates of certain effects of current immigration. Rand addresses fiscal costs in local communities in California. The NAS study emphasizes national trends, both fiscal and economic, and also examines fiscal effects at the state level. In

California, after subtracting state and local taxes which immigrants pay, each immigrant-headed household imposes a net annual tax burden of \$3,463, a deficit that is made up by all other taxpayers in the state (NAS 1997).

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About three quarters of immigrants enter the labor force. Economists George Borjas, Donald Huddle, Vernon Briggs, and others using separate study populations and methodologies, find that immigration is one of the primary causes of depressed wages and displacement of American workers. Borjas concludes that the losses to native-born workers amount to \$133 billion annually. Labor is cheapened by competition from the large immigrant pool, so employers benefit in the amount of approximately \$140 billion for a net economic benefit of \$7 billion annually.

A comparable, net \$1 to 10 billion annual economic benefit is reported in the 1997 study of the National Academy of Sciences. In the days following release of the NAS report, some in the news media including the *New York Times* suggested that the annual net gain to the economy overwhelmingly supported the value of immigration to the United States. The finding has since been

put into perspective: \$10 billion is a trivial amount in a \$8 trillion economy and hardly worth its assorted detrimental effects. These include squeezing middle class Americans, the polarization of society into rich and poor, the fiscal costs of population growth (and, specifically, immigration) born by state and local taxpayers, and the environmental consequences of population growth.

George Borjas, one of the authors of the NAS study, compares free trade (often blamed for wreaking havoc on the labor market) with immigration, and concludes that immigration has by far the greater impact (Borjas, George, "How Not to Save American Jobs," *National Review*, Dec.22, 1997, p.20; Borjas, G. and Freeman R., Findings We Never Found. *New York Times*, Op-ed.

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December, 1997). Moreover, although the labor market is generally held to be national because both labor and capital move, Ed Rubenstein (*National Review*, Dec. 22, 1997, p. 12) observes that the "states with the greatest influx of immigrants generally experience the largest growth in the income gap."

Immigrants are represented at both extremes of the educational scale, although the preponderance of post-1970 immigrants (over 70 percent) have less education than the average American. Immigrants who are more skilled are concentrated in professional specialties that do not require a command of English (computer programming, mathematics, and engineering, for example). Some Americans avoid training in specialties which attract immigrants, as is perennially lamented by employers seeking computer programmers. However, the perception of being squeezed frustrates native-born job seekers who lose out to lower paid immigrants or find their options narrowing. These affected Americans are precisely the upwardly mobile young who have traditionally used technical training to get ahead but now avoid

these specialties. Thus, yesterday's response to perceived labor shortage – bring more immigrants – is part of the cause of today's dearth of skilled labor.

The brunt of immigration's negative economic effects is born, nevertheless, by those who are the least skilled and already least advantaged in American society. Immigration pits them against Mexicans and Central Americans who average less than an eighth grade education. The NAS reports that "...44% of the decline in the relative wage of high school dropouts between 1980 and 1994 can be attributed to the large influx of less-skilled immigrants" (p.228). This translates into a 5 percent loss in real wages among high school dropouts, about 13 million people.

Poor people who lose marginal income are likely to become public burdens. Donald Huddle counts this effect in estimating that the public cost of immigration is \$68 billion annually, after subtracting taxes which immigrants pay (Carrying Capacity Network 1997). Moreover, very low earned income erodes the incentive to work and increases the relative attractiveness of welfare and crime. Unfortunately for the future of self-government, democracy is unlikely to survive long in a country lacking the stake that a strong middle class has in its continuance.

The solution is to reduce immigration so that it does not exceed the number of young immigrants who voluntarily leave each year. The results will be many and positive. The labor market will begin to reward work with a living wage, even at its lower levels; efforts to improve the environment and infrastructure will not be overwhelmed by rapid growth in the number of users. In a renewed mood of optimism and hope, Americans may return to the habits of marriage and reproduction.

Immigration As An International Escape

Almost worldwide, the exuberant optimism which characterized post-World War II economic assistance for "development" in the third world is ending. Some recipient countries are experiencing real privation in addition to disappointment relative to the high expectations that had been encouraged by aid and the rhetoric of development. Other countries are rapidly industrializing, but wealth is

very unevenly distributed; a small middle class lives with insecurity. The sense of insecurity and struggle in highly competitive environments exerts downward pressure on fertility rates — one of Malthus's preventive checks.

Whereas promises that wealth would be redistributed, along with successful independence movements combined with significant subsidies for education, healthcare, food and housing, allowed fertility rates to rise after World War II in a number of countries, present conditions promote a decline in family size targets (Abernethy 1993). Malthus could have foreseen these developments. The worm has turned, however. Today, preventive checks in response to perceived scarcity account for declines in both fertility and population growth rates.

The possibility of immigrating is counter-productive in terms of supporting the rapid decline of fertility rates. Counterproductively, it encourages many people to discount the limits of their own environment, neutralizing the incentive to avoid family responsibilities that they know cannot be adequately discharged. Fertility rates would be falling faster without the safety valve which immigration offers (Abernethy 1994).

Conclusion

Had the preceding centuries seen no famine, no genocide, no class warfare, then Malthus might be doubted — the capacity of population growth to outrun growth in resources would be justly questioned. Had the centuries seen no voluntary restraint in reproduction in populations that sensed diminishment of opportunity and prosperity, then Malthus might still be doubted. Had time recorded no great flowering of fertility in precisely those populations that enjoyed new and unfamiliar wealth, one might again discount the sage. But each of these phenomena predicted by Malthus has occurred.

Critics will say there were local perturbations; political aberrations fueled by rank ambition; a new consciousness; modernity. But what caused these developments?

Is the balance between *wants* and *resources* not involved, always, in shaping how one thinks and acts? The difference in perspective is analogous to the cultural and functional schools of anthropology. The former assert that cultures are historical accidents, to be studied either *sui generis* or as a

chain of borrowings. Functionalists assert that mental and behavioral phenomena are *caused*; the first cause is ecological: for example, the balance between population size and carrying capacity.

Accumulating data will judge Malthus in time. The train of events will bring round many who still are unconvinced. But as Malthus was a philosopher, let us be so, too:

*A man persuaded against his will
Is of the same opinion, still.
(Women, too).*

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