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EDITORS-IN-CHIEF

Timur Friedman
Alex Laszlo

Gabrielle Popclazic
Viyada Sarabanchong

Ajit Singh-Molares
Salvador Uy

EDITORIAL STAFF

Yumi Ando
Brad Deutsch
Victor Chao

Reza Haniph
Wei-Yee In
Jun Kitatani
Kathryn Thorup

Shomita Maitra
Ben Martin
David Mischoulon

PRODUCTION STAFF

Timur Friedman
Wei-Yee In
Reza Haniph

Ben Martin
Mariko Nasu
Viyada Sarabanchong
Richard Wongsonegoro

Gaku Sato
Ajit Singh-Molares
Salvador Uy

FACULTY ADVISORS

Sylvia Gordon

Brian Kahn

Joan Neil

WRITERS AND CONTRIBUTORS

Iobel Andemichael
Emilie Chow
Gabor Csillag
Mary Fenn
Ramyar Moghadassi
Gaku Sato
Susie Tanenbaum
Jonathan Winnick
Vanya Yoors

Billy Centenera
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Rose Zacharia

Padma Challa
Francesca Cook
George Fenn
Virna Khan
Claudia Ross
Janet Su
Tina von Ohnesorge
Richard Wongsonegoro
Winston Zacharia

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INTRODUCTION

Limits to growth

"Of all things in the world, people are the most precious."
World Population Plan of Action, Bucharest 1974

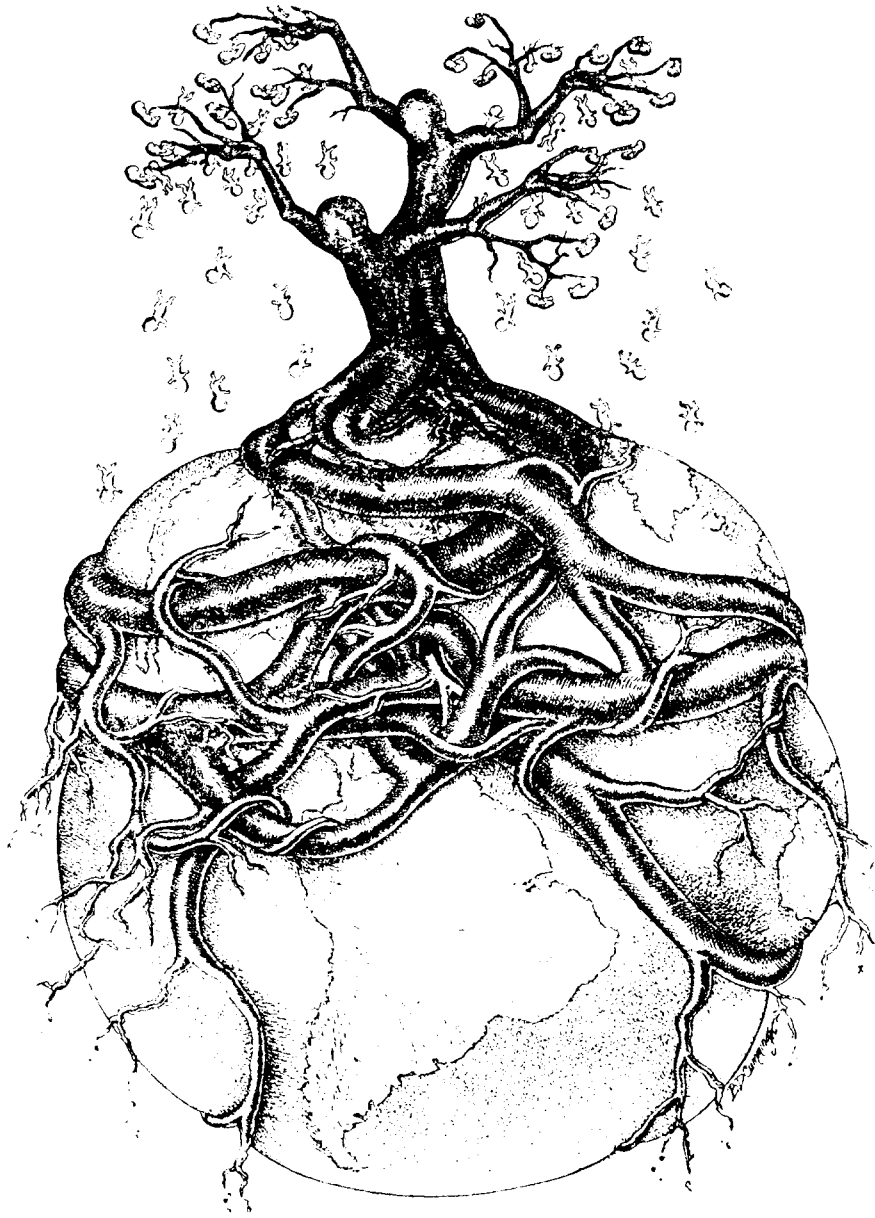
The crux of many problems that face mankind today is the planet's rapidly growing population. Humankind's numbers have grown to frightening proportions. Populations soared when rises in the food supply and advances in medical science came about during three key eras; the advent of agriculture in the Neolithic Age, the Industrial Revolution, and the period after the Second World War. The birth rate at each time increased significantly, while the death rate went down, resulting in population explosions. Now the rate of population growth in some countries has reached 3 to 4 per cent annually, causing an increase in the numbers of people to what could be considered the biological limit. This is opposed to the growth rate of 2 to 5 per cent per century that existed in the first fifteen hundred years after Christ. The number of people in the world currently stands at 4.4 billion. With population growing at its present rate, it may reach 6.1 billion by the end of the century, and 10.5 billion by the year 2110.

The quality of life of humankind is endangered by the population problem. Growing population causes an increase in demand for necessary resources. While technology has thus far helped cope with demand, the continued rise in population is creating demands in excess of the available supply of food, fossil fuels, minerals, and clean water that support life and civilization.

Food consumption is so high that if world production were to stop now, the reserves of food would last us only 35 days. Furthermore, overcultivation of much of the world's top soil, which has taken centuries to form, is removing cultivable land from the earth's surface at an alarming rate. Since the area of cultivable land is fixed, the increasing use of fertilizers and agricultural technology will eventually result in diminishing returns.

The demand for food is taxing not only land-based sources of supply but water-based resources as well. The fishing industry is growing due to the large and hungry world population. There is increasing competition between oceanic fishing industries, especially those controlled from London, Tokyo, and Lima. Overfishing is quite common, and the pollution of the waters of the earth steadily worsens. Between 1965 and 1970, the world fish catch rose by 35 per cent. While this may not seem a threatening figure, certain species of fish are in danger of extinction as a result. Once those species are extinct, people must begin catching more of other types of fish, with similar consequences.

The problem of mineral and fossil fuel depletion is somewhat worse, due to the incredible rate of consumption now prevailing and the fact that these resources are non-renewable. To illustrate this, note that, if consumption were to continue at its present rate, all of the world's oil reserves would be used up by the year 2000. And at the present rate of world population growth, consumption is doubling every decade.



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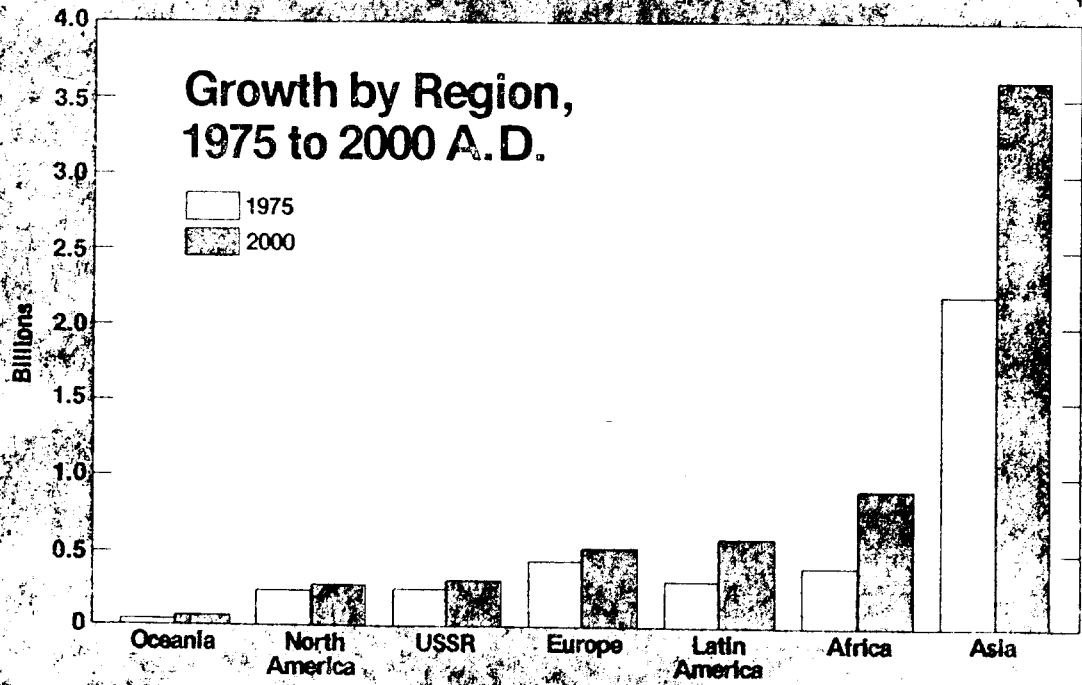
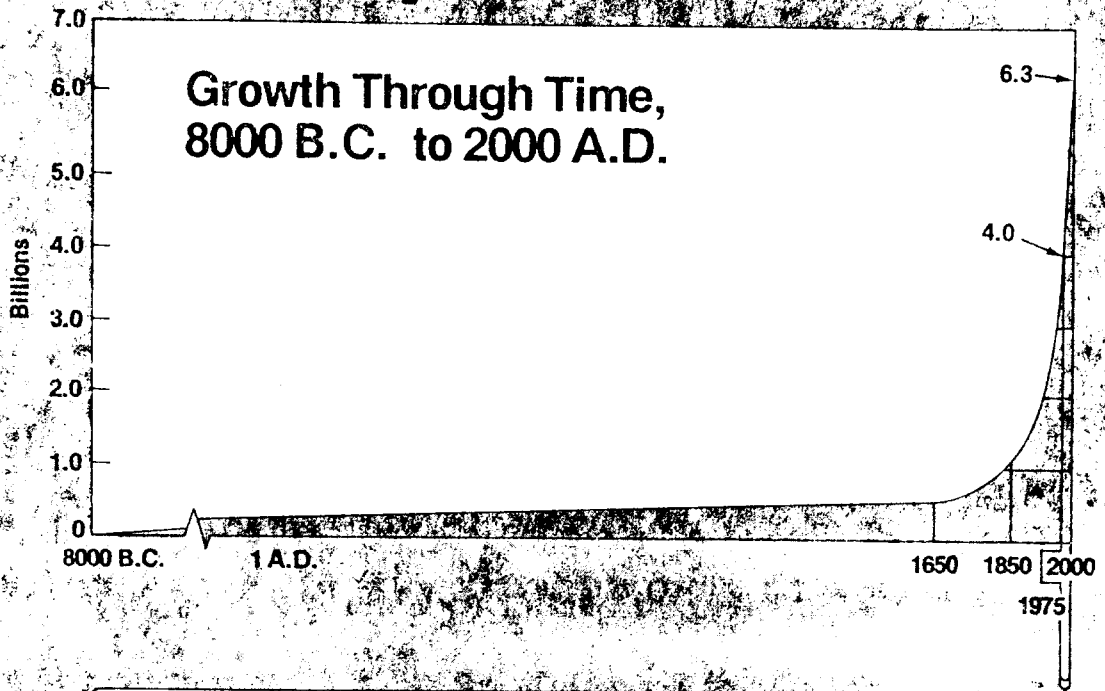
Another resource that is in danger is forestland. Many families depend on fire to heat their homes and cook their food. As the number of people who use firewood increases, they use up the nearest available trees, and go off in search of other trees. Another source of forest depletion is the clearing of land for agriculture. When deforestation takes place at the borders of a desert, as is the case in the Sahel, the desert advances as the barrier of trees is taken away, and desertification results. Deforestation affects ecological balances in many ways.

What is the effect of such vast numbers of people on the human condition? A critically dense population is called, quite properly, overcrowding. Overcrowding has shown devastating effects both psychologically and physically on the health of laboratory mice. Placed in an isolated environment free of predators and disease, the mice proliferated until the space ran out. The first symptoms exhibited by the mice were social breakdowns: the mice were all healthy, but they had lost the desire or ability to exhibit social compatibility. They had lost the instinct to mate when they reached sexual maturity. The mice did not have enough space to carry on their normal behavior, and new generations had no way of learning the former norms of mouse society. The mice began to show hostility to each other. They huddled together and attacked approaching mice. Deviant animal behavior such as homosexuality emerged. The male mice lost their sense of territoriality, and the females rejected, and even ate, their pups to conserve their space. All attempts to right the situation failed, and by the fifteen hundred and fifty-third day of the experiment, all the mice had died. While Dr. Calhoun, who had run the experiment, did not conclude that humankind would forget how to reproduce in a similar situation, he did say that it would stop exercising its intellectual capacity, including the formation of ideas and creative thought. While people have questioned the validity of that experiment, there is a human example--that of the Ik in Uganda--that cannot be ignored. This primitive society of nomadic people was forced by the Ugandan government to settle in permanent villages. Overcrowding resulted and the society broke down.

It has been said that there are limits to the growth of humankind that can take place on this earth, and that those limits seem to have been reached.

Another school of thought maintains, however, that there are no limits to humankind's growth because the totality of the world's resources can be enlarged by advances in technology. Technology has aided some nations so spectacularly it can solve present problems also. But is the present situation only a question of scarcity? Although 1.3 billion people are chronically undernourished, it has been calculated that there is sufficient grain produced in the world to provide 3000 calories per day for every man, woman and child on earth. True, a scarcity of resources exists, but this may be partially due to the mismanagement of the distribution of resources by developed nations as

World Population Growth



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well as by the developing countries themselves. For the foreseeable future, the world will be divided into sovereign nations, each with the different balance of people and resources. One cannot shake the globe like a snow scene paper-weight and watch the flakes spread evenly over the landscape. Efforts to assure a more equitable distribution of resources throughout the globe should balance handwringing over their limitation.

The longer one postpones dealing with the problem of population growth and the world's resources, the fewer choices of action one has. Are there really limits to the number of people an ecosystem can support? (All the people on earth at this moment could sit on Long Island, as computed by Gaku Sato, UNIS, class of 1983.) Can resources be better used through co-operation rather than competition?

I. POPULATION

When dealing with the problems of the world's population, it is necessary to have a certain amount of knowledge of the study of regional or national populations, called demography. This body of knowledge entails the study of the size, age and all other descriptive factors related to the way in which a population lives and dies.

When studying the distribution of the world's population, one cannot look only at how many people live where, but one must also consider how they live, interact, and use the resources available to them. For each area in the world there is an optimum population. This means that there is an ideal number of people which the resources of the area can support. Most of the regions of the world do not have an optimum population: some have too large a population for the available resources (this is what we call overpopulation); some have too small a population, and though this might seem to be ideal, it may not be so in reality as many of the underpopulated areas are unable to tap the resources available to them.

Demographers seek to understand how populations change, in order to make projections about the future of the world. When considering the growth of a population it is necessary to understand birth and death rates and migration patterns. The birth rate of a nation or a region is usually expressed as the number of births per 1000 population in any given year. This means the number of people added (because of births) to every 1000 members of the already existing population in that year. The death rate is expressed in the same way, but instead of calculating the births per 1000 one calculates the deaths per 1000. Migration is the movement of individuals across national or geographical boundaries to establish permanent residence. Migrations may occur within nations (e.g. from country to city) or between nations; hence the terms "internal" and "external migration". Although these three terms are fundamentals in the study of the growth

and development of populations, other demographic terms which closely relate to the formation of these rates must also be taken into consideration.

These are the following:

The fertility rate, which is the number of surviving children born per every 1000 women in the population between the ages of 15 and 49 in any given year. This is conceptually (though not numerically) almost the same as the birth rate, except that for fertility rates demographers use births per 1000 people instead of per 1000 women;

The net reproductive rate, (NRR) which is the rate by which each generation of women is replaced by its daughters. This would mean that an NRR of one would yield a steady population of women, the mother having one daughter to replace herself. Therefore the replacement rate would be roughly 2.5, because the number of males born must also be taken into account;

Morbidity, which is the frequency with which disease and illness appear in one year;

Mortality, which is the number of deaths as a part of population change;

The growth rate, which is the rate at which a population grows, not in terms of absolute numbers, but as a percentage of the base-year population;

Zero population growth, which means that the size of a population is steady. The number of births and of people entering a country as immigrants equals the number of deaths and of emigrants;

Natural increase, which is the surplus of births over deaths in any given time period;

Demographic transition, which describes the historical process of moving from a period of stable population to one of exponential growth, and finally to a stage of stabilized growth.

A. The census

The basic tool of demographers is the census, which is the actual process of collecting population information. The Demographic and Social Statistics Branch of the United Nations has had much experience in doing this; it computes data for Member States and drafts a manual on how to collect statistics for countries that want to initiate their own census-taking. The experience and competence of different countries vary: India has taken a regular census since 1871, while the African countries did not start to do so until the 1970s. The United Nations Fund for Population Activities (UNFPA) is aiding many countries to acquire the skills that are needed to interpret such statistics.

A census can take many different forms and the results can be used in many different ways. There is the household-by-household enumeration--very difficult to obtain in remote regions--or the sample survey. The questions asked can vary from simple information on the number, sex, and family relations of the people in the household to more complex information regarding a person's schooling, type of job held, and state of health. These data are important to all Governments, whether for tax and election purposes, for market research, or for helping Governments to make their development plans.

Organizing a census is a major undertaking. In some countries, laws have to be passed so that a regular census can be taken. The type of information desired must be established and a date set. For instance, the hurricane season is not a good time to take a census in Cuba. A massive publicity campaign through posters, radio, television, and village meetings must get the announcement of the census to as wide an audience as possible. Census takers (enumerators) must be recruited and trained. Some countries, like the Bahamas with 50,000 people, need a small group of enumerators, but China, with a population of almost 1 billion, requires 5 million enumerators. A major effort is being undertaken to complete a country-by-country survey of the world's population by the early 1980s.

A census is as useful as its accuracy. Statisticians have developed a sleuthlike ability to detect error--though they are not always completely successful. Sometimes there is a deliberate falsification of data--not very serious when women wish to appear younger than they are--that can have political overtones when a country wants to appear more populous than it really is. Countries with a very large population but a small Gross National Product (GNP), show a low Per Capita Income (PCI) and therefore become more eligible for international aid.

B. The population census and computers

Because of all the people that inhabit a nation, it would be very difficult to complete a census without the use of computers. The tabulation of all questionnaires, their checking for error, and their correction without computers would most likely be a slow and tedious process. Errors can also be made in the process of checking and correcting the errors of the enumerators. These are some of the reasons why computers are preferred and are even necessary when dealing with large amounts of data. For example, in the 1980 population census of Indonesia, two large computers were used, each having a capacity of 1.5 megabytes (i.e. 1.5 million words), making a total of 3 megabytes. The entire system costs about \$7 million.

The Indonesian population census began with approximately 280,000 enumerators, 65 per cent of whom were elementary school teachers and 35 per cent were high school students, who consider the job a great honor. The country was then divided up into blocs, each consisting of

approximately 200 households with an average of 5 members each.

Storage Section:

After the enumerators completed their assigned blocs, the questionnaires were collected at the regional offices and then brought to the central office, where they were sorted and stored by region (equal to 20 census blocs).

Editing/Coding Section:

Any error made by an enumerator was corrected. The information on the questionnaires was checked for consistency and then followed by an encoding process. This encoding process associated codes with certain responses, e.g., marital status, occupation, and so forth.

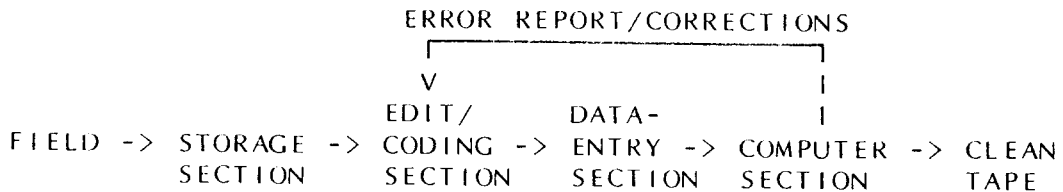
Data-Entry Section:

After the preliminary edit pass the data was transferred to flexible-disk media using key-to-disk machines.

Computer Section:

The information on the flexible disk was then transferred to the computer's memory and a "clean", or error-free tape, was made. Some of the errors made by a missing piece of information could be corrected by the computer immediately. In such a case, the computer imputed the missing fact with the given information. For example, let us suppose that in one of the household-questionnaire forms the answer to the question "sex" was "male", for "age" was (let us say) "40", and for "family status" was "mother". The computer then inferred the family status to be "father".

A report was produced for all rejected data describing the particular errors. This report was then sent to the Editing/Coding Section, where the errors were corrected. The corrected data were then sent back to the Computer Section, again using the flexible-disk medium, for another edit pass. This loop continued until there were no errors in the entire batch of data and a "clean" tape with all the correct data had been made. Tabulation of the enormous amount of data was then possible, and once again the use of a computer in this final step was necessary.



II. DEVELOPMENT

Development is defined as the improvement in the standard of living of a people through the provision of food, jobs and basic services like health and education. What is the relationship between population and development? Is it, as the developed countries wished to emphasize in the Population Conference in Bucharest in 1974, that population growth only serves to perpetuate poverty? The developed countries considered that the first step along the path of development was effective population control. This attitude angered many third world nations, which saw the cause-effect relationship in a different way. Attempts to deal with population before development are meaningless. When parents realize that better-fed children do not die but grow to maturity and are able to provide for them in old age, they naturally curb the number of births in the family.

The argument that development slows population growth has strong historical roots. For centuries, populations remained stable because the number of births barely managed to balance the deaths caused by the great decimators: war, famine, and disease. A worldwide phenomenon, occurring in the eighteenth century, was not fully explained by demographers: populations began to rise. Better methods of agriculture and new crops, like the potato, meant better nutrition and more children living to childbearing age. The introduction of cotton clothing led to more frequent, easier washing. Greater care for public and private health, as well as changing attitudes toward marriage and children, were some of the factors that led to an inexorable upward swing on the demographic curve.

The father of the science of population was Thomas Malthus, an English clergyman, who published An Essay on the Principles of Population in 1798. He pointed out that there was inevitable competition between people and resources, because population increases geometrically (2,4,8) while food production grows only arithmetically (1,2,3). Malthus believed that there would always be more people than food, and that the population "surplus" would be undernourished and poor. This analysis of population suited the factory owners of the early Industrial Revolution, who were thus assured of a pool of cheap labor.

However, the old prophet was proved wrong. The initial stages of demographic transition--first, when population levels were stabilized, and secondly, when they exploded--were followed by a third, when population once again stabilized. The advantage brought about by industrialization eventually improved living standards, and people began to have fewer children when they realized that a smaller family could enjoy greater comfort.

This pattern of demographic transition has not yet been completed in the third world. When the Europeans introduced the technology of better health care to their colonies (for humanitarian reasons), a natural restraint to population growth was removed and populations began to grow exponentially. These countries entered the second stage of demographic transition, which the countries of the Northern Hemisphere had reached in the early nineteenth century. The colonies provided the mother countries with cheap labor--and this certainly added to their wealth--but the mother countries did not return the wealth, and did nothing to help the colonies move into the third stage of demographic transition which would have meant a decline in the birth rate as a result of increased prosperity.

The early plans made by the newly independent, ex-colonial countries stressed industrialization as the core of all development because industrialization creates the environment that will enable people to limit the size of their families and, when population growth slows, the moneys spent for building mines, factories, and the infrastructure to make them work can be distributed among the people. But the results of the industrialization plans of these countries were disappointing. The developed countries were not fully prepared to share their wealth and technology with the developing world or to help it attain better living standards for the majority of their peoples. The rich within countries, as well as among countries, were also not prepared to share their wealth. Concern for the environment has made the wisdom of spreading industrialization over the globe questionable. Depleted raw materials, increasing costs, inflation and recession raise questions of where the capital and resources will come from to spur industrialization. Do the developed countries want to develop third world industries to compete with their own?

There are new interpretations of "development". Some, like those of E. F. Schumacher, are expressed in the title of his book Small is Beautiful. Others stress human, as opposed to material and capital, resources. In the economic triangle of land, labor and capital, it is time to find out what healthy and educated people can do for themselves. The world may be short of land (resources) and capital, but there is no shortage of labour. Give people the opportunity, and their ingenuity will assure their survival. A development strategy based on human resources must provide these opportunities. People must be healthy, they must be appropriately educated, and they must have jobs.

A. Health and nutrition

Good health and nutrition are important to ensure that people can lead useful and productive lives. There is a large gap between the quality of life of developed and developing countries as measured in their infant-mortality and life-expectancy rates. People in developed countries can expect to live 20 to 30 years longer than people in developing countries. Health services are better in developed countries: in 1977 there was one doctor for 630 people and one nurse

for 220 people. The comparable figures in developing countries were one doctor for 9900 people and one nurse for 8790 people. A human resources development strategy, as urged by the World Bank in its 1980 report, stresses agricultural development to produce more food, the provision of clean water, and basic health care. Healthy people provide their own momentum for development.

B. Employment

The question of employment is closely related to that of population. One billion more jobs will be needed by the year 2000. Where will they come from? How will automation affect the third world?

i. Computers and automation

The world is in the midst of an electronic revolution that will have far-reaching consequences. It is not surprising that the developing world has not yet felt any significant impact, since they trail the developed world in scientific advances. Spearheading the electronic revolution is the silicon chip, the size of a fingernail, which can accomplish what roomfuls of electronic equipment could do--less than three decades ago. As the costs of developing such equipment decreases every year, the possibility of robots replacing a significant portion of the labor pool is quickly becoming a reality. What will happen to employment in the third world?

Two of the major sources of export earnings for developing

way to reduce production costs. IBM is engaged in a \$4 billion upgrading of its facilities from labour-intensive to capital-intensive, high-productivity, high-technology factories.

Major manufacturers are pulling out of the developing countries and redirecting the construction of factories to developed countries in order to be closer to their markets. Although these moves will initially cause a high level of unemployment in the third world, there will be many positive aspects. It is a well-known fact that the multinationals exploit both the resources and the labour of the developing world. With the multinationals' exodus, nations in the developing world will have resources as well as labour with which to reconstruct their economies in a more self-beneficial manner.

There will be no problem for the developing countries in the world market. Almost all countries have a comparative advantage in some specific field and will compete for completely different markets. The implementation of appropriate development strategies by the third world will lead to a more natural course of development, and the bulk of the benefits will be directed within a nation.

ii. Appropriate development and education

Automation is changing employment patterns throughout the world. Old jobs disappear, but new technologies create new jobs. A greater understanding of the effects of population pressure on food production, energy, and the environment has opened up new fields for research and employment. Human-resource development will require more workers in health, education, and community services. The co-ordination of all these new industries and services will demand more managers and administrators. Unless even more jobs are created, however, population growth will outrun employment opportunities. The answer to the problem of employment lies in appropriate development, a fusion of appropriate technology and education that prepares people for their environment. The idea of labour-using technology is simple: instead of a tractor, buy a new hoe and either invest the money thus saved in new seed and fertilizer or fix your house. Instead of investing millions in an automated factory, hire people to do those jobs. Because labour-using technology does not require large capital investment and keeps people employed, it could solve many problems in countries with more people than capital.

People need an education that will enable them to do the jobs that are available and to use their ingenuity to make jobs where there are none. For development purposes education need not be formal. The ideal educational system for developing countries would be inexpensive, flexible, and short; necessary skills should be acquired quickly. This sort of system is called non-formal education.

An example of such a system is the village polytechnic in Kenya. Begun in 1962, the village polytechnic is run in a local building by local people at minimal cost. Due to the unequal distribution of

wealth in Kenya, the need for such schools is widespread throughout the poor sector of the economy. Non-formal education came into being spontaneously and was ideally suited to the Kenyan developing sector. A minimum of academic subjects was taught and the concentration was on vocational training. In a short time the Government became involved by partially subsidizing the schools; for the most part, however, funding came from community-based organizations like churches and clubs. The aim of this form of education is to give people the skills to improve their lives in rural communities and to be more productive and self-reliant. The trouble is that the pull of the old educational standards is so great that people see non-formal education as a way of getting into the mainstream of a system which will get them good jobs in the city. On the other hand formal education is unsuitable for the needs of the country. In India, for example, there are too many doctors of philosophy in low-level civil service jobs, a phenomenon called "structural unemployment".

Developed countries have not been very helpful in furthering the process of self-reliant development. Multinational corporations are not interested in funding research in appropriate technology as there is not much profit in it. In education, the problem is a subtle one of luring people away from Western standards of consumption, proclaimed in every form of advertising, and not substituting one form of indoctrination for another. It is difficult to get people to choose freely and intelligently what is best for them and their communities.

C. Balanced development

The most common characteristics of many developing nations are a high rate of population growth; an agriculture-based economy with a small industrial sector; and rural-to-urban migration, along with the poverty and squalor which often accompanies it. However, the squalor and high growth-rate are not products of under-development; they are the results of improper development.

There are three closely interrelated areas in which development must take place: the industrial sector, the agricultural sector, and the sector of population "controls". These sectors are interrelated. If any development takes place in the agricultural sector, for example, there must be jobs available in the industrial sector to absorb both the released labour and the "new labour" resulting from the population increase, for if population levels grow faster than the economy, people will be worse off than before.

But the transition from an agricultural to an industrial economy can cause further unemployment if industry is built on capital-intensive and labour-saving technology. Although the growing-pains of this transition are always full of stress, they can be made less so by a conscious attempt on the part of Governments to use an index of development that puts job creation above profit-making. Four factors must work together: people must work at their maximum productivity, profits must be invested in industry, innovation or

better ideas must be generated constantly, and industry must be labour-using. Japan could be considered an undeveloped country in the 1880s. Its development, at first accidentally, but then increasingly by design, has been based on the balance of these four factors.

When considering development strategies, the third world must not emulate the historic process of industrialization that took place in the North. The issues are simply not the same. When one is walking a tightrope, it is better to balance carefully than to act like one who has already crossed and is resting on the other side.

D. Rural development

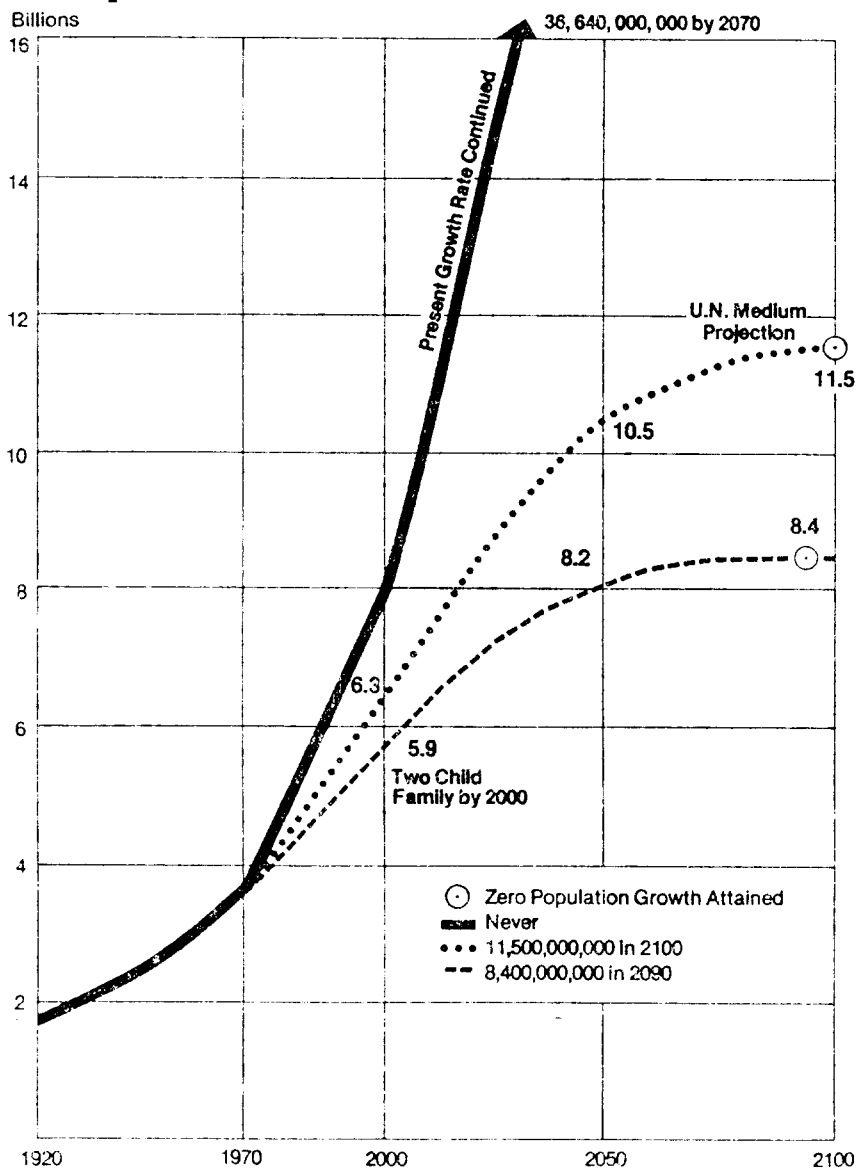
To prevent a massive rural migration to the cities, new strategies of development must concentrate on rural communities and offer people fulfilling lives in the countryside. Most foreign aid has gone to industry. Agricultural development has concentrated on producing cash crops for export, but the benefits have not trickled down to the peasants. Too little money has been put into improving essential services for rural workers in the form of the provision of drinking water, electrification, housing, transport, schools, and clinics.

As the need for increased food and employment becomes more urgent, Governments are finally reviewing the role they play in formulating rural development plans and are coming to a realization that land-distribution policies need to be changed. Small farms are more productive and more likely to use labour-intensive machinery than large plantations. Rural industry, based on food processing, machinery maintenance, and the use of local materials, can supply more jobs.

Some countries have succeeded in establishing agriculture and industry side by side in their rural areas. The idea of farming co-operatives is being tried in many countries, not only to balance agriculture, industry, and the available work force but to share resources more equally. In China, agricultural communes are large conglomerations of farms and rural workshops. In Israel, the kibbutzim maintain a balance between agriculture and industry and also offer their settlers self-reliance and pride in their endeavours. In the United Republic of Tanzania, the Ujamaa villages bring together the scarce resources of the region and offer people a chance to achieve a better life.

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Population Growth Scenarios



Sources: Unpublished data from the Population Reference Bureau, Washington, D.C., and the U.N. Population Division.

III. FAMILY PLANNING

Past and present statistics show that people naturally limit the size of their families when their standard of living rises. But there are many countries which find it difficult to raise their standard of living because there are too many people in relation to resources. One solution is development, increasing the size of the economy. The act of increasing the economy through the creation of jobs and the transformation of income-earning sectors can also be a way of controlling family size. The other solution is family planning, decreasing the size of the family sharing that economy. The World Population Plan of Action, adopted at Bucharest in 1974, states that:

All couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children and to have the information and means to do so; the responsibility of couples and individuals in the exercise of this right takes into account the needs of their living and future children, and their responsibilities to their children.

Translated into practical terms, this means the availability of both birth control devices and the provision of education regarding their necessity and use. This is a form of invasion into areas previously considered taboo and private--sex and sexuality. It is also a measure of the urgency of the situation that a growing majority of people throughout the world now accept the necessity for family planning. The World Fertility Survey, reporting in 1979, found that fertility was declining dramatically in many developing countries. More than half the women of reproductive age do not want more children, but half of these do not use contraceptive devices, although 80 percent of all married women surveyed have heard of them. But their use varies widely from country to country due to custom and tradition. In a growing number of instances, however, the willingness to use contraceptive devices has outstripped their availability.

Many developing countries are including family planning in their development programmes, but it can be a difficult decision in as much as budgets are tight and money spent on building clinics, training people, and distributing medical supplies is money taken away from building roads or sinking wells. More and more Governments are therefore turning for aid to the United Nations Fund for Population Activities (UNFPA) which projects the costs of these programs at \$1 billion annually. This, however, is only 2 per cent of all development aid.

There are several problems involved in making a family planning

programme work. People have children for many reasons and children are considered a gift of God. In rural communities children are extra farmhands; in cities they are extra wage earners. They are also a form of social security in old age. Until recently, child mortality was high in developing countries, and a woman needed many pregnancies to be assured of having surviving children. A higher standard of living would remove some of the reasons for having many children, but after the willingness to practice birth control has been aroused, the means must still be developed. So, whether family planning programs come as a result of development or as a spur to development, they must still be put into effect.

One of the most persuasive factors in birth control is the ease and effectiveness of its methods, but research is continuing as there is no "perfect" method. Though the responsibility for contraception lies with the man as well as the woman, men have not borne their full share. Part of the success of birth control depends on a change in men's attitudes.

Methods of birth control

The rhythm system is based on a woman's menstrual cycle and the idea is to avoid sexual intercourse on the most fertile days. It is a risky method, although better than none. It has been used throughout history and is accepted by most religions. Personalized computers will soon be on the market to calculate a woman's cycle and remind her of her "dangerous" days.

The condom for men and the diaphragm for women place a rubber barrier between the sperm and its eventual destination. For extra protection, these devices are usually used in conjunction with some form of spermicide. They are not altogether popular, but they are safe and have no potentially dangerous side effects. The condom has the added advantage of affording some protection against venereal diseases.

The pill interferes with the body's chemistry, as it prevents ovulation, with potentially dangerous side effects. It is a popular method because it is the least obtrusive, but can cause problems if it is not taken every day. Experiments are being done on a "morning-after" pill and on a male pill.

The Intra-Uterine Device (IUD) prevents the fertilized ovum from adhering to the wall of the uterus. It needs to be inserted by a properly trained person, and although it can cause pain and heavy bleeding, the IUD can be very successful. One drawback is that it causes cultural problems for some women.

Sterilization is a simple surgical process that is in most cases irreversible. Women have their Fallopian tubes tied (tubal ligation) and men have the tube that connects the testicles to the urethra along which the sperm travels cut (vasectomy). This method presents no health hazard and is popular in many countries.

Abortion is legal in many countries, and is used by some women as a means of birth control. In some cases there is the danger that women who have multiple abortions may find it difficult to carry a pregnancy to term when they want to have a child. Abortion is often a traumatic experience, and, when necessary, must be done with skill and understanding. Legalized abortion safeguards the health of women; illegal or self-inflicted abortions not only cause pain and death but cost a country more in subsequent hospital care than a programme of legalized abortion. The opponents of legalizing abortion argue that the foetus is conscious and has a right to life. Many women stress their right to control their bodies and to consider the future of the life they might bear.

The methods of birth control that a country chooses must accord with its customs, without interference from others.

There are various incentives to persuade families to limit the number of their children. Different methods are tried in different countries. Birth control is urgent in Singapore, which, having no natural resources, is totally dependent on trade. Economic policies raised the standard of living in Singapore, but the rate of decline in births was not fast enough. It is expensive to have more than two children in Singapore: there are extra hospital costs for the delivery of the third or fourth child, and there is a small, or often no, tax deduction for them. The additional children do not get priority in the choice of primary schools--a serious consideration that can affect their entrance into high school and college. These "disincentives" have been very effective. Singapore's annual rate of population growth has declined from 4.48 per cent to 1.51 per cent in the last 20 years.

Another good example of successful family planning programmes in a developing nation is the one instituted in Indonesia. The National Family Planning Board (BKKBN) turns to village headmen and traditional sources of authority to oversee its birth control programme. Village headmen, who have themselves been concerned by the lack of food and aid for their villages, have been intensively instructed in family planning and birth control methods. "Aspari," or local mothers' clubs, meet in the village headman's house, where, under his watchful eye, the pressure to practice birth control comes from the other group members. In Bali, an island with a predominantly Hindu population, many villages have a map of each house coloured to correspond to the birth-control method used by its family. Inhabitants of houses left uncoloured become social outcasts. Indonesia does not promote birth control as a foreign and Western idea, but, in Java and Bali, the world's most densely populated islands, uses traditional art forms, like wayang kulit (shadow puppets).

By the mid-1970s India had about 110 million couples in the reproductive age (the wives were between 15 and 44 years old). The Government has so far been able to reach only one fifth of this number

with a view to persuading them to accept some form of family planning. An enormous communication gap exists between urban and rural areas in India, and the Government and other agencies are faced with the problem of reaching about 70 to 80 million couples, 64 per cent of whom are illiterate, in order to explain to them scientific and modern methods of birth control. To provide facilities for family planning in half a million villages, a minimal clinic must be opened, with a doctor or nurse, medicine, and equipment. The annual cost for such a clinic, without support services, is about \$250; which brings the total annual cost to \$125 million to the Government of India.

India's family-planning programme is one of the oldest in the developing world. Its success, however, has been uneven. There was a disastrous time when men with several children were forced to have vasectomies. Other men were strongly persuaded, with the promise of a transistor radio, to undergo the operation they did not fully understand. However urgent the need for birth control is in India, the people have learned the value of understanding and cooperation between the villagers and family planning workers to achieve full and willing participation in these programmes.

Community participation is also important in China. Local "birth planning groups" educate their members in the need for contraception, and put pressure on them to conform. With the largest population in the world, China is urging young couples to sign a pledge to become a one-child family and eventually reduce the birth rate to below replacement level. In Catholic countries, like Mexico and Colombia, birth control is becoming increasingly accepted and even urged. Mexico is using the medium of the television soap opera to educate people about birth control.

"While the program, *Accompany Me*, was being broadcast, from August 1977 to April 1978, more than half a million women began planning their families for the first time, 32.5 percent more than in the previous 12 months. The sale of contraceptives rose by 23 percent compared with 7 percent the year before."

The New York Times, 5 January 1982

Sex education is seen as a necessary part of family planning. A group called CORA in Mexico City has discovered that peer counseling among teenagers is more effective than lectures by adults. Such counseling hopes to help adolescents deal with their sexuality in a more open and responsible way, as well as -- through an understanding of contraception -- avoiding unwanted pregnancies.

Family planning has been most successful in the developed

countries. In the United States, 74 percent of the married population use family planning. Japan has reduced its birth rate from 37.5 per 1000 in the years immediately after the Second World War to 17.2 per 1000 today.

Based on the successful examples of a few nations, we can see that family planning is indeed a viable alternative -- the goal being to encourage the use of family planning methods through positive reinforcement, thus urging the conscious and willing participation of all those involved. The one thought that must be kept alive, however, is that although the reduction of the world's birth rate is the primary concern of family planning, the respect and acknowledgement of the social and cultural beliefs of others are essential. A task of such magnitude, one that involves change for many people, must be instituted with understanding and genuine concern.

IV. WOMEN AND DEVELOPMENT

Man for the field and woman for the hearth;
Man for the sword, and for the needle she,
Man with the head, and woman with the heart;
Man to command, and woman to obey,
All else confusion.

Alfred, Lord Tennyson, "The Princess", 1847

"Women have the right to complete integration in the development process particularly by means of an equal access to education and participation in the social, economic, cultural and political life. In addition, the necessary measures should be taken to facilitate this integration with family responsibilities which should be fully shared by both partners.

World Population Plan of Action, Bucharest, 1974

Women traditionally have been regarded by societies all over the world as the weaker sex, the invisible and forgotten half of the human race. The old adage that "it's a man's world" sadly still holds true in many countries; women still exist, unseen, in the kitchens, nurseries and backyards of many homes. Only rarely in developing countries, have they ventured out to claim their stake in shaping and determining the future of their world. We must learn to use all human resources so that both men and women realize their full potential.

In considering the development of human resources, it would be folly indeed to take into account only half the population. Women

represent a relatively untapped well of human potential. Thus women may well hold the key to solving some of the world's problems.

How, then, can women be integrated into the mainstream of human activities and thus be allowed to play an active role in determining the future? One obvious answer is to educate them, and provide them with information enabling them to make their own decisions concerning their future and the future of their families.

A. Education and Development

In most countries of the world free primary education is available to all children, although in many developing countries girls still are less important than boys. Girls are often removed from school earlier than boys, and in such cases, rarely return. All industrialized countries provide free secondary education; in some developing countries education is also available free to all children, while in others the parents must pay. The percentage of girls who finish secondary school is much lower than boys, although the numbers have improved significantly during the last decade. Either the parents need their daughters at home, or the local custom is for early marriage (something that is beginning to change, however), or if the parents must pay for their children's education, boys take precedence. Women students make up an even smaller percentage of higher-education students; however this is not the case in all countries or in all professions. Women are inclined to train for jobs in health and education services rather than in engineering and industry unlike their counterparts in the socialist countries. The argument is still raging as to whether this proves a sex-determined mind set, or is the result of years of performing traditional roles. Who knows what female Einstein was prevented from studying physics because of prejudice?

Educating women has a wonderful ripple effect: like a pebble thrown into a pond, its benefits radiate outward in many ways. There is an Indian saying, "If you educate a man, you educate only one person; but if you educate a woman, you educate the whole family". Women are the first resource of their children, and educated women are better able to care for their health and nutrition. In many countries women are the primary food producers. They can be more productive when they can read manuals for better farming. With very little training, and some informal education, women can provide support for their community, as health workers and family planning advisers. Women's co-operatives now provide banking facilities, food storage facilities and labour for rural projects, such as road building and pipe laying. Women can be encouraged to run such enterprises as food processing and craft manufacturing businesses.

Educating rural women and giving them a place in rural development is of prime importance, and will affect the majority of women in developing countries. Women must also be given equal opportunity to enter the professions and do many different kinds of work. Women make up one third of the world's labour force today. Most women in the

developed countries, and those in the cities in the third world, are in service jobs as saleswomen, secretaries or hospital and domestic workers. Many of the traditional assembly line jobs in industry that had been reserved to women because they required quick hands and eyes are now being taken over by computers and robots. In a tight labour market, men resent competition. Such a situation is illustrated by the following story:

There are two families, Smith and Jones. Mr. Smith and Mr. Jones each have a wife and two children. Mr. Smith works at a steady job, earning \$20,000 a year, enough to feed his family comfortably. His children are old enough to allow his wife to go to work. Mr. Jones is unemployed. Both Mrs. Smith and Mr. Jones have similar educational backgrounds and similar skills; both are applying for the same job. It can be argued that the job should go to the man on the basis of need, since he is the sole wage-earner in his family. Mrs. Smith's family is already living comfortably; she doesn't "need" the job. If the employer gives the job to Mrs. Smith, Mr. Jones may feel resentment.

Mrs. Smith represents the group of women who, having had increased education, are now looking for employment. More jobs must be opened to women; yet often this cannot be done easily. With the increase in the labour pool due to women, the job market is becoming more and more crowded.

It takes a certain kind of conviction to insist on women's right to work at whatever they feel they can do best, which need not necessarily be homemaking and childcare. One must believe that justice releases important energy, ingenuity and good will and enables human beings to contribute more fully to the development of society.

B. Family planning

Women's role is central in family planning, and here education can have an immediate and long-term effect. Many cultures have practised some of form of birth control in the past, and have no difficulty in merging their traditions with the use of modern contraceptive devices. In other cultures women are prevented from learning about birth control and practising it. Some husbands forbid it because they fear they will lose the prestige of their masculinity if they do not get their wives pregnant every year. Perdita Huston, in her book Message From the Village, tells of the pain and struggles of women to control their lives against their husband's wishes. One woman, afraid that her husband would find out if she obtained contraceptives, made her own from a mixture of dried and ground umbilical cord of her previous child, cow's urine and dried meal. In Mexico, an estimated 1 million abortions are performed outside hospitals and clinics. Women pass off the resulting pain and damage as "female sickness." In some Moslem countries the idea of stopping a child from being born, a child that is the gift of the Almighty Allah, is unthinkable. Any family planning method that requires a physical examination by a male doctor is

rejected by some Muslim and Indian sects. The belief that women during menstruation are unclean and should not prepare food limits the use of the IUD, or other methods that may induce irregular bleeding.

The relationship of the education of women to the success rate of family planning programs is illustrated by a study made in Jordan in 1972 of women between the ages of 30 and 34. The women that were illiterate bore an average of 6.4 children; those with a primary school education had an average of 5.9 children, and women with secondary school education averaged 4.0 children. University educated women had an average of 2.7 children. Kenya, the country with the highest crude birth rate in the world, now provides free education up to the eighth grade for both boys and girls as part of their development plan.

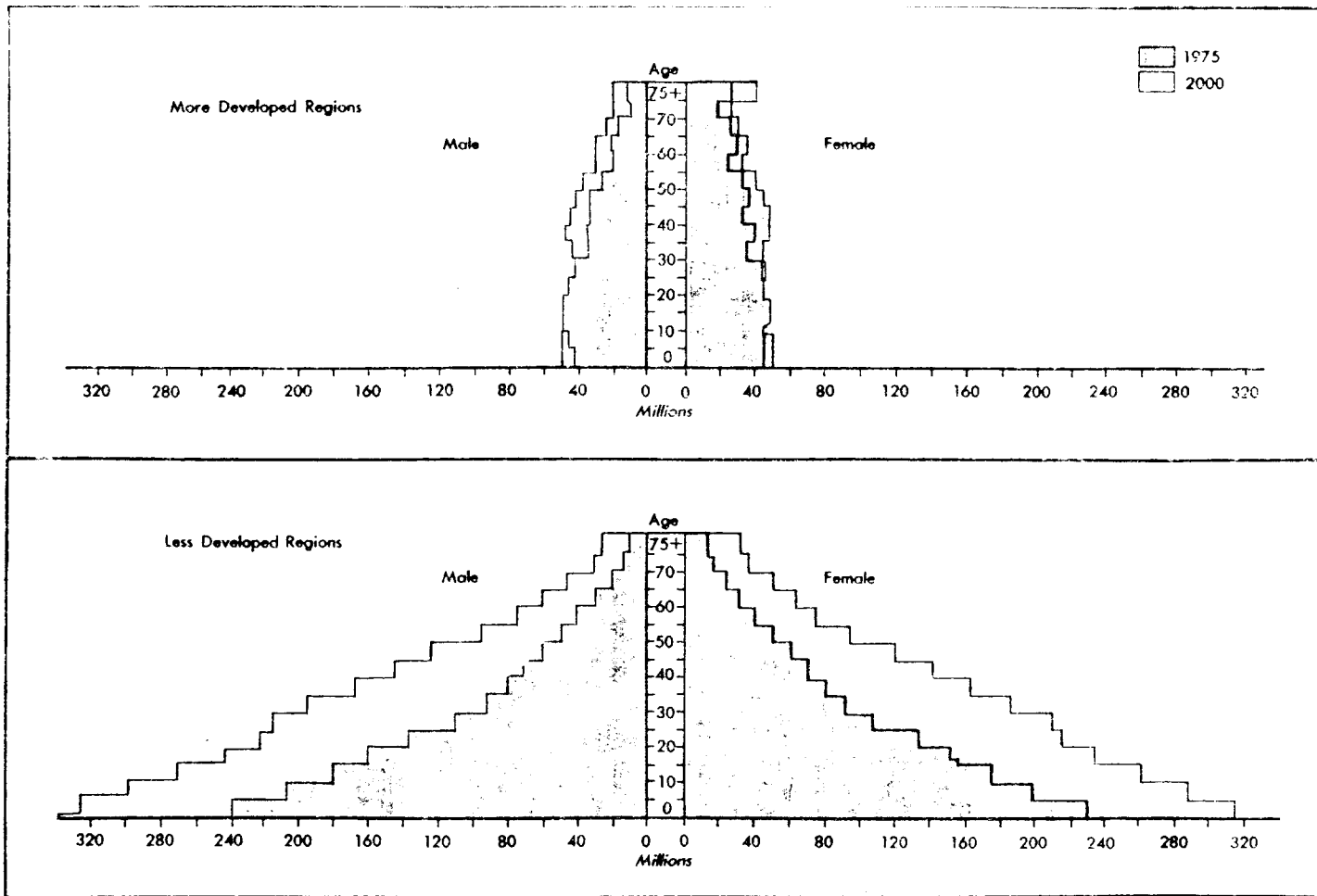
The most heartening example of the correlation between the education of girls and the slowing of birth rate comes from Sri Lanka. When free education was made available to girls the effect was electric. Girls as wage earners became as valuable as boys to their aging parents, so that mothers no longer continued with childbearing until they had produced a safe number of boys. Young women developed a sense of autonomy and made decisions about working, postponing marriage, and seeking birth control information. Working women do not have to rush into marriage as their only economically viable alternative. Working women have fewer children, as they wish to balance their roles as mothers with other hopes and desires. Within 15 years, the growth rate of the population in Sri Lanka dropped from 3 per cent to 1.7 per cent.

The United Nations declared the years 1975-1985 the United Nations Decade for Women. In conferences in Mexico City and Copenhagen, women from around the world shared their concerns and compared advances in their status. Women in developed countries, and increasingly in developing countries also, are discovering the cost of changing roles. It is difficult to be a working mother, even though economic necessity, as well as choice, is placing more and more women in that position.

Some people consider that there is no more important job in society than the rearing of children, and that mothering is a full-time occupation which society should support. But until women are given the opportunity of re-entering the job market as equals after their children are grown, or until mothers get supplementary payments so they have no need to work, they will continue to work. Many countries recognize the importance of good day-care centres or other forms of childcare to help women work outside the home; working then tends to reduce the number of children they have. Inadequacy of childcare can have another, not altogether wanted, effect in countries that are experiencing zero or negative population growth -- women stop at one child, or have no children at all.

The education of women is the first step in helping them become part of the development process. Their strength and insights are

needed. The United Nations has always proclaimed that economic and social justice is part of development. It is time to recognize women's right to participate fully in their society.



Age-sex composition of the world's population, medium series, 1975 and 2000.

Source: The Global 2000 Report

V. THE PROBLEM OF THE AGING

In the words of the satirist Jonathan Swift, "Every man desires to live long, but no one would be old." Death is inevitable, and as more people throughout the world live longer, so is its precursor, old age. If we deny this, because the implications are too painful, we deny our own future and so fail to prepare for it.

Old age is a difficult stage of life. The body is not as willing and dependable as it used to be and often is actually breaking down. The process of aging is not a continuous one but begins in one's thirties. Though it is not fully understood, it involves a gradual slowing of the body's metabolism and a deterioration in its immune system. The brain seems to be one of the most resilient organs and functions satisfactorily well into the nineties, but loss of short-term memory and mental acuity often accompany aging.

With advances in medical technology, the death rate has dropped considerably so that ever more people are living beyond their sixties. Worldwide, the proportion of the population which is considered aged is increasing dramatically.

Most populations in the third stage of demographic transition, have a high percentage of aging people. The problem of the aging is more pressing in highly developed economies. What happens when the greater part of the population is old and no longer part of the working population? Who supports the aging in the absence of a caring, extended family system?

The aging are, however, still capable of contributing to society, and society has an obligation to take care of them if they cannot take care of themselves. Traditional societies have found ways of dealing with the aging, and in some they are venerated for their wisdom and possess important spiritual and leadership roles. Most often strong family ties allow for the support of the aged. But now with the rapid advances of technological industrial societies, especially in developing nations, family bonds are losing their strength, and there is a growing unwillingness to support those who are no longer productive. As a result the aging feel a growing estrangement from society, a loss of their sense of worth, status, and prestige, and a feeling of loneliness.

A serious question arises: where does the responsibility for the aging lie? Is the government supposed to foot the bill for social security and medical care, or should it be the families? Few would call upon the aging to fend for themselves. How much should society do for its members who may have contributed greatly in the past but have ceased to be productive? What about turning the question around: what can the aging do for society? Have the aging truly lost their ability to benefit society? Beyond the human wisdom which they have accumulated

and can share, the aging represent a largely untapped human resource. While perhaps lacking the skills necessary to remain in the mainstream of employment, ostracism is not the only alternative. At present retired executives share their experience with people who are starting out; many aging people participate actively in charitable organizations. Retraining programmes can make the aging useful in a wide variety of fields and widen their horizons. They can be integrated into modern society. A World Assembly on Aging will be held by the United Nations in Vienna in the summer of 1982 to focus on the needs and potential of the aging in development planning. Each country must reach its own solutions based on its cultural and economic structure.

The question of the aging touches on the core of our attitudes toward the value of human life. Are we to continue to isolate our own parents, those who have brought us into the world and have served as productive members of our society for several decades? Or are we going to recognize their worth, and respect them for what they have done, allowing them to continue to function in society with respect and dignity?

Can we support the viewpoint that an investment in the aging is worthless? We must not allow ourselves to think so. It is an investment in the present and in our own future.

VI. MIGRATION AND THE GROWTH OF CITIES

Migration is the movement of people from one place to another. A population increase can bring a region needed strength and skills or it can be a burden. If people could be moved like chess pieces from over-populated to under-populated areas, the pressures resulting from population growth could be spread more evenly. However, migrations require decisions to leave home, where the language and customs are familiar, and the courage to seek acceptance and make adjustments in a new society.

People leave their homes for two reasons: either because they are forced to leave by war or politics; or because they seek better opportunities. There are millions of refugees in the world today: the Vietnamese boat people, the Cambodians in Thailand, the Afghans in Pakistan, the Africans who have fled their countries, the Haitians, the Cubans, the Nicaraguans, the list is endless. Few countries welcome them, and they are sometimes forced to return home at gunpoint. The logistics of housing and feeding new arrivals, preventing the spread of disease, and eventually finding jobs for the immigrants are formidable. The best way to "solve" the refugee problem would be to eliminate the causes of mass migration by ending wars and discrimination, and improving conditions in the countries from which migrations flow.

People move within a country or across national borders to find work and better their living conditions. When highly skilled people do

not find as interesting or well-paying a job at home as they can abroad, a country may experience a "brain drain". Some countries prohibit the emigration of doctors and scientists until they have worked some years in their own country to repay the government's cost of educating them. These emigrants are not necessarily selfish people. The level of development of their country is sometimes inadequate to absorb all skilled professionals. And people may feel that at home they will be prevented from reaching their highest potential because their country cannot stimulate or use their skills.

The emigration of unskilled workers from developing countries was welcomed by many European countries during the economic expansion of the 1960s. Turkish workers in The Federal Republic of Germany and Algerians in France were a necessary addition to the European labour force. Their remittances were even more important to their home countries and became an essential component of national budgets. Skilled labour is required by the oil-rich nations for their development plans: in some countries foreign workers outnumber the indigenous population.

Immigration can cause problems for host countries when the economic situation changes and there may no longer be enough jobs to absorb newcomers. Currently the recession in the developed world is causing a review of many countries' immigration policies. Illegal immigrants, motivated by the hope that whatever they can find in the country of their destination is better than what they leave behind, cause much resentment. There are also ethnic frictions. The host country, whether it is the United States coping with newly arrived Mexicans, or Malaysia dealing with Vietnamese-Chinese, is likely to be reluctant to absorb a large group of "different" people. One of the arguments used to persuade developed countries to give more aid to the third world is that, by increasing job opportunities at home, the need for migration to find work is reduced.

Within a country migration has usually been from rural to urban areas. Again, people are looking for better opportunities. There is a lure and excitement to cities that attract people until the reality of slums and unemployment disillusion them. But even so, life is frequently better in the cities than in the villages. There is drinking water, electricity, schools, and clinics in the cities. The "informal" sector of small urban enterprises and services provide jobs for many. The shanty towns keep growing, as people decide to take the chance of doing better in cities than remaining in a hopeless state in rural areas. Villages are often robbed of their most enterprising people, and thus village societies have an even smaller chance of improving their condition through their own resources.

The pressure of population growth is felt most acutely in the cities. The United Nations forecast the population of the largest urban centres in the year 2000 as follows:

	(millions)
Mexico City	31.0
Sao Paulo	25.8
Tokyo-Yokohama	24.2
New York-NE New Jersey	22.8
Shanghai	22.7

It may not be "standing room only" in the cities, but the pressure on the urban infrastructures of transportation and utilities will be great. We get an intimation of this when there is a subway breakdown or a power failure in New York. Clearly, rural communities must be developed to take the pressure off the cities existing at present

Migration to outer space

A concept entertained by many historians is that man's travels beyond his familiar frontiers were motivated by the pressure of population expansion. The European explorations of the Renaissance can be seen in this light. Some believe that similar pressures will lead mankind toward outer space. There are two aspects of space exploitation which directly or otherwise bear on population: these are sites for habitation and the production of new resources.

In the two decades of the "space age" a mere handful of people has ventured beyond the earth's atmosphere. Given a significant technological break-through and a major drive toward space colonization, only a projected 60,000 would comprise the space population by the year 2025. As the world finds itself with 200,000 more people each day, the only current significance of space colonization as a site for homes is the possible preservation of the human gene pool in the event of a thermonuclear war.

Space habitation is a prerequisite however for extensive exploration of extraterrestrial resources and the development of space technologies. The mineral resources of the nearby planets and asteroids are present in quantities only dreamed of on Earth. Existing space programmes have already reaped considerable benefits. The weightless environment of space allows for the fabrication of substances of importance to everything, from medicine to construction.

But fundamental questions arise: how much we are willing to invest in the exploitation of outer space and how are the benefits to be distributed? Almost no one doubts that outer space presents myriad possibilities to benefit mankind. However, an investment in our future

must not detract from programmes designed to maintain the present world, especially as regards the welfare of the poor. Will outer space benefit rich and poor equally? Experience tells us not. Advances have been made in the exploration of our oceans--a comparable frontier--but unless the agreement on the law of the sea is forged now, the prospects of the equitable use of new wealth are dim. The Second United Nations Conference on Exploration and Peaceful Uses of Outer Space, which will take place this year in Vienna, will address this issue. Is outer space, like the oceans, the "common heritage of mankind"?

VII. DEVELOPMENT STRATEGIES

Development is necessary both as a means of coping with increasing population and as an incentive for family planning. This has been known for some time, and yet many countries have shown little change and their populations continue to grow. What is wrong with all the plans made to develop, improve, and enrich the economies of the developing world is that the gap between rich and poor is still so wide.

Most developing countries were once colonies whose economies have remained dependent on the industrialized countries in the Northern Hemisphere. When they became independent, they found that they needed a massive influx of capital and technology to pull them up to where their population would have a standard of living comparable to that of the developed world. They did not want their people to live like Americans or Europeans, but only to have their basic needs for food, health, education, employment satisfied. The United Nations declared the 1960s the first Development Decade, when the transfer of resources from the developed to the developing world was to bridge the gap between rich and poor countries.

But this did not happen. Some people say that the increase in population swallowed up the increase in wealth. Others blame the nature of the relationship between donor and recipient countries: the rich do not give something for nothing, the poor find dependency easier than self-reliance. How does one persuade the rich to be more generous, and the poor to be more independent?

The first strategy was announced in the Declaration on the Establishment of a New International Economic Order (NIEO) during two special sessions of the General Assembly in 1974 and 1975. This declaration was a thundering condemnation of the ex-colonialist countries' economic imperialism. Raw materials continued to be extracted from third world countries at rates favourable to multinational corporations. Industrialization was discouraged to keep third world countries as markets for the goods manufactured in developed countries and sold at large profits when compared to the price originally paid for the raw materials. When developing countries tried to increase their income by selling manufactured goods on the

world market, they found tariff barriers and high transportation costs; shipping was controlled by the developed countries. When the developing countries needed money to build schools, roads, and irrigation canals, they were offered loans, but not the means to repay them. They were then offered new loans to repay the old ones until their accumulated debt swallowed up all the progress they had achieved in the economy.

The NIEO proposed several ways of changing the relationship between the rich "North" and the poor "South." Subsequent conferences were held on the law of the sea and on the transfer of science and technology. The effort to bring some equity to people through the economic development of the countries of the world continues with the global round of negotiations. Discussion is stalled at the moment by the unwillingness of the minority of rich countries to put themselves in a position where they would be constantly outvoted by the majority of the poor. The Report of the Independent Commission on International Issues, better known as the Brandt Commission or the North-South dialogue, was written to stimulate the global round into action. It reiterated many of the suggestions of the NIEO, but also urged the socialist and the oil producing countries to aid in the development process.

Improvement in the lives of millions of people is not happening-enough or fast enough. What alternatives are there? The rich cannot be lectured into sharing their wealth, especially at a time when the world economy is in recession. Can they be persuaded that a prosperous third world is to their long-term advantage, even though such development might entail short-term sacrifice? They might retort that with a twist of fate a short-term sacrifice could easily turn into a long-term disaster, and who wants to risk that? Rather "triage"--a frank admission that not all countries and peoples can be saved from poverty, so let those with a head start, the industrialized and newly industrialized countries (NICs) from the third world, save themselves.

Another concept is the "Toughlove" solution proposed by Garret Harding from the University of California. By withholding aid from the developing world, the industrialized countries are forcing the developing countries into self-reliance and saving them from dependence on the wrong kind of imitative development and technologies. This concept focuses on figures, not on the pain of the individuals. Its proponents argue that to be tough now is to show love for the future. People who are starving will eventually find ways to grow more food for themselves and to have fewer children. However, "Toughlove" policies and formidable tariff barriers erected against developing countries are not consistent.

The formulation of such a solution is only one indication of a growing reluctance of developed countries to sacrifice in order to give aid to what they see as a bottomless pit of need in developing countries. There is serious consideration in Washington to add a proviso to all foreign-aid bills, to the effect that no aid can be

given to a country unless it has a government-sponsored family planning programme. It is an old argument, but it is one that needs to be taken seriously in a world of diminishing resources. Why should one sector of society sacrifice because another refuses to reduce its population growth? The view may be distorted, as many other articles in this working paper show, but many people hold it.

If little can be hoped for from the rich--until perhaps new disasters have taught us it is one world--what can the poor do? The answers lie in self-reliance and co-operation on the community, national, and regional levels. The ideas and techniques exist. Efforts to strengthen the North-South dialogue must not be abandoned, but they can be supplemented by South-South negotiations with such hopeful titles as Economic Co-operation among Developing Countries (ECDC), Regional Co-operation among Developing Countries (RCDC), and Technical Co-operation among Developing Countries (TCDC). Such development plans might be more successful in meeting the needs of the third world countries.

VIII. OPINIONS AND CONCLUSIONS

In international forums, in the media and in academic and political circles concern over the seemingly uncontrollable population growth has been uninterruptedly emphasized.

Is population growth uncontrollable? It has become a commonplace that wealth in the world is unequally distributed. Some countries are richer than others, and within some poorer countries a few people are rich while many are poor. It is generally accepted that wealth is intimately related to the political and social conditions prevailing in various States. One can still say with confidence that what is presented as the problem of "excessive" population growth occurs mostly in countries which have just evolved from colonial status and/or are at low levels of economic development. The problem of taking care of the ever-growing number of human beings in these countries is critical. However, population growth should not always be seen as something negative. Human resources, if properly utilized, can lead to growing prosperity and wealth. The experiences of development point to the importance of political acuity. Action affecting social and economic conditions is determined by political decisions. Once economic and social needs have been recognized, government intervention in developing a rational and humanistic system of population control is fully justified. Such a system ought to include general and health education, financial aid and incentives to start small businesses or local co-operatives, job opportunities, etc. In general the objectives of population control have to be integrated with the overall objectives of national development. Furthermore, it has to be recognized that nations in the modern world are much more interdependent than they were in the past. Daily experience in international organizations such as the United Nations demonstrates the complicated nature of the

development process.

* * *

The United Nations, although overflowing with good intentions, is not always able to function as a united body. It has certainly carried out actions to benefit the world and to avert possible disasters, eg., relief aid to the Cambodian boat people in 1979. But it is hard to imagine any actions being taken at the United Nations without the consent of the super-powers. The veto power, which is enjoyed by the permanent members of the Security Council (China, France, the Soviet Union, the United Kingdom and the United States), has often significantly limited the United Nations' usefulness. For the body to improve both its image and efficiency, its Charter must be reviewed. The Organization was set up in a different era by the industrial Powers to serve their own purposes in the period following the Second World War. But the world of the 1980s is not the world of the 1940s and 1950s. Since then, the third world has entered the international community and has become a major political grouping without a voice.

It is not only the Western democracies and their socialist counterparts which, with unending statistical studies, will help to solve overpopulation in a poorer nation. It is also the latter's own leaders who must find solutions, because only they possess the crucial knowledge of the impact of social and cultural change on their people.

There is much hypocrisy in the world of international politics. Governments lay blame on other Governments, when the fault lies partly, if not largely, in the selfish and short-sighted policies of their own people. The elites within developing nations must bear as much of the responsibility for the poverty in their countries as the rich developed nations.

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All plans for economic and social change are put into effect through the political will of the people. Unless this will is exercised and based on different values, humankind will not survive.

The greatest chance for our survival may well be in learning to share and work together. And there are many signs that give us hope that we can live up to our highest aspirations.

At Dakar in 1980 The First Congress of the World Social Prospects Study Association discussed a "contract of solidarity." The participants spoke of "replacing the prevailing system of apartheid with a 'will to live together' founded on the mobilization of the democratic forces in all human communities".

The contracts of solidarity are a means through which confrontation can become co-operation. The rich and powerful, in any milieu, do not feel the need to negotiate as long as they are sure of

maintaining their superior strength. Therefore, the first stage toward co-operation is for the disadvantaged to unite in order to persuade the powerful of their equal strength. This strength should not be measured in armies or economic wealth, but by common humanity. Co-operation, then, becomes a creative adventure shared by all parties working towards a common goal.

Humanity as a whole must be seen as the world's greatest asset. This belief can determine how our political and economic structures function. If we lose this generosity of vision and expansion of responsibility, all other solutions will also eventually fail.

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The world is faced with the problem of accommodating a "baby boom" generation which, by the year 2000, may result in more than one and a half times as many people aged 15 to 29 as there are today. It is hard to say how many people there will be, but it is clear that it all depends on what is done in the meantime. Many advances have been made, but today the international aid given to developing countries' population programmes is a smaller per cent of total aid than it was in the early 1970s. Studies on fertility control represent only 2 per cent of all medical research. Worse still, the tremendous shortage of money and resources is making the work of organizations such as UNFPA even more difficult.

Population growth is no longer a long-term problem; it cannot be dealt with abstractly, as a crisis of the future; on the contrary, it should be seen as a harsh reality which is here today. It is crucial that this dilemma should not be treated bureaucratically by a handful of demographers.

We are talking about human beings, and not about just a series of graphs and charts. Occasionally we find that the people of the world are being reduced to nothing more than a few statistics. Granted, a careful statistical analysis helps us to draw conclusions about what needs to be done; but this should not override a "human" approach to the problem. Most importantly, it is not enough to listen to speeches, read articles, and then go on seeing the problem abstractly, as something which does not really apply to us. We must remember that we are part of one world and need to take concrete action.

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