

POPULLUTION

THE 1981 APHA PRESIDENTIAL ADDRESS

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When I was a candidate for election to the Executive Board of the American Public Health Association in 1975, I noted that over-population was one of the major personal and environmental health threats facing this nation and the world. I repeated this same theme when I was nominated for President-Elect of the APHA, and I still recognize this as an issue of the highest magnitude of importance.

The American Public Health Association was among the early leaders in policies and actions to attempt to control over-population. The APHA Governing Council has adopted policy statements on a number of occasions addressing the population problem. These statements commenced in 1959 and have continued since then.

We note that the issue of population has occupied the attention of thoughtful people through past ages as well as the present time. Plato and Aristotle were deeply concerned with the problem of regulating community size, as well as being advocates of family planning. Plato noted the need to stabilize population so people "will live pleasantly together with a prudent fear of poverty or war keeping them from begetting children beyond their means." Aristotle warned, "if no restriction is imposed on the rate of reproduction, and this is the case in most of our existent states, poverty is the inevitable result; and poverty produces in its turn civil dissension and wrong-doing." Aristotle even criticized the Spartans for their pro-natalist policies (that a father of three sons could be exempt from military services, a father of four from taxes) as it would ultimately ruin their equitable society, since in time, each family plot would be divided to the point of non-viability.

I have frequently observed this same phenomenon in my own State of New Mexico. Many of the early settlers of New Mexico were awarded huge Spanish land grants. The lands were tilled and irrigation ditches developed. It was a custom to divide family lands into increasingly smaller plots perpendicular to the ditches, or what we know as acequias. Ultimately, the subdivided agricultural lands left for each family member became too small to support the owners, who simply gave up and went on welfare. The lands then became tax delinquent, reverted to the State, and were subsequently bought in larger plots by the more wealthy agricultural interests.

Aristotle also noted that men do not know what it is that makes a state "great"; they judge greatness in numerical terms, by the size of the population, "but it is capacity rather than size, which should properly be the standard. . . . A great state is not the same as a populous state," he said.

India's Prime Minister Nehru stated that "Population control will not solve all of our problems, but it is certain that none can be solved without it."

The 1968 report of the US House of Representatives Subcommittee on Science, Research, and Development observed that "Population must come under control and be stabilized at some number which civilization can agree upon. Otherwise, the best use of natural resources will be inadequate and the apocalyptic forces of disease and famine will dominate the earth."

In 1969, the National Academy of Sciences issued a report, *Resources and Man*, which concluded that a world population of 10 billion "is close to (if not above) the maximum that an intensively managed world might hope to support with some degree of comfort and individual choice." In the same vein, in 1972, the United States Commission on Population Growth and the American Future, chaired by John D. Rockefeller, III, concluded, "We have looked for, and have not found, any convincing economic arguments for continued national population growth. The health of our economy does not depend on it. The vitality of business does not depend on it. The welfare of the average individual does not depend on it." That Commission report also recommended that "immigration levels not be increased..... In 1974, then California Governor Ronald Reagan issued a Proclamation on World Population Stabilization, that "The US can only become weaker with a burgeoning population. We need sound population policies today as never before." Estimating that the World's population could stabilize at 10.5 billion by the year 2110, a 1981 United Nations report warns of the implications of such growth. "Though the 10.5 billion ... is less alarmist than the figures projected by other studies," the report notes, "it still means that the global population would have grown to be two and one-half times larger than the present 4.4 billion. . . . Even during the present century, we might not be able to claim to have provided for the basic needs of nearly half of the World's population.

Recently, the Global 2000 Report to the President, submitted in 1980 by the US Department of State and the Council on Environmental Quality, indicated that if present trends continue the world in the year 2000 will be more crowded, more polluted, less stable ecologically, and more vulnerable to disruption than the world we live in now. Serious stresses involving population, resources, and environment are clearly visible ahead. Despite greater material output, the world's people will be poorer in many ways than they are today.

Perhaps populations should be viewed something like a giant amoeba, constantly pushing, probing, expanding, growing, engulfing, and finally destroying in its wake. An environmental barrier to such over-population may tend to halt its growth and movement unless it can expand and move in another direction. It seems senseless to me to keep attempting to adapt the environment, the economy, and nonrenewable resources to over-population when the more rational approach would be to exert greater efforts to controlling this giant amoeba of over-population while we still have some remaining degree of environmental quality.

About a decade back, the old *Life Magazine* carried an editorial concerning over-population titled, "Won't Anybody Hear The Awful Truth?" Well, the awful truth

still isn't being heard. Political leaders continue to cry for more growth while making futile attempts to solve problems created by or related to over-population. The problems include the energy crisis, pollution, housing, crime, hunger, crowding, deforestation, over-grazing, species extinction, restrictions on individual freedom, health threats, soil depletion, loss of agricultural lands, and water shortages.

Over-population must be viewed as the number one social, economic, health, and environmental problem facing this nation and the world. Too many political leaders continue to confuse progress with growth. Progress is simply change toward an established goal and does not imply or require growth.

A few years ago I copied someone's remarks about "popullution" as resulting from two selfish drives:

- 1) Exploitation of the blessings of the Earth in the name of something called progress, and
- 2) Abuse of the sex drive, which was designed to perpetuate the species rather than destroy it.

Similar to the principles of the Malthusian theory, too many members of the human species are already being destroyed by violence in over-populated areas in the same manner as suggested by laboratory research utilizing other animals. The target group in both cases is primarily young, healthy males in their reproductive years. Biologically, we know that population will ultimately be controlled by some stress such as war, famine, pestilence, environmental degradation, or congestion if not by rational behavior. People must curb population growth, not for whimsical aesthetic reasons, but for the very self-serving reason that we must protect our environment because it literally gives us life. The Earth and its resources are finite.

Population cannot continue to increase indefinitely in a finite world, and signs of resource shortages, social stresses, and environmental ills are widely apparent. As long as the human population remains uncontrolled, no program of resource conservation or environmental health can be successful for long. The Earth's ability to yield sustenance and absorb punishment in the form of pollution is not endless. Ultimately, the human animal must live in balance and harmony with its environment. We have been and continue to be, on a credit-card binge, borrowing against the future. Population will be controlled at some point -- whether by war, pestilence, or disease -- and it would seem to be more rational to control it through behavior modification while some semblance of environmental quality remains.

Efforts to control pollution are only treating the symptoms, not the causes, and are not effective preventive measures. The ultimate prevention and conservation issue has yet to receive our serious and organized attention.

Continued population growth and unmanaged demographic changes are eroding our ability to leave a healthy world and a quality environment for future generations.

We can no longer take for granted the renewal of our renewable resources -- our crop lands, forests, streams, estuaries, beaches, and the biological diversity of species.

I am frequently alarmed by the observation that various types of public health personnel become so engrossed in their immediate day-to-day tasks that they seldom take the time to step back from their offices, clinics, laboratories, hospitals, and classrooms long enough to relate their endless and frustrating daily tasks to the issue which truly creates the priority personal and environmental health problems affecting all of us -- the issue which has not been fully accepted for preventive programming by our society and legislative bodies, -- the issue inadequately addressed by traditional public health programs and textbooks, -- the cause of most of our environmental health ills, the staggering problem of over-population.

Public health and other personnel must realize that the undesirable symptoms of over-population are visible locally and regionally as well as nationally and globally. Even at the municipal, county, and regional levels, the population levels can be affected or controlled through attitudes; educational measures; demographic projections; environmental research, planning, and control; zoning and land-use; fiscal policies; economic incentives; cost assessment to those developmental interests creating growth; and critical analyses of all bond issues to determine if they are allowing, promoting, subsidizing, and/or creating growth.

Since the definition of environmental health and environmental quality is somewhat subjective, different peoples and cultures place different values on varying types of environments. Some people value living in apartments in urban areas, using subways, mixing with the masses, and enjoying the sophisticated cultural aspects of urban living. Others enjoy the opportunity of seeing nature through the use of modern recreational vehicles and facilities in company with many others. Still other people enjoy the solitude of back-packing into wilderness areas and arctic-alpine mountain peaks.

We should recognize these varying physical and psychological needs and attempt to provide something for everyone, not everything for everybody.

In 1973, I was asked to discuss the issue of population levels at a meeting sponsored by the Albuquerque, New Mexico Urban Observatory (a metropolitan planning group). I was asked to indicate the impact of over-population on the environment in that area. I chose to answer, in part, as follows:

"You will know when you can no longer see the mountains.

"You will know when you pay more for sewage treatment facilities.

"You will know when traffic problems become worse and it takes twice or three times as long to get to work. "You will know when you have to move out of the city to find quiet and privacy.

"You will know when you wake up to the constant background of noise that disrupts your sensibilities.

"You will know when you have to travel further to find an uncrowded recreational spot.

"You will know when you must wait in line for hours to launch your boat at your favorite marina.

"You will know when a greater percentage of land is used for freeways and interchanges.

"You will know when all your arable valley land has finally been relegated to subdivisions.

"You will know when you have to ask a computer when you may use a campsite in your favorite recreational area.

"You will know when we experience a constantly increasing number of air pollution alerts.

"You will know when you finally realize there is no such thing as clean industry if it means more people. More people mean more water pollution, more vehicles, more air pollution, and more freeways.

"And yes, you will know when people stop bragging about our beautiful vistas, our starlit nights, and our sparkling mountain streams."

Now, only eight years later, in 1981, that community has experienced many of the foregoing. Unemployment is increasing and homicides have become more common than automobile deaths in the largest city in my state. These and other undesirable social, economic, and health problems are the known and expected manifestations of migration to the Sun Belt and the resultant over-population.

We cannot really expect to regain former environmental quality once it is lost. We cannot continue to grow without sacrificing many desirable qualities and amenities.

The human animal is altering and destroying some of the very conditions, environment, and ecological relationships which allowed for the evolution of modern man -- through toxic chemicals, pesticides, hazardous wastes, pollution of the air and

water, deforestation, over-grazing, all related to the demands of over-population. The environmental ravages to be experienced by the development of synfuels, the "forever" nature of radioactive tailings and wastes, the damages caused by uncontrolled strip-mining, and the destruction caused by acid-rain represent other examples of environmental degradation not yet fully understood. Nor do we know the impact of these by-products of over-population on the evolution of man, inasmuch as the human animal has been exposed to such influences for only an insignificant fraction of his evolutionary development.

With regard to the environment and the economy, let us not be misled into a process of "versus" or "either/or". A quality environment and a healthy economy are not mutually exclusive or contradictory expectations, but, in fact, are mutually interdependent. We cannot have an economy without an environment. "Ecology" and "economy" are both derivatives of the Greek word "ecos" (oikos) which means "house". An economist was a keeper of the house. An ecologist is the keeper of the house in which we all live -- our environment -- the place where we are all going to spend the rest of our lives.

It continues to be a matter of serious concern to me that the human animal sometimes seems more willing to suffer the health, social, economic, and environmental consequences of disease and pollution, rather than paying for environmental quality for this and future generations. Perhaps the human animal can slightly adapt to some degree of environmental degradation, but it is indeed alarming that the human animal might attempt to merely survive through adaptation rather than thrive in a quality environment. Population stabilization is the only real preventive endeavor, since curative programs to control the secondary problems of environmental degradation, energy shortages, transportation, land-use, congestion, crime, and famine have not and will not be effective without resolving the basic issue of overpopulation.

In relation to the problem, as personal and environmental health personnel:

We should support specific national and global actions and agreements to stabilize population levels through such mechanisms as education, racial justice, sexual equality, technology sharing, birth control, reorientation of social values and attitudes, demographic research and planning, and economic policies and incentives;

We should sharpen and utilize the tools of environmental epidemiology to better identify the current and future effects of environmental chemicals and stresses inasmuch as we still do not fully understand the effects of the environment on disease, disability, efficiency, morale, comfort, quality of life, life span, absenteeism, insurance rates, Medicaid and Medicare budgets, and other health care costs;

We should recognize that social security measures for the elderly are among the most effective population stabilization methodologies yet devised, inasmuch as such a

system represents the economic security provided in the not-too distant history of our country by a large number of children;

We should understand that the concern of environmentalists with the eco-system, endangered species, and the natural environment is a sound manifestation of interest in the entire natural system of which the human animal is a part, and that the environmental effects on wildlife and endangered species serve as an "early warning" or "pre view of things to come" in accordance with the known and proven ecological maxim that "everything is connected to everything else";

We should realize that society has only recently allowed governmental curative efforts in such environmental problems as pollution of the air and water, noise pollution, and solid wastes; but has not yet reached the point of authorizing program efforts to effectively resolve problems concerning the basic priority issue of over-population;

We should change our collective attitudes and adjust to the fact that "bigger is not better" and that "growth is not progress";

We should constantly consider the sub-clinical, long-term, and genetic effects of environmental insults as well as the more obvious clinical effects;

We should have a better knowledge of the cost-benefits of health care as compared with the cost-benefits of a quality environment;

We should not let uninformed and naive politicians foster the erroneous belief that we cannot have both environmental quality and economic vitality;

We should insist that environmental protection standards and regulations be based on the needs of the environment and of man in his environment rather than on the latest polluter-professed "limits of technology";

We should ensure that our programs are properly designed and directed to current problems rather than comfortable tradition;

We should recognize that there is a price to be paid for a quality environment, but that this does not result in adverse economic consequences;

We should insist that environmental impact statements be utilized as decision-making tools rather than as mechanisms to justify environmentally adverse decisions already made;

We should recognize Man as a part of the environment rather than as a supreme being in the environment;

We should constantly remind our citizen and political leaders that environmental quality reaches beyond mere freedom from pollution, and includes such concerns as

desertification, deforestation, water shortages, over-crowding, loss of agricultural lands, and species extinction;

***We should* insist that all governmental leaders at all levels of government develop mechanisms to ensure payment and internalization of the hidden and long-term costs of growth and pollution now instead of deferring these costs for future generations;**

***We should* continue to emphasize the necessity of stabilizing population and reducing energy consumption rather than considering only the alternatives of continued growth and increasing energy demands;**

***We should* join forces with the ecologists, conservationists, and other environmental activists whenever appropriate instead of criticizing these "Johnnies-come-lately" and being intent on territorial defense;**

***We should* make every effort to ensure that government is truly responsive to the needs of the people, rather than just the wealthy and the elite corporations;**

***We should* increase efforts to better research, understand, and control those environmental factors which create health problems;**

***We should* demand that no significant environmental deterioration be permitted beyond current levels inasmuch as the environment, once degraded, is seldom restored;**

***We should* guide national policy and priorities so that population stabilization and development of solar energy resources are as high a priority as putting a man on the Moon;**

***We should* protect our environment in such a manner that future generations can enjoy the thrill of fresh brisk air, wilderness areas, trout in clear mountain streams, uncluttered mesas and vistas, wild geese on a cold morning, or solitude on a mountain peak;**

***We should* ensure that population stabilization is an integral component of appropriate personal and environmental health programs as well as a basic and required emphasis for planning bodies such as Health Systems Agencies, State Health Planning and Development Agencies, Statewide Health Coordinating Councils, and Councils on Environmental Quality;**

***We should* develop ideal family planning which is safe, effective, reversible, available to all, and culturally acceptable; and we should ensure that family planning is as basic as safe food, clean water, and clean air;**

***We should* insist that women have a broad array of realistic choices including, but not limited to, child bearing;**

***We should* continue to expand public information efforts regarding the problems of over-population and the means of intervention;**

***We should* continue to research improved birth control methods for use by men;**

***We should* join forces with other groups and recognize that adoption of a national population planning policy is long overdue, as the need for such a policy becomes more urgent every day;**

***We should* recognize, and take steps to change, the currently popular rhetoric that blames environmentalists rather than greed for the nation's ills;**

***We should* continue to show how population growth and demographic changes are at the root of many of the problems of our nation and the world;**

***We should* insist on the adoption of a national land-use policy to identify and properly plan for the future conservation and utilization of our nation's agricultural, recreational, coastal, urban, and wet-land areas;**

***We should* pay as much attention to the control of births as our profession has devoted to the control of deaths and disease; and**

***We should* nurture and protect the environment rather than conquering and despoiling it.**

The Earth serves man best when he has the humility to leave some of it alone. We have inherited the Earth from our parents, but more importantly, we are borrowing it from our children.

A few years ago, California-born writer, Richard Armour, penned the following doggerel:

***"So leap with joy, be blithe and gay, or weep my friends with sorrow;
What California is today, the rest will be tomorrow."***

In the mid-1800s, Alexis De Tocqueville wrote: "They (Americans) may finally become so engrossed in a cowardly love of immediate pleasure that their interest in their own future and that of their descendents may vanish and they will prefer tamely to follow the course of their destiny rather than make a sudden energetic effort necessary to set things right."

Such an "energetic effort" regarding over-population and "carrying capacity" should be considered the number one priority for all personal and environmental health personnel.

AJPH April 1982, Vol. 72, No. 4