



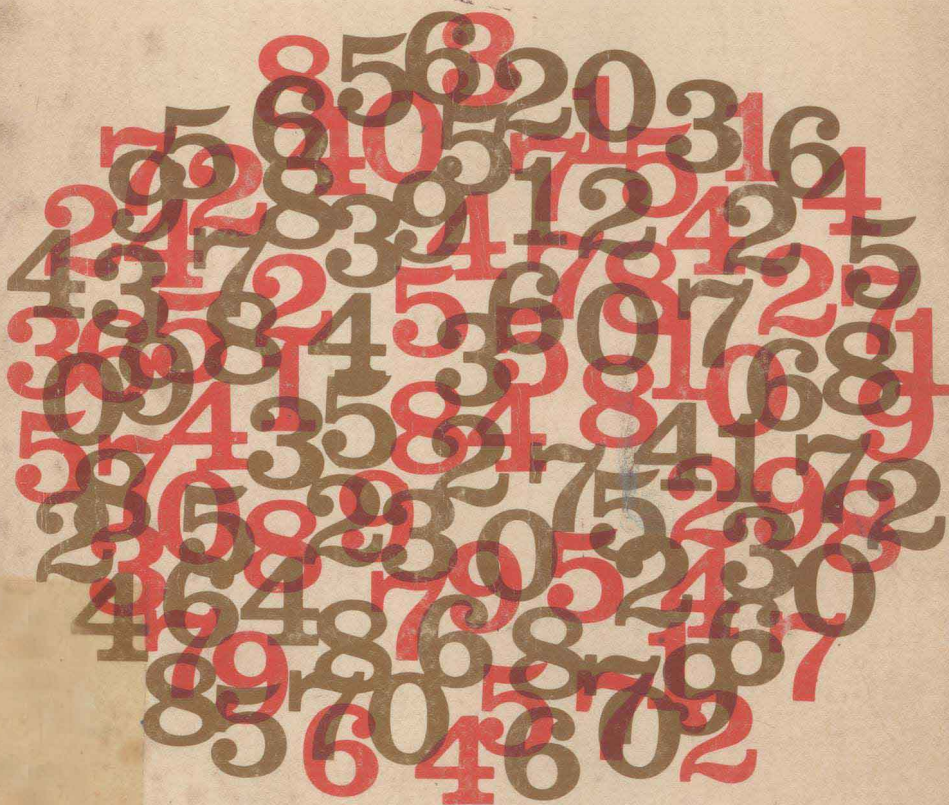
THE AMERICAN ASSEMBLY

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THE POPULATION DILEMMA

EDITED BY PHILIP M. HAUSER





The American Assembly, *Columbia University*

THE POPULATION DILEMMA

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Preface

This collection of papers, written for the general reader under the supervision of Philip M. Hauser, University of Chicago, also comprised the background reading for the Twenty-third American Assembly at Arden House, Harriman (N.Y.) Campus of Columbia University, May 2-5, 1963. For three days participants in the Assembly discussed the facts and issues raised in the chapters which follow, and in plenary session on the fourth day reviewed the final report of findings and recommendations for national policy which begins on page 178.

The opinions expressed in these essays are not necessarily endorsed by The American Assembly, which takes no official stand on the subjects it presents for public deliberation. Neither do they represent the views of The Ford Foundation, The Population Council, Cordelia Scaife May, or Laurel Foundation, who generously supported the entire program.

Henry M. Wriston
Chairman
The American Assembly

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1

Introduction and Overview

Our ever-shrinking, more complex and interdependent world is increasingly confronted with global problems. Among those recognized and dealt with historically are epidemics and contagious diseases; narcotic and white slave traffic; postal, telegraphic and radio communication; weather forecasting; and international air transport. New global problems have emerged in the postwar world such as fallout and the exploration and use of outer space. Another global problem of long making is becoming ever more acute and threatens to assume crisis proportions in the coming generation. It is the problem posed by accelerating population growth.

Certainly more attention is being devoted to population problems today, nationally and internationally, than at any time since Malthus. On the world scene a number of governments as a matter of policy are striving to dampen rates of population increase by means of fertility control. These governments include Japan, India, Pakistan, Korea, Singapore, the United Arab Republic, Turkey, Tunisia, and with reversals of policy, Mainland China. For this explicit formulation of the need to control population growth is the product of three centuries of accelerating world population increase unprecedented in scale—the “demographic revolution.” It is significant that on December 18, 1962, in the General

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Assembly of the United Nations, sixty-nine nations voted for and carried a resolution recognizing the relationship between population growth and economic development and requesting the United Nations to take certain steps designed to provide assistance on population problems. The nations which have made it a matter of policy to control their population growth may well be in the vanguard of a world-wide movement to face up to the implications of the demographic evolution.

On the national scene there is also ample evidence of the mounting interest in population growth and its consequences. There has been widespread public discussion of population problems and the pros and cons of birth control. Moreover, the federal government in recent years has taken cognizance of the relationship between population and economic development and the State Department has issued a "Statement of United States Policy." This statement expresses the concern of the United States about its own and world population trends, states that each nation must determine its own population policy, applauds the efforts of the United Nations and its affiliated agencies in this field, and offers to help other nations upon request "to find potential sources of information and assistance on ways and means of dealing with population problems."

This volume has been prepared as an aid to The American Assembly discussions. It sets forth the key population facts, the major problems being generated by accelerating growth, the basic policy issues, and the more important policy and action alternatives. The materials presented in the following chapters are thus designed to provide the reader with a sound basis for participating in the decisions on population matters that this democratic nation must make in the coming years.

An overview of world population growth, retrospectively and prospectively, is provided in Chapter 2 by Dr. Dorn. Despite the deficiencies in historical data, the fact that a remarkable acceleration in the rate of world population growth has occurred, especially in the past three centuries, is indisputable. Also indisputable is the explanation of this demographic revolution—man's increasing mastery over nature in effecting remarkable declines in mortality. Even though the major gains in longevity for most of the modern era, and especially before World War II, were restricted to a relatively small proportion of the world's peoples—those enjoying "Western civilization"—the explosive increase of Western populations together with the slower increase of the rest of the world's population produced amazing acceleration in total world growth.

Since the Second World War, the death rates in the non-western world have decreased sharply without the corresponding increases in productivity that occurred when western death rates declined over a longer period. Never before in the history of man have increasing numbers of persons been able to keep alive without increases in levels of living.

Given the new post-World War II situation, what is the prospect? In the long run the answer is quite clear. In less than a century and a

half as Dr. Dorn reports, the highest estimate of the population-carrying capacity of the globe ever made by a competent scholar under extreme assumptions would be reached; and in about seven centuries there would be one person for every square foot of land surface on the globe. Such projections illustrating the effects of compound interest do not, of course, predict what future world population will be. But they do permit a highly significant and incontestible conclusion: the present rate of world population growth cannot possibly persist for very long into the future. In the long run, space is the limiting factor to population increase.

In the short run, the prospect is not quite so clear. For present and prospective rates of population increase have more indeterminate consequences affecting the economic, social, and political climates of individual nations as well as that of the world as a whole. The most significant consequence of rapid population growth in the contemporary world, however, is to be found in the relation of rapid population increase and its demographic accompaniments to economic development. In the short run the crucial effect of accelerating population growth, therefore, is to be found in the underdeveloped areas of the world. Population growth in the underdeveloped areas is Dr. Taeuber's subject in Chapter 3.

Continuation of present trends would, as Dr. Taeuber indicates, result in an increase of sixty five per cent in the population of the underdeveloped areas between 1950 and 1975 and a doubling of population in these areas in the last quarter of this century. Thus, the underdeveloped areas alone stand to experience a population increase in the second half of this century considerably greater than that achieved by all mankind in all of the millenia of his existence up to the current year! Since the "developed" areas would during the second half of this century increase by some 600 million persons—less than one-sixth of the increase in underdeveloped areas—the proportion of total world population in present underdeveloped areas would increase from two-thirds in 1950 to about four-fifths by 2000.

The populations of the underdeveloped areas are experiencing a "revolution of rising expectations"—to use Assistant Secretary of State Harlan Cleveland's felicitous phrase—against which their efforts to achieve higher levels of living seem frustratingly slow. The result is increasingly manifest. Political instability, subversion, revolution—all are associated with frustration and serve usually further to retard advance.

The way in which population growth and its demographic accompaniments tend to obstruct efforts to raise levels of living is comprehensively treated by Dr. Coale. He clearly traces the impact of population factors on per capita income and on productive employment of the labor force. He shows how a decline in the birth rate operates to increase per capita income, in the short run, by dampening the rate of population increase and reducing the burden of child dependency without major effect on the size of the labor force; and, in the longer run, by reduction

in the growth rate of the labor force and lower population density. Reduced birth rates could increase income per consumer by over 40 per cent in thirty years, by 86 per cent in fifty years and more than 100 per cent in sixty years. "After one hundred and fifty years the low fertility population," concludes Coale, "would have an income per consumer six times as high as the faster growing population with unchanged fertility."

The chapters by Dr. Taeuber and Dr. Coale, within the framework of the world picture set forth by Dr. Dorn, clarify the crucial implications of contemporary rates of population increase for the underdeveloped areas and for the world as a whole. In doing this they also make it evident that the United States has a huge stake in both developments. For the citizenry of the United States there is no way to evade either the long-run implications of accelerating world population growth or the short-run consequences of events in the underdeveloped areas.

The fact that the population problem is an increasingly serious one in the United States itself is documented by Dr. Bogue in Chapter 5. Dr. Bogue points to both the short-run costs of our accelerated population increase and its long-run implications. The postwar rise in the birth rate of the United States which has produced a natural increase of over 1.6 per cent per annum, if sustained, would within a century produce a population of a billion Americans. He summarizes that this "would be roughly equivalent to moving all of the population of Europe, Latin America, and Africa into the territory of the fifty states." Even a return to our depression rate of natural increase, during the 1930's, a rate about half that of the present, would by 2065 produce a population of over 416 million persons. Such projected growth obviously has profound implications for the future style and level of living in the United States.

In the long run our present rate of population growth would exhaust all available space and, therefore, it cannot possibly be continued. But the problem is not only long run. As Dr. Bogue points out, although the effects of the baby boom are not all deleterious, we have already paid a high price for it and the price will continue to mount.

Among the more significant implications of accelerating population growth is that concerning its effect on the relation between population and resources—or the "man-land" ratio. The salient facts about resources in the United States and in the world are summarized in Chapter 6 by Dr. Fisher and Mr. Potter. Their answer to the question "Are resources becoming scarcer?" should, on the one hand, quiet the cries of alarmists who foresee early mass starvation and the imminent exhaustion of critical materials. On the other hand, they give reason for further reflection to the optimists who are convinced that man's ingenuity can resolve all the problems which may be precipitated by the increasing pressure of population on land and other resources.

Fisher and Potter provide the basic data for a realistic appraisal of the political significance of accelerating population growth. The world

political problem posed is not one arising from any immediate threat of mass starvation or lowered living levels. It is, rather, that arising from the inability of the mass populations in the less developed areas to achieve significant increases in their levels of living consistent with their aspirations as generated by the "revolution of rising expectations." It is the continued frustration and poverty of the mass populations of the underdeveloped nations, to which rapid population growth contributes, that portends continued political instability and unrest. In the bipolar world rent by the Cold War, explosive population growth may thus become a major factor in determining whether the mass populations of the underdeveloped nations, still neutral or uncommitted, swing to the Free or Communist way of life.

What is to be done to control runaway population growth? There are only two ways to dampen world population increase. One is to increase the death rate and the other is to decrease the birth rate. There are no nations or cultures in the world prepared to accept an increase in mortality as a way of controlling population growth. In consequence, only the control of fertility remains as a way to check population increase. Fertility control and problems incident to it constitute the subject of Chapter 7 by Drs. Notestein, Kirk and Segal.

In view of the demographic prospects of the developing countries Dr. Notestein and his colleagues conclude that it is imperative that an effort be made by governmental as well as private means to effect reductions in fertility. Although governmental programs to promote birth control have not been operating long enough yet to prove their effectiveness, some success stories are already at hand, as for example in India and Ceylon. The evidences of success to date together with the prospect for improvement in methods of preventing conception lead the authors to moderate optimism about the outlook for regulating fertility.

Dr. Lorimer concludes this volume in his consideration of "issues of population policy." Recognizing that "questions of policy relative to population trends are, in large part, regional and specific . . .," Lorimer nevertheless appropriately holds that "the development of American policies . . . must . . . be framed in a world context." Objective analysis is beset with obstacles of cultural and personal preconceptions—including the Neo-Malthusian and Marxist postures and the positions of diverse religious groups. Nonetheless it is necessary to face the issues and take the appropriate policy decisions.

Special policy issues include those arising from differential rates of natural increase in the U. S. by region, race and socio-economic status; from the redistribution of our population from rural to urban and metropolitan areas, and from the South to the North and West. Dr. Lorimer emphasizes the need to recognize "the nation is an interacting demographic unit." There is need also to face policy issues with respect to immigration; and to a number of social problems affected by popula-

tion changes such as unemployment, school "dropouts," marginal workers and Aid to Dependent Children. Policy problems are also posed by our increasing numbers of older persons. In his presentation of issues of population policy Dr. Lorimer, on the one hand, touches on problems which must be faced by reason of past demographic history and, on the other, on problems that will arise in the future.

We are forced to live with and in some manner to deal with the population problems that we have inherited from the past. For example, under the pressures generated by our postwar resurgence in population growth, we have expanded our elementary school plant, and we are faced with doing the same during this decade with our secondary school and college plants. But despite our efforts, we are experiencing depreciation in the quality of our education. As our postwar babies reach labor force age during the sixties, we shall pay a high price in striving to provide jobs or support of some kind for our tidal wave of new workers. We seem to deal with the consequences of accelerated population growth only as they become acute problems that cannot be evaded.

It is easier to ignore the tasks that aim at preventing the population problems of the future. In consequence, we are expending huge resources for treating the deleterious consequences of past rapid population growth while, in the main, we continue to do little or nothing about the present excessive growth which will produce even more acute problems in the future. For example, as a nation we are just beginning to consider whether we should assist the underprivileged who desire such assistance to control their fertility—both within the United States itself and abroad.

In this situation lies the dilemma which gives this volume its title—the choice of unsatisfactory alternatives. It is to be found in the necessity to choose between continued indifference to the implications for the future of present population growth and the acceptance of the consequences of such indifference. To formulate appropriate population policy and take necessary action requires changes in established attitudes and behavior which meet with resistance—more from some quarters than from others. But to take the easy way out at the present time is to compound the difficulties of the future. To avoid the ounce of prevention in the present will, in the future, require many pounds of cure.

It is undoubtedly a fact that the vast majority of the people of the world, including a large proportion of the people in the United States, do not yet recognize this dilemma. It is the major purpose of this volume to call attention to it, to clarify the issues involved, and to press the point that to continue to ignore the population problem is, in effect, to choose one of the horns of the dilemma—the more costly and dangerous one.



2

World Population Growth

More than one million identified species of animals and plants inhabit the earth. Of these, only man can in part control and modify his environment. Because of this ability, he now dominates the earth to an extent probably never before approached by any other species. This dominance is very recent and has given rise to conditions to which man still is far from well adjusted.

The evolutionary process has endowed all species of plants and animals with a reproductive potential which, if unrestrained, would overpopulate the earth within a few generations. This reproductive potential has been and still is controlled by disease, limitation of the food supply, and interspecies competition in the struggle for existence. No organism has ever been able to free itself from the biological regulators of growth in number. Man is no exception to this principle.

NATURAL CHECKS ON GROWTH

Throughout the centuries of his existence man undoubtedly has had a birth rate which, if unchecked, long ago would have led to standing room only in the world. Until very recently, this excessive fertility has

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been controlled, just as for all other species, by an almost equally high mortality. During this century one of the most significant developments for the future of mankind has been his increasing ability to control two of the three natural regulators of population increase—disease and famine.

It is difficult to realize today how effectively disease and famine have acted as a check upon the increase of population during the centuries of man's existence, and how recently the effectiveness of these checks has been curbed. The last great famine of Western Europe occurred in Ireland about 115 years ago. A severe shortage of food lasted for nearly six years. In spite of assistance from other countries, one out of every eight persons alive at the beginning of the famine in 1846 died during the following five years.

In the present century, between twenty-five and thirty million deaths in excess of those that normally would have been expected are estimated to have taken place in the Soviet Union in the twelve-year period, 1914-1926, as a result of war, famine, and disease. Severe shortages of food still occur in local areas as evidenced by those in India in 1943 and 1951, in Brazil in 1961, and possibly in China during recent years. From the global point of view, however, the famines of the present century have been a minor check upon world population increase in comparison to those of the past.

Disease historically has waged a close struggle with famine for first place as a regulator of population increase. At least one-fourth of the population is thought to have died when the Black Death swept through Europe around the middle of the fourteenth century. Three hundred years later, the Great Plague of 1664-1665 killed one-sixth of the population of London.

In 1832, 1849, and 1854 epidemics of cholera raised the death rate in New York City to more than forty-five per 1,000 per year. It was not until the 1870's that the crude death in New York City permanently dropped below thirty per 1,000.

THE DEMOGRAPHIC REVOLUTION

Around 1700, the expectation of life at birth of the white population of North America and of Western Europe was about thirty-three years and probably had increased very little during the preceding three or four centuries. In 1950, the expectation of life at birth of the white population of the United States was sixty-nine years, an increase of more than 100 per cent. Nearly all populations of Western and Central Europe participated in this gain in longevity.

Four factors were primarily responsible for this dramatic increase in longevity: (a) the opening up of new continents, which provided addi-

tional sources of food, precious metals, and raw materials as well as an outlet for an increasing population; (b) the expansion of commerce, which made possible the transportation of food and capital goods over long distances; (c) technological changes in agriculture, together with the development of modern industry; and (d) increased control of disease by means of improved housing, better food and water supplies, adoption of sanitary measures, the growth of knowledge of preventive medicine, and discoveries in pharmacology and chemotherapy, particularly antibiotics and insecticides.

These developments upset the near balance between fertility and mortality that had existed during the previous centuries. Following the drop in the death rate, the European population multiplied rapidly. There were about 100 to 120 million Europeans in 1650. Three centuries later, the number of persons of European stock had increased eight-fold, reaching a total of about 940 million.

The rapid increase in population that followed the lowering of mortality rates was checked by the development of an effective substitute restraint upon uncontrolled fertility, namely, contraception. By the late 1920's, fertility had fallen so low that many demographers believed the population of European origin might soon begin to decrease in number. Voluntary control of fertility had proved to be fully as effective a regulator of population growth as disease and famine.

This shift—from a relatively low rate of increase due to the restraining effect of a high death rate upon a high birth rate to a correspondingly low rate of increase due to the voluntary control of fertility which brought about a fall in the birth rate to the low level reached by the death rate—is known as the demographic revolution. Less than one-third of the world's population participated in this revolution.

At the beginning of this century the remaining two-thirds of the world's population—the people of Africa, Latin America, and Asia—had an estimated birth rate of forty or more per 1,000 per year and a death rate only slightly lower. Since then the scientific knowledge and technical skill that brought about the remarkable increase of longevity in North America, Europe, Australia, and New Zealand have become available to the remainder of the world's population. The result has been an absolute increase in number unparalleled during the recorded history of mankind.

Past growth

The number of persons living in the world today is known only approximately. Even less is known about the size of the world's population at various times in the past. Although records of occasional attempts to count the population living in selected areas of the world go back to the dawn of written history, regular censuses of population did not exist

TABLE I

Estimated population of the world and the number of years required for it to double

Year (A.D.)	Population (billions)	Number of years to double
1	0.25 (?)	1650 (?)
1650	0.50	200
1850	1.1	80
1930	2.0	45
1975	4.0	35
2010	8.0	?

in any country prior to 1800. Reliable population counts even today are regularly available for less than one-half of the population of the world.

The generally accepted estimates of the population of the world prior to 1900 are derived from fragmentary statistics supplemented by informed guesses. As one goes backward in time, the available statistics become increasingly more fragmentary and unreliable, so that the earliest estimates represent only informed guesses.

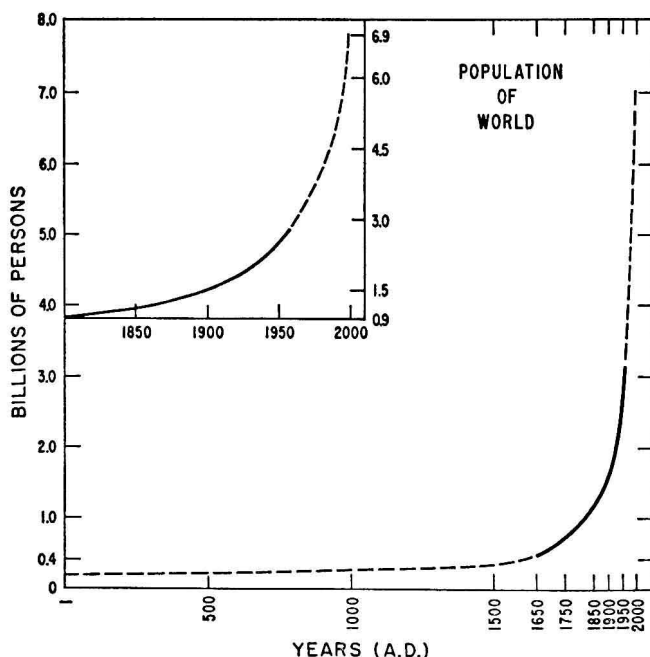


Figure 1. Estimated population of the world from 1 A.D. to 1960 A.D. and the projected population 2000 A.D.

Nevertheless, scholars have pieced together a consistent series of guesses and estimates of the growth of the world's population during the past two thousand years that appear plausible. The most generally accepted estimates are presented in Figure 1 and Table 1.

The length of time that the present subgroups of man have inhabited the earth is unknown. Most estimates range from 50,000 to 200,000 years, although some are even longer. Enough is known, however, to support the belief that many millennia were required for mankind to increase in number until he reached a global total of one-quarter of a billion persons. This occurred about 2,000 years ago.

Sixteen centuries passed before another quarter-billion persons were added to the world's population. The Pilgrims had landed at Plymouth Rock and had founded the Massachusetts Bay Colony at about the time the population of the world reached a total of half a billion.

In contrast to the hundreds of centuries that elapsed before the first half billion was reached, only two centuries were required for the second half billion. Shortly before the outbreak of the Civil War, it is estimated that one billion persons inhabited the earth. The addition of successive half billions of persons has required increasingly shorter periods of time. The sixth half billion, just added, required slightly more than ten years. At the present rate of growth only six or seven years will be required to add the eighth half billion. This change in population growth has taken place since the first settlers came to New England.

Increase in longevity

This acceleration in the rate of growth of the world's population has resulted from a rapid decline in mortality rates with a consequent sharp increase in the average expectation of life. Accurate statistics do not exist, but the expectation of life at birth in Greece, Rome, and Egypt during a period of perhaps 500 years around the beginning of the Christian Era probably did not exceed thirty years. Nineteen hundred years later, the populations of North America and Western Europe had added another fifteen to twenty years to their expectation of life, thus reaching a total of forty-five to fifty years. Today another twenty years has been added. The increase in expectation of life at birth for these peoples during the past half century has been as great or greater than that during the previous years.

By 1940, only a minority of the population of the world had experienced the spectacular increase in longevity just described. The longevity of the majority of persons was no greater than that of Western Europeans during the Middle Ages. During the past two decades, the possibility of achieving a twentieth-century death rate has been opened to the masses of the world who still had a medieval death rate. An indi-