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Human Survival

IT IS DIFFICULT for Canadians to bring home to themselves the menace to human survival caused by over-population. They have never been desperately hungry, they have adequate shelter, they are free from the epidemics brought on or made worse by privation, and they have abundant living space.

There are, however, many millions of people on earth who have not the accepted necessities of life, and Canadians are affected by their suffering. The interdependence of human beings is such that educated people, wherever they live, cannot morally evade or safely escape concern.

Black pessimism is an unconstructive mood. Upon learning about the state of affairs, men and women everywhere need to study what they can do to relieve hunger and distress, and do it relatively quickly.

After viewing with some apprehension the pollution problem, which is being given increasing attention in Canada, a recent *Manchester Guardian* went on to warn: "The future is doom-laden, though, so long as we shrink from tackling the true runaway element in the world scene: the population explosion. Within the next generation or two the world population will have to be stabilized if there is not to be a global catastrophe."

N. J. Berill, who was Strathcona Professor of Zoology at McGill University, wrote in *Let Us Live*, published by the CIBA Chemical Group: "The pessimistic possibility is that human beings are not intelligent enough as a whole to control their own fertility and will always press hard against the ragged fringe of subsistence. If such is to be our fate it means we are already approaching the end of our tether, for never in the past has a race survived which failed to make necessary adjustments to changing circumstances."

The past few years have seen the growth of increased awareness of the population peril. In the international organizations, in the Vatican Council, and in internal debates in all countries, the question of population regulation has received unprecedented attention.

Perhaps young people are more alive to the danger than are older people upon whom the problem has

crept up unawares. The unrest among young people may be due to their uncertainty that they will have a tomorrow. That is the challenge to adult people who are in a position to act effectively. Unless they move to make surer than they are now that this young generation has a future, nothing else matters. It is not enough to give tender, loving care to youth and to buy it an expensive education: these things do not mean anything unless we take steps to see that there will be a living world for young people to step into.

No room for doubt

World-wide statistics leave no room for doubt about what is happening. According to the authors of a United Nations study the world population figures have an importance which transcends immediate economic and social problems, however urgent they seem.

"Multiply and replenish the earth" was a counsel of perfection when there were only eight people on the globe after the Great Flood, but today there are more than three thousand million people.

A world "population clock" would show that, on the average, 3.9 babies were born every second in 1969, while just under 1.7 people died. This amounts to a gain of 2.2 persons per second, 132 per minute, 190,000 per day, and more than 1,330,000 every week. On July 1st last year the clock showed a world population of 3,551 million. The increase in twelve months, 72 million, compares with only 20 million per year less than half a century ago.

It took an immense lapse of time — somewhere between a quarter of a million and a million years — to bring the world population up to some 2,900 million, but that figure will be doubled at today's rate in thirty or thirty-five years.

The United Nations projections give a rate during the closing decades of this century high enough, if continued, to multiply the world population sevenfold in a hundred years. To put it another way: with the present population growth rate, one dozen people would produce the present population in only 1,000 years.

A projection of future population is not a forecast. It is a mechanical calculation based on the present trend of fertility and mortality. It assumes that there is to be no sudden reduction in numbers resulting from war and natural disaster.

The President of the World Bank Group told a university audience last year that in six and a half centuries from now there would be one human being standing on every square foot of land on earth. That is just the same insignificant span of time as separates us today from the battle of Bannockburn where Bruce defeated Edward II, and the beginning of the Hundred Years War in France.

It would be tiresome to make an array of all the authorities supporting the fact of the menace of over-population: economists, anthropologists, demographers, health and welfare authorities, and various United Nations committees.

The situation is well summarized in the *Demographic Yearbook* of the United Nations: between 1965 and 1966 the family of man grew by 61 million. That means that in twelve months the population of the world expanded by three times the entire present population of Canada.

It would not be wise to be stampeded by predictions of doom, but they are useful to make us aware that there is a situation demanding thought.

A serious challenge

The President of the United States said in a message to Congress in 1969 that one of the most serious challenges to human destiny in the last third of this century will be the growth of population. He added: "Whether man's response to that challenge will be a cause for pride or for despair will depend very much on what we do today."

It took the United States three centuries to reach the 100 million mark; half a century later it passed the 200 million mark. If the present rate of growth continues the third one hundred million persons will be added in about thirty years.

But less developed nations are showing much faster growth. As a class the non-industrial nations have been growing about twice as fast as the industrial ones. In 1900, Latin America had a population of 63 million; it now has 268 million. At that rate of growth the population will double in 23 years.

The rate of natural increase in the western industrial nations rarely rose above 15 per 1,000 population per year. This is not the birth rate, but the excess of births over deaths. In contrast, the natural increase rates of the underdeveloped countries are extremely high: in the ten years ending in 1960 the rate averaged 31 in Taiwan, 27 in Ceylon, 32 in Malaya, 28 in Albania, 32 in Mexico.

As a result, many already impoverished nations are struggling under a handicap of an excessive population increase which the industrialized nations never had to bear.

There are several considerations curbing the birth rate in developed and well-to-do and educated countries which are not operative elsewhere: the economic cost of children; the tendency of today's children not to fulfil their parents' expectations; the competition of other things with children in giving satisfaction.

Lengthened life span

The principal reason for over-population is, of course, the achievement of a low death rate. Even the poorest government is rich enough to provide its subjects with a substantial measure of death control. International agencies and the governments of the affluent nations have been delighted to act as Good Samaritans in providing disease-fighting programmes. As a result, a Stone Age people can be endowed with a low 20th century death rate within a few years.

But the pressure of population in countries not ready for it causes suffering, unrest and political instability. Capital formation, industrialization, education, the opening up of new areas of cultivation: all are needed, but they cannot come in time to cope with the demands of population increasing at its present rate.

There are people at the older end of the life scale to be counted. In both developed and developing countries the average length of life has steadily increased over recent decades. Through all of man's previous history only a fraction of the babies born had grown to maturity; now, in the industrial countries of the west, only five per cent die before adulthood, and many live into old age.

In the late mediaeval period (the 14th and 15th centuries) the life expectancy in England was about 27 years. At the end of the 17th century and during most of the 18th it was about 31 years in England, France and Sweden, and in the first half of the 19th century it advanced to 41 years. Today's expectation of life at birth in Canada is 68.35 years for males and 74.17 years for females.

The food supply

Thomas R. Malthus wrote in 1798 that population tends to grow faster than the food supply. He pointed out that population increased in geometric progression 2-4-8-16 while food supply increased in arithmetical progression 2-4-6-8.

As an illustration, consider the case of a couple bringing into the world four children who grow up, mate, and in their turn bring into the world four more children for each couple. Generation by generation this breeding stock increases at the rate of 2, 4, 8, 16, 32, 64 . . . and so on. The tenth generation descending from that couple would be made up of 1,024 people and the twentieth would number 1,048,576. Multiply that by five so as to apply it to the case of the couple who won the national large family prize in the Canary Islands last spring with twenty children — a figure not unique in underdeveloped countries.

Malthus' basic population concept is as valid now

as it was when he wrote it, and there are still only two possible checks: high death rates or low birth rates.

As to providing food for this increasing population, it is easy for the disbeliever in the Malthusian theory to point to the quantity and variety of food displayed in Canadian grocery stores, to the productivity of Canadian farm and grazing lands, to new agricultural land being brought into cultivation by irrigation and drainage. But the food-population problem is world-wide, and few countries are so blessed with resources as is Canada.

Man has been an ingenious creature in finding ways to increase his food supply, but usually this increase has been more than matched by the rate of population growth.

If the world's population increases by ten per cent during a period when its output of goods increases by ten per cent the net effect per person is zero. And, of course, food-producing land is limited. Hardly more than a tenth of the total land area on the earth is classed as arable.

The traditional scourges keeping the population in check were war and disease. Arnold Toynbee, the distinguished historian, asked in a broadcast address: "Is mankind going to rid itself of its traditional scourges, only to be done to death by the third scourge, famine? Surely we are not going to be so stupid as that."

"Famine is a disgrace"

While one part of humanity is struggling with the effects of over-eating, more than half their fellow human beings suffer from undernourishment. At present, 400 million human beings in the western industrial nations consume as much protein as 1,300 million of their fellow men in Asia.

"Famine is a disgrace to humanity . . . an offence to the dignity of all men, not merely the victims of it," declared Dr. M. Autret, Director of the Nutrition Division of the Food and Agriculture Organization.

In many parts of the world the threatening food crisis has been kept at bay by using the surpluses of the developed countries. This can only be a stop-gap measure. If all surplus stocks of food were shared out, said the UNESCO *Courier*, they could nowhere meet the needs of all the food-deficient countries. The primary answer to the world's food problem is the development of food production where it is needed, and this requires that the people be inspired to plan and work effectively.

Pearson and Paarlberg of New York State College of Agriculture stated the reasoning about famine bluntly: "In parts of the world where famines continually occur, they are passively accepted as a powerful force in keeping the population down. Frequently, no provision is made against these recurring famines because life would be harder for everyone if there were no famines. The famines accomplish quickly what would otherwise be prolonged and more painful."

The Bengal famine of 1943 killed more than three million people. An Indian business man said: "Our last famine was a failure. It killed only three or four million people, which means that it still lagged far behind the birth rate."

Merely to break even, without any improvement in the present levels of nutrition, food supplies must be increased by about 150 per cent in the low-calorie countries and by about 120 per cent in the world as a whole.

The task of meeting this challenge by transferring knowledge about food production and skill in adapting this knowledge to conditions in the needy countries is one of the major objectives of the Food and Agriculture Organization, founded under the United Nations at Quebec in 1945.

Experts feel that it can be done. They point to Pakistan, the world's sixth most populous nation. It was famine-frantic and dependent on food help from other nations just a few years ago. Now it is virtually self-sufficient.

This approach is different from that of the relief-giving agencies. Regardless of how the people come to be hungry, moral considerations and the feeling of humanitarianism demand that they be fed. But the benefit of pouring food relief into a country is short-term only. The result of the relief may be an immediate increase in population, which soon means increased misery in the form of hunger, starvation and death for more people than before.

Effect is world-wide

Not alone those in the famishing countries are affected, but also people in the affluent and well-nourished countries. The plight of hungry people has become a chief determinant of the quality of our lives.

Eugene Black, President of the World Bank, warned that all the efforts of industrial countries in their own interests could be nullified if population in the poorer countries continues to grow at its present rate. "We are coming to a situation," he warned, "in which the optimist will be the man who thinks that present living standards can be maintained."

In a world on the verge of starvation, Canada's fortune is to be a well-fed nation, with abundant farm and forest produce and unlimited fish as her main assets. A little girl on a tour of one of our restored pioneer villages put this neatly when she compared the austere living conditions of the pioneers with ours: "We have practically every comfort there could be."

Levels of living in Canada today are higher than they were for men doing similar work fifty years ago. We are accustomed to getting what we need on demand, and much of what we want as well. The workman today is able to spend his increasing leisure time and his increasing surplus income on a thousand things which only the rich could have afforded a generation or two ago.

Nevertheless, the rise in the world's population is a factor of which Canada must take account in any study of her social and economic development. The attempt to improve living standards is continually threatened by the fact that there is an ever-increasing number of people in the world to be provided for.

William Vogt said in his book *Road to Survival*: "As we look ahead to a falling carrying capacity over most of the earth and toward a sharp increase in world populations, we must also look for a marked decrease in our material standard of living."

Rising expectations

There has to be taken into account also the rising expectations of the backward countries. The revolution in communications has broken down the barriers of distance and language. Men and women in depressed countries want the things that those in well-to-do countries have. The demand for better living conditions is spreading as widely as the newspapers, magazines, movies, radio and television reach. The shining car of a tourist passing through an appallingly poor village conjures up the picture of a better life that is not solely confined to keeping body and soul together.

Extreme poverty, when it is combined with the knowledge that some societies are wealthy, breeds envious desires and the expectation that these desires must of necessity, and very soon, be satisfied.

From disappointment, through resentful frustration, to widespread social unrest the road is short. As Dr. Elmer Pendell wrote in *Population on the Loose*: "The plain truth is that when men are in such numbers as to make it impossible to get enough food for self and family then those men are enemies, each of the others."

The need to learn

The spread of education and industry have in the past pried people out of a vegetating existence. Knowledge, foresight, and the will to apply resources properly, are the indispensable prerequisites of economic development.

A surplus of labour on the farms holds back the mechanization of agriculture; a rapid rise in the population uses up money to keep people alive that might otherwise be used for long-term investment in education, equipment and other capital needs. It is difficult to give a child the education he needs when he is one of eight children of an illiterate farmer who must support his family with the produce of two acres of hand-worked ground.

Most of the less developed countries have the natural and human resources required for their own salvation, but they need to learn how to mobilize them and to use them efficiently. They can only learn this if external aid and guidance are made available.

The tidal wave of political independence which broke upon tropical Africa in the 1960's left behind within two years nineteen new sovereign states, many of them abysmally poor, most of them countries where

pitifully little is produced by much back-breaking labour.

It would seem that for these and other members of the human race now suffering from the consequences of uncontrolled population increases in a context of industrial backwardness, poverty and illiteracy, the only hope for the future is immediate help and understanding guidance from the better developed nations.

If the job of saving humanity from destruction is ever to be carried out it will be by people young enough in spirit not to know that it cannot be done.

World population that is out of hand should not await a public explosion to force action. It requires that governments and people deal with the complicated remedial steps one at a time and with reasonable judgment and without delay.

Aldous Huxley wrote in *The Politics of Ecology*: "Thanks to our rapidly advancing science and technology, we have very little time at our disposal. The river of change flows ever faster, and somewhere downstream, perhaps only a few years ahead, we shall come to the rapids, shall hear, louder and ever louder, the roaring of a cataract."

Cannot be ignored

In short, population growth is a world problem which no country can ignore, whether it is moved by the narrowest perception of self-interest or the widest vision of common humanity.

To avert what is written in the book of nature as the outcome of present negligent drift more is needed than good intentions. There is an obligation upon educated people everywhere to spill over some of their knowledge and their resources and their enterprise into backward areas of the world.

Obviously, the project is not simple. It must be attacked on many levels simultaneously, aimed at increasing food production, building industrialization to provide purchasing power and employment, spreading education, developing conservation, and stabilizing population.

The problems of human survival are not all technical. They are also problems of human nature . . . co-operation, how to get along with neighbours, planning for tomorrow, thinking of the increasing numbers of men and women who have desires as well as urgent needs.

To encourage a rational approach to solution of the problem there has been proposed a World Population Year for 1971. It would have four objectives: to set world-wide targets in population stabilization, perhaps to reduce population growth in developing countries from the present three per cent or more to rates nearer two per cent; to organize a concerted effort of the richer countries to help finance population programmes; to set up appropriate national and international structures for tackling the population problem; and to increase population research.