

# Human Population Pressures and Birth Control

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THE world's human population and its explosive increase has become a subject of world-wide concern to biologists, sociologists, statesmen and theologians. There is general agreement that a problem exists but a great deal of controversy as to what, if anything, should be done about it.

The statistics of population growth are well-known and have been made widely available, not least through frequent reference to them in the public press. Unfortunately, they are so staggering as to be meaningless without reflection. It is almost unbelievable that more than 50,000 individuals are added to the world's population every twenty-four hours.<sup>1</sup> This is a net gain. Sir Charles Darwin has frequently stated that, at the present rate of increase, in a hundred years there will barely be standing-room on the land surfaces of the earth for the population. Dr. H. L. Geisert, sociologist of George Washington University, has predicted that by A.D. 2000 the world's human population will be 6,300,000,000 (or about double the present population).

The first acceptable estimate of the world's total population is for A.D. 1650. It is a fairly reliable guess that some 545,000,000 people inhabited the earth at that time.<sup>2</sup> Prior to 1650, the earth's human population gained only very slowly in numbers through the centuries. In the following three centuries to 1950 there was a four-fold increase to 2,400,000,000.<sup>3</sup> The population of India, according to the 1951 census, was 356,829,485. This was a 12.5% increase in the ten years from 1941.<sup>4</sup> The population of the United States of America increased by 2,900,000 during 1956. There were 4,200,000 births or 25.1 per 1,000 of population for that year, and the birth-rate has exceeded 24 per 1,000 for eleven years. Infant mortality has been low at about 26.2 deaths per 1,000 live births. Mortality for the total population was 9.4 deaths per 1,000 of population. The increase in population in the U.S.A. is of the order of 1.7% annually; in Canada it is almost 3.0%.<sup>5</sup> The life expectancy at birth has steadily increased from 34 years in 1879 to 70.2 years in 1956, and continues to increase.<sup>6</sup> The number of

1. J. R. Bodet, quoted from A. Stone, "Present day international trends in family planning," *Annals of the N.Y. Acad. of Sciences*, 54 (1952), 769-75.

2. H. F. Dorn, "The effect of public health developments upon population growth," *ibid.*, 742-49.

3. *Ibid.*

4. Statistical Bulletin, Metropolitan Life Insurance Co., December, 1956. The following figures are from the same source.

5. *Ibid.*, December, 1957; December, 1958.

6. *Ibid.*, September, 1957.

persons added to the human population in the past century exceeds the total accumulated number of persons during the entire previous history of the human race.

While the earth's population is rapidly approaching astronomical numbers the world's natural resources are dwindling, despite the wonderful claims made for "the great untapped resources of the wildernesses of the world." During the past century there has been an unprecedented drain upon the world's natural resources. Whereas there was an "inexhaustible" supply of minerals, including gas, oil and metals, two generations ago, they are rapidly approaching the vanishing point today. This means, for example, the use of poorer and poorer ores at higher and higher costs of extraction to supply the world's increasing demand for metals. The drain upon the "renewable" resources of soil, water and forests has also been prodigious. It is certainly apropos, then, to demand: What is the relationship between people and provender?

Unfortunately there is no uniformity of opinion on the potential resources of the earth. Thus, the situation has been misrepresented or misunderstood by many scientists, politicians and others. In 1952 the International Congress of Applied and Pure Chemistry maintained that only pessimists believe that a population problem exists. Many agricultural chemists claim that the world supply of food could be increased tremendously by agricultural methods now known. Application of what is now known, even without further research, could produce enough food to supply 4,000,000,000 persons. The implication is that science has the solution to the problem of the world's food supply, so that there is no need for concern.

The truth is that no magic barrel exists that never becomes empty. These wonderful harvests have not been produced, and ifs and buts will not produce them. Even if it were true that the world could feed four billion people, what of the other third of the six billion inhabitants the present rate of increase would give it by A.D. 2000? The basic necessities, essential for life for the vast numbers of the hungry and the naked, have not appeared and are not likely to do so. The realities of human existence cannot be faced by wishful thinking. Nor can they be faced by arguing that the multitudes do have a subsistence diet, monotonous though it may be.

Dr. L. I. Dublin, of the Metropolitan Life Insurance Company, had been misled by regional considerations in the U.S.A. when he said: "The recent bumper crop of children and increasing number of aged present challenging problems to many communities throughout the country. These problems can be resolved constructively through our great productive capacity, the vitality of our people, and our democratic way of life." This may apply in some regions of the U.S.A. but it does not supply an ever increasing world population, faced with ever decreasing goods and resources.

The inescapable fact remains that two-thirds of the world's population lack even the basic necessities of life. Two out of ever three persons on the face of the earth barely exist. With a population now in excess of three

billion the world production of food is about 900 million tons annually.<sup>7</sup> This is totally inadequate to supply the ideal 3,000 calories per person per day. Only 25% of the world's population have more than 2,750 calories per day; 20% have between 2,750 and 2,250; 55% have less than 2,000 calories per day. The average in the United States is 3,100 calories, while in India the average is 1,640 calories.

J. R. Bodet, addressing the Unesco Conference as long ago as 1950, said that the question of food and people was the gravest international problem of the time from the long-term point of view. But the problem has to do, not only with food alone, but also with other commodities, as well as with space. The greatest peril to human existence is uncontrolled population increase. The problem is far more urgent than that of radioactive fallout, of the development of guided missiles, or of space travel and space exploration. It is not merely a challenge to scientific ingenuity to increase food supplies; there are just too many people for the resources.

Over 100 years ago the Rev. T. R. Malthus (1766-1834) warned that population tends to multiply faster than its means of subsistence can be made to do, so that unless population increase is restrained, poverty is inevitable.<sup>8</sup> We must now realize that the time has come (indeed that it came a long time ago) for us to reach decisions concerning the stabilization of human population. We can no longer sustain even the notion that industrialization of backward countries will alleviate the situation. Sir Charles Darwin and others have frequently pointed out that social welfare and education of increasing masses use up the wealth that might accelerate industrialization. Population control is the sole remaining solution.

The science of population studies is a highly specialized branch of biology and no exhaustive examination of it is possible here. It is, however, well worth a brief examination of the factors which have brought about the phenomenal increase in human population.

Human fertility (like all animal fertility) is strikingly excessive. Until recent times there has been an almost equally high mortality rate. An examination of cemetery records in Toronto<sup>9</sup> revealed that just a hundred years ago half of all the deaths recorded were of children under the age of five years. There is no lack of supporting statistics on infant mortality in earlier times. Human population increases have always been checked by war, famine and disease. Leaving war out of account, we may note for example, that 201 famines have been reported in the British Isles between A.D. 10 and the great potato famine of 1846-47. Disease has been no less important than famine in population control. Populations have frequently been decimated by the black plague, influenza, cholera and other epidemics. In the twen-

7. J. G. Harrar, "Food, Science and People," *Trans. of the N.Y. Acad. of Sciences*, 20 (1958), 263-77.

8. Cf. T. R. Malthus, *An Essay on the Principles of Population* (9th ed., London, 1888).

9. A class exercise conducted by Prof. J. B. Falls in the Department of Zoology, University of Toronto.

tieth century medicine has achieved a phenomenal control over disease. Sanitation and epidemic control preserve the lives even of the very poor, even in densely crowded areas. Such has been our preoccupation with preserving life that we have failed to appreciate the dangers of its superabundance.

We now stand face to face with population increases which will surely defeat all efforts to sustain the advances in living standards that full health and happiness require. What these standards are was admirably stated at the Lambeth Conference of Anglican bishops in 1958:

The Conference, recognizing that there is a world-wide need for decent and suitable housing, records the belief that every married couple should have adequate privacy and shelter, for the better bringing up of the family as well as for the benefit of its own married life; and that national and local government share fully with private enterprise the community's obligation to meet this need.<sup>10</sup>

We need only extend this to cover other basic resources for it to become apparent that such standards are quite impossible of achievement for a rapidly increasing world population.

It may be contended that the problem should be considered at the purely biological level. All living organisms must adapt themselves to their environment if they are to survive at all, either as individuals or as a race. The survival of the fit and their continued reproduction and selection constitute a primary biological principle. Many more individuals are born than can survive. Changes in survival rate are reflected in reproductive rates. Thus, a reasonably stable population results which is further stabilized by environmental control. If there is a trend to overpopulation it is relieved by lowered reproductive rates, by increased mortality rates or by migration. Migration, however, is seldom the solution to overpopulation. Stable populations result from a mortality rate which equals or approximates the natality rate.

Unlike other organisms, man has learned to modify, and in large measure to control, his environment. The sources of man's increasing control over his environment have been the exploration and exploitation of new land masses, the accompanying expansion of commerce, the discovery and improvement of technical processes, and the control of disease by sanitation, preventive medicine and chemotherapy. These advances in human welfare have upset the delicate balance between natality and mortality.

We are now faced with the problem of how to make the advantages of public health and good medicine, now accessible only to a small minority, available to all people, while, at the same time, preserving a balance between reproduction and mortality, so that the benefits are not nullified by a galloping increase in numbers.

We arrive at last at the basic question: How can we control human population increase? We have learned to control, or at least modify, many natural phenomena. We have not yet discovered how to evade the conse-

10. Lambeth Conference, 1958, Resolution 123.

quences of biological laws. No species has ever been able to multiply without limit. The natural checks on rapid increase are high mortality and/or low fertility. To state the point as simply as possible, the rate of population increase is a function of two factors, natality and mortality. A decrease in mortality without a similar decrease in natality results in a positive rate of population increase. Man is unique among biological organisms in that he can choose to regulate his population increase. The choice must be made immediately, for the situation is desperate.

Now that we have effected decreases in infant mortality and extended the life expectancy of man, it would be illogical to think of withdrawing these benefits in order to limit population. The only logical means of controlling population increase is birth control. This implies contraception. In the past many peoples have attempted to control fertility by means of sexual taboos, abortion and infanticide. Among Western Europeans birth control by contraception has restrained population growth to relatively limited gains. The great masses of people have, however, been unable to control their fertility effectively. For both moral and medical reasons, it is clear that abortion is not the solution to the problem. Abortion is cumbersome, expensive, and dangerous even when performed by skilled surgeons. It is not within the scope of the present discussion to consider the various aspects of the morality and legality of abortion. Therapeutic abortion is a matter which patient and doctor must resolve within the framework of medical ethics and of the faith and conscientious convictions of the persons involved.

It is worth noting in passing, however, that even in North America many women have turned to abortion as a means of controlling fertility. It is well-known that the majority of abortions, legal and illegal, are sought by married women who already have several children. Indeed, this raises sociological problems of a very serious nature, since the number of abortions is phenomenally high.

There is no lack of contraceptive knowledge at the present time, and it increases with advancing research into the nature of human fertility and with practical research on means of contraception. Essentially, contraception means a method or methods by which sperms are prevented from reaching (and thereby prevented from fertilizing) the ovum. Surgical sterilization is the surest way to achieve this end. The male can be sterilized by tying and cutting the vas deferens. This procedure is permanent, but has no effect upon the maleness of the individual. It can be carried out quickly and effectively without discomfort or hospitalization. Sterilization of the female requires more extensive surgery and hospitalization. There are several ways of accomplishing it, and in most cases fertility can be restored by corrective surgery.

Chemical contraception includes the use of spermicides with or without a mechanical barrier in the vagina. Other chemicals have been developed which prevent ovulation in the female. These permit ovulation to return when the chemical is withdrawn. Many such drugs produce undesirable

side-effects, but continued research can be expected to improve them and to discover still others.

The Government of India has already decided to provide surgical facilities in state hospitals, as a means of controlling population growth by the sterilization of males. This was announced by Health Minister Kamarkar early in 1959. The secretary of India's Atomic Energy Commission has stated that his country's problem is so vast that no tangible results could be obtained by propaganda or by large-scale free distribution of contraceptives. Governments of other nations, including Japan, have taken similar stands. The great difficulty is that it requires considerable intelligence and some little knowledge to use chemical contraceptives effectively. Eventually, as indicated above, an effective and otherwise harmless substance that can be mixed with food will be developed.

The purpose of all of the foregoing discussion is to emphasize the urgency of the problem of population increase on the one hand and on the other to establish the fact that effective contraceptive information, sufficiently simple to be used even by illiterate masses, is the only answer to the problem. The final question then becomes: What should our attitude be towards this solution—that is, towards large scale control of birth by contraception?

It is patently impossible to consider the possible attitudes of the world's many religions. At the same time it has to be realized that we face a world problem, not a regional one. Attitudes towards contraception are, however, influenced in a large measure by Christian teaching, particularly since any information or financial assistance must come from western Europe and North America.

To many faiths the question of birth control is not a religious question. As with the biologist, it is simply a question of survival. Representatives of the Jewish faith (for example, Rabbi Abraham Feinberg) have supported and urged a program of birth control to check the world's population growth. Similarly, church leaders among the various Protestant groups are in favour of birth control, at least in overpopulated countries. Individuals in these groups have made statements indicating their appreciation of the distressing problem of population, but urging various degrees of caution in the use of contraception.

The attitude of the Anglican Communion can be deduced from these statements of the Lambeth Conference of bishops in 1958.

The Conference believes that the responsibility for deciding upon the number and frequency of children has been laid by God upon the consciences of parents *everywhere*: that this planning, *in such ways as are mutually acceptable to husband and wife in Christian conscience*, is a right and important factor in Christian family life and should be the result of positive choice before God. Such responsible parenthood, built on obedience to *all* the duties of marriage, requires a wise stewardship of the resources and abilities of the family as well as a thoughtful consideration of the varying *population needs and problems of society* and the claims of future generations.<sup>11</sup>

11. Lambeth Conference, 1958, Resolution 115; italics mine.

It is already evident from this resolution that the Anglican communion officially sanctions the use of contraceptives as a means to limiting population, but we may also note that the Archbishop of Canterbury has affirmed, in *Canterbury Diocesan Notes*, that the Anglican and Episcopal Churches have formally favoured artificial birth control. Such use, however, is subject to the recognition that it is wrong to marry with the deliberate intent of not having *any* children and thus avoiding part of the responsibility of Christian marriage.

The Roman Catholic Church has always taken a firm stand against any kind of birth control as a crime against natural law. It is unfortunate that frequent statements, appearing in the public press and attributed to either lay or clerical members of that faith, have only tended to becloud the issue. A few examples will suffice. The Most Reverend Joseph Heenan, Archbishop of Liverpool, is reported to have said that the Church would not object to a birth control pill if it did not infringe the law of God. Since it would inevitably do so (see argument below) it could never be acceptable. Solicitor-General Balcer and Mines Minister Comptois, Roman Catholic laymen in the Federal Cabinet, have been reported as favouring the dissemination of birth control information to underdeveloped countries. Such press reports of a controversial issue only tend to obscure the facts in the public mind.

The Roman Catholic Church fully admits the problems of population pressures. It will not, however, allow that population may be controlled by "unnatural" means, but firmly opposes mechanical methods of birth control. This church maintains that an equitable distribution of the world's resources will provide a partial solution to the problem. Further, it holds that there is a time factor involved and that industrialization, later marriages, advanced education, and other social factors will provide natural checks on population during the next half-century. Within God's divine plan, a solution will appear in these ways. This optimistic view is unwarranted. It has already been argued above that such ideas cannot be supported by the biological facts. The world's total potential productivity will not support an unlimited population, and it is not likely that any effective natural checks on population increase will appear.

Population is "naturally" controlled by disease and starvation, coupled with low fertility. It is not necessary to extend this argument to cover excessive fertility, the prodigious production of eggs, sperm and young which do not survive. It suffices to point out that what we mean by "natural" is what we find in nature. One writer has discussed the term "unnatural" in this way.<sup>12</sup> The progenitors of the birds we know had feathers to keep them warm. At a later stage of evolutionary emergence, wings were used for flight. In terms of their original use, this new use was no doubt "unnatural." By learning how to defer early death and to make conception voluntary,

12. R. C. Cook, "Social and biological factors in human fertility," *Annals of the N.Y. Acad. of Sciences*, 54 (1952), 750-59.

mankind, whether it likes it or not, has behaved in a most "unnatural" manner. In human terms, then, any deliberate attempt to prevent conception is unnatural, in that it does not occur in nature. This includes total abstinence from intercourse as well as abstinence during the fertile period, which is the basis of the rhythm method of birth control. Whether we recognize it or not, the fact is that man's survival is increasingly determined by his social and political acts.

The subjection to law of all of the phenomena of life in all its forms is, for the biologist, an act of nature; for the theologian it is a product of divine wisdom, and thus a dogmatic principle. All things are subject to the natural law, which is the reflection of the eternal plan of divine wisdom in the reason of man, or a participation by man in the eternal law.

The position of the Roman Catholic Church is that under natural law contraception in all its forms is a grave crime. It is an injury to God, for it defeats the ends of marriage and degrades it to the level of mere pleasure. It is an injury to society, because the human race is endangered when marriage is abused; this kind of abuse tends to race suicide, since it depopulates the nation by an act of its own people. It is an injury to the family, largely because of the indulgence possible within a small family. Finally, it is an injury to the individual, in that it is a perversion of the sexual act from its specific end to that of passing gratification. There are many arguments derived from the above which may be strongly urged against Neo-Malthusian and other similar arguments for birth control.

It is argued in moral theology, however, that birth control is lawful with reference to its *end*, that is, limitation of the number and spacing of the arrival of offspring. But it is only lawful with reference to its *means* when they are continence or abstinence, and not onanism or the use of chemical or mechanical devices. This leaves as the only lawful means of family limitation the deliberate avoidance of conception by the restriction of intercourse to the naturally sterile periods of the female menstrual cycle. This method has not received the unqualified approval of the Roman Catholic Church; rather, its adoption is subject to need and spiritual guidance.

The rhythm method of birth control is perhaps the least reliable of all methods, and on a world wide scale it would not be applicable at all. The method assumes a high degree of regularity in the menstrual cycle from month to month. Unusual exertion or stress can affect the time of ovulation, and so can minor variations in general health. The use of this method requires the intelligence to understand the significance of the menstrual cycle and the ability to count and keep records—something that illiterates are unable to do.

It is clear from the above statements that the Roman Catholic Church can approve the rhythm method of birth control, because this method uses only the natural means that God has placed at man's disposal. It is equally obvious that it cannot approve the use even of a drug or "pill" that will inhibit ovulation. Such a drug is not biologically different in its action from



spermicides, even though it may be argued that preventing an egg from forming is of a different order than killing sperm already formed.

It should be argued, however, that whatever method of birth control is used the *intent* is always the same, that is to have intercourse and at the same time prevent conception. If there is a moral issue involved it is in the intent and not in the method. If avoiding conception is immoral, then any method of doing so is wrong. The Church recognizes that sexuality in man has other ends than reproduction, since it permits marriage between sterile persons, and does not condemn intercourse either when pregnancy is known to have occurred or after the menopause, although in both cases it cannot serve the primary purpose for which it exists.

The argument against contraception on the ground that it tends to depopulate the world cannot be supported, since in part it is a stable population that must be achieved if all men are to enjoy the health and welfare that God intended them to have.

Finally, the greatest good must surely be considered in the interpretation of moral law. In 1936, in his encyclical on chaste and Christian marriage, Pope Pius XI said in part: "Nor are those considered as acting against nature who use their marital rights in the proper manner though on account of natural reasons . . . new life cannot be brought forth. For in matrimony . . . there are also secondary ends such as . . . the cultivation of mutual love." A very natural reason supports the conviction that new life cannot be brought forth in unlimited numbers: there are too many of us relative to the world's resources. Why then cannot the moral problem be resolved in such a way that contraception may be applied effectively to population control? We have already imposed upon nature by affecting human mortality rates. We must affect the natality rates to maintain a relatively stable population. Society will suffer otherwise. Whatever is to be done must be done now.

We are left with a serious issue. We are faced with a problem that must be solved at the purely biological level. And yet, we cannot urge its solution by acts judged to be immoral by a large segment of the population. Mgr. T. B. Fulton, Chancellor of the Archdiocese of Toronto, has already classed any such procedure as an "affront to the conscience of at least half of the population of Canada." It can only be hoped, then, that the next "ecumenical council" of the Roman Church will give very serious consideration to the urgent question of the dissemination of contraceptive information to underdeveloped countries.