

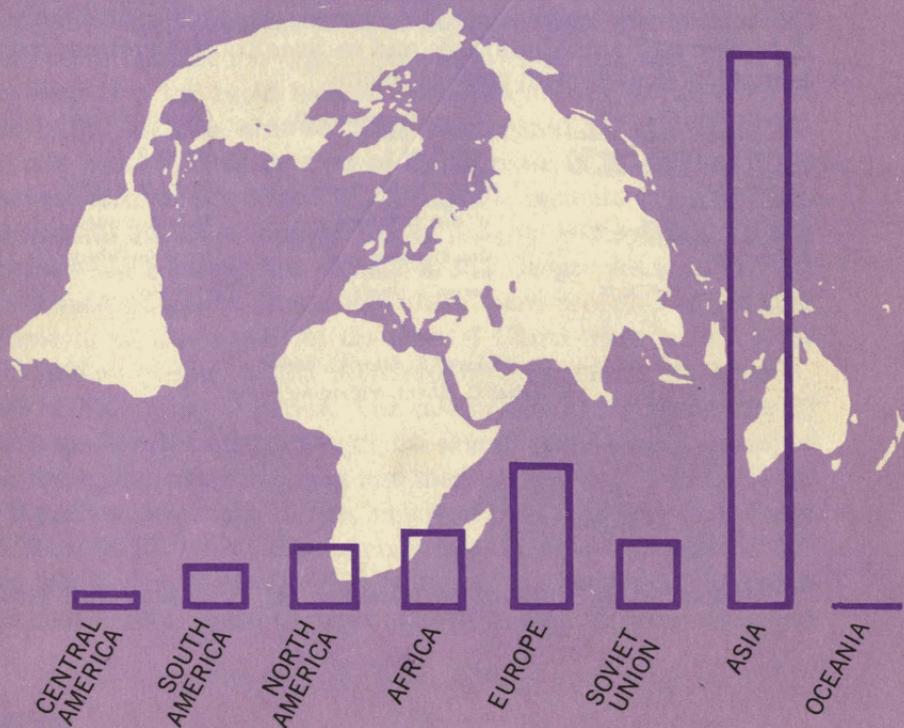
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THIS CROWDED WORLD

BY FREDERICK OSBORN

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BY FREDERICK OSBORN

Mr. Osborn, a leading authority on population problems, is author of A Preface to Eugenics and Population, An International Dilemma, and is Chairman of the Executive Committee of The Population Council. . . . Visual Services, Inc. prepared the illustrative material for this pamphlet.

Population problems may be of many different kinds. Each nation and each area has its own problems. But there is a world problem of population which overshadows all the rest. It is the problem of a too rapid increase in numbers in a world, parts of which are already crowded and unprepared in skills and resources to take adequate care of the increase in its people. If the increase in numbers of people outruns the increase in production, mankind is in for a long period of poverty and suffering. Many of the world's people are already at this danger mark.

At the end of the Stone Age there were probably 10 million people in all the world. At the time of Christ there were 200 to 300 million people; at the beginning of the modern era (1650), 500 million; today 3 billion. The danger lies in the rising rate of increase. For thousands of years the rate of population increase, in the aggregate, was something less than .02 per cent a year. Some 300 years ago it began to rise, slowly at first, then very fast. From 1650 to 1930 world population increased at an average of 0.5 per cent a year. Between 1930 and 1940 the increase averaged 1 per cent a year. Since the end of World War II it has averaged

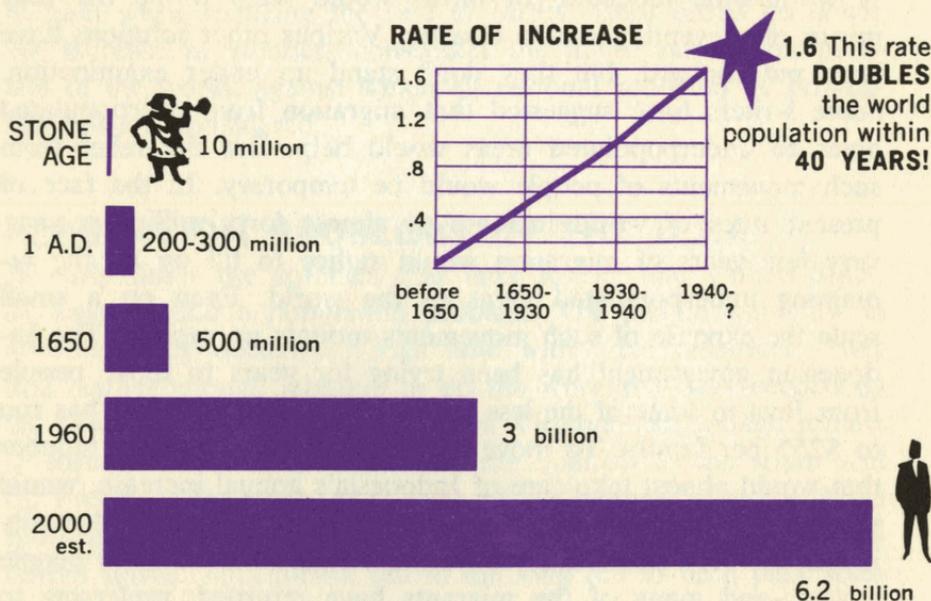
1.6 per cent a year. At the rate of 1.6 per cent a year the population of the world would double about every 40 years. The medium estimate of the United Nations is for a world population of 6.2 billion by the year 2000.

decline in the death rate

These rising rates are due to modern man's increasing control over death. Among primitive peoples half the children died before growing up. Until about a century ago, one third of the children born in Europe died in infancy. But among peoples of European descent today, less than 10 per cent of the children die before reaching age thirty, and in Asia, Africa, South America and the Arab States the high death rates that prevailed until quite recently have now begun a rapid decline. A reduction of infant deaths from 50 per cent to less than 10 per cent of all children born is equivalent to almost a doubling of births. Thus when deaths go down, births must go down too, or the population will increase with startling rapidity. Births have gone down among European peoples, but only slowly, following long after the more rapid decline in deaths. Between 1650 and 1950, while the world as a whole was increasing fourfold, Europeans increased sevenfold, and filled the vacant areas of North America, Canada, and Australia. Today, while deaths are going down in the rest of the world, there are few signs of a similar drop in births. Populations are mounting, and there are a few vacant lands to receive the people.

As deaths decline further in most of the world, the rate of world increase may rise considerably before it flattens out as eventually it must. At anything like present rates of population, there will be six billion people in the world in another forty to fifty years. There is room in the world for this many people, and the United Nations Food and Agricultural Administration believes it will be possible to feed them if the world's agricultural resources are sufficiently well organized. It may be more difficult to double the manufacture and distribution of commodities in so short a time. For another generation we might be successful in reducing world poverty against the handicap of rapid increases in numbers of people, but

GROWTH OF THE WORLD'S POPULATION



it looks as though we were in for a long period during which there will be little improvement in well-being for most of mankind unless there is a rapid decline in the birth rate.

Today three-quarters of the world's people are just beginning to hope for better things. At the same time, for reasons which we cannot go into here, most of the world's peoples are in a state of ferment, insistent in their demand for more of the world's goods. If they are frustrated in their hopes, if their poverty deepens, then the chances are slight for the growth of democracy, such as we in America know today. Democracy does not thrive in an atmosphere of poverty and frustration.

After forty years, if world population has reached over six billion and is still growing at anything like present rates, the technical problems of world organization for supplying such vast numbers of people with their ever-increasing requirements for food and commodities in a world of diminishing resources will become at some point insurmountable. This is the climate in which aggression and war develop.

only solution — reduction in births

A world-wide reduction of births would seem to be the only means of preventing such a disaster. Various other solutions have been put forward, but they don't stand up under examination. Some writers have suggested that migration from overpopulated areas to underpopulated areas would help. But the relief from such movements of people would be temporary. In the face of present rates of world increase of almost forty million a year, very few years of migration would suffice to fill up all the remaining underpopulated areas of the world. Even on a small scale the expense of such movements mounts up rapidly. The Indonesian government has been trying for years to move people from Java to some of the less populated islands. The cost has run to \$255 per family. To move a million people a year, a number that would almost take care of Indonesia's annual increase, would require a sum greater than the entire national budget. Actually it has not been possible to move more than about 25,000 people a year, and many of the migrants have returned, preferring to be in their old homes.

Idealists have proposed that a more "equitable" distribution of the world's goods would relieve the poverty of the less industrialized areas. A more equitable distribution would diminish the cause of friction and jealousy between nations, and may some day be necessary for that reason, but it would not in the long run be sufficient to relieve much of the world's poverty. The 200 million people of the United States and Canada have an average income of over \$2,000 a year each; the 300 million people of Europe outside the Soviet orbit something around \$1,000 a year each; and the people in the Soviet orbit and in Russia considerably less. Dividing these incomes among the other two billion people of the world, who now have an average of under \$100 a year each, would raise the average incomes to perhaps about \$400 a year, too little to meet their needs. But even this would not be a lasting benefit, for undoubtedly production would go down in the industrial countries if their people were not permitted to enjoy the goods they themselves produced.

The only acceptable answer seems to be to increase world production while reducing the rate of births. Until births go down, the increase in numbers constitutes the major population problem of the world, against which all national problems of population must be considered.

POPULATION PROBLEMS IN THE U.S.A.

In early times the colonies that later formed the United States of America had a population problem. The people were few in number. They occupied a vast land with great resources. They had neither enough laborers to do the work that was needed on the tobacco and cotton plantations of Virginia, nor enough settlers to forestall the encroachments of the Spanish to the south and the French to the north, or to fight off the Indians. They met these problems in two different ways. For the hardest labor they imported slaves. That turned out in the long run to be a poor solution. It led to a great civil war, and we are still struggling with some of its aftermath. For the other solution, the colonists had large families themselves and encouraged the immigration of other family units from England, from Ireland, and from all of Europe, who in turn helped populate the land. The people who came included refugees from religious persecution, indentured laborers, sometimes people under sentence for petty crimes, often the poor and oppressed to whom in Walt Whitman's words, "we opened our gates." Many people had forebodings about this policy. But it worked. Each different race and nationality has made its contribution to American life, each has renewed on these shores the love of liberty to which our country was so early dedicated, each has left its mark, and each after a generation or so has been absorbed in the main stream of American life.

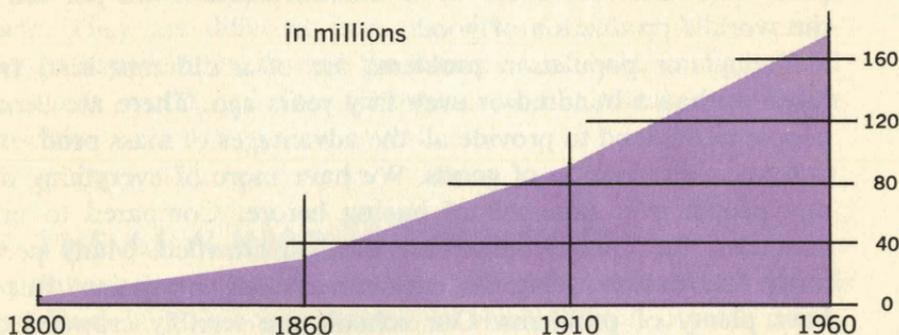
We have been through a long cycle of changes in population. There were only 275,000 people in the colonies in 1700. Throughout colonial times the women of this country who lived to middle age were averaging 8 children apiece; families of 12 to 15 were frequent. Almost one quarter of the children died before they

reached their fifth year. You can still see their little tombstones and often also those of their young mothers scattered in lonely cemeteries through the New England countryside. But the excess of births was so great that the population was increasing far more rapidly than today, doubling every twenty years. Education was brief; the children went to work early on the farms where 95 per cent of the people lived. When the children grew up they had little trouble looking for jobs; there was free land for the asking and new farms to be made.

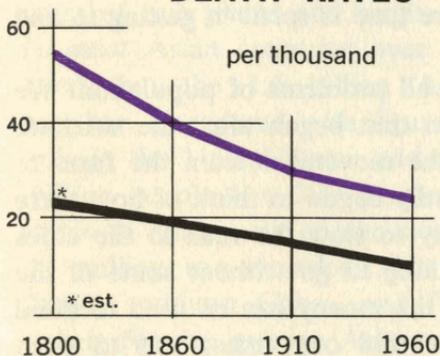
All this changed, slowly at first, then later very fast. The country was growing. Roads were built, and then canals. By 1860 railroads were finally being built across the continent. The cities were growing, manufacturing was well advanced, people were leaving the farm, and immigration was increasing. Public health was improved, only one-sixth of the children were dying in their first year of life, the average length of life had increased from 35 years to about 40. The birth rate was down, too, from 55 per thousand per year in 1800 to 40 per thousand in 1860. But the death rate was down even more, and the population grew from 1,600,000 in 1760 to 31 million in 1860, and was still doubling in less than 30 years. Women reaching middle age had given birth to five children on the average in 1860, and families of 12 to 15 were becoming rare.

In the fifty years from 1860 to 1910 the population grew from 31 million to 92 million. The trek from the farms had begun. The average number of births per woman living to middle age was down from about 5 in 1860 to 4.3 in 1910. But the country in 1910 still maintained its old outlines. It was still predominantly rural—54 per cent lived on rural farms or in rural villages. High birth rates were maintained by the rural folk, especially in the south, and by immigrants. Death rates were down, and the average length of life was approaching 55 years. The telephone had come, but automobiles were rare and the first airplane flight was a recent event. The country was just completing its last great immigration from the old countries of Europe, this time from Italy, Poland, and neighboring countries.

U.S. POPULATION



BIRTH VS. DEATH RATES



LIFE EXPECTANCY



increasingly rapid growth

In the fifty years from 1910 to 1960 change took place at an accelerated pace. So many people left rural areas that by 1960 only 12 per cent of the population were on the farm or in rural villages, and 58 per cent were in metropolitan areas of cities of 50,000 or more. Ninety-five per cent of all children born lived to see their thirtieth year; the expectation of life for women had gone up to 73.5 years and for men 67.1 The average number of births to women reaching middle years was 2.9 after having gone as low as 2.3 in the great depression of the 1930's. The country had

almost 60 million automobiles to supply transportation for its 180 million people and 52 million families, and its factories were producing consumer goods in an amount equal to 42 per cent of the world's production of goods.

Today our population problems are of a different kind from those we had a hundred or even fifty years ago. There are enough people in the land to provide all the advantages of mass production and mass distribution of goods. We have more of everything than any people ever dreamed of having before. Compared to other countries, the United States is not at all crowded. Many people might feel that we have the optimum size of population. But we have plenty of problems. Our schools are terribly crowded and becoming more so all the time; we have not enough hospitals nor enough doctors and nurses; our cities and suburban communities are sprawling and badly laid out; everywhere transportation is breaking down and more and more time is spent in getting to and from work.

Directly or indirectly these are all problems of population. We did not anticipate the baby boom that began after the war; we did not anticipate the extent of the movement from the farm to the city and suburbs. We have hardly begun to think of how these problems will be met. Shall we try to slow the rush to the cities or even to reverse it? Are we willing to go without some of the things we are now buying so that the money can be used to build new schools and highways, to rebuild our cities, and to train more men and women in the professions? Are we going to plan for a country not much larger than we have at present, say the 250 million people we shall have before the present baby boom is over, or are we going on to 300 million, 400 million, or a billion people, when we would begin to be as crowded as some of the Asian countries and our standard of living would be going down? Are we going to make a considered effort to persuade people to reduce the birth rate by later marriage, by better means of fertility control, or by a change in social conditions? At the present rate of births, it won't take us long to reach the billion mark—only four or five generations.

Our population problems relate to the kind of country and the kind of society we want to have for our children. They relate to our national security and to our relations with the rest of the world. They are different from the immediate population problems of Japan, of India and the countries of Asia, of Egypt and the Arab world, of the Caribbean and Central and South America.

IN THE LOW-INCOME COUNTRIES

Throughout man's history, at least half the people of the world have lived in Asia, concentrated in river valleys, coastal areas, plains, and wherever else nature was not too unkind. We Americans associate high population density with metropolitan cities and think of our rural population as widely scattered over acres of rich plains and virgin forests. Asia is in sharp contrast. In most Asian countries over 80 per cent of the population is rural, but the 1.6 billion Asian people are densely packed together. Compared with figures such as 50 persons per square mile in the United States and about 220 in Europe, India's 400 million people live 300 persons to the square mile, East Pakistan's 46 million are compressed 850 to the square mile, Taiwan's 10 million are crowded 700 to the square mile. In southern Japan, southern China, and Java the crowding is even worse.

Life for the average Asian is, by European standards, meager indeed. It is eked out of a small patch of land handed down from generation to generation. Not only is caloric intake insufficient to meet the requirements of vigorous life (18 per cent below requirements in India for example), but about 75 per cent of the calories are derived from cereals, starchy roots, and sugar.

People subject to inadequate and unbalanced diet, lacking the fundamentals of public health and exposed to periodic floods, famines and epidemics, have high death rates and especially high rates of infant mortality. They have to bear many children to have a few left to support them in old age. Beyond that they give little thought to planning the size of their families.

In general the least well off people tend to have the most children. Thus women in many parts of Asia and Africa and in some parts of Latin America have 8 or more children during their reproductive period, and birth rates range between 40 and 50 per thousand population per year, compared with 15 to 25 in the Western World.

changed attitudes needed

Ingrained attitudes are not easily changed. They tend to linger long after they have become inappropriate. This is particularly true of reproductive habits, involving as they do the basic religious, moral, social, cultural and biological aspects of life. Death rates are a different matter. No one wants to die, and it is now possible to reduce high death rates drastically with the introduction of relatively inexpensive, simple public health measures, like spraying for mosquitoes, providing a pure water supply, and supplying antibiotics. These things require government support and teams of experts, but little involvement on the part of the people at large. Thus the underdeveloped countries continue to have high birth rates at a time when death rates are falling quite rapidly.

In Ceylon for example, the death rate dropped from 19.8 in 1946 to 12.3 in 1949, following the adoption of malaria control and other public health measures. Ceylon's present official death rate of about 10 per 1,000 people is down to Western levels, but her birth rate remains at a high level of 35 per 1,000. In Taiwan the 1953-55 registered death rate was down to 8.7 from 13.7 in 1947-49, but the birth rate went up from about 38 at the end of the war to 41.4 in 1957. Malaya reports a drop in deaths from 16.6 to 12.0 per 1,000 people during the same period.

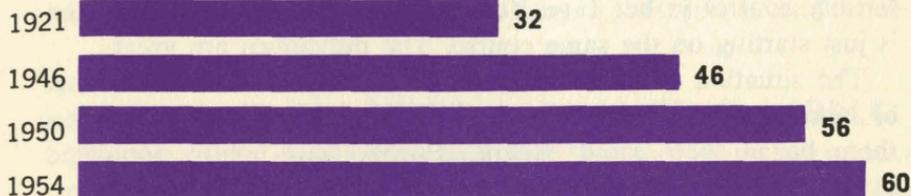
In Latin America it is estimated that malaria has now been suppressed in two-fifths of the areas where it was formerly a great cause of early death, and eradication programs are now going on in other areas.

As a result of the fast-falling death rates, life expectancy has increased in the underdeveloped areas with a rapidity

INEXPENSIVE PUBLIC HEALTH MEASURES

INCREASE LIFE EXPECTANCY

Years of Life Expectancy in CEYLON



SPRAYING MOSQUITOES



PURER WATER



SUPPLYING ANTIBIOTICS

unmatched by the experience of any Western nation. In Japan, for example, the expectation of life at birth was extended about five years in the single year 1948. The best record for any Western country was five years' extension in a ten-year period. The latest United Nations figure for Japan (1957) is 63.24 average years of life for men, 67.60 for women. Although recent and reliable figures are not generally available, the trend is unmistakable: in Ceylon life expectancy rose from 32 years in 1921 to 46 in 1946, to 56 in 1950, and to 60 by 1954, almost doubling in this 33-year period.

France recognized her population problem several decades ago, and Sweden did so 30 or more years ago. Japan, India, Pakistan, and Egypt are keenly aware of their population problems today. Each has taken steps to develop and implement

plans for reducing births. As yet, however, Japan alone has been successful in bringing births down more nearly to the level of deaths. It is her hope that her population can be stabilized at around 100 million. India has incorporated plans for fertility control in her Five Year Plan for development. Pakistan is just starting on the same course. The difficulties are great.

The situation of all these countries is very different from that of North America and Europe 150 years ago when death rates there began their rapid decline. Europe was lightly populated by comparison with Asia today, and North America was almost empty of people. These continents could afford a long period during which deaths went down rapidly and the drop in births followed only slowly. There were great increases in population, but the countries could absorb them. Today in most of the rest of the world, there are already too many people for the land to support under present methods of agriculture. Larger populations can be fed only by the introduction of fertilizers in great quantity, by the use of farm machinery, by improved transportation, storage, and distribution. Goods other than food must wait on the construction of factories and an immensely expensive process of industrialization. There is little margin from which capital can be saved for the enormous investments required. The process of improving the conditions of life for most of the world's peoples presents many difficulties, and if to these are added large increases in numbers of people without at least a corresponding increase in food and goods, the difficulties become almost insuperable. They can then be met only by types of repression and sacrifice which are abhorrent to Western ways of thought. A rapidly growing population not only means more mouths to feed, it means a smaller proportion of adults of working age; for example, two children to three adults, as against one child to three adults in the slower growing countries.

Thus increasing longevity and a widening gap between birth rates and death rates among peoples already living on a bare subsistence level in densely populated regions of the world are giving rise to an increase in numbers that can be truly explosive,

and can become an insuperable handicap to improving their levels of living. If the hopes and aspirations of the peoples in most of Asia, Africa, the Arab countries, and in much of Latin America, are frustrated by a continuation of the cycle of poverty and hunger, there can be little but turmoil, revolution and chaos.

AMERICA'S PLACE IN A CHANGING WORLD

The American people may well feel that they have no population problem to be concerned about. Our population is large enough to maintain a production of goods which makes us one of the leading nations of the world in military power; the death rate of our people is as low as that of any people in the world; our birth rate has always been high enough to provide a substantial increase in numbers, and we have room to take care of that increase for some time to come.

It is only when we look outside our own country that we see population pressures mounting in a way that may soon greatly affect us. Our southern neighbor, Mexico, is increasing its population at the rate of 3 per cent a year, the highest rate of increase of any large country today. Mexico's present population of 36 million will at present rates reach 123 million by the turn of the century, less than forty years away. Next to Mexico, the most rapid increases in the world are taking place in the Caribbean and Central America with a present combined population of 66 million, and a projected population of 200 million by the year 2000. Present trends indicate that the population of South America will grow from the present figure of 140 million to 394 million by the year 2000. This would mean that instead of being substantially smaller than the United States, it will be substantially larger. In some of the South American countries a large proportion of the people are extremely poor and recently awakened to wanting better lives for themselves and their children. Few of the smaller countries have had any long history of self-government. Some are ripe for revolution, and we have been having a foretaste of it in recent years. Soon

their people will be far more numerous and their industrial strength, though it may not for a long time equal ours, will no longer be negligible. It is time we reappraised our "good neighbor" policies in the light of these rapidly changing conditions south of our border.

challenge of nationalism

A very similar change is taking place among other peoples who are geographically more distant, but getting nearer with each advance in communication and transportation. Their numbers are increasing more rapidly than ours, and to a greater or less degree they are moving towards the manufacture of their own goods and towards the industrial status which provides a potential for war. They have little or no background of democratic tradition, and most have known no government except some form of oligarchy or dictatorship. They are presently in an intense phase of nationalism and in a ferment of change. Their rapid increase in numbers adds enormously to their problems of orderly growth and industrialization. China with more than 600 million people is headed, according to the best estimates available, towards a population of 1.6 billion by the year 2000. India, is expected to have 660 million people in another forty years if fertility declines, but 1 billion if it continues as at present. Both of these great countries are moving towards a larger production of goods in their own factories, and striving desperately to improve the condition of their people.

We are living in a rapidly changing world, and the present position of the United States as one of the two predominant world powers cannot but change with the increase in numbers and strength we are witnessing in other nations. Indeed, the whole group of European peoples with whom we share the background of European civilization constitute with us only some 750 million people, about one quarter of the world's population. The other three-quarters spring from wholly different backgrounds. It will not be easy to learn to live with them in peace in a crowded world.

WHAT IS TO BE DONE?

The problem cannot be met by allowing death rates to remain at a high level. The living conditions which lead to a high death rate include malnutrition and widespread disease, and these spell low vitality, lethargy and lack of drive, conditions under which no nation can work effectively at improving its way of life. Nor can we expect birth rates to go down except in consequence of a lowered death rate. When half the children die before they grow up, many children are necessary to the survival of the family as well as to the survival of the nation. People generally are not willing to have their family line die out or their nation disappear. They will reduce the size of their families only when they feel confident that enough children will survive to care for them in their old age. There is a vast saving in labor and human suffering in a system of reduced deaths and correspondingly reduced births. But it can be attained only by beginning with the reduction of deaths. Our humanitarian effort to improve sanitation, combat disease, and improve nutrition is necessary to provide a base for the attack on the problem of a too rapid increase in population.

It is fortunate that the control of disease, the reduction in infant mortality, and the extension of life expectancy comprise the necessary first step in the control of births. It is a step every one approves. People everywhere want to save the lives of their children and to protect themselves from illness. The efforts of the World Health Organization and of the United States and other countries in the field of health are always welcome. These efforts are not suspect and can lead to the idea of reducing births, for as infant mortality goes down and other deaths become less frequent, parents begin to have more hope and aspirations for the future of their children. They more easily recognize that if they have fewer children they can do more for them.

Intentionally limiting the size of one's family is indeed a new idea to much of the world. It goes contrary to the social habits and customs, the religious and moral precepts which have devel-

oped over the centuries in response to the need to survive in long periods of high mortality. Until 150 years ago in this country and in Europe, and even today in most of the world, death rates of 30 to 40 per thousand per year have been the normal lot of mankind. Under such conditions women must average from five to seven children each to provide even a slow growth in numbers over the years. As late as 1800 in England and later still in Ireland and other places, such growth was interrupted from time to time by famine and plague. The great plague which swept Europe in the 14th century reduced the population by some 25 million people. London, Venice, Florence, and Paris are estimated to have lost nearly half their populations within a few months. Similar though less well documented catastrophes have swept Asian and other countries from time immemorial. Their memory is part of man's racial inheritance. No wonder he finds it hard to make a sudden adjustment to this new world in which an increasing number of children live to maturity and in which famine and plague no longer ravage the people.

The recent reduction in deaths in underdeveloped countries has usually been effected by governments, with little participation by most of the people. There has been no need to change popular customs or habits of mind in order to cut death rates. Spraying with DDT is an effective means of reducing the incidence of one of the great killers, malaria. Pure water can be supplied and fly-borne infections can be reduced at moderate expense. To a greater or less extent these simple steps are being carried out in countries all over the world. Reductions in the rate of deaths which took 100 years in Europe and North America, are now taking place in other areas in as many months. The very speed with which this first step is being accomplished makes it hard for people to understand its import.

The second step, reducing the number of births, is slower and more difficult than the reduction of deaths. Limitations of family size must be carried out by the people themselves, and to do this they must change habits of mind acquired over the centuries. This is not something that can be done by government.

The final decision on size of family is made by the parents, and only they can carry it out. It is perhaps fortunate that most of the countries of the world are in a state of social ferment, when old customs are being cast off and new habits acquired.

In a period of intense nationalism, and with a topic as highly charged emotionally as family planning, it is important that the argument for a reduction in births should come from within the country itself and not be pressed from the outside. Any appearance of outside pressure, especially pressure from the West, might set back many of the movements for family limitation which are already well under way in India, in Egypt, in Pakistan, in the Caribbean, and those which are beginning to develop elsewhere. This is not to say that outsiders cannot be of any help. There are many effective ways in which our government, as well as the United Nations and private agencies can provide help indirectly, and without giving offense. Programs for maternal health and child care offer excellent opportunities to stimulate interest in the health and welfare of children, and help people understand that too many children may endanger the health and educational opportunities of each one. All nations welcome help in the development of scientific techniques and the training of scientific personnel, and most are grateful for help in carrying out studies on the means by which they may affect the attitudes of their people in respect to size of family. Under proper conditions, financial support may be given groups working on these problems in their own countries. Here then are many opportunities for foreigners to do helpful things without the danger of arousing antagonism.

stages of family limitation

Pressure for limiting size of family becomes effective only when it is applied to the parents themselves. Parents may be moved, as they are in the United States today, by the desire to give their children better opportunities, and for a family life in which the mother is not overburdened by childbearing, so that four or five children usually set the upper limit. Or they may be afraid

for the future of their children, as in Ireland after the great famine. Or they may see a new and better life for their children if they do not have to bring them up in the unrelieved poverty of a large family in a poor country as in Asia today. Or they may be frightened by a period of economic distress, as in the United States during the depression.

Pressures of these sorts, acting on the parents themselves, seem always to bring about a reduction in births. But the method by which the reduction is effected varies from time to time and from place to place. Self control and abstinence do not seem to have been effective with any large group of people. In Ireland, after the potato famine, the method used for reducing births was late marriage. In Ireland today, a hundred years after the famine, women marry at an average age of thirty as compared to an average age of twenty in the United States and fourteen in India. The population of Ireland which was some 8 million before the famine of 1846-47 fell drastically by some 3 million from deaths and emigration following the famine and has declined steadily in the past century to the present 2.9 million. In the United States and most of Europe the method chiefly used has been the control of conception. (Recent surveys indicate that over 83 per cent of American married women use some form of contraception, including rhythm or periodic continence.) In Puerto Rico sterilization probably has more effect on the birth rate than contraception. In Japan abortion and contraception are both used widely, but every effort is now being made by the Japanese government and health authorities to educate the people to the advantages of contraception.

Infanticide is the first and most primitive stage in family limitation. It is used when no other method is understood or available. Abortion is another dread alternative, for it may endanger the health of the mother. The moral sanctions against it are strong among people everywhere, but it is still widely used. Laws against abortion are flouted, or, if they are pressed, it is driven underground where its danger to health and morals is greater than before. In European countries, the incidence of abortions

per 100 live births is estimated to range from 30 in Czechoslovakia to over 100 in Hungary. There are no official figures for abortions in the United States; estimates range all the way from 200,000 to 1,200,000 per year as compared with more than 4 million births. In Japan there are over a million abortions a year, almost the same as the total of recorded births. Moral injunctions against abortion have been tried over the centuries but have never had much effect. The alternative to abortion is to make contraception more available, more widely used, and more effective, or to have sterilization.

birth control

In one form or another, contraception is becoming increasingly accepted in the United States. The Catholic Church approves only periodic continence—the rhythm or “safe period” method—though this method of family limitation is not very effective unless couples know the facts on which it is based. Many of the Protestant churches, on the other hand, have come out positively in favor of family planning through the use of modern medical scientific methods. Even among Catholics a recent study found that 50 per cent of the fecund couples married at least ten years had used some method other than the safe period.

Present methods of birth control are relatively expensive for people at the lowest economic levels. Their use declines with poverty, lack of education, and lack of motivation of the people trying to use them. As a result, in the Western countries there is still a considerable number of unwanted births, and in Eastern countries attempts at using contraceptives are often quite ineffective and are not continued.

There is a good deal of work now going on looking towards the development of some physiological means of fertility control, either by a pill, inoculation, or immunization. In the United States there is already on the market a hormone-like drug which can be taken by mouth and which has the effect of suppressing ovulation and hence conception. These particular pills have to be taken twenty days a month and at the right time, and they

are still relatively expensive. But there is good reason to believe that eventually a pill or immunization will be developed which can be taken at infrequent intervals and will be inexpensive and adapted to mass use, without injurious after-effects. When such a method is available, having children can more easily become a wholly voluntary matter, and we may expect that births will then be reduced much more rapidly to a reasonable level above deaths. Such a development is probably our best hope that the too rapid increase of peoples will be checked in time by limited births rather than by an increased death rate caused by insufficient food.

fewer deaths, fewer births, and a longer life

We are playing for big stakes in our effort to reduce death rates and birth rates more or less simultaneously. Reducing the deaths of infants and children to a minimum vastly reduces the sum total of human sorrow; and extending the average length of life of men and women to 70 years or more is to realize one of mankind's greatest hopes and ambitions. When, as in the United States today, 95 per cent of all children born live to reach their thirtieth year, parenthood takes on new dimensions of happiness. Life has more zest, and on the economic side more goods are produced and more services rendered, for there is great economic waste in the early death of those for whom there has already been a heavy expenditure.

Studies made in many different areas of the world indicate that few men or women want to have more than five or six children, even under the best conditions of life, such as exist today in the United States. When a country is poor and life is hard, four children appear to be the maximum number couples want to have, provided there is some assurance most of them will live. The reduction in childbearing under conditions of poverty and minimum nutrition means enormously improved maternal health. The mother has more strength and time for the children and for the work which may be her lot outside the home. There is more food for each child when it is divided among three or four

instead of among six or eight; there are better opportunities for education and training; perhaps even there can be some saving against the future.

All these things added together mean that couples even in the poorest countries can for the first time have some hope for the future, can think of planning their own lives, instead of living in hopeless resignation.

effect in the United States

Here in the United States we have been enjoying the benefits of low death rates and low birth rates for several generations. A hundred years ago women in their mid-40's had borne about five children on the average. By the 1950's this had been cut in half; the average number of births by this age was only 2.3, and only one-eighth of the women had had five or more. Some increase in family size had begun among younger women, however, for those 30-34 years old in 1960 had already borne about 2.6 children, and expected to average over 2.8. About one in five will have 5 or more children. At an average of 2.8 children, with the low death rates prevailing in the United States today, the population is not only increasing, but is increasing quite rapidly and, at the present rate, will pass the 300 million mark early in the next century. There is no evidence that the full acceptance and practice of family limitation brings births below the level needed for replacement, even though it reduces the proportion of large families.

We must not, however, infer that it would be a good thing if there were no families of more than 4 children. There are exceptional parents who would benefit themselves, their children, and society as a whole by having more than 4 children, and they should be encouraged to have them. In general, these are not the people who are having the large families now. Large families still tend to be found among the people who are too poor, too hopeless, too uneducated to bother about family limitation. The proportion of large families is no longer too high, but they are still unevenly distributed.

THE PROBLEM OF QUALITY

The quality of any population depends to a great degree on the conditions in which its people live and have reached their development. Their traditions and habits, handed down from father and mother to son and daughter, their religious beliefs, their national aspirations, their educational facilities and the physical conditions of their lives, which determine their opportunities for getting an education and determine their health and well-being — all these things go to make up the qualities of human beings. In any population these conditions differ for different families. In India where the caste system has been accepted for over 2,000 years, differences in quality have assumed an almost hereditary nature; some persons are born to be hewers of wood and carriers of water, or even to have humbler duties. In the United States where the national tradition has called for constant effort to keep the way of advancement open to every one, there are no hereditary castes, but there are nonetheless large groups of people set apart by their poor physical surroundings, their lack of education, and by their failure to take part effectively in the larger activities of the country.

In every population so divided into groups at different economic, intellectual, or social levels, there will be differences between the groups in their birth and death rates, and hence in the proportion of each group who survive in each generation. These group differences in births from one generation to another change the proportion of people of different qualities, and hence the quality of the people as a whole. This may present a real danger when birth control is first introduced and reaches the more educated people first, and the people at a lower educational level considerably later. Births, not deaths, are now almost the only factor in the increase or decline of various groups in the population, and the differences in births, as shown conclusively by recent studies, are not due to differences in fecundity, that is the ability to have children, but are due almost entirely to the voluntarily control of fertility.

In 1910, among wives who had completed their childbearing, wives of professional and business men had given birth to less than half as many children as had the wives of farm renters and farm laborers, and one-third as had wives of unskilled manual laborers in the cities. These women had lived at a time when differences in the use of contraceptives were at their peak. By 1957, when the practice of family limitation had spread to the lower income groups, women aged 15 to 44 whose husbands were in professional and technical occupations were having an average of 2 children as against an average of only 2.6 children for the wives of laborers in industry, or a ratio of 4 to 5, and approximately the same ratio was expected to continue to the end of their childbearing period. Thus in fifty years the differences in births between these two groups had become much less marked. Most authorities seem to agree that there will be a further narrowing of these group differentials as birth control becomes more widespread and more effective.

The past birth differentials between social and occupational groups at the upper and lower levels of education are generally believed to have had a retarding effect on the educational quality of our people. But there is no information available as to whether within each occupational group, the more educated and intelligent couples are having more or less than their proportion of children. Children are affected by the environment provided by their parents as much as they are affected by their schooling, and if a disproportionate number of children are born in homes which provide low educational standards, the effect would be to handicap the educational effort of the next generation.

the problem of genetic endowment

Children are affected not only by the environment provided for them by their parents, but they receive from their parents, grandparents, and family line their entire genetic endowment, popularly called their heredity. Because they take after so many different people, no two individuals except identical twins are genetically alike. These differences in genetic endowment play

an important part in determining the way in which different people will respond to those things in the environment which build character and intelligence. A "good" environment does not always make a fine person; and many people out of a "poor" environment have the ability to grow into fine people.

But the combination of a "good" environment with a "good" heredity is a pretty sure bet to turn out a fine person. Some forty years ago an eminent psychologist, Terman, examined the children from the public schools of the larger cities of California, and selected 1,500 who ranked in the top 1 per cent on the Stanford-Binet test for intelligence. No other criteria were used in picking them out. Intensive studies were made of these children, and there have been follow-up studies at frequent intervals since, the last in 1955, when they were about 45 years old. Their parents came from every racial and occupational group, with the proportion from the professions greater than in the population at large. The children grown up and at age 45 were above the average of their fellows of the same age in every measurable respect. A larger proportion of them were married, and their marriages were happier, than the average. To a far greater extent than even their parents, they had become lawyers, doctors, teachers, scientists, judges, and business executives. Their earnings were above average, divorces were fewer, they had less trouble with the law, they took more than average part in community activities. They were, in general, normal, hard-working, successful men and women, making important contributions to society. It is good to report that they had somewhat more children than the average of people in similar occupations, though somewhat less than the population at large. Their children, so far as they have been tested, show a higher intelligence than their fellows in the general population.

Many other studies have been made which bear on family resemblance. Identical twins have been compared with non-identical or fraternal twins and with other brothers and sisters; children reared at home have been compared with children reared in institutions; and there have been parent-child com-

parisons for all these groups. As a result of these studies psychologists have come to the conclusion that children tend to be like their parents as much in traits of intelligence as they do in physical traits. In technical terms the parent-child correlation is about .50 for both mental and physical traits. It is not known how much of this similarity is due to the similarity of the environment and how much to similarity in genetic constitution, but both factors are known to be involved. Because children tend to be like their parents, the quality of any group of people will be affected, from one generation to another, by the proportion of children born to different types of people within the group. So far as genetic factors are concerned, the effect will be of a permanent sort.

births — a family decision

In the United States, where some form of family limitation is used by almost every married couple, size of family is a matter which is decided by husband and wives; and their decision is determined by a great number of conditions which influence their thinking. They may be afraid that they will not have money enough to take good care of several children and give them an education; or they may expect that their children will be unusually intelligent and able to get scholarships. They may think that the neighbors will laugh at them if they have more children, or they may feel they will be more highly regarded if they have a large family. They may enjoy exuberant health themselves and expect it in their children, or they may be afraid that their children will inherit some serious defect that seems to run in the family (In the latter case, they should go to a good heredity counselor and ask about the risk.) Almost everything that affects the thinking of parents about how many children they should have arises from their social, economic, or cultural surroundings, and could be to a great degree controlled by society.

Factors which influence parents in their decisions as to how many children they want to have are being studied by social

scientists, and we are slowly learning more about people's motivations. At the same time our knowledge of human genetics is being constantly enlarged. Out of advances in these fields of knowledge there should come practical applications which will make for a sound and well balanced distribution of births throughout the population.

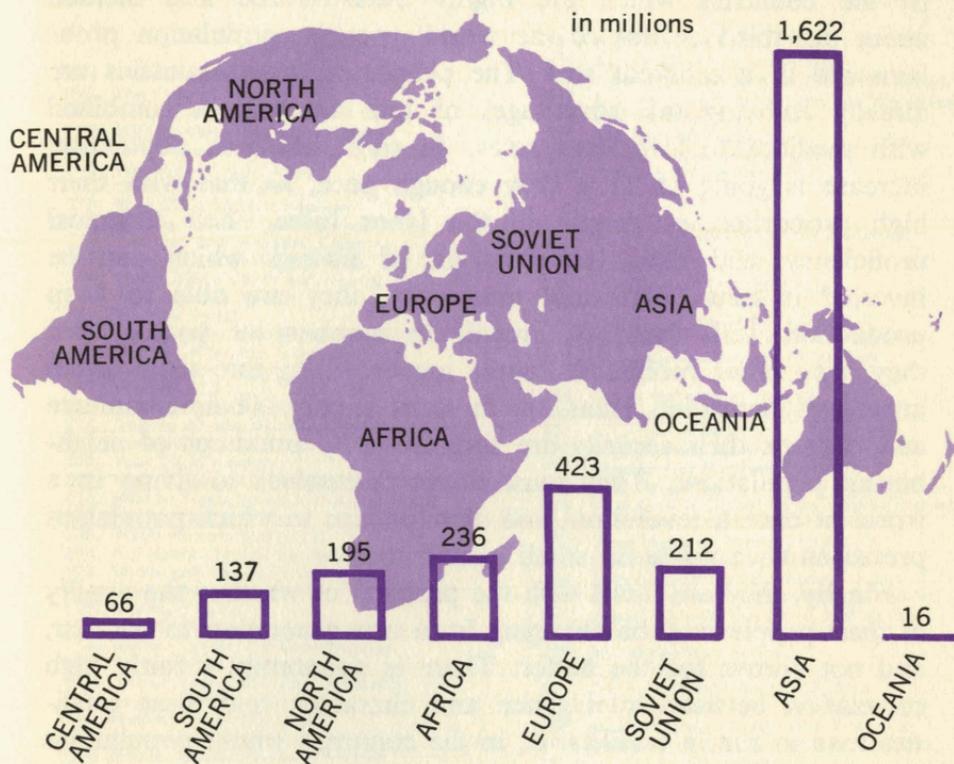
SUMMARY AND CONCLUSIONS

Man has conquered his environment to an extent beyond his wildest dreams. Even in the poorest countries the arts of agriculture, the use of fire, the weaving of cloth, the manufacture of metal tools, and a host of other advances give him comforts unknown to his distant ancestors of forest and plain. These things came slowly, over thousands of years. With each advance, his numbers increased till he spread to every corner of the earth. Now, suddenly, in not much more than 100 years, there has come a sudden rush of knowledge which makes it possible for man, if he will, to reduce the death rate greatly, especially at the younger ages. Where this knowledge is used, almost twice as many people live through their child-bearing years as did so even in the best conditions 200 years ago. Already in large areas of the world over 90 per cent of the children born live beyond the middle of their reproductive period; in other areas 70 per cent to 80 per cent survive; but in the most heavily populated areas, with the largest number of people already crowded on tiny plots of land, the rate of survival is still low, from 60 to 70 per cent. In all areas it is going up.

As the conquest of early death spreads throughout the world it brings serious problems of population. These problems are of different kinds in different areas.

In countries where two-thirds of the world's people live by agriculture and are poor and overcrowded on the land, the problem is one of such a rapid growth in numbers of people that the production of food and commodities cannot keep up with the increase. When this happens, individual incomes are low,

POPULATION OF THE WORLD



everyone has a little less, and there is suffering, unrest, and political instability. The solution is that births should go down when deaths go down, and at about the same rate. This is not an easy thing to bring about. In Europe and the United States, the decline in births followed slowly after the fall in deaths, but there was vacant land for the increase in peoples to settle on, and untapped resources with which to increase their production of goods. In the older, crowded countries births must fall along with the fall in deaths, and this will require a rapid change in old habits and customs, and strong government action. The discovery of improved means of fertility control would greatly facilitate the process. If this problem is not solved, the world is in for a long period of suffering, unrest, and political instability.

in industrial countries

In the countries which are highly industrialized and include about one-third or less of the world's people, population problems are of a different sort. The people of these countries are already enjoying the advantages of low death rates combined with medium to low birth rates. In most of them population increase is going on at a slow enough pace, so that with their high proportion of people in the labor force, their technical proficiency, and their large margin of savings which can be invested in new plants and machinery, they are able to keep production well ahead of growth in numbers of people. But they have other problems. People are crowding into their urban areas and recreation areas are in short supply. Their commerce and perhaps their security are threatened by pressures of neighboring populations. They must adapt themselves to living in a world of unrest, revolution, and dictatorships to which population pressures have made no small contribution.

Finally, they are faced with the problem of whether the quality of their people may be changing from one generation to another, and not always for the better. There is apparently a fairly high correlation between intelligence and character, and these qualities tend to run in families. If, in the countries whose populations are now fairly stable in numbers, families at the lower levels of intelligence and education have more than their proportion of children, and families at the upper levels of education and intelligence less than their proportion of children, the country will suffer a serious handicap in its efforts to improve the quality of its people. There are some scientists who even question whether the genetic qualities of the race are, under such conditions, holding their own.

Our people have barely begun to consider the impact of population trends on policies at home, on foreign policy, or on the quality of our people. Yet the future of our country may depend to a large degree on a better understanding of the population changes taking place all over the world today, and on the solution of the problems created by these changes.

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