



Population Growth in the United States and Canada: a Role for Scientists

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The current discussion on "biodiversity" would be more fruitful if it were framed in terms of the ever-increasing takeover of total living space by one species, rather than in terms of the number of different species that can remain viable in the ever-shrinking total habitat left over for them as the human niche expands.

Herman E. Daly (1996)

North Americans who recognize the connection between growth in human numbers and biosphere damage often think that reduction of environmental degradation depends on curbing population growth on other continents. Yet the rapidly increasing populations of Canada and the United States constitute a serious hazard to the global environment. The per-capita consumption of natural resources by individual North Americans, who draw on land and energy resources from the rest of the world, is several times that of individuals in poorer countries (Wackernagel & Rees 1997). To halt ecosystem simplification worldwide, population growth in North America has to be stopped. It is unreasonable to expect other parts of the world to arrest population growth when policies of federal governments in North America accept (United States) or specifically encourage (Canada) exponential growth in human numbers.

Population growth rates have dropped in recent decades to about 0.4% in the industrialized world, but the annual rate in Canada is 1.2% (Keating 1997). The rate of population growth in the United States is also over 1% annually (Kolankiewicz 1998). Because these North American population growth rates are driven largely by immigration (Keating 1997; Kolankiewicz 1998), reducing them requires stemming the immigration tide. Since 1985, Canadian immigration policy has sought to increase population growth; since 1993 Canada has had an immigration target of up to 1% of the total population annually (Trempe et al. 1997), despite the long-term de-

structive ramifications of the resulting growth trajectory for the environment. Carol Browner, chief of the U.S. Environmental Protection Agency, expressed a parallel lack of interest in the phenomenon of human expansion as the most important upstream contributor to environmental degradation by stating that the idea of controlling population "just doesn't fly in a democratic country" (Negative Population Growth 1993).

Because economists are generally wedded to the continual increase of the gross domestic product, which is largely driven by a growing population, the possibility of ending human expansion is viewed with consternation. Orthodox growth economics ultimately loses its utility because of an increasing inability of the stressed host ecosystems, within which the economy functions, to supply resources and absorb wastes (Daly 1996).

Cooperrider (1996) implicates academic fragmentation as one reason for the lack of progress in solving broad societal problems such as population growth and excess consumption. Each discipline concentrates on its own specific area of interest, while issues of a more holistic nature are left unaddressed. The same fragmentation and confinement to narrow mandates are also evident in government. The long-term consequences of phenomena such as open-ended population and economic growth are not the responsibility of any branch of federal government.

Rapid population growth strains the credibility of Canadian and U.S. federal governments regarding international environmental commitments because, for example, any technological gains made in decreasing per-unit greenhouse gas production will be eliminated by the requirements of a skyrocketing population for more units. Simple exponential projections show that, if present growth rates continue, North America will approach a population density similar to that of present-day China within the next two centuries (Salonius 1998). Maximization is obviously good short-term economics but, in the long run, bad ecosystem management (Noss & Cooperrider 1994).

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Although the general education about population growth called for by Meffe et al. (1993) is important, the time has passed for scientists to continue talking and writing among themselves while hoping legislative policy makers will notice. In reaction to federally orchestrated expansionism and apparent indifference to the consequences of exponential growth, the concept of a plebiscite or referendum on the desirability of immigration-driven population growth was presented to the Canadian government (Salonius 1998). If approved, the question would be attached to a future federal general election ballot, as has been done previously for constitutional questions. The Canadian electorate would be exposed to a thorough airing of conservation issues as proponents on both sides of the growth argument engage each other in the debates preceding such a vote.

Powledge (1998) describes a growing realization among scientists that "science must get more involved with politics," and he cites a statement by Norman Myers concerning the need for biologists to understand not only how energy flows through ecosystems but also how influence flows through government. Raven (1990) suggests, in the context of the current ongoing mass extinction, that we must accept responsibility instead of practicing endless self-indulgence. For conservation biologists to continue concentrating exclusively on their specific research interests, while disregarding the political basis of rapid biosphere destruction, amounts to self-indulgence. Ehrlich and Ehrlich (1996) suggest that individual scientists devote at least one-tenth of their time to attempting to make the human endeavor more sustainable.

Wackernagel and Rees (1997) suggest that ecologically meaningful policy changes remain politically impossible. One exception to this situation in the United States and Canada is the ability to arrest ecologically damaging population growth by altering immigration policy such that the number of entrants is used as a tool to stabilize or slowly reduce the pressure of human numbers in the context of declining domestic birth rates.

A concerted effort should be launched by conservation biologists in personal appeals to legislators to consider the consequences of the pursuit of continuous growth. Policy makers need information, as individuals, about the diminishing ability of the biosphere to withstand the onslaught of exponential human population and economic growth. North American legislators must be made aware that, as a result of their present-centered, expansionist agendas, they are continuing to set their

naïve constituents on a course toward a dismal and crowded future brought about by massive immigration. This reality-driven action is necessary now. There is ample justification for scientists to spend significant blocks of work time away from their specific disciplines to help legislators understand the environmental destruction that will result from the unfortunate trajectory of unchecked human expansion. If this endeavor is not taken up by the present cohort of scientists, then the next generation of conservation biologists will not have much of the natural world to study, as we, the "endangering species," will have appropriated most of it.

All nations ultimately will have to institute policies that recognize the impossibility of sustaining exponential growth; the United States and Canada could make the first steps in this direction by using immigration to stabilize or slowly reduce population numbers.

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