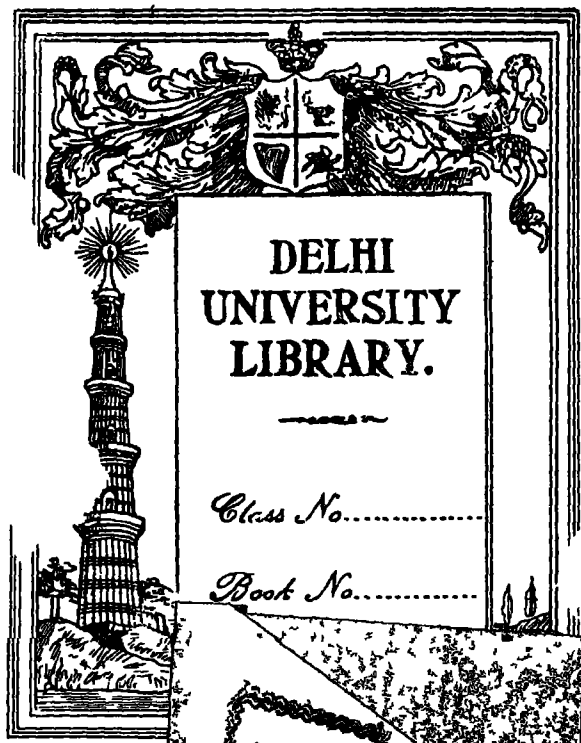




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POPULATION PRESSURE, WAR AND POVERTY

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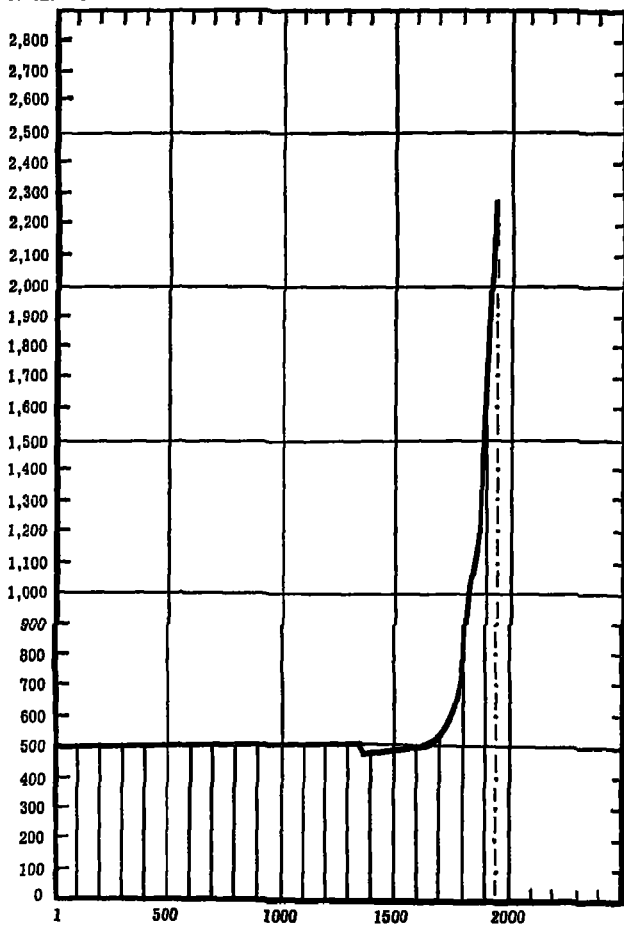
by
Helen R. Hinman
and
William I. Battin, Jr.

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Newark, New Jersey
1945

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*To
Mother
and
Father*

MILLIONS OF PERSONS



SOURCE TABLE III

WORLD POPULATION, A. D. 1 - 1945

FRONTISPIECE

PREFACE

Family planning is winning the approval of many thoughtful persons throughout the world. Proper spacing of children is obtained by cooperation between husband and wife in their mutual love. Four methods of family planning are both widely approved and extensively practiced: sexual abstinence, contraception, rhythmic regulation, and moral restraint.

Sexual abstinence lasting months after childbirth is possible but extremely difficult for most married couples. Contraception will usually give proper spacing of children to those few parents in the world who can afford and can obtain the best of this luxury. Rhythmic regulation helps the fortunate couples who are physically suited to the rhythm method of spacing children. Couples who are unable or unwilling to use any other method may practice moral restraint. Even though these couples are few, they deserve sympathetic recognition. The last chapter of this book has been written to show them some consideration.

Moral restraint in love life is a true spirit of cooperation that guides both partners toward

mutual fulfillment. Other methods have advantages that make them preferred by most persons, but moral restraint also has some advantages. This method does more than assure proper spacing of children—it gives a full sex life. It has the added advantages of being free and applicable to all who practice it. The method of moral restraint is available for family planning throughout the world.

Moral restraint likewise has great advantages as a method for regulating population. This book describes many methods and then gives the advantages of moral restraint. The subject of the book is the regulating of population. The main thesis is that high population pressure with its consequences of war and poverty can be avoided by family planning. Chapter I shows the working of population pressure and how it brings a need for regulating population. Methods for multiplying population follow in Chapter II. Chapter III deals with methods for slowing population growth. Chapter IV is added to champion the regulating of population by moral restraint.

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CHAPTER I

THE ZEST FOR LIFE

The heart of human life is reproduction. Life without children is a living death, a slow and torturing suicide. Some individuals may not feel the pain, yet it gnaws at their subconscious spirit. The old age of persons without descendants usually resembles a barren desert.¹ To live without having any children is becoming the greatest sacrifice.

The fundamental urge of human nature is the urge *to be*, the zest for life, and children fulfill this urge as nothing else can. The urge to be finds expression in the greatest desires: the desire for self preservation, the desire to be important, and sex desire. Now children are the reproductive way to self preservation and the closest approach to everlasting life on this earth.

The desire to be important is a development of the urge to be: it is an urge to be somebody in a big way. Children elevate married persons to

¹ Alexis Carrel, "Married Love", *The Readers Digest Reader* (Doubleday, Doran & Company, Inc., New York, 1940), p. 477.

positions of matriarch and patriarch, senior partners of a family. They offer their mother and father dominions of authority with opportunities to lead, to judge, and to show the highest virtues of love. Children give their parents a feeling of importance.

Sex desire is a further development of the urge to be: it leads to multiplying, and among civilized persons it may even be associated with an urge to multiply. Individuals do more than produce human beings, they reproduce themselves, they multiply. Children are living growths of the flesh and blood of their parents. And children are the biologic reason for sex desire.

Strength of the love for children

The desire for self preservation, the desire to be important, and sex desire reach high fulfillment in children. Why then did the birth rate in the United States decline from around fifty per thousand population in 1830 to around twenty per thousand by 1930?² In addition to economic reasons, part of the answer may be that sex life in the United States is going through a period of transformation. Persons with little love for children are seldom reproducing and as a result are being eliminated. Passionate lust for sexual

² *Human Fertility* (Mar., 1944), Vol. 9, No. 1, pp. 28, 29.

gratification no longer assures survival of American families. The mixture in sex life, of carnal impulse with love for children, is being changed to an increasing proportion of love for children.

Statisticians that neglect this transformation in sex life will usually underestimate the future increase of population. During present generations when persons with little love for children are being sifted out, the average birth rate per thousand population appears low. That average is brought down by millions of persons who never reproduce and who have nothing to do with the future population. The significant figure is the average birth rate for parents who have several children because they love them and want them. Such parents represent the family of the future and their rate of reproduction will determine the future increase of population.

With each new American generation the love for children will grow in strength; more and more it will become the deciding factor in reproduction. The more reproduction originates from love for children, the less it will come from carnal impulse. Sex life is being perfected and developed to a stronger basis than passionate lust. This development of considerate love toward children in sex life is most welcome and most promising for the future of humanity.

Index of population pressure

When nearly everyone born in a nation is blessed by having many children, the population will rapidly multiply. The rapid increase of population proves that the large families enjoy good health supported with an adequate standard of living. Where such conditions prevail, persons having five or more children are beneficial to a nation. Indeed the large families may be regarded by the nation as a great blessing to mankind.

Large families bring a problem only in those nations where the multiplying of population is retarded by extreme misery that results in early deaths. Under this condition a nation suffers from high population pressure. Population pressure is then defined as the product of two factors: a misery factor of course, but also a parent factor. The parent factor represents the large families that enable a nation to continue in spite of excessive rates of infant mortality and death of young persons. Parents having five or more children are as essential as misery to keep up population pressure. If either the parent factor or the misery factor becomes very small, population pressure goes down. Both factors are large wherever population pressure remains high.

The parent factor may be measured by the proportion of adults having five or more children.

For the United States one adult in six eventually has that large a family which gives a parent factor of seventeen per cent. Approximately the same result is obtained by considering only the adult females: around seventeen per cent of them bear five or more children.

The misery factor may be measured by the number of deaths before age thirty out of a hundred persons born. This factor for the United States amounts to only eleven.

The unit of population pressure may be called the *parmis*, representing the product of the *parent* factor and the *misery* factor:

Population pressure=(parent factor) (misery factor)

Population pressure=(17%) (11)=1.9 *parmis*
in the United States

One of the most significant conclusions from the definition is that population pressure has no necessary connection with a high birth rate. If nearly everyone born in a nation lives to have several children, the birth rate will be high but the population pressure will be low. For example the annual birth rate may be thirty per thousand population, yet if less than ten per cent of the families have five or more children and the

TABLE I. TYPICAL POPULATION PRESSURES (a)

Nation	Parent Factor (b)	Misery Factor (c)	Population Pressure in Parnis (d)	Great Modern Industries	Trend of Population Pressure
AUSTRALIA	18%	10	1.8	Some	Prosperous Peace
UNITED STATES	17%	11	1.9	Many	Prosperous Peace
SWEDEN	16%	12	1.9	Many	Prosperous Peace
GERMANY	18%	17	3.1	Many	Aggressive War
ITALY	21%	24	5.0	Many	Aggressive War
JAPAN	24%	34	8.2	Many	Aggressive War Abject Poverty
CHILE	25%	30	7.5	Some	Abject Poverty
INDIA	30%	57	17.1	Some	Abject Poverty
CHINA	35%	60	21.0	Few	Abject Poverty

(a) Source: Estimated as described in the text; sources are given in the footnotes to this table.

(b) The parent factor equals the percentage of adults having five or more children. Estimated from *Istituto Centrale Di Statistica Del Regno D'Italia. VIII Censimento Generale Della Popolazione, 21 Aprile 1936—XIV. Volume III. Regno. Parte Prima—Relazione* (Tipografia Ippolito Failli, Roma, 1938—Anno XVI), Tav. III B), p. 110^c; Tav. V, pp. 114*-117*; *Statistik des Deutschen Reichs. Band 470, 1. Die Hauptergebnisse der Volks-, Berufs- und Betriebszählung im Deutschen Reich (einschl. Saarland) Heft 1. Die Bevölkerung, die Familien und die Haushaltungen im Deutschen Reich* (Verlag für Sozialpolitik, Wirtschaft und Statistik, Paul Schmidt, Berlin, 1937), pp. 6, 20; Gyan Chand, *India's Teeming Millions* (George Allen & Unwin, Ltd., London, 1939), pp. 154, 157-160; *Population Index* (Jul., 1939), pp. 146, 147; *United States Department of Commerce. Bureau of the Census. Sixteenth Census of the United States: 1940. Population. Differential Fertility, 1940 and 1910* (United States Government Printing Office, Washington, 1943), Table 1, p. 7; *United States Department of Commerce. Bureau of the Census. Sixteenth Census of the United States: 1940. Population, Vol. IV. Characteristics by Age. Part I.* (United States Government Printing Office, Washington, 1943), Table 5, p. 16; *Statistical Year-Book of the League of Nations (1941/1942)* (League of Nations, Geneva, 1943), pp. 36-39.

(c) The misery factor equals the number of deaths before age thirty out of a hundred persons born. Estimated with considera-

misery factor is less than ten, population pressure will be lower than one parmis. Moreover the parent factor may rise to twenty-five per cent with a misery factor of seven; population pressure will be only moderate. The combination of a moderate or low population pressure with a high birth rate typifies the vigorous and growing nation that is destined to become a mighty world power.

Another important conclusion is that population pressure may usually be brought down and held low by simply working on the misery factor, striving to eliminate early deaths. This way of preventing high population pressure is the best and is emphatically recommended. It is much preferable to reducing the proportion of large families, which might lower the birth rate. But efforts to bring down the misery factor may meet with little success in some nations and fail to prevent high population pressure. Then adjusting the parent factor at least deserves consideration.

Population pressure and war

Table I lists some typical population pressures. Australia, the United States, and Sweden are

tion of Table IV of this book; *Statistical Year-Book of the League of Nations (1941/42)*, pp. 63, 68-71.

(d) Population pressure in parmis equals the product of the parent factor and the misery factor.

examples of the many nations with moderate population pressures, just below two parmis. Germany and Italy have high population pressures, exceeding three parmis, while those of Japan, Chile, India, and China are extremely high, more than seven parmis.

High population pressure always means trouble for a nation. The large number of untimely deaths may represent merely accident and disease fatalities or it may include war casualties. Indeed high population pressure has been considered by some authorities as one of the many causes of world wars. But it pushes a nation toward expansion by war only if the nation possesses great industries necessary to military conquests. Accordingly for modern times the relation of population pressure to war must be qualified:

Axiom I. Now only a few *industrial* nations with population pressure exceeding two parmis tend to aggressive war.

Some of the most noteworthy predictions of World War II—statements of what nations would attack, where they would invade, and when their aggressions would begin—were made by authorities on population. H. J. Hutchinson in 1917 predicted that a second and most terrible world

war must result from increase of population.³ Louis I. Dublin stated in 1926 that increasing population makes war inevitable.⁴ In 1929 Warren S. Thompson published a remarkable book showing how population pressure leads to war.⁵ In 1936 Raymond Pearl, through a careful analysis of lands and populations ruled by world empires, presented a statistical picture of population pressure as a cause of war.⁶ Henry Pratt Fairchild “* * * has repeatedly, in print and orally, expressed his firm conviction that population pressure has always been, and still is, the great underlying and predisposing cause of practically all international wars.”⁷

Population authorities predicted the future aggressors years before the Second World War. Japan was the future aggressor named by Harold Cox in 1923 and by Dublin in 1926, five years be-

³ H. J. Hutchinson, “World Congestion and the Real Armageddon”, *The Quarterly Review* (Oct., 1917), p. 387.

⁴ Louis I. Dublin, “The Statistician and the Population Problem”, *Population Problems in the United States and Canada* (Houghton Mifflin Company, New York, 1926), pp. 3, 4.

⁵ Warren S. Thompson, *Danger Spots in World Population* (Alfred A. Knopf, New York, 1929), pp. 8, 13, 47, 48, 113, 119, 209, 328, 332.

⁶ Raymond Pearl, “War and Overpopulation”, *Current History* (Mar., 1936), p. 594.

⁷ Henry Pratt Fairchild, *People; The Quantity and Quality of Population* (Henry Holt and Company, New York, 1939), pp. 212, 292.

fore the Manchurian incident.⁸ Thompson wrote in 1929 that Italy is in much the same situation as Japan: that the population problem is urgent and likely to lead to war.⁹ He and other population authorities named all three of the aggressors, Japan, Italy, and Germany.¹⁰

Predictions by population experts include great invasions of the Second World War. Cox discussed a possible Japanese conquest of Manchuria, drive to the south toward Australia, and war on the United States.¹¹ Thompson also predicted the Manchurian incident, to be followed by Japanese expansion south and west.¹² Hankins warned that the British Empire must be ready to fight.¹³

Central Europe, Italy, Poland, and the Balkans were selected by Thompson as danger spots of a

⁸ Harold Cox, *The Problem of Population* (G. P. Putnam's Sons, New York, 1923), pp. 89, 90, 92; Louis I. Dublin, "The Statistician and the Population Problem", *Population Problems in the United States and Canada*, p. 4.

⁹ Thompson, *op. cit.*, pp. 119, 210, 220.

¹⁰ *Ibid.*, pp. 42, 43, 47, 48, 119, 210, 220, 245, 246; Louis I. Dublin, *The Population Problem and World Depression. Foreign Policy Pamphlets. No. 1. Jan., 1936* (Foreign Policy Association, Incorporated, New York, 1936), pp. 3, 22, 26; Raymond Pearl, "War and Overpopulation", *Current History* (Mar., 1936), p. 594; Frank H. Hankins, "Pressure of Population as a Cause of War", *The Annals of the American Academy of Political and Social Science* (Jul., 1938), pp. 106, 108.

¹¹ Cox, *op. cit.*, pp. 89, 90, 92.

¹² Thompson, *op. cit.*, pp. 26, 27, 46, 115.

¹³ Hankins, *op. cit.*, p. 107.

coming war in Europe.¹⁴ As early as 1923 Cox said, "Frenchmen fear that unless they can increase their man power by producing more children they may go under in the next war."¹⁵

Population authorities even predicted the timing of World War II. Dublin emphasized the rapid growth of the war spirit in Japan during the 1920's.¹⁶ Thompson, convinced by population studies, wrote in 1929 that Japan was going to war within a few years.¹⁷ He also predicted an Italian war in the near future, and war in Poland and the Balkans within the next few decades.¹⁸ In 1936 Fairchild called attention to the increasingly tense international situation with its threat of imminent war.¹⁹

Authorities likewise predict on the basis of population studies that China and India will not start wars of aggression.²⁰ The population pres-

¹⁴ Thompson, *op. cit.*, pp. 13, 260, 264.

¹⁵ Cox, *op. cit.*, p. 95.

¹⁶ Louis I. Dublin, "The Statistician and the Population Problem", *Population Problems in the United States and Canada*, p. 4.

¹⁷ Thompson, *op. cit.*, p. 119.

¹⁸ *Ibid.*, pp. 210, 220, 260, 264.

¹⁹ Henry Pratt Fairchild, "International Migration", *The Annals of the American Academy of Political and Social Science* (Nov., 1936), p. 295.

²⁰ Thompson, *op. cit.*, pp. 14, 50, 68-70, 150; A. M. Carr-Saunders, *World Population* (At the Clarendon Press, Oxford, 1936), p. 294; Hankins, *op. cit.*, p. 104; Warren S. Thompson and P. K. Whelpton, "Levels of Living and Population Pressure", *The Annals of the American Academy of Political and Social Science* (Jul., 1938), pp. 93, 96.

sure in these nations is high but they have not developed many great industries. They are too weak for invasions of other nations and conquests of lands.

Population pressure and poverty

Extremely high population pressure always proves the existence of abject poverty:

Axiom II. In nations with population pressure exceeding seven parmis, many persons suffer abject poverty.

Long descriptions have been written of abject poverty in nations with extremely high population pressure. But the most horrible aspects of dire poverty, such as infanticide, cannibalism, and ruin of children with opium or venereal disease, have usually been kept secret by the perpetrators, censored by governments, or disguised in vague words by writers to meet requirements in publication. The frank revelation of abject poverty remains a task for sociologists of the future. Such revelation will be a worthwhile move toward bringing the worst poverty to an end.

The conclusion must not be drawn that poverty necessarily means high population pressure. In areas of poverty where health is good, population pressure is moderate. Starvation deaths

form only a fraction of the misery factor; disease deaths are not confined to the poor. With free clinics and public health programs, poverty can be largely prevented from influencing the misery factor. Poverty has little connection with deaths from war or from natural calamities such as earthquakes, volcanic eruptions, floods, tidal waves, and hurricanes. Another fraction of the misery factor represents deaths from occupational hazards such as oil-well fires, mine disasters, silicosis, sulphur acid, and lead poisoning. Hazardous occupations often pay more than average wages.

Population pressure is not measured by statistics of poverty, but by census data on size of families and mortality tables of deaths according to age. Axiom II is not derived from the meaning of population pressure, but is merely an observed relation based on study of actual conditions in the world. The true meaning of this chapter is that—providing population pressure is kept moderate—large families, a high birth rate, and a continuously increasing population are great blessings to a nation.

CHAPTER II

METHODS FOR MULTIPLYING POPULATION

Methods for multiplying population embrace the spiritual and ethical forces in a nation, as well as the economic and political. If this is true, why have national efforts to increase population been only moderately successful? The reason is that they have usually lacked sufficient vigor. Many varieties of methods have resembled mere experiments rather than strong national policies.

Consideration of what can be done to multiply population, even though highly theoretical, will show the weaknesses of existing efforts to increase population. It will also indicate what to expect from national policies when powerful methods for multiplying population are applied full force.

Natural selection of the most prolific families

Zest for life and love for children, increasing through the process of survival, encourage reproduction and large families. Indeed this natural tendency toward large families is one of the main forces multiplying population. Natural selection now works with mankind principally through

survival of the most prolific families. Not families with the highest intelligence, not families with the best health, not families with the largest fortunes, but families with the most surviving children form the future population.

Classification of mankind into four groups will illustrate natural selection of the most prolific families:

1. Persons having no children.
2. Persons having one child.
3. Persons with two or three children.
4. Persons with four or more children.

Group 4 is the only group capable of maintaining the population of the United States. Here so many persons form group 1, some single, some sterile, that even group 3 parents cannot make up for them. Under existing conditions an American woman has not reproduced adequately until she has four living children.¹

The natural selection of families with the most children is mathematically clear. For example a farm community has an average of four children per family. A metropolitan community with a somewhat larger adult population has an average of only one child per family. If these averages

¹ Raymond Pearl, *The Natural History of Population* (Oxford University Press, New York, 1939), p. 141.

continue for another generation, the grandchildren from the farms will outnumber the grandchildren from the city by more than ten to one.

Natural selection of the most prolific families is artificially supplemented when a nation stimulates reproduction by giving privileges and money rewards to parents with many children. Such a nation will breed some naturally fertile persons who have many children, but it will also breed individuals who may even undergo operations and treatments to reproduce for money rewards. If these rewards are discontinued, the number of large families will decrease. The conservative policy for developing fertility lets natural selection work alone. Then the fertility of the most prolific families is biologic and grows in strength with each new generation. Natural selection is a good method of selective breeding for fertility.

Selective breeding for fertility

The United States has what amounts to a population policy that concentrates on selective breeding for fertility. Nearly everyone who can reproduce is permitted to reproduce. Parenthood is left largely to individual action with few requirements or limitations. Fertility determines the results. Being the main requirement, it serves as the American standard of competence for par-

enthood. Fertility in the United States is in effect the applied measure of fitness to survive.

Reproduction in the United States comes from fertility without social inducements. Here economic rewards for parenthood are small. Tax allowances for dependent children are insufficient to act as inducements. Appeals to have children for patriotism and moral duty are seldom made. The best citizens receive little encouragement to multiply; the worst citizens are rarely dissuaded from having children. In the absence of social inducements or other standards, fertility almost seems to monopolize control of human survival and to work for its own growth.

From generation to generation as a consequence of the process of survival, fertility is being strengthened. The greatest fertility results in the most rapid rate of family increase. The most fertile are multiplying and creating the American population of the future. Therefore the future population of the United States will become endowed with much greater fertility than the present generation. This process amounts to an intense population policy of selective breeding for fertility.

In order for natives of India to survive they must possess strong resistance to disease. Survival in China often requires ability to work hard

and long. Germany claims to breed for patriotism and leadership. Alongside these, the United States in effect concentrates on selective breeding for fertility.

Research to increase food production

As a result of natural selection of the most prolific families and selective breeding for fertility, a problem of food arises. Food supplies must increase rapidly to feed a multiplying population. Research to increase food production needs extensive development. It is an auxiliary to methods for multiplying population wherever population growth is slowed by famine deaths or malnutrition.

The basic problem for a nation like India, suffering from malnutrition, is what crops or live stock or combinations of them will give the most food from the land. This requires both selection of products with the highest food value per acre and farming them for the maximum production per acre. New farm products of high nourishment and rapid growth will be developed by research. It will also develop crops and live stock that thrive on lands formerly waste.

In the future additional land may not be very essential to increase food supplies. Rivers, lakes, and seas become vast sources of foods when mod-

ern methods of fishing are applied for large catches. Moreover research will develop edible products from plants that grow under sea water and in lakes, swamps, and marshes. The time may come when unlimited quantities of nourishing foods can be manufactured from oil, wood, chalk, air, and water. A nation that requires more land to feed its people should try to increase food production by every means, including research in synthetics.

Social sponsorship of large families

If adequate food supplies are assured, a nation can use many methods for multiplying population. Social sponsorship of large families will supplement natural selection of the most prolific. Members of the community can support early marriages and encourage large families in a number of ways. They can promote coeducation, social events, and young people's clubs that bring girls and boys together. Words of praise for brave young couples who have many children should be backed with financial support. Wealthy individuals in Europe do more than contribute to maternity hospitals and nursery schools. They award substantial prizes to parents who have many children. Endowed scholarships could specify that contestants must come from large families.

Societies have been organized, notably in Belgium and France, to promote the interests of large families. These organizations sometimes acquire political influence for the benefit of their membership. Politicians usually praise the societies, grant favors to their members, and support political action beneficial to large families.

Political encouragement of reproduction

Strong nationalism often leads to encouragement of reproduction and population growth. Raising a large family then becomes an expression of intense patriotism. Political encouragement of reproduction has the following appeals:²

1. Power is gained from the strength of a large population. To be able to win wars a nation needs millions of young men.
2. Great size has a majestic beauty. A population that numbers many millions is a source of national pride.
3. Growth means national progress. Continued increase of population is desirable.
4. Great men are born in a supreme nation and their plans for mankind require the help of millions of plain people. The men of extraordinary ability who lead the ruling

² Henry Pratt Fairchild, *People; The Quantity and Quality of Population* pp. 153-157

political party must have a large population with which to accomplish glorious works.

5. To be fruitful and multiply is the first commandment of the state religion. An expanding population is the sacred way to spread worship of the nation.
6. Best-quality people have a patriotic duty to raise large families. Members of the excellent native population are under moral obligation to the state to multiply the custodians of their fine character.

Use of religion to increase fertility

The sacred word of God has been quoted to encourage fertility. Religion may denounce as mortal sin every restraint of the natural process of reproduction. The making, sale, or use of any contraceptive is sometimes condemned as certain to bring the wrath of God, the tortures of hell, and eternal damnation.

Intercourse can be required during the two weeks following menstruation as an expression of religious devotion. Sacred scriptures may prove that God commands all people to have large families. Admission to heaven may be conditioned upon leaving a living child in the world. The blessing of everlasting life might be promised only to those who have prolific children.

Leading religions apply most of these principles. Roman Catholic Christians are taught

that contraception is sin. Jewish religion forbids intercourse, starting from the first day of menstruation and continuing for twelve days³, which includes the few days immediately following menstruation when conception is unlikely.⁴ As a result intercourse is permitted to begin at the most fertile time of the monthly cycle. Confucians worship family. The Hindu must have a son in order to enter heaven.⁵ Use of religion to increase fertility has the authority of divine command in many faiths.

Moral support for procreation

Moral support for procreation is a powerful aid in multiplying population. This support may be complete and even approve the birth of children outside of marriage. Polygamy also may be considered moral in order to increase the birth rate after war has killed millions of men. In fact all intercourse for reproduction may be regarded as highly moral.

A further development of moral support is the denouncing of any restraint of reproduction.

³ Enid Charles, *The Twilight of Parenthood* (W. W. Norton & Company, Inc., New York, 1934), p. 174.

⁴ *Human Fertility* (Mar., 1936), Vol. 1, No. 5, p. 67; (Apr., 1938), Vol. 3, No. 4, p. 86; (Sep., 1938), Vol. 3, No. 9, p. 158; (Oct., 1938), Vol. 3, No. 10, p. 182; *The Journal of the American Medical Association* (Jan. 22, 1938), p. 258.

⁵ S. Chandrasekhar, "India's Human Resources", *The Annals of the American Academy of Political and Social Science* (May, 1944), p. 67.

Contraception is then condemned as filthy dirty lust, and even rhythmic regulation of intercourse becomes suspect. Abortion wrongly induced is of course one of the worst violations of the moral code.

The great power of conscience can be of strong influence when a rapid growth of population is desired. The moral standard should then approve *only* intercourse for reproduction; people may be taught that any sex relation not aimed at reproduction is immoral. According to this standard, embracing, kissing, or simply loving a mate are wrong, dirty, obscene, lewd, and lascivious unless the couple sincerely tries to have a child. Truly moral people would refrain from any love-making except for procreation. Their consciences should direct their desires for sex life entirely toward multiplying population.

Growth of population through medical science

Medical science gives strong support to growth of population. Medicines that strengthen the mating urge have been developed. Operations have been performed to build up sexual power. When other methods fail, artificial insemination may be used to produce pregnancy.⁶

⁶ Enid Charles, *The Twilight of Parenthood*, p. 192; *Human Fertility* (Apr., 1938), Vol. 3, No. 4, pp. 75-77; (Dec., 1943), Vol. 8, No. 4, pp. 117-118; Raymond Pearl, *The Natural History of Population*, p. 66.

An increase in the number of girl twins will help to multiply population. Growth of population depends upon the number of women who reproduce. When medical science is able to control sex and produce twin pregnancies, the number of women in the population can rapidly multiply. One woman with ten pregnancies can produce twenty daughters. They in turn might give her four hundred granddaughters. The population will then increase several hundred times in a few generations.

Painless birth will soon be perfected and will remove a deterrent to the growth of population.⁷ Medical science is making progress in reduction of infant mortality. The cure and prevention of disease are reducing another obstacle to increased population. Proper diet avoids malnutrition and further strengthens resistance to disease. In all these ways medical science makes possible a large increase of population.

Research in medical science may produce a huge increase of population. A birth bank of ova and spermatozoa may be devised. When a million children are desired, the ova might be artificially

⁷ Robert A. Hingson and Waldo B. Edwards, "Continuous Caudal Analgesia", *The Journal of the American Medical Association* (Oct. 30, 1943), pp. 538-546.

fertilized in a birth hospital and incubated to fully-developed babies.⁸

Laws encouraging increase of population

Laws of many nations have forceful influence toward multiplying population. Heavy fines and imprisonment are the penalties for distributing any contraceptive information as well as for selling or possessing a contraceptive even in the United States.⁹ As a final development of such legislation, pregnancy might be required to the extent of possible procreation. Women who failed to have children regularly would be given a medical examination. If able to have children the women would be artificially inseminated.

Taxes on bachelors when repeatedly raised induce most of them to marry. The taxes on small families levied in Russia yield additional revenues to help support large families.¹⁰ Such taxes should be reduced one-fourth for each child so that parents with more than three children will

⁸ John B. S. Haldane, *Daedalus or Science and the Future* (Kegan Paul, Trench, Trubner & Co., Ltd., London, 1925), pp. 63-68; *Human Fertility* (Sep., 1944), Vol. 9, No. 3, p. 84.

⁹ *United States. Statutes. Public Acts*, 44th cong., 1st sess., Chap. 186 (Jul. 12, 1876); 54th cong., 2nd sess., Chap. 172 (Feb. 8, 1897); 60th cong., 2nd sess., Chap. 321, secs. 211, 245, 312 (Mar. 4, 1909).

¹⁰ *Human Fertility* (Sep., 1944), Vol. 9, No. 3, pp. 87, 88.

be exempt. Tax allowance deductions for children apply to income taxes of many nations including the United States. They also apply to inheritance taxes in Belgium, France, and Germany.

Some governments grant marriage loans to newlyweds. Usually one-fifth or more of a loan is cancelled for each child born during the early years after a marriage. Scandinavian mothers often receive confinement benefits toward their hospitalization and premiums for live births. Family allowances are paid extensively to heads of large households in Europe, but amounts are less than needs which average around twenty per cent of a worker's wage for each child.¹¹

Many governments that finance low-cost housing give preferences to large families. Priority for government employment is granted to parents in Germany and Italy. Italy also favors them by waiving age-limit requirements of the civil service.

Parents might be permitted to cast votes for their children under voting age, mothers for daughters and fathers for sons.

In France special exemptions from military service are granted to fathers of large families.

¹¹ D. V. Glass, *Population Policies and Movements in Europe* (At the Clarendon Press, Oxford, 1940), p. 209.

TABLE II. APPLIED METHODS FOR MULTIPLYING POPULATION^a

CAMPAIGNS TO INCREASE POPULATION

1. Increase food supplies by irrigation and selection of crops (Italy)
2. Encourage rural living (Italy)
3. Propagandize for large families (France, Germany, Italy)

PROHIBITIONS AFFECTING POPULATION

4. Legislate against emigration (Italy)
5. Prohibit abortion by law (Belgium, France, Germany)
6. Prohibit contraception by law (Belgium, France)

TAXES ON BACHELORS

7. Tax bachelors heavily (Germany, Italy)

TAX CONCESSIONS FOR LARGE FAMILIES

8. Grant reductions and exemptions on income and inheritance taxes according to the number of children (Belgium, France, Germany, Italy)

HONORS FOR PROLIFIC PARENTS

9. Provide medals and organize societies for parents who have many children (Belgium, France, Germany, Italy)

PRICE CONCESSIONS FOR LARGE FAMILIES

10. Reduce railroad fares for parents of large families (France, Germany)
11. Give special low rates on electricity and gas to large families (Italy)
12. Provide low-cost housing with reduced rents for large families (Belgium, France, Germany, Italy, Sweden)
13. Reduce school fees and university tuitions for children from large families (Belgium, France, Germany)

FREE SERVICES FOR LARGE FAMILIES

14. Supply free meals to children at school (Sweden)
15. Furnish free transportation on street cars to members of large families (Italy)
16. Make hospitals, clinics, and nurseries free to members of large families (France)

CASH PAYMENTS FOR HAVING CHILDREN

17. Grant a honeymoon vacation with pay and bonus to newlyweds (Italy)
18. Make marriage loans that are cancelled by having children (France, Germany, Italy)
19. Pay benefits during confinements for childbirth (Italy, Sweden)

^a Source: Compiled from D. V. Glass, *Population Policies and Movements in Europe* (At the Clarendon Press, Oxford, 1940), pp 116-341

TABLE II. APPLIED METHODS FOR MULTIPLYING POPULATION^a**(Concluded)**

20. Pay premiums for live births (Belgium, France, Italy, Sweden)
 21. Pay regular family allowances according to the number of children (Belgium, France, Germany, Italy)
 22. Pay extra bonuses to parents who raise many children (Germany)
 23. Have endowed prizes for very large families (France)
- PRIVILEGES FOR PROLIFIC PARENTS**
24. Give preferences in government employment to parents of large families (Germany, Italy)
 25. Make exceptions on civil service age limits and other requirements for parents who have many children (Italy)
 26. Grant exemptions from military service to parents who have many children (France)

Power of methods for multiplying population

Table II lists some of the applied methods for multiplying population and a few European nations that have put them in practice. Many of the possible methods have been applied, yet seldom has any one of them been applied full strength. The results achieved so far are those of efforts having restricted scope and limited force. When a nation launches a comprehensive program to increase population with maximum exertion, the results will be surprising.

The methods for multiplying population might be combined strongly enough to produce a remarkable increase in world population. Present efforts can be considerably broadened and strengthened. With sufficient stress on all methods throughout

TABLE III. WORLD POPULATION^a

(End of year figures)

Year	Number of Persons	Year	Number of Persons
10,000 B. C.	480,000,000	1914	1,832,000,000
		1915	1,845,000,000
		1916	1,858,000,000
		1917	1,871,000,000
		1918	1,880,000,000
2,000 B. C.	490,000,000	1919	1,891,000,000
		1920	1,905,000,000
		1921	1,915,000,000
		1922	1,925,000,000
A. D. 1	495,000,000	1923	1,938,000,000
		1924	1,951,000,000
		1925	1,965,000,000
1300	500,000,000	1926	1,979,000,000
		1927	1,994,000,000
1400	480,000,000 ^b	1928	2,007,000,000
		1929	2,019,000,000
1650	500,000,000	1930	2,030,000,000
		1931	2,045,000,000
1750	600,000,000	1932	2,060,000,000
		1933	2,072,000,000
1800	800,000,000	1934	2,084,000,000
		1935	2,100,000,000
1850	1,100,000,000	1936	2,118,000,000
		1937	2,137,000,000
1900	1,600,000,000	1938	2,156,000,000
		1939	2,173,000,000
1905	1,685,000,000	1940	2,190,000,000
		1941	2,207,000,000
1910	1,770,000,000	1942	2,223,000,000
1911	1,786,000,000	1943	2,238,000,000
1912	1,801,000,000	1944	2,253,000,000
1913	1,817,000,000	1945	2,270,000,000

^a Source: Estimated with consideration of Table IV and Table VI of this book; A. M. Carr-Saunders, *World Population* (At the Clarendon Press, Oxford, 1936), p. 42; Raymond Pearl, *The Natural History of Population* (Oxford University Press, New York, 1939), pp. 252, 253, 257-264; *The World Almanac and Book of Facts for 1942* (The New York World-Telegram, New York, 1942), p. 612; *ibid.*, 1944, p. 752; *Statistical Year-Book of the*

the world the number of mankind will soon exceed three billion.

Table III shows the growth in world population. For thousands of years the number of mankind remained around half a billion. An increase of world population began in the seventeenth century and has continued to now more than two billion persons. The rate of increase depends on the point of view. Compared with the possible multiplying of population the increase has been slow. Nevertheless if the curve of population growth is drawn to scale beginning with the Stone Age, the result is thought-provoking. The curve takes the shape of a horizontal bar until the seventeenth century, terminated by a vertical line to the present.

League of Nations (1941/42) (League of Nations, Geneva, 1943), p. 18.

^b Black Death plagued Asia and Europe from 1348 to 1369.

CHAPTER III

METHODS FOR SLOWING POPULATION GROWTH

The checks to population growth include some of mankind's great tragedies as well as fine examples of religious devotion and moral character. War, famine, and vice cooperate here with chastity and virtue to slow the increase of population. These facts of living offer opportunities for artists to present the deep spiritual and emotional realities of life.

Study of the growth of population deals with millions of births and deaths. To convey to people the meaning of a million deaths from starvation is a difficult problem even for the unlimited power of art. Great art can express the sorrow of one life tragedy, but artistic genius may be baffled to impress people with the magnitude of tragedies in millions.

The statistics in what follows seem cold, heartless. This shortcoming illustrates the difficulty of conveying to people facts—tremendous facts—in the slowing of population growth. Effective expression of these remains an open challenge to

**TABLE IV. FATALITIES OF ALL BELLIGERENTS
IN WORLD WAR I^a**

ALLIES	Mobilized Forces	Killed and Died
Russia	12,000,000	1,700,000
France	8,410,000	1,357,800
British Empire	8,904,467	908,371
Italy	5,615,000	650,000
United States	4,355,000	126,000
Japan	800,000	300
Roumania	750,000	335,706
Serbia	707,343	45,000
Belgium	267,000	13,716
Greece	230,000	5,000
Portugal	100,000	7,222
Montenegro	50,000	3,000
TOTAL OF ALLIES	42 188,810	5,152,115
CENTRAL POWERS		
Germany	11,000,000	1,773,700
Austria-Hungary	7,800 000	1,200,000
Turkey	2 850 000	325,000
Bulgaria	1,200,000	87,500
TOTAL OF CENTRAL POWERS	22,850,000	3,386,200
TOTAL OF ALLIES	42,188 810	5,152,115
TOTAL OF CENTRAL POWERS	22 850,000	3,386,200
TOTAL OF ALL BELLIGERENTS	65,038 810	8,538,315

^a Source Estimated from Leonard P Ayres, *The War with Germany, a Statistical Summary The Official Record of the United States Part in the Great War* (United States War Department Washington, [1923?]), p 132, C R M F Cruttwell, *A History of the Great War, 1914-1918* (At the Clarendon Press, Oxford 1936), pp 630-632, *The World Almanac and Book of Facts for 1944* (The New York World-Telegram, New York, 1914) p 43

the unrestricted ability of artistic genius. If only some great artist would present these spiritual and emotional realities so that they would truly impress humanity!

Population checked by war

Table IV shows the number of persons killed in the armed services of all belligerent nations during the First World War. The figures do not include civilian fatalities from the war and epidemics. The total of more than eight million persons killed is the least effect of World War I on the growth of population. If these men and women had survived they would have added at least eight million children to the population.

The terrific destruction from World War I did not prevent the growth of population: world population increased forty-eight million during the war.¹ Since then it has increased three hundred and seventy-three million. On the basis of these figures war is not very important as a check to population.

Modern medicine in war is saving millions of lives that formerly were lost. Disease was until recently a terrible wartime killer, often worse than the enemy. Vaccines, medicinal drugs, modern

¹ Table III.

methods of food preparation, and sanitary precautions now hold wartime disease down. Bleeding to death used to be common on the battlefield; now transfusions of blood plasma save many lives. The progress in saving lives is making war a minor factor as a method for slowing population growth.

Another offset to the killing in war is the increase of birth rates by some nations in the years preceding a war. This practice is so typical of expansionist governments that it helps to predict which nation will start a world war. The aggressor is nearly always the industrial nation, with population pressure exceeding two parmis, that has most successfully fostered a high and increasing birth rate.

War itself has recently been an influence toward increasing the birth rate. This is especially true for the United States, a nation comparatively free of military and political pressure to increase the number of births. In 1940 the number of births increased a hundred and ninety thousand over the average for the preceding decade.² Between January 1, 1940, and December 31,

² *United States Department of Commerce, Bureau of the Census. Vital Statistics of the United States. 1942. Part I. Natality and Mortality Data . . .* (United States Government Printing Office, Washington, 1944), Table G, p. 6; *The World Almanac and Book of Facts for 1944* (The New York World-Telegram, New York, 1944), p. 654.

1943, the excess of births over the former average totaled more than two million. Part of this increase was due to the recovery in business activity that came with rearmament. Careful study by William Fielding Ogburn also shows in detail how a considerable part of the increase in births is attributable directly to the war. Definite rises in the birth rate followed ten months after events such as the passage of the Selective Service Act and the attack on Pearl Harbor.³

War even reinforces natural selection of the most prolific families. The soldiers taken first are usually men who have not become fathers, many of them in their thirties. Their chances of raising a family are substantially reduced; they face the longest military service. A large proportion of the soldiers killed in battle have no children. While millions of childless men are being eliminated by war, the most prolific fathers who reproduced in their twenties continue adding to the future population. War in this process resembles selective breeding for fertility.

With these modern trends in war deaths and war births, war will no longer be significant as a method for slowing population growth. The slaughters of war history are not sufficient proof

³ William Fielding Ogburn, "Marriages, Births, and Divorces", *The Annals of the American Academy of Political and Social Science* (Sep., 1943), pp. 25, 28.

that population will be checked by war in the future. If the growth of population is slowed, it will be by some other method or combination of methods.

TABLE V. STARVATION IN THE TWENTIETH CENTURY^a

Nation	Deaths Due to Starvation
China	40,750,000
India	30,050,000
Russia	16,100,000
Greece	2,000,000
Poland	1,500,000
France	1,000,000
Germany	750,000
Austria	150,000
All other nations	12,042,300
TOTAL	104,342,300

^a Source: Table VI.

Population limited by subsistence

Table V shows the deaths from starvation in the twentieth century. The suffering in so many million deaths from starvation is difficult to feel personally; some idea of it can be realized by going without food for several weeks. When the gnawing pains of hunger become severe, a person may realize the suffering in one death by starvation.

A person can feel deeply the deaths by starvation of several friends, but his feelings will scarcely grow in proportion when a hundred humans starve to death. Famine in the twentieth century has taken the lives of more than a hundred million men, women, and children. Many of those who die by the slow torture of starvation are children. Such magnitude of suffering stuns the feeling of sympathy.

A tragic feature of these starvations is that they might have been prevented. World food production is sufficient, many charities, churches, and governments are concerned, and funds are available for famine relief. The main needs are adequate transportation and food storage facilities in famine areas. Even these difficulties may soon be overcome. Modern caterpillar trucks can move tons of concentrated food hundreds of miles across open country in a few hours.

When starvation deaths are reduced to several thousand a year, famine will have lost its power of limiting the growth of population. Malnutrition might continue to retard the growth because it lowers human fertility.⁴ Few nations are near to ending malnutrition. Furthermore the fear of want will incline some parents to limit the

⁴ *Asia* (Nov., 1936), p. 702.

number of their children. But inadequate subsistence will have little force as a method for slowing population growth.

Population decimated by disease

Disease is the leading killer of mankind. The great majority of people die by one or more of the thousands of diseases. Malaria is the most deadly destroyer in India, taking the lives of more than a million persons every year.⁵ In the United States the most fatalities are from heart disease.⁶

Disease has a strong retarding influence on the increase of population only when it strikes early in life, and is fatal or produces sterility. Nearly all babies are born before their parents reach forty-five years of age. Therefore fatal disease after age forty-five has a limited effect on the net reproduction rate of population growth.

Medical science is fast conquering the fatal diseases of childhood, youth, and even middle age. Disease already has little effect on the increase of population in some nations, and this improvement of health will soon extend to other nations.

⁵ Gyan Chand, *India's Teeming Millions* (George Allen & Unwin, Ltd., London, 1939), p. 119.

⁶ *United States Department of Commerce, Bureau of the Census. Vital Statistics of the United States, 1942. Part I. Natality and Mortality Data . . .*, Table Y, p. 12; Table Z, p. 13; *World Almanac, 1944*, p. 655.

The time is near when disease will be a minor factor in slowing the growth of population.

War, famine, and disease are being overcome as checks to population. Despite the millions of untimely and tragic deaths from these three checks, the population of the world has considerably increased. With these checks having little influence to slow the future growth of population, the increase of mankind may exceed all past records unless other retarding influences act with great strength.

Murder, suicide, and fatal accident

Homicides in the United States average roughly eight thousand a year; suicides, seventeen thousand. Fatal accidents exceed ninety thousand.⁷ This toll of sudden death in the United States, amounting to more than a hundred thousand persons every year, tends to slow population growth. Victims are of all ages from babies to grandparents. If it were possible, this way of slowing population growth would be eliminated. Other ways, such as sexual abstinence and postponement of marriage, are more acceptable as methods for regulating population.

⁷ *United States Department of Commerce, Bureau of the Census. Vital Statistics of the United States, 1942. Part I. Natality and Mortality Data . . .*, Table Y, p. 12; *World Almanac, 1944*, pp. 654-656.

Extreme sexual abstinence

It is love and love alone the world is seeking. Persons who practice extreme sexual abstinence undertake great self-denial, not only of reproduction which is the heart of human life, but also of some of the truest expressions of love. They may limit their denial to a few years or extend it to a lifetime. The demographic effect of their abstinence is a curtailment in the number of additions to the population.

When practised for a lifetime, extreme sexual abstinence means celibacy, virginity, chastity, plus abstinence from embracing and kissing except for the kiss and embrace of religious devotion or family affection. Such a life is possible without any serious consequences.⁸ This statement is made with full knowledge that some mental patients have practiced abstinence. The psychiatrist for the individual patient might guess whether the mental condition is due to sexual abstinence or abstinence is due to the mental condition. For most normal healthy persons there is little danger in practicing extreme sexual abstinence.

⁸ Gladys M. Hall, *Prostitution in the Modern World; A Survey and a Challenge* (Emerson Books, Inc., New York, 1936), pp. 115-116; Alexis Carrell, "Married Love", *The Readers Digest Reader*, pp. 475, 477; Harry Emerson Fosdick, *On Being a Real Person* (Harper & Brothers Publishers, New York, 1943), pp. 182, 183.

Widespread practice of abstinence in the United States is a major influence holding down the birth rate. Thousands of adolescents practice it when the drive of sex passion is strongest. Many religious persons adopt celibacy or virginity for their entire lives. The demographic result of so much abstinence is a considerable curtailment in the birth rate.

Postponement of marriage

Postponement of marriage is another major influence slowing population growth in the United States. Mainly because of such postponement, from sixteen to thirty-six per cent of the reproductive span elapses on an average before American women give birth.⁹ Women in other parts of the world are very fertile in this early portion of the span. Postponement of marriage in the United States contributes to the less high birth rate here.

Forbidding remarriage of widows

In India many widows are forbidden to remarry. A large proportion of them are young women who otherwise would add thousands of babies to the population.

⁹ Raymond Pearl, *The Natural History of Population*, p. 136.

Harmful effects of withdrawal

Withdrawal is the most common method of avoiding conception.¹⁰ It is also one of the most harmful usages of love life.¹¹ The harmful effects of withdrawal include mental as well as physical troubles that injure both wife and husband.¹² This method must be openly condemned until it is stopped. Now it is a leading influence slowing population growth in the United States. At the same time it is making tragic wrecks of many marriages.

Contraception and sex hygiene

Contraception is another method used extensively for slowing population growth. The largest-selling device for contraception and sex hy-

¹⁰ *The Holy Bible*, Genesis, Chapter 38, verse 9; Robert L. Dickinson and Louise S. Bryant, *Control of Conception* (The Williams & Wilkins Company, Baltimore, 1931), p. 57; *Human Fertility* (Aug.-Sep., 1936), Vol. 1, No. 9, p. 143; *The British Encyclopaedia of Medical Practice* (Butterworth & Co. (Publishers), Ltd., London, 1936-1941), twelve volumes with index and supplements of Surveys and Abstracts, Vol. 3 (1937), pp. 386, 388; Pascal K. Whelpton, *Needed Population Research* (The Science Press Printing Company, Lancaster, Pa., 1938), p. 86; D. V. Glass, *Population Policies and Movements in Europe*, p. 48.

¹¹ Dickinson and Bryant, *op. cit.*, p. 58; Leslie D. Weatherhead, *The Mastery of Sex through Psychology and Religion* (The Macmillan Company, New York, 1935), p. 83; Alvin C. Drummond, "Coitus Interruptus—Its Pathological Picture in the Male", *Human Fertility* (Oct., 1936), Vol. 1, No. 10, pp. 161, 162; *The British Encyclopaedia of Medical Practice*, Vol. 3 (1937), pp. 388, 389.

¹² Drummond, *op. cit.*, pp. 161, 162; *The British Encyclopaedia of Medical Practice*, Vol. 3 (1937), p. 389.

giene in the United States is used at the rate of around five million a day. Sales of other contraceptives approximate three hundred million dollars a year. Hundreds of manufacturers and thousands of agencies engage in this billion-dollar business.¹³

If contraception were free and available to all, it might become an effective check to population growth throughout the world. At present many persons in the world are unable to use contraceptives. Millions of poor persons, who exist on substandard incomes without proper food or medical care, can hardly afford to buy contraceptives every month. Millions of well-to-do persons live in nations that prohibit contraception by law or forbid it by religion.

A great fault of contraceptives at present is that they are unreliable. No sure contraceptive has been developed; the best have one chance in twenty of failure.¹⁴ Failures of contraceptives

¹³ Harrison Reeves, "The Birth Control Industry", *The American Mercury* (Nov., 1936), pp. 285, 286.

¹⁴ Regine K. Stix and Frank W. Notestein, "Effectiveness of Birth Control", *The Milbank Memorial Fund Quarterly* (Apr., 1935), p. 178; *Human Fertility* (Aug.-Sep., 1936), Vol. 1, No. 9, p. 143; *The American Mercury* (Nov., 1936), p. 289; Raymond Pearl, *The Natural History of Population*, pp. 74, 160, 215, 222, 239; Margaret C. Banning, "The Case for Chastity", *The Readers Digest Reader*, pp. 377, 378.

often lead to unwanted babies or criminal abortions.¹⁵

Rhythmic regulation of intercourse

Rhythmic regulation of intercourse is a method of family planning approved by some religions.¹⁶ Investigations have verified the existence of an infertile time for women of around five days preceding menstruation.¹⁷ These five days offer a rather safe period for intercourse without conception. Religions merit praise for approving the rhythm method and thereby recognizing that sex life has important functions in addition to reproduction.

The difficulty with rhythmic regulation is the problem of forecasting the infertile time. Most women have changing menstrual cycles that vary several days more or less from the regular cycle of twenty-eight days.¹⁸ Even with a regular cycle, calculation of the infertile time is subject to

¹⁵ Pearl, *op. cit.*, pp. 222, 239.

¹⁶ Leo J. Latz, *The Rhythm* (Latz Foundation, Chicago, 1932), pp. ii, 110-114; Enid Charles, *The Twilight of Parenthood*, p. 165; *The Christian Century* (Aug. 28, 1935), p. 1077; *The British Encyclopaedia of Medical Practice*, Vol. 3 (1937), p. 393.

¹⁷ *The British Encyclopaedia of Medical Practice*, Vol. 3 (1937), p. 393; *Human Fertility* (Mar., 1937), Vol. 2, No. 3, pp. 51, 60, 61; (Oct., 1938), Vol. 3, No. 10, p. 182.

¹⁸ *Human Fertility* (Mar., 1937), Vol. 2, No. 3, p. 58; *The Journal of the American Medical Association* (Jan. 22, 1938), p. 261.

serious mistake. In fact rhythmic regulation as well as contraception may lead to unwanted babies or criminal abortions.

Extent of abortion and infanticide

Authorities figure the extent of abortion in the United States around one abortion for every five living births.¹⁹ This means between four hundred thousand and six hundred thousand abortions a year. From one-fourth to one-third of these are criminal.²⁰ Abortion in the United States is a principal method for slowing population growth.

Infanticide has been a principal method for checking the increase of population among primitive people.²¹ How many thousand babies are murdered each year is a matter of conjecture; any nation with a high infant mortality rate

¹⁹ Frederick J. Taussig, *Abortion, Spontaneous and Induced* (The C. V. Mosby Company, St. Louis, 1936), pp. 25-29; *Human Fertility* (Nov., 1936), Vol. 1, No. 11, p. 10; *The Milbank Memorial Fund Quarterly* (Jan., 1938), pp. 85, 88; Raymond Pearl, *The Natural History of Population*, p. 90.

²⁰ Taussig, *op. cit.*, pp. 28, 366, 388; *Human Fertility* (Nov., 1936), Vol. 1, No. 11, p. 10; (Sep., 1943), Vol. 8, No. 3, p. 89; *The Milbank Memorial Fund Quarterly* (Jan., 1938), p. 88; *American Journal of Public Health* (May, 1938), p. 623; Pearl, *op. cit.*, p. 93.

²¹ Alexander M. Carr-Saunders, *Population* (Oxford University Press, London, 1925), p. 15; W. L. Holland, "Population Problems and Policies in the Far East", *The Annals of the American Academy of Political and Social Science* (Nov., 1936), p. 315.

may be suspected of infanticide. The truth will come out when the improper treatments of babies are made known, such as the doping of infants with opium.²² If more than one child in a thousand is killed by improper treatment, the number of infanticides throughout the world may be estimated in excess of fifty thousand a year.

Masturbation as a sex outlet

Masturbation, though held in contempt by many adults, is at least better than any intercourse that leads to infanticide. Because masturbation and some other subjects are often treated too briefly, they are given more than their due consideration in this book on methods for regulating population. Nearly every adolescent practices masturbation.²³ Ignorance of this fact lets many young persons suffer shame and guilt for a practice that is natural and harmless. The physical effects of masturbation are negligible.²⁴ Mental harm might come from believing that masturbation is sinful, immoral, or unnatural, but the

²² Begum Hamid Ali, "Maternity and Child Welfare", *Indian Population Problems. Report and Proceedings of the 2nd All-India Population and 1st Family Hygiene Conference* (Karnatak Publishing House, Bombay, 1938), pp. x, xi; *The Scientific Monthly* (Sep., 1935), p. 222; Holland, *op. cit.*, p. 315; *The British Encyclopaedia of Medical Practice*, Vol. 10 (1938), p. 44.

²³ Leslie D. Weatherhead, *The Mastery of Sex through Psychology and Religion*, p. 122; John F. W. Meagher, *A Study of Masturbation and The Psychosexual Life* (William Wood and Company, Baltimore, 1936), third edition, pp. 68, 77.

²⁴ Weatherhead, *op. cit.*, p. 124.

harm comes from the belief and not from the practice.²⁵ Such beliefs are as harmful as they are illogical. Too often, owing to a lack of proper sex education, the young boy or girl develops a guilt complex that injures personality. Some mental harm might also come from associating pornographic pictures with masturbation. Effects of association are negligible for pin-up, art, and physical-culture pictures, passed by the censors, sold publicly at magazine stores, and resembling persons desirable in marriage.

Masturbation may even help some strongly-sexed persons by giving them independent power for the relief of sexual tension.²⁶ Marriage in the United States usually occurs years after puberty. Customary standards of personal conduct make little provision for the individual who at seventeen is much more strongly sexed than most other persons will ever be. The very passionate and moral individual may be driven to self-reliance.

The practice of masturbation is sterile. To the extent that it takes the place of reproductive intercourse, it tends to slow population growth. To the extent that it supplants whorish intercourse, it helps to keep down a loathsome racket. From

²⁵ *Ibid.*, pp. 124, 125; Meagher, *op. cit.*, pp. 82, 83.

²⁶ *The British Encyclopaedia of Medical Practice*, Vol. 11 (1939), p. 120.

the point of view of regulating population, individual masturbation is certainly preferable to the evils of prostitution.

Evils of prostitution

Prostitution retards the increase of world population by providing intercourse with little reproduction. There are at least a quarter of a million prostitutes in the United States.²⁷ Every year twenty-five thousand young American girls fall victim to the prostitution racket.²⁸ Some racketeers control up to a hundred brothels with annual profits amounting to huge sums of money.²⁹

International traffic in women flourishes. Regular trade routes in ruined girls are established between continents. If the evils of prostitution in the United States are bad, they are even worse in many other nations.³⁰

Girls enslaved by prostitution when young and beautiful often become starving wrecks within a

²⁷ Howard B. Woolston, *Prostitution in the United States* (The Century Co., New York, 1921), Vol. I, pp. 38, 39, 78, 168; Ben L. Reitman, *The Second Oldest Profession* (The Vanguard Press, New York, 1941), pp. 6-8.

²⁸ Woolston, *op. cit.*, p. 168.

²⁹ *Ibid.*, p. 166; Reitman, *op. cit.*, pp. xix, 4.

³⁰ Reitman, *op. cit.*, p. 79; Henry W. Harris, *Human Merchandise* (Ernest Benn Limited, London, 1932), pp. 52, 87, 187, 218, 251.

few years. Prostitutes are treated as human merchandise. They must take on any man, however repulsive, who pays the price; yet they cannot keep their pay from the racketeer. They suffer from the torture of frequent arrests, criminal charges, and jail. The heavy drinking that is common among prostitutes further breaks down their health. As their earnings become small the filthy conditions of their occupation get worse.³¹

Other tragic consequences are difficult to realize. Most prostitutes are infected with venereal disease and nearly half of those infected carry the dread syphilis.³² Their occupation is so revolting that thousands of girls can only be forced to comply with the disgusting demands of prostitution by beatings from their exploiters. Some are even slashed with razors and horribly mutilated.³³ Many American girls are being driven to suicide by the prostitution racket.³⁴

Perversion of sex desires

Perversion of sex desires is spread through prostitution but it is also rather extensive between men. Sex perverts in the United States

³¹ Woolston, *op. cit.*, pp. 57, 100; Reitman, *op. cit.*, pp. 14, 22, 79; Harris, *op. cit.*, pp. 150, 260, 261.

³² *Standard Statistics of Prostitution, Gonorrhea, Syphilis* (The American Social Hygiene Association, New York, 1919), pp. P-2, P-3; Woolston, *op. cit.*, p. 53.

³³ Woolston, *op. cit.*, pp. 164, 167; Reitman, *op. cit.*, p. 44.

³⁴ Reitman, *op. cit.*, p. 23.

exceed a million and this is merely a small fraction of the world total.³⁵ They use unnatural conduct, different from the normal sex life of married couples discussed in this book. Their conduct tends to check the increase of population since perversion often leads to disinclination for reproductive behavior. The principal objection to perverts is their tendency to mislead and ruin innocent young persons.

Sterilization, eugenic and voluntary

Thousands of perverts, habitual criminals, and mentally or physically defective persons have been sterilized. Some normal persons have voluntarily been sterilized. Medical science has discovered how to make sterilizing operations temporary as a new method of family planning.³⁶ The total number of sterilizations in the United States alone exceeds twenty-five thousand, and many other nations are making active use of sterilization laws.³⁷ Sterilization is an effective

³⁵ Leslie D. Weatherhead, *The Mastery of Sex through Psychology and Religion*, p. 152; Clifford Allen, *The Sexual Perversions and Abnormalities* (Oxford University Press, London, 1940), pp. 59, 60, 188.

³⁶ *Human Fertility* (Oct., 1936), Vol. 1, No. 10, pp. 159, 161; (Aug.-Sep., 1937), Vol. 2, No. 8-9, p. 159; (Dec., 1937), Vol. 2, No. 12, pp. 230, 231; (Jan., 1939), Vol. 4, No. 1, pp. 13, 14; (Oct., 1939), Vol. 4, No. 8, pp. 191, 193, 194; *The British Encyclopaedia of Medical Practice*, Vol. 11 (1939), p. 471.

³⁷ *Human Fertility* (May, 1936), Vol. 1, No. 7, pp. 92, 94, 95; (Oct., 1940), Vol. 5, No. 10, p. 139; Henry Pratt Fairchild, *People; The Quantity and Quality of Population*, p. 259.

method for slowing population growth, but its present use is small compared with its future application.

Mass sterilizing of conquered nations

The mass sterilization of a conquered people is a check to the increase of population that has never been applied. If modern methods had been known to the Romans, mass sterilization might have been applied at the destruction of Carthage. Sterilization of conquered people has not occurred in recent years because the expansionist nations likely to apply it have not been completely victorious.

The simplest form of sterilization is X-ray of genitals.³⁸ This produces sterility for several years and may easily be applied to millions of people. Vasectomy, the sterilizing operation on man, is also a simple procedure well adapted to mass application.³⁹ It can produce permanent sterility without any other effects. The corresponding operation on woman is more difficult but possible for mass application. Sterilizing of a conquered

³⁸ Robert L. Dickinson and Louise S. Bryant, *Control of Conception*, pp. 24, 122, 133, 223; *Human Fertility* (Aug.-Sep., 1936), Vol. 1, No. 9, p. 143; *The British Encyclopaedia of Medical Practice*, Vol. 10 (1938), p. 469; *ibid.*, Vol. 11 (1939), p. 464.

³⁹ Dickinson and Bryant, *op. cit.*, p. 129; Fairchild, *op. cit.*, pp. 257, 258; *The British Encyclopaedia of Medical Practice*, Vol. 11 (1939), pp. 468, 470, 473, 474.

nation can be partial and temporary or complete and permanent.

Complete and permanent sterilizing will prevent a nation from fighting aggressive wars. Authorities on plans for lasting peace may well give that fact thorough consideration. Sterilization is more humane than the death penalty. Sterilizing of a nation's million top militarists, war-promoting financiers, and politicians convicted of war guilt will give warning of what may happen to the entire nation if it persists in fighting aggressive wars.

Moderation or sublimation of sex desires

Moderation or sublimation of sex desires is a method for slowing population growth applied rather extensively in the United States. Moderation of sex desires is accomplished in many ways, such as circumcision to check masturbation, cold baths, exercises, special diets, and avoidance of heavy meals at night.⁴⁰ Sublimation is more of a problem.⁴¹ In the sense of redirecting sexual energy into child care, supervision of young people's groups, religious and charitable work, or hobbies such as the drama and music, sexual desires can be diverted to a degree resembling sublimation.⁴²

⁴⁰ Leslie D. Weatherhead, *The Mastery of Sex through Psychology and Religion*, pp. 135, 141, 144; Harry Emerson Fosdick, *On Being a Real Person*, p. 183.

⁴¹ Fosdick, *op. cit.*, p. 182.

⁴² *Ibid.*, pp. 183, 184; Weatherhead, *op. cit.*, p. 112.

Family planning by the method of moral restraint

Moral restraint is a most suitable method for slowing population growth wherever regulation is advisable because of high population pressure. Moral restraint in love is defined as a true spirit of cooperation, making a clear distinction between sex life for pleasure and planned reproduction. In contrast, extreme sexual abstinence precludes sex life both for pleasure and for reproduction. Withdrawal, contraception, and rhythmic regulation fail to distinguish clearly between pleasure and reproduction. Consequently they often lead to unwanted babies or criminal abortions. Prostitution and perversion are immoral. Masturbation, sterilization, postponement of marriage, and moderation or sublimation of sex desires are compatible with moral restraint, but it is something other than these. Moral restraint is a definite understanding by husband and wife of when their love is for pleasure and when it is for reproduction.

Moral restraint includes embraces and kisses. It even permits ejaculation and orgasm in sex life for pleasure. It includes intercourse for reproduction. And it allows intercourse for pleasure when one partner can no longer reproduce. The main requirement of moral restraint is consideration whether the love-making is intended for conception.

A husband and wife practicing moral restraint will refrain from intercourse on their wedding night. They will embrace and kiss in intimate love. Indeed a wife may well have her first orgasm induced by her partner's embraces, motions, or possibly digital manipulation⁴³ known as love play. Such relations will continue according to moral restraint as long as husband and wife desire exclusive enjoyment of each other. Intercourse will start only when both partners decide to become parents.

Normal sex life combines several methods for regulating population. For example the young adolescent may practice sexual abstinence, followed perhaps by a short period of masturbation. The newlywed might try moral restraint for a very brief time and then adopt rhythmic regulation with sex hygiene. The parent might return to sexual abstinence or moral restraint for a few months after bearing three children. Sometimes injuries from Caesarean operations may even make advisable therapeutic sterilization. As a matter of fact, the parent often finds new happiness in love after menopause, when the family is complete.

⁴³ Helena Wright, *The Sex Factor in Marriage* (The Vanguard Press, New York, 1931), pp. 93, 94, 117, 118; Leslie D. Weatherhead, *The Mastery of Sex through Psychology and Religion*, p. 237.

Moral restraint, as a type of normal sex life and a method of family planning, reaches its natural climax in intercourse and its highest fulfillment in children. Furthermore it usually includes one of the other methods of family planning: sexual abstinence, contraception, and rhythmic regulation. Moral restraint has been described as an independent and complete method mainly for purposes of clear definition.

A couple planning a family may find that rhythmic regulation is for them the best way to achieve proper spacing of children. They are practicing moral restraint. Another couple may find that rhythmic regulation is a failure for them, and they may rely on the independent method of moral restraint. Some parents space their children by months of sexual abstinence. They, too, are practicing moral restraint. The essential nature of this method is an attitude of consideration, a true spirit of cooperation.

CHAPTER IV

ADVANTAGES OF MORAL RESTRAINT FOR REGULATING POPULATION

Regulating of population by moral restraint confirms the preciousness of the individual. A nation that practices moral restraint must be a nation of individuals capable of managing their own affairs. Persons who practice this method live with confidence and self-respect in mastery of nature.

Economic basis for moral restraint

The great economic basis for moral restraint is that the method is free to all. Poorest persons can benefit from it as well as millionaires. When contraceptives are available to everyone without cost, contraception will have as universal an economic basis as the moral restraint method of family planning. At present contraception has the opposite economic basis: it is a luxury for those who can pay the price. It is a basis for huge profits by the rich and powerful interests who manufacture, sell, and promote contraceptives. These economic facts of contraception are reasons for the practice of moral restraint. The method of moral restraint is a universal good like fresh air and sunshine.

Persons practicing moral restraint can arrange to have their first child when their earning power has become sufficient to assure adequate medical care and nourishment. If their earning power stays insufficient, they can postpone reproduction until they save money to provide a good start in life for their baby. The same economic consideration may have some influence on the proper spacing of children. Parents who allow only three years between their first child and second child may decide to allow four or five years between their second and third. Moral restraint supports economic planning for children.

Most parents desire to give their children more than good health, but many of the other benefits cost money. Therefore some parents reason that they can raise a few children better than a large family. The costs of benefits like clothing and advanced education give their reasoning an economic basis. Parents who can afford clothing for only a few children may well practice moral restraint.

Maternity payments, bonuses for having children, and family allowances are still inadequate to pay the expenses of bringing up children. Moreover the taxes on unmarried adults and small families are too small to make a large family financially advantageous. Family planning and

child spacing continue to have an economic basis that encourages moral restraint in the individual.

Benefits from the method of moral restraint also add to the economic strength of an entire nation. Control of natural resources and world markets usually goes to the nation that is vigorous, well equipped, and trained to master competition. In battles to defend territorial possessions, one million fighters with mechanized equipment can defeat many millions of weak and poorly-armed combatants. By encouragement of moral restraint a nation is able to grow under conditions of moderate population pressure, develop vigorous citizens, and promote their material progress with economic advantages. Such citizens in turn build up economic power for the nation.

Religious basis for moral restraint

In addition to the economic advantages of moral restraint, this method for regulating population has a deeply religious basis. Because of a sense of inadequacy for the task of interpreting scriptures, they are offered here without profound critical comments. The Holy Bible may to some extent be interpreted by faith. Faith in something more than scientific method is indeed required to appreciate this religious section.

Religion endorses marriage, embraces, and kisses. "Marriage is honorable in all, . . ." ¹ "Therefore shall a man leave his father and his mother, and shall cleave unto his wife: . . ." ² "A bishop then must be blameless, the husband of one wife, . . ." ³ "To every thing there is a season . . . a time to embrace, and a time to refrain from embracing; . . ." ⁴ "And Jacob kissed Rachel. . . ." ⁵

Religion instructs married couples to raise a family. "... God said unto them, Be fruitful, and multiply, . . ." ⁶ "I will therefore that the younger women marry, bear children, . . ." ⁷

In view of such encouragement of marriage and family, religion may seem to present a mystical paradox by upholding celibacy and virginity. "... there be eunuchs, which have made themselves eunuchs for the kingdom of heaven's sake." ⁸ "The unmarried woman careth for the things of the Lord, that she may be holy both in body and in spirit: . . ." ⁹ "... he that standeth steadfast in his heart, having no necessity, but

¹ *The Holy Bible*, Hebrews, Chapter 13, verse 4.

² *Ibid.*, Genesis, Chapter 2, verse 24.

³ *Ibid.*, I. Timothy, Chapter 3, verse 2.

⁴ *Ibid.*, Ecclesiastes, Chapter 3, verses 1, 5.

⁵ *Ibid.*, Genesis, Chapter 29, verse 11.

⁶ *Ibid.*, Genesis, Chapter 1, verse 28.

⁷ *Ibid.*, I. Timothy, Chapter 5, verse 14.

⁸ *Ibid.*, Matthew, Chapter 19, verse 12.

⁹ *Ibid.*, I. Corinthians, Chapter 7, verse 34.

hath power over his own will, and hath so decreed in his heart that he will keep his virgin, doeth well.”¹⁰

The seeming paradox is explained by religious interpretation. One interpretation is that celibates and virgins are really married and fruitful in a spiritual sense.

Another interpretation is that the Holy Bible inspires moral restraint in persons by glorifying both reproduction and virginity. Virginity may be maintained in the enjoyment of married love until a couple decides to have a family. Family planning in this way corresponds with one of the forms of moral restraint.

The method of moral restraint reconciles three great expressions of the will of God: (1) endorsement of marriage, embraces, and kisses, (2) instruction to be fruitful and multiply, and (3) praise of celibacy and virginity. In spirit this trinity of divine revelation finds fullest observance through practice of moral restraint.

Ethical basis for moral restraint

Moral restraint as a method for regulating population also has a strong ethical basis. The first thought in the practice of this method may well

¹⁰ *Ibid.*, I. Corinthians, Chapter 7, verse 37.

be the golden rule. Sex life then avoids offense or injury to a partner. It avoids births out of wedlock and criminal abortions. Love gives only benefits: mutual pleasure and reproduction. A clear distinction between sex life for pleasure and planned reproduction leads to the well-being of husband, wife, and children.

Persons practicing moral restraint may consider whether the world at the time is a fit place to bring children. If war, famine, and disease are killing thousands of infants, a married couple may decide to have their children when peace and good living are restored. Even during peacetime some parts of the world are hardly fit for children. The worst slums of cities make a bad childhood environment. Large sections of some nations are plagued with diseases that kill or seriously injure many of the young. The method of moral restraint permits persons to decide whether the district in which they live is a fit place for children; married persons can move to a favorable location before raising a family.

Practice of moral restraint helps prevent children being born into conflict between husband and wife. When only one partner desires a child, the birth of a baby sometimes fails to end the disagreement. The conflict in the household may injure the child's subconscious spirit and lead to nervous breakdown later in life. Children are

born according to moral restraint only when both husband and wife earnestly desire to raise a family.

Persons who plan to have a family should give much thought to whether their children will appreciate being born. Most children are so full of the zest for life that living seems worthwhile even under tragic handicaps and hardships. Nevertheless the misfortunes that hit some are so great that even the will to live may be overcome. Hereditary insanity, orphan neglect, and starvation give a child little chance for happiness. Hereditary physical defects, abuse, and child labor are other bad but common fates. Before raising a family, married couples may well consider the chances of their children having health, happiness, and success.

The ethical basis of moral restraint is primarily that it permits consideration for children. Sex love for pleasure is distinguished from planned reproduction. The sex impulse is prevented from throwing confusion into life; babies are no longer born unplanned into a bad environment. With the method of moral restraint available, parents who provide the heredity and early environment of their children are clearly answerable for their children's well-being.

Moral responsibility of some parents may extend beyond their children. Parents having five or more children are a major factor keeping up population pressure wherever it is high. On the basis of Axiom I, responsibility for aggressive war may be partly traceable to these parents in industrial nations with high population pressure. On the basis of Axiom II, responsibility for much abject poverty may belong to parents of large families where population pressure is extremely high. Only if parents have five or more children is high population pressure possible. Furthermore nations with low population pressure enjoy good standards of living. The great hope for the future confirms the ethical basis of moral restraint: when nearly all parents have two, three, or four children, peace and prosperity will prevail throughout the world.

TABLE VI. FAMINE IN THE TWENTIETH CENTURY^a

Continent or Nation	Period Under Consideration	Number of Persons Affected	Deaths Due to Starvation in Period
AFRICA	1901-1944		4,000,000 ^b
ASIA			
China	1906	10,000,000 ^c	750,000 ^e
	1911	10,000,000 ^d	2,000,000 ^f
	1920-1922	40,000,000 ^g	8,000,000 ^h
	1928-1930	65,000,000 ⁱ	12,000,000 ^j
	1934	10,000,000 ^k	2,000,000 ^k
	1936-1937	52,000,000 ^l	3,000,000 ^m
	1942-1944	20,000,000 ⁿ	3,000,000 ⁿ
	Other years		10,000,000 ^o
India	1901	50,000,000 ^p	4,000,000 ^q
	1906-1907	50,000,000 ^r	50,000 ^e
	1918-1919	150,000,000 ^s	10,000,000 ^s
	1942-1944	40,000,000 ^e	1,000,000 ^t
	Other years		15,000,000 ^u
Japan	1905-1906	1,000,000 ^v	10,000 ^e
	1931-1932	600,000 ^w	6,000 ^e
	1935	100,000 ^x	1,000 ^e
	Other years		20,000 ^y
Other Asiatic nations	1901-1944		5,000,000 ^e
ASIA	1901-1944		75,837,000

^a Source: Estimated and compiled as detailed in the footnotes. *The Readers' Guide to Periodical Literature* lists hundreds of references to famines.

^b Estimated. Statistics on starvation deaths in Africa are not available. Some supporting evidence is found in sources such as E. F. Gautier, "La Famine en Algérie", *La Revue de Paris* (Jun. 1, 1921), pp. 631, 632, 636; Wendell Cleland, *The Population Problem in Egypt* (Science Press Printing Company, Lancaster, 1936), pp. vii, 51, 55, 75, 108, 109.

^c Walter Kirton, *A Silent War* (North-China Daily News & Herald, Ltd., Shanghai, 1907), Preface, pp. ix, 53, 54; *The National Geographic Magazine* (Jul., 1917), p. 89.

^d *The National Geographic Magazine* (Jul., 1917), p. 89.

^e Estimated.

^f *Current History* (Apr., 1931), p. 67.

^g *Report of the China Famine Relief. American Red Cross. Oct.,*

TABLE VI. FAMINE IN THE TWENTIETH CENTURY^a
(Continued)

Continent or Nation	Period Under Consideration	Number of Persons Affected	Deaths Due to Starvation in Period
EUROPE			
Austria	1915-1918	2,000,000 ^e	150,000 ^{aa}
France	1941-1944	10,000,000 ^e	1,000,000 ^{bb}
Germany	1915-1918	10,000,000 ^e	750,000 ^{cc}
Greece	1941-1944	6,000,000 ^{dd}	2,000,000 ^{ff}
Ireland	1924-1925	750,000 ^{gg}	100 ^{hh}
Poland	1940-1944	35,000,000 ^{bb}	1,500,000 ^e
Russia	1906	21,000,000 ⁱⁱ	500,000 ^e
	1911	25,000,000 ^{jj}	600,000 ^e
	1919-1923	33,000,000 ^{kk}	5,000,000 ^{ll}
	1933-1934	35,000,000 ^e	6,000,000 ^{mm}
	1942-1944	20,000,000 ^e	1,000,000 ⁿⁿ
	Other years		3,000,000 ^{oo}
Spain	1942	100,000 ^{pp}	100 ^e
Other European nations	1901-1944		1,000,000 ^{qq}
EUROPE	1901-1944		22,500,200

1920 - Sep., 1921 (The Commercial Press, Ltd., Shanghai, [1922?]), p. 3.

^b *Current History* (Apr., 1931), p. 67; *The North China Famine of 1920-1921. Report of the Peking United International Famine Relief Committee* (Commercial Press, Ltd., Peking, 1922), p. 15.

ⁱ *Report of the American Red Cross Commission to China, 1929* (The American National Red Cross, Washington, D. C., 1929), p. 70.

^j *New Republic* (May 14, 1930), pp. 347-349; *Current History* (Apr., 1931), p. 67; *The American Magazine* (Feb., 1933), p. 106.

^k *The Trans-Pacific* (Sep. 13, 1934), p. 10.

^l *The Literary Digest* (Mar. 27, 1937), pp. 11, 12.

^m Estimated. *The Literary Digest* (May 9, 1936), p. 16.

ⁿ *Time* (Feb. 14, 1944), p. 37.

^o Estimated. *Report of the China Famine Relief. American Red Cross. Oct., 1920 - Sep., 1921*, p. 3; *The Literary Digest* (Sep. 15, 1928), p. 21; *Current History* (Apr., 1931), p. 66.

^p D. J. Karve, *Poverty and Population in India* (Oxford University Press, Humphrey Milford, 1936), pp. 15, 29.

^q *The Encyclopedia Britannica, Eleventh edition* (University

TABLE VI. FAMINE IN THE TWENTIETH CENTURY^a
(Continued)

Continent or Nation	Period Under Consideration	Number of Persons Affected	Deaths Due to Starvation in Period
NORTH AMERICA			
United States	1930-1931	500,000 ^{rr}	100 ^e
Other North American nations	1901-1944		5,000 ^{ss}
NORTH AMERICA	1901-1944		5,100
SOUTH AMERICA	1901-1944		2,000,000 ^{tt}
AFRICA	1901-1944		4,000,000
ASIA	1901-1944		75,837,000
EUROPE	1901-1944		22,500,200
NORTH AMERICA	1901-1944		5,100
SOUTH AMERICA	1901-1944		2,000,000
STARVATION DEATHS IN THE TWENTIETH CENTURY			104,342,300

Press, Cambridge, England, 1910), Volume X, p. 168.

^r A. Loveday, *The History & Economics of Indian Famines* (G. Bell and Sons Ltd., London, 1914), p. 74.

^s *The Nation* (Jan. 7, 1919), p. 902.

^t *Life* (Dec. 20, 1943), p. 38; *Asia and the Americas* (Feb., 1944), p. 74; Kumar Goshal, *The People of India* (Sheridan House, Inc., New York, 1944), pp. 337, 340; *The Annals of the American Academy of Political and Social Science* (May, 1944), p. 64.

^u Estimated. Statistics since 1900 are largely suppressed. A few sources still give some indication that famine occurs nearly every year in India: *The Outlook* (Jan. 11, 1913), p. 85; P. K. Wattal, *The Population Problem in India* (Bennett, Coleman & Co., Ltd., Bombay, 1934), p. 75; D. J. Karve, *op. cit.*, p. 21; *Indian Population Problems. Report and Proceedings of the 2nd All-India Population and 1st Family Hygiene Conference* (Karnatak Publishing House, Bombay, 1938), pp. 6, HH23, VS13, x, xi; Gyan Chand, *India's Teeming Millions* (George Allen & Unwin, Ltd., London, 1939), pp. 34, 129; F. F. Fergusson, "Famine and Water Supply in Western Rajputana", *The Geographical Journal* (Jan., 1939), p. 45.

^v *The Independent* (Mar. 15, 1906), p. 611.

^w *The Trans-Pacific* (Jan. 14, 1932), p. 5; *The China Weekly Review* (Aug. 20, 1932), p. 423.

^x *The Missionary Review of the World* (May, 1935), pp. 212, 213.

^y Estimated. Statistics since 1910 are suppressed.

TABLE VI. FAMINE IN THE TWENTIETH CENTURY^a
(Continued)

^{aa} *The Famine in Europe. Report of the International Economic Conference Called by the Fight the Famine Council* (The Swarthmore Press, London, 1920), p. 18.

^{bb} Alexander S. Lipsett, *Famine Stalks Europe* (Craft Union Publishers, New York, 1941), p. 17.

^{cc} *The Starving of Germany. Papers read at the Extraordinary Meeting of United Medical Societies Held at Headquarters of Berlin Medical Society, Berlin, December 18th, 1918* (L. Schumacher, Berlin, 1919), pp. 6, 14.

^{dd} *Newsweek* (Feb. 16, 1942), p. 38; *Life* (Aug. 3, 1942), p. 13.
^{ff} *Life* (Aug. 3, 1942), p. 13; *The American Mercury* (Oct., 1942), pp. 444, 445; *Newsweek* (Nov. 9, 1942), p. 40.

^{gg} *The Literary Digest* (Feb. 21, 1925), p. 13.

^{hh} *The Outlook* (May 27, 1925), pp. 128, 129; Sir James O'Connor, *History of Ireland, 1798-1924* (Edward Arnold & Co., London, 1926), Vol. II, pp. 381, 382.

ⁱⁱ Harold H. Fisher, *The Famine in Soviet Russia, 1919-1923* (The Macmillan Company, New York, 1927), p. 480.

^{jj} *Ibid.*, p. 480; *The Outlook* (Apr. 6, 1912), p. 756.

^{kk} Comité Français de Secours aux Enfants, *La Grande Détresse de la Russie Affamée* (Editions du Comité de Secours aux Enfants, Paris, 1922), pp. 3, 20.

^{ll} A. Daudé-Bancel, *La Réforme Agraire en Russie* (Aux Editions de "La Bonne Idée", Paris, 1926), pp. 97, 98; A. Markoff, *Famine in Russia* (Committee for the Relief of Famine in Russia, New York, 1934), pp. 6, 9; *Famine in Ukraine* (United Ukrainian Organizations of the United States, New York, 1934), p. 17. The 5,000,000 deaths include cannibalism resulting from famine: P. C. Hiebert, *Feeding the Hungry. Russia Famine, 1919-1925* (Mennonite Central Committee, Scottsdale, Pa., 1929), pp. 224, 225; *The Scientific Monthly* (Jan., 1943), pp. 6, 7.

^{mm} A. Markoff, *op. cit.*, pp. 6, 9; *Famine in Ukraine* (United Ukrainian Organizations of the United States, New York, 1934), pp. 7, 14; *Vital Speeches* (Jan. 14, 1935), p. 245; *Foreign Affairs* (Apr., 1935), p. 432. The 6,000,000 deaths include cannibalism resulting from famine: *Famine in Ukraine* (United Ukrainian Organizations of the United States, New York, 1934), p. 21; Ewald Ammende, *Human Life in Russia* (George Allen & Unwin, Ltd., London, 1936), pp. 100, 101.

ⁿⁿ Estimated. *American Mercury* (Jun., 1942), p. 708.

^{oo} Estimated. Statistics since 1920 are suppressed. Famine relief was an annual expense of the Russian Government early in the twentieth century: A. Daudé-Bancel, *op. cit.*, p. 89.

TABLE VI. FAMINE IN THE TWENTIETH CENTURY^a

(Concluded)

^{pp} Estimated. *Collier's* (Aug. 22, 1942), pp. 44, 45.^{qq} Estimated. Alexander S. Lipsett, *op. cit.*, p. 17.^{rr} *The Nation* (Feb. 11, 1931), pp. 151, 152; *The Literary Digest* (Feb. 28, 1931), pp. 5, 6; *The Outlook* (Apr. 29, 1931), pp. 595-597.^{ss} Estimated. These are mostly starvation deaths of queer recluses, lost persons, Eskimos, and poor inhabitants of Central America and the West Indies. Reference to famine deaths of Eskimos is found in *The Literary Digest* (Aug. 22, 1936), p. 18.^{tt} Estimated. Statistics on starvation deaths in South America are not available. Some supporting evidence is found in sources such as (for Chile) Carlos Keller-Rueff, *La Eterna Crisis Chilena* (Editorial Nascimento, Santiago, Chile, 1931), p. 302; Earl Parker Hanson, *Chile, Land of Progress* (Reynal & Hitchcock, New York, 1941), pp. 157, 169; Isaac Joslin Cox, *A History of Chile* (The University of North Carolina Press, Chapel Hill, 1941), pp. 412, 413, 432, 433; Erna Fergusson, *Chile* (Alfred A. Knopf, New York, 1943), pp. 107, 195, 197, 199.

