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DEGREE CONFERRED
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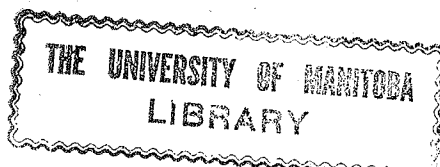
"THE PROBLEM OF POPULATION."

submitted to the
University of Manitoba,
March 1st, 1908.

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THE PROBLEM OF POPULATION.

The subject of population may be studied in regard to its size and composition at a given time, or in regard to the principles which control it as to size, composition and growth. In other words, we may after careful observation and enquiry, classify the principal features which it presents, and give in tabulated form "the totality of human beings existing within a given area at a given moment of time, according to sex, age, conjugal condition," etc. (En. Britt. Art. Pop.), or we may investigate the system of causes which produce these characteristic features, and attempt to discover the laws governing the forces, both physical and moral, which determine the growth of population. The former method is of interest to the statistician principally, and is usually carried on under government supervision, while the latter belongs, more particularly, to the province of economics, forming one of the most important departments of political economy, and ~~depriving~~ that subject of a great deal of its abstractness.

^{relying} It shall be the object of this essay to deal with the subject of population, having regard mainly to the moral and physical laws by which the growth of numbers is determined. No attempt will be made to enter minutely into the discussion of this important question, which has occupied the attention of the ablest minds in almost every age, but the principal views that have been advanced on the subject will be stated and examined. In doing this, we shall, as far as possible, follow the historical method, tracing the growth of the study of the problem ~~down~~ through its various stages of development, and applying the principles enunciated to the facts, as they are found in the various classes of society.

The study of the "movement" of population is by no means a merely modern one. It has, in some form or other, occupied the minds of all thinkers in all periods of the world's history. "To its influence, often unavowed, sometimes not even clearly recognized, we can trace a great part of the rules, customs and ceremonies that have been enjoined in the Eastern and Western World by law-givers, by moralists, and those nameless thinkers, whose far-seeing wisdom has left its impress on national habits." (Marshall, p 229). These rules and customs were sometimes directed to increase the growth of population, and sometimes to retard it, according as circumstances seemed to warrant. It is clear that those charged with maintaining the welfare of the State recognized that the "movement" of population could to a certain extent be regulated, and that at certain times it should be controlled. But, while in a vague form this problem received some attention in ancient times, still it may be asserted that those who framed laws regulating the growth of population did so more because of the practical results than because of their knowledge of the principles operating in the "movement." We must admit however that some of the ancient thinkers, such as Plato and Aristotle, had seriously considered the problem of population, and embodied in their teaching, principles calculated to "remove the causes that impeded the progress of mankind towards happiness." (Malthus)(p. 1)

From these early times down to the present day, more or less attention has been given to the subject, and now we have certain well-defined principles, agreed upon by most political economists, as determining the growth of population, and it is to a brief study of these that we now turn our attention.

Among the various nations of the world, both ancient and modern, different opinions have been held as to whether an increase in the number of citizens was a source of strength or otherwise. In ancient Greece, where the city-state was the unit, Plato and Aristotle both maintained that the state should exer-

cise a firm control over the growth of numbers, so that the city should not become too large to control, and the citizens too numerous to be happy. They have had many followers, but the weight of opinion has been in favor of the state giving every encouragement to the growth of population, the argument, as stated by Child, being, that "most nations in the civilized parts of the world, are more or less rich or poor proportionably to the paucity or plenty of their people and not to the sterility or fruitfulness of their land." (Dis. on Trade, Cap. x). The prevailing tone among political writers was that population could not be made to grow fast enough. No doubt this idea arose from the ceaseless demand for men to recruit the armies decimated by the presence of constant war. Another factor tending to augment the desire for an increased population was the advent of many new inventions, by which manufacturing developed enormously, thus creating a great demand for labor. So strong was the opinion in favor of a large increase of population that we find, even Pitt, in 1796, declaring that the father of a large family had a claim on the state to assist in their education.

While politicians and rulers were endeavoring, by every possible means, to encourage the increase of numbers, thinking thereby to enhance the security and happiness of the nation, there was a growing belief among others, who had given the matter more serious thought, that the mere increase in population may prove more a curse than a blessing to a nation. About the middle of the eighteenth century an intellectual revival set in, and in this movement political economy had an important share, with the result that the subject was brought more prominently before the people and was more popular than ever before.

In France there was formed the first school of economists, known as the Physiocrats. The dependence of population on subsistence, and the tendency of population to overtake, if not to exceed subsistence, was the doctrine of this new school, as stated by Quesnay, its founder. Other members of the school expressed the same view regarding the tendency of population to a maximum.

The subject was also receiving attention in England. The outstanding economist was undoubtedly Adam Smith, although some others, such as David Hume, and Richard Cantillon, writing before him had anticipated many of the doctrines later ascribed to him. Both Hume and Cantillon, who seem to have held some of the views later presented by Malthus and Ricardo, saw that, "where there is room for more people they will always arise," (Hume, Essay I. 427) Adam Smith also observed the tendency of population to increase up to the limit of subsistence, and in his "Wealth of Nations" expressed himself in these words: "Every species of animals naturally multiplies in proportion to the means of their subsistence, and no species can ever multiply beyond it." (I. 8).

It was not, however, until 1798, when Malthus published the first edition of his "Essay on the Principle of Population," that the question began to arouse general public interest. While many of the views advanced were not new, yet Malthus made as great an impression as if he were stating the principles for the first time. Although the essay excited great discussion, and called forth many replies, the doctrines set forth in it, were soon adopted, with little modification, by both the French and English schools of political economy.

The severe criticisms passed upon his work led Malthus to travel extensively on the continent, gathering evidence to verify his statements. The result was that in 1803 he published a second edition of his essay, eliminating conclusions that had been arrived at hastily and adding much that made it "more worthy of the public's attention, by applying the principle directly and exclusively to the existing state of society." (Malthus Tract on "High Price of Provision") The interest aroused by Malthus' "Essay" was undoubtedly due to the fact that it had such a direct bearing on the current English economic policy, and struck so forcibly at prevalent abuses. There was much suffering among the working classes, caused by a series of bad harvests and the French

War. To relieve this distress it was found necessary to give some measure of assistance to those in need. But, since there was a growing demand for recruits for the army and navy, tenderhearted people were disposed "to be somewhat liberal in their allowances to a large family, with the practical effect of making the father of many children often able to procure more indulgences for himself without working, than he could have got by work, if he had been unmarried or had only a small family." (Marshall P. 243) Against these and similar abuses Malthus protested.

The fundamental proposition with Malthus is that "there is the constant tendency in all animated life to increase beyond the nourishment prepared for it." (Bk I, Chap I. p. 2.). There are always two forces at work, tending to counteract each other. On the one hand we have the tendency and power of individuals to propagate their species, and on the other the constant struggle for life which destroys vast numbers of the young before they reach maturity and even of the mature. In the human species are found the same power and instinct to reproduce its kind, the same forces to counteract that tendency, and in addition many other influences limiting the growth of population. Having established his general position Malthus next proceeds to show that nature, after a certain point has been reached, will not continue to yield an increase proportionate to the increase in population. "Because of the limited powers of the soil, no form of life can continue to increase even for a single generation, without meeting enormous forces of opposition, which destroy great numbers and set a limit to the species." (Fetter p 2, 186) In other words, population can in no case exceed the margin of subsistence, for whenever it approaches that point such checks as will produce equilibrium inevitably present themselves.

It has been observed that mankind in common with plants and animals possesses this "tendency to increase beyond food," and if there was not in man something other than there is in animals to counteract this instinct, there would be crowded into this world fresh lives which must surely perish from starvation. The voice of reason interrupts, "and asks him whether he may ~~not~~ bring beings into the world, for whom he cannot provide the means of support." (Malthus, Bk I, Chap 1, p. 2.)

Therefore, although in mankind the power of increase is indefinite, the actual increase is kept far behind the capacity, because of "impulses superior to mere animal instincts," which have regard for the future, and the well-being of the race. It might be said that in proportion as mankind rises above the condition of the beast, population is governed by rational restraint, so that those causes which operate among the lower animals to retard the growth of numbers are seldom, if ever, seen in actual operation among mankind, thus leading many to dispute their presence or at least to maintain that they have "no relation to the times in which we live, or to any which are near at hand." (Bowen, p. 134).

To see just what would result if the power of population were left to exert itself with perfect freedom, we would require to find a state where all obstacles were removed, and where reason had no need to interfere. Since such a condition is unknown the nearest approach to it will answer our purpose. There would have to be, first, absolute plenty, so that starvation would be impossible, and, second, immunity from vice and its attendant evils. The best example of such a condition is furnished by the early settlers on this continent. "In the Northern States of America, where the means of subsistence have been more ample, the manners of the people more pure, and the checks to early marriage fewer than in any of the modern states of Europe, the population was found to double itself, for some successive periods, every twenty-five years." (Malthus p. 3). Such was the conservative estimate of Malthus, but others have shown that population, in the agricultural districts of new countries, is capable of doubling itself in twenty or even fifteen years. Perhaps

no better illustration is provided than by the French settlers in Canada. Their number increased from 60,000 to 2,000,000 in a century and a quarter. (Statistical Journal, 1887). It is evident therefore that under favorable conditions, extended over a considerable period of time, population will show an enormous growth, approximating, at least, to the geometrical increase claimed by Malthus, as characteristic of population.

Now we come to examine the rate of increase of subsistence. Man's food consists of the lower forms of life, animal and vegetable, and his increase depends on the abundance or scarcity of these. But it has been pointed out already that all animal life, and in fact every animated thing, unchecked by itself, tends to increase in a geometrical ratio. If it is true that mankind increases in a geometrical ratio, much more is it true of lower forms of life. Take for example, a grain of wheat, and under favorable circumstances it will multiply itself twenty fold. At first, then it would seem that the increase of subsistence would equal if not surpass the increase of population, and as a mere abstract theory this is true. But it must not be overlooked that for the growth of this food, land is demanded, that the earth has no tendency to increase her surface, and that without such an increase the supply of food cannot be provided for the possible increase of population. Thus we see that on a given area, although the tendency of seed to increase in a geometrical ratio is still present, there can be no such increase of the total crop, because of the limited area. We must admit that there is a limit to the number of human beings that could find room on this given area, but that number must, obviously, be out of all proportion to the amount of food that can be raised. What is true of grain as a food supply is also true of animals. Cattle, for instance, show the same tendency to increase in a geometrical ratio, but on the given area, pasturage would be limited, and thus the increase of cattle for the supply of human food is limited. It is also worthy of notice that of this increase in animals and vegetables a large proportion is consumed by man, so that only a limited number is left to propagate its kind. However, it must be admitted that so long as it is possible to add to the land area the food supply would increase even more rapidly than man. But this would not afford a fair comparison of the two ratios of increase. "The contrast begins to show itself as soon as the given quantity of land has grown its crop and its animal and human population have used all its food." (Bonar) p. 68) Let it be supposed the land yields x quantity of food now, and that by an additional application of another equal quantity of labor at the end of twenty-five years it yields $2x$ quantity. While it may be possible thus to double the productiveness of the land in twenty-five years by greater labor and greater ingenuity, it is obvious that the utmost the land could produce at the end of fifty years would be $3x$, and this would mean that at the end of 100 years every farm should produce five times what it does at present. Even this is incredible, though it would be only an arithmetical increase. Now with regard to population, it has been shown, even at a moderate estimate, that it doubles every twenty-five years, so that taking the present population as represented by x , at the end of twenty-five years we should have a population of $2x$, at the end of fifty years $4x$, at the end of seventy-five years $8x$, and at the end of one hundred years $16x$. Thus we see that at the end of one hundred years--assuming, to begin with, that x quantity of food is just sufficient to sustain x number of population--we should have a population of $16x$ with a food supply for only $5x$. Of course we know that such a result is impossible in actual experience, but it shows what might be expected were no checks in operation. It shows, conclusively, the tendency of population to outrun subsistence.

But it is admitting too much to say that there might be an increase every twenty-five years equal to the present produce of the land. "After a certain, and not very advanced,

stage in the progress of agriculture--as soon, in fact, as mankind have applied themselves to cultivation with any energy, and have brought to it any tolerable tools--from that time it is the law of production from the land, that in any given state of agricultural skill and knowledge, by increasing the labor, the produce is not increased in an equal degree; doubling the labor does not double the produce; or, to express the same thing in other words, every increase of produce is obtained by a more than proportional increase in the application of labor to the land." (J. S. Mill, p. 130)

This failure of nature to respond to the application of additional labor with proportionate increase in production is known as the "law of diminishing returns," and proves to us that the yield of food from a given area does not keep pace with the number of workers, and that although every mouth is furnished with a pair of hands, the labor of these hands is less productive the more hands there are. While this law is true and is in constant operation, its effects may not be apparent for some time, because of the "progress of the arts, by which man, making his labor more effective, " keeps up an equal struggle with nature, and extorts fresh resources from her reluctant powers as fast as human necessities occupy and engross the old." (Mill, p. 146)

But though improvement may for some time keep up with, or even surpass, the actual increase in population, it never comes up to the rate of increase of which population is capable. It is evident, therefore, that "on no single farm could the produce be so increased as to keep pace with the geometrical increase of population; and what is true of a single farm is true in this case of the whole earth." (Bonar p. 176.)

As has already been shown, no matter how great the tendency of population to increase beyond subsistence, for it to actually do so is an impossibility. Therefore, certain causes must be operating to prevent this prodigious increase in numbers, and to keep population within the bounds of subsistence. These causes were never clearly understood or definitely stated until Malthus published his "Essay." In the preface to the second edition he says, "though it had been stated distinctly, that population must always be kept down to the level of the means of subsistence; yet few inquiries had been made into the various modes by which this level is effected; and the principle had never been sufficiently pursued to its consequences, nor those practical inferences drawn from it which a strict examination of its effects on society appears to suggest." (Malthus, Pref. 2nd Ed.)

Having stated and discussed the proposition that "population tends to increase more rapidly than subsistence," and having shown that the rate of increase is much less than the possible power of multiplication, we shall now proceed to examine the various restraining causes that must be in operation. These have been classified by Malthus as positive and preventive checks, and most economists while refraining from using the phraseology of Malthus have practically adopted the same classification. The positive checks may be said to act on the actual population and reduce it, while the preventive act in reducing the birthrate. Among the former we may include war, famine, disease, and all conditions of life unfavorable to health; and among the latter, every prudential consideration, caused by motives of the most complex sort, diffused throughout society and acting upon every member of it." (Fetter, p. 191) It must be observed that at different stages in the history of mankind, and in different countries, these checks have operated with varying degrees of activity; sometimes the one and sometimes the other being more predominant, but with the usual tendency for the preventive to become more active as civilization advanced. "Probably the most satisfactory test of the civilization of a country would be to ascertain to what extent the positive and the preventive checks respectively operate; nothing would more surely indicate national advancement

than if it were found that the latter were obtaining relatively greater force than the former." (Fawcett p. 114) Consequently it may be said with approximate accuracy that, among uncivilized races and the lower classes in civilized nations, the positive checks are more active, and the preventive proportionally less active.

In ancient times war was the most powerful check on population, often causing the annihilation of almost whole tribes of savages. War was the normal condition of most primitive races. These wars were often caused by the necessity of finding new hunting grounds or pasturage for flocks in order to supply food for the tribe. When subsistence began to fail a band of these starving warriors would sally forth and take possession of the flocks of a rival tribe. War was the inevitable result, and the terrible loss of ~~human~~ life in such savage encounters is almost incredible to modern ~~xxxxxx~~ minds. So great was the slaughter that with many of the tribes the difficult task was to maintain the population.

History furnishes us with many examples of the pressure of numbers, leading to great wars for the purpose of obtaining subsistence. The second century before Christ witnessed the famous march of the Teutonic and Cimbrian hordes against the Romans. "They came with all their belongings, their wagon-homes, their women and children, to seek new settlements in the south; and the whole host is said to have numbered 300,000 fighting men." (Smith's History of Rome, p. 203) As they pressed on hoping to find food in the fertile plains of Italy, they were met by the Romans and completely defeated. Dr. Smith thus describes the battle: "The carnage was dreadful, the whole nation was annihilated, for those who escaped put an end to their lives and their wives followed their example." (H. of R. p. 203) Near the close of the fourth century of our own era there was a similar invasion of the Roman Empire by the Goths, resulting in terrible slaughter on both sides. There is little doubt but that these migrations were the result of necessity to find food for a population that had increased up to, and was threatening to surpass the margin of subsistence. The result of ~~these~~ wars was to reduce the numbers so materially that those left had ample provision for all their needs, but the gaps were soon filled up and the process of exterminating the surplus population would again be inaugurated. Thus was the equilibrium between food and people maintained, by bringing the number within the limit of the food supply. But in modern times the diminution of the population by war has been reduced almost to a minimum, except, perhaps, among the most savage races.

Another great check on population, and one often closely connected with war, is famine. If in any given community men continue long to increase, they will inevitably reach a point where they will consume all that nature can provide under most favorable conditions, with the result that when conditions are adverse and nature does not yield her utmost, many must perish from want. "In a very backward state of society, like that of Europe in the Middle Ages, and many parts of Asia at present, population is kept down by actual starvation." (Mill, p. 117) In Asiatic countries even today the vast majority of the people have only the minimum of subsistence. The result of this is that, even under the most favorable conditions, the people are weak and ill-fed, and, while in ordinary years starvation does not occur, in seasons of drought and scarcity, which in these states of society are quite frequent, hundreds of thousands perish. India furnishes abundant proof of this. She has been visited with a long series of periodic famines, and her population has been reduced by millions from this cause alone. It is true that under British rule the ravages of famine have been greatly reduced in India, and yet even today it makes periodic appearances, carrying off vast numbers of the poorer classes. During the last century there has been a great development of industry in India, and the people have had an opportunity of improving their condition. We find, however, that, instead

of this actually happening, the population has increased from two-hundred millions to three hundred millions, and these all live in practically the same misery as before, thus demonstrating the tendency of population to increase up to the limit of subsistence.

In China conditions are as bad as in India, if not worse, and the results are the same. There the population presses hard on the supply of food even in ordinary years, and the failure of a single crop means starvation to hundreds of thousands before next season's crop can be converted into food. In these countries we find the preventive checks conspicuous by their absence, while the positive check of starvation operates with tremendous force and frequency.

If it be true that misery loves company, it is equally true that those forces which tend to produce misery are in intimate association, so that where we find war and famine, we usually find plague and wasting epidemics. These are usually the result of famine and constitute one of the ways in which it operates to reduce population. It is difficult to estimate how many victims are claimed by ~~these~~ periodic outbreaks in Asiatic countries, but one thing is certain vast numbers are swept off the earth in this way, and pestilence forms no unimportant check on the increase of population.

Year by year the number of deaths from war and famine and their attendant evils is becoming less, as wars become less frequent, and the dire effects of famine are largely mitigated by the action of Christian nations in coming to the assistance of those, who, from force of circumstances are reduced to the verge of starvation. Hence the restraint of these forces on population is less in this age than in any previous age in history.

There remains one more very powerful check to population that must yet be mentioned. No force operates more assiduously today to restrain the growth of population, than disease among children. If all the children born into the world lived to maturity or old age the death rate would not appreciably affect the population. But as a matter of fact a very large proportion of the human family die in infancy. There are many reasons for this, but generally speaking, the cause of the great mortality among children is due either to poverty, ignorance or vice. In modern times the effect of the latter cause is seen in the impaired condition of the health of the child born into the world, thus rendering it incapable of maintaining the struggle for life. In ancient times infanticide was generally practised, even among highly civilized peoples. It was the custom in Sparta as also in Rome to destroy not only deformed and weak children, but also unwelcome ones. This practice, although considered vicious by us was not so considered by the Spartans, who looked upon it as the only way of maintaining the strength and unity of the city state. In many parts of India and China, the same practice prevails today, and thousands of infants, especially females, are annually consigned to the waters of the Ganges. But apart from this method of child murder there is an enormous mortality among children in Christian lands.

Doubtless the advance of medical skill has greatly advanced reduced the death rate among children, nevertheless among the poorer industrial classes and especially in large cities where there exist such densely populated districts, about one-half of the children die before they are five years old. Investigation has shown that this terrible mortality is due largely to ignorance and poverty. Where poverty prevails the family is usually underfed, poorly clad and weak, and therefore unable to combat successfully the ravages of disease. But ignorance is the handmaid of poverty, and consequently to lack of knowledge on the part of parents may be traced a large proportion of infant deaths. This ignorance shows itself in many ways. The laws of hygiene are neglected, food is improperly prepared, bad nursing is the rule,

sanitation is disregarded, and thus the children are allowed to grow up in filth and squalor, weak in body and mind, a ready prey for the disease germs which lurk in the miserable hovels called homes.

Here again medical and sanitary science have come to the rescue in civilized lands and the result is a falling off in the death-rate among children. "The death rate in the Middle Ages, especially in cities, was tremendously high, but during the last hundred years has steadily decreased." (Fetter, p. 192) With the attention that medical men are giving to this subject, the improved sanitary conditions of the slum districts in large cities, and the training which some civic governments have undertaken to give to mothers among the lower classes, the result must be the saving of a much larger proportion of the children.

The positive checks mentioned above do not by any means exhaust the list, but they include the chief ones and have had most to do in maintaining the equilibrium of population and subsistence. In addition might be mentioned the loss of life by storm, earthquake, fire, disaster, severe labor, exposure and unwholesome occupations. In fact under this head might be included everything that acts on the present population and reduces it.

We now come to deal with the preventive checks on population, those that operate when, as Mill points out, "the increase of population is kept within bounds, not by excess of deaths, but by limitation of births." (Mill, p. 117) There comes a time in the advancing civilization of every state when the awakening intelligence of man first grasps the mystery of birth, and the first attempts are made in some way to regulate family relations or to interfere with the growth of numbers. It was early seen that a smaller number with large resources, meant a happier state of society than when a greater number was dependent on the same resources. This was evident with regard to the state as a whole, and also with regard to individual families, and led man to place restraints on the increase in numbers. This limitation of births is usually the result of prudent or conscientious self-restraint, expressed by the individual, voluntarily, or because of some law enacted by the state. Moral restraint marks the advance from a savage or ancient civilized population to a modern civilized people. But even in highly civilized communities there are found large numbers who have not yet risen to this higher stage where self-restraint is the ruling principle. Therefore, it must be remembered that, when moral restraint is spoken of as the prevailing factor in modern civilization, in keeping population within the bounds of subsistence, there are many in civilized and so-called christian communities who have not risen above that stage where vice and misery in various forms are the only checks on population. Hence in dealing with moral self-restraint as a preventive check, it will be necessary to enquire to what extent it operates and among what classes it is practised most extensively. In such an investigation the motives leading to this self-restraint cannot be overlooked, because it is obvious that they vary greatly in different countries and in different classes of society.

John Stuart Mill points out that "in proportion as mankind rise above the condition of the beast, population is restrained by the fear of want, rather than by want itself. Even where there is no question of starvation, many are similarly acted upon by the apprehension of losing what have come to be regarded as the decencies of their situation in life." (Mill, p. 115) Dire need, resulting in illhealth and even in starvation, is still acting in some portions of society, but less today than ever before, and we might safely say that as a matter of fact the extreme margin of subsistence is not often reached in civilized lands. And even among the poor the standard of life is rising. "The standard of life is rising,"

among the poor there seems to be something like a standard of wretchedness," a point below which they will not continue to marry. If this be true of the poor it is much truer of the other classes of society, that they are restrained because they desire to maintain a certain "standard of life." "The standard of life" may be taken to mean the measure of necessities, comforts and luxuries considered by any individual to be indispensable for himself and his children. This "standard" varies from time to time, from class to class and from land to land, so that what would be considered a high standard in Asia might be a very low standard in America; what was a high standard one hundred years ago might not so be considered in our day, what is a high standard for the unskilled laborer, might not be high for the artisan, what is considered a necessity for the wealthy, might be a luxury for the poor.

In low states of society, whether the phrase, "standard of life" is equivalent almost to bare subsistence, as in the greater part of India and China, little or no moral restraint is exercised. India furnishes us, as has been seen, with an example of a country where although the resources have been greatly improved, the condition of the people has improved but little. This is accounted for by the fact that instead of the "standard of life," rising with the increased resources, the population has multiplied up to the limit of food supply. What is true of India in this respect, is true of all semi-civilized and savage states, and is true also of the lower strata of society even in civilized communities. History proves that where people have only the bare necessities of life and make no provision for the morrow, there the birth-rate is higher than among those maintaining a better standard of life. The fact is that never is the procreative force more active than when the conditions of life are squalid and subsistence meagre. Under such circumstances hope for the future seems absent, the enjoyment of the present has reached its lowest or we might say its highest point, and there is no incentive to self-restraint. Among this class marriage takes place at a very early age, since there is no need to reach a standard set by predecessors and it is impossible to sink lower and live. Thus it is that among unskilled laborers the birth-rate is so high, and the lower their condition the higher the rate. Marshall points out that "never had the marrying age been earlier, or christenings more frequent in Ireland than when, just upon the verge of the great famine, Earl Devon's Commission, in 1844, thus described the condition of the peasants: 'In many districts, their daily food is the potatoe; their only beverage water; their cabins are seldom a protection against the weather; a bed or a blanket is a rare luxury; and, in nearly all, their pig and manure heap constitute their only property!'"

We find, however, that the absence of the preventive check necessitates the presence of some form of positive check. Therefore although the birth-rate is very high among the poor yet population does not increase in the same proportion, since children, born under such conditions, are physically weak and fall a ready prey to disease and death in large numbers. In fact, once population falls below the plane of comfort and decency, it is rarely, if ever, and then with the greatest difficulty, kept above the plane of extreme misery. The effect of this misery is to produce moral weakness and recklessness, and to weaken the will power so that there is little desire for improvement. Every large city both in Europe and America furnishes abundant illustration of this condition of things. The problem of these cities is what to do for the improvement of the condition of the laboring-classes. Favorable circumstances do not and will not increase the happiness of this section of the population, unless there is a general improvement in intellectual and moral culture, thereby creating a demand for a higher standard of living. This demand once created will become habitual and then the unskilled laborer, instead of being

satisfied with a bare existence, will endeavor to live on a much higher plane. In dealing with the remedies for the condition of the lower classes, we shall treat this point more fully, suffice it now to say that their condition although deplorable is by no means hopeless.

What has been said in the preceding section refers particularly to the poorer classes in the cities, although in general it applies also to the agricultural laborer. In the case of the latter, however, there are conditions entering in which to some extent at least tend to alter or modify our conclusions, ~~to a certain extent.~~ It was the custom in England in the eighteenth century, for the married agricultural laborers to live in cottages on the estate of their master, while the unmarried men occupied apartments in the houses of their employers. As these cottages were limited in number, no man could get married until one of them was vacant. In this way many were kept from marrying until late in life and consequently their families were small. Switzerland had a similar custom. In the villages no one was allowed to marry until a cowherd's cottage became vacant. There was a rule among the peasants in the Jackman valley of the Bavarian Alps, that no more than one son in each family should marry. This was rigidly enforced and if any other son married he had to leave the village. (Marshall, 237) Under these conditions late marriages were the rule and population remained almost stationary. During recent years there has been some improvement in the condition of agricultural laborers and they now are freer to emigrate to any new country, where such labor is in demand and where land can be had in abundance.

We shall next examine the checks on population among the artisan and middle classes. These desire more than mere subsistence; they must have the decencies and comforts common to their class. Therefore since they have a certain standard to maintain they are restrained from marrying until they are sure that they can provide for their families according to that standard. This tends inevitably to make marriages later than among the poorer class, with the result that the number of children in each family is much smaller. It is among this artisan and middle class--for they may be taken together in this discussion--that concern for the welfare of children becomes one of the most powerful motives. Hence we find that after social distinctions become marked there is not only the effort, on the part of parents, to maintain a certain standard but to improve their condition so that their children may enjoy even greater comforts and luxuries than they themselves have enjoyed.

There is another class, not entirely exclusive of that just mentioned, which claims our attention, namely, the land-owners. In some countries, as in England and Scotland, these landed proprietors hold large estates and rent small sections to tenants who cultivate the land. But in new countries like Canada and the United States where land is to be had in abundance at low cost the majority of the "farmers" own the land they cultivate. It is obvious that these, instead of finding a large family a burden, find it a real assistance. No conditions are more favorable to the growth of population than those found in the agricultural districts of a new country where the law of diminishing returns has not yet commenced to operate, and where there is, not only all the necessities, but ample to supply many of the comforts and even luxuries of life. But even among such there is the practice of self-restraint, for with these peasant proprietors, both in the Old World and the New, there is the desire not only to maintain their rank, but to improve their condition, with the result that marriage is postponed until late. France furnishes a splendid illustration of how the ownership of land antagonizes the procreative force. There, instead of allowing population to increase up to the limit of subsistence, the people utilize the resources in improving their living, comfort and security of condi-

tions. The "standard of life" among them has risen very greatly during the past century. "The object of every family is to live well and to save at the same time, so as to be able to leave their sons and daughters in as good a position as themselves, at all events, and in a better if possible. The greater number of Frenchmen argue: 'With two or three children we can live comfortably, and save sufficient to leave our children as well off as ourselves; a greater number would involve curtailment of enjoyments both for ourselves and our children.'" (London Times, Jan. 25, 1883)

We are now able to see that, generally speaking, according as the "standard of life" is raised, moral restraint acts on the growth of population, principally by causing marriage to be deferred until later in life. Since this is so, we should naturally expect to find, in countries, like Canada and the United States, where the standard of living is, on the whole, the highest found anywhere in the world, the preventive check operating with greatest power. To a large extent this is the case, but as countries differ in this respect, so even in a country where the average standard is very high, many still occupy a very low plane. Even among the lowest classes the standard is slightly higher than among the corresponding classes in the older lands, and there is not that constant pressure on the margin of mere subsistence. This is due to the fact that usually there is a greater demand for labor and also an abundance of unoccupied fertile land. But on the other hand there is a certain immobility of population, so that in many cases it is impossible to get the poorer people in large cities to migrate to the districts where labor is in demand and land is open for settlement. Still more is this true of the laboring classes in Great Britain and the Continent. Their condition at home is bad enough, but such is their inherent aversion to emigrating, that they would "rather bear those ills they have than fly to others they know not of." Thus we see that even on this continent there are large sections of the population where moral restraint has little or no influence.

We come now to face a problem practically unknown in Malthus' time. Had it existed he would not only have bewailed the rapid increase among the poor, but would have lamented the number of childless homes among the well-to-do. It is a notorious fact that in the large cities on this continent the average size of family has decreased considerably in the last fifty years. In the families of the early settlers in the New England States the average number of children reaching maturity was six, today the average number in families of American descent is slightly over two. In view of the fact that many of these do not marry it is seen that the stock barely maintains itself in numbers. There are obviously some definite reasons for such conditions. Mr. Doubleday maintains that, as people become better fed, they become unprolific. A more probable explanation is given by J. L. Laughlin when he says, "The diminishing fertility of New England families gives a truer explanation, when it is seen that with the progress in material wealth later marriages are the rule. When New-Englanders emigrate to the Western States, where labor is in demand and where it is less burdensome to have large families, there is no question as to their fertility." (Mill, p. 117) But other considerations enter into the problem and make it most complex and far-reaching. Modern conditions of society are largely to blame. The greater facilities for travel have created a larger desire for it, and many children make the gratification of the desire, if not impossible, at least burdensome. The countless costly pleasures, the increasing social demands, and the entrance of women into public life, all have tended to make large families unwelcome. The growing ~~condemning~~ tendency in all large cities, to live in apartment houses, also militates against raising families. In many of these houses there is no accommodation for children, and they are denied fresh air and sunshine, with the result of ill-health and often premature death. Not only is this so, but in these cities there are whole areas where children are not ad-

mitted to the apartment houses, where no one who has a child can rent rooms. To such an extent are these causes operating that many writers in the United States have treated the subject at considerable length, pointing out that if population is to be restrained unnecessarily among the well-to-do, the lower and less cultured classes must ultimately predominate, and the result be a national calamity. But there seems little danger of any such result, so long as we have the conscientious, industrious and prudent farmer, artisan, and merchant, as the backbone of the country.

There are those who claim that population will be held in check by the progress of civilization. This claim is founded on the belief that "the general development of intellect will weaken the passion for marriage and supersede the necessity for any checks on it". (Bonar, p. 393) Such a theory, however, has never been established with any degree of satisfaction. Herbert Spencer was its champion, but failed to prove that those who do high mental work are as a class unprolific, while those holding the opposite view have established their case by giving specific evidence. There is, this, nevertheless, in favor of the theory of Spencer, that people whose lives involve great mental strain often marry late, and consequently have small families. Were the theory true absolutely it would force us to the somewhat disagreeable conclusion that the pressure of population would be lessened most in those classes where lessening is at present least needed, and least where it is most needed. But the real truth of Spencer's view lies in its relation to the principle of Malthus that self-restraint is necessary. The intellectual development will certainly check population, not by any physiological process weakening the passions, but by making men alive to their responsibilities and strengthening their power of restraint.

We now have at least a little insight into the conditions involved in the solution of the problem that has been under discussion. The remedy, if it is to prove permanently effectual, must be such as to increase the force of the preventive checks upon population, and thus lessen the force of the positive. It is obvious in view of what has already been stated that, many agencies may be employed to promote the more general diffusion of prudential habits. We cannot discuss all these agencies, but will endeavor to show that the one which should occupy the position of first importance is national education. If among the educated part of the community, as has been shown, the prudential check to marriage operates to a sufficient degree to maintain their comfort and happiness, the obvious mode of proceeding with the lower classes of society, is to endeavor to infuse into them a portion of that knowledge and foresight which will tend to secure the operation of self-restraint. "The thorough enlightenment of the people, which includes their moral purification as well as their intellectual instruction, is to complete the work of mending all, in which men are to be fellow-workers with God." (Bonar p. 56) We can scarcely estimate the good that would result from the education of the whole people as indicated. There would not only be moral and material advancement, and a greater efficiency of labor, but there would be the prospect of remedying some of the gravest defects in our present industrial economic system.

To accomplish this education of all the people Malthus advocated a system of parochial education. In addition to the regular course of instruction, he would teach some of the elementary principles of economics, showing the lower classes how they were dependent on themselves for the chief part of their happiness or misery. In these parochial schools the rising generation would be trained up "in habits of sobriety, industry, independence and prudence, and in a proper discharge of their religious duties; which would raise them from their present degraded state, and approximate them in some degree, to the middle classes of society, whose habits, generally speaking are certainly superior." (Malthus, p. 498).

The system advocated by Malthus is in force today, and yet

both in this country and in Britain, we have vast numbers without any education. We shall confine ourselves to the question as it affects Canada. Free elementary education is the established policy in the Dominion, and many of the provinces have passed compulsory education laws. By some these laws are considered a hardship, but a little observation and reflection must convince any man of their wisdom. While the affection of parents can in most cases be trusted to provide ~~for~~ their children with education, yet when family affection fails the child and the state are the victims of the resulting ignorance, crime, and pauperism; hence it is the duty of the state, not only for the sake of the child, but of the community at large to insist on its education. No matter how good the government, or how well its laws are administered the "effect will always be incomplete without a good system of education; and, indeed, it may be said that no government can approach to perfection, that does not provide for the instruction of the people." (Malthus, p.498).

The effect of this compulsory education will be two-fold. In the first place it will act on the parents, by removing from them the opportunity of putting the child to work at an early age. In England and on the Continent child-labor has been a menace to the race. Often a lazy father sends his young children to work and lives a life of idleness himself. Sometimes the necessities of the parents oblige them to take their children from school, other parents do so not from necessity, but because they are anxious to have more to spend on drink. Thus among poor people a large family nearly always has been a source of revenue, and therefore not considered by them a hardship. With a system of compulsory education these children would be in school, and when a father was face to face with the responsibility of providing for his family he would be constrained to practise more prudent habits. But the greatest benefit would come to the children themselves. Even an elementary education will fit them for more remunerative service and their increased knowledge will create in them a desire and taste for a higher standard of living. Having discovered their own possibilities they will go on to better their position, and having enjoyed the advantages of education themselves they will strive hard to let their children enjoy them also. On the other hand, if children are allowed to grow up in ignorance, there is little hope of them rising above the level of their forefathers, for ignorance is an evil which will not cure itself. "Can there be any hope that the children who are now in the streets will, when they grow up, be less apathetic about education than their parents now are?" (Fawcett, p. 128)

In Canada this problem of education is rendered doubly important by the fact that there are pouring into our land thousands from the Continent of Europe, where the standard of living is vastly lower than in this land. The majority of these coming belong to the class that presses hard on the margin of subsistence all the time, in their native land, and if they come hither in large numbers, they are likely to follow their old habits, unless the children are educated and led to seek a higher standard of living. It is gratifying to know that the children of some European emigrants are anxious to receive an education, but there are many who will not attend school except by compulsion. This should be applied, for the only hope of making them good citizens lies in the power of the public school. Awaken in them a sense of their own possibilities and powers, and also a sense of the possibilities and resources of the country, holding up before them a high ideal of citizenship and national life, and they cannot fail to rise above their immediate surroundings and aspire to become worthy citizens of their adopted country, upholding all her worthiest traditions, and sharing all her great achievements.

This essay would not be complete without a brief reference to pauperism and its effect on population. We have already touched on the subject, when speaking of the encouragements given in different countries for stimulating the growth of population but now we shall treat it more in detail. Without doubt the unusual interest in Malthus' "Essay" was due to the direct application of his doctrines to pauperism as it then existed in England. To the influence of Malthus more than to any other cause may be traced the agitation that resulted in the passing of the New Poor Law in 1834. Prior to 1834, under the old law, the most flagrant abuses were practised, and the nation was threatened with complete demoralization. So lax was the administration of the existing laws, that instead of discouraging pauperism, it really made the lot of the pauper more desirable than that of the independent labourer. To provide for this extensive system of granting relief the ratepayers were compelled to pay excessively high taxes. The temptation was for even the able-bodied to apply for relief since all that seemed necessary was to make application declaring their need. In 1832 a Royal Commission was appointed to investigate and report to the government, and in their report some startling facts were brought to light. In many districts out-door relief was granted to able-bodied men upon so liberal a scale that pauperism became a very remunerative employment, and afforded a better living than independent labor. To the father of a large family generous assistance was given and so great was the grant for each additional child born, that the more numerous a man's family the better his circumstances became. Thus an artificial stimulation was given to population, and the children of the indolent and indifferent were maintained at the expense of the industrious. Taxes increased at an enormous rate and in many instances land-owners had to pay over fifty per cent of their income in taxes. Industry was completely disorganized as men refused to work when they could receive aid in this way. Many became utterly reckless, and there was an alarming deterioration of morals. Above all the family ties were destroyed, and men ignored any obligation which they owed to their children. The improvident regarded it as their right to marry, whether they ~~maintained~~ were in a position to support a family or not, and they considered that maintenance ought to be provided for as many children as they chose to have. In fact "if they married when they had no reasonable chance of being able to maintain a family, they were treated as if they had performed a meritorious act, for the more children they had the greater was the amount of relief they obtained." (Fawcett, p. 16) This by no means exhausts the list of evils and the degradation that resulted from the old law, but it shows sufficiently the need of the reforms contained in the New Poor Law of 1834.

Under the new law many improvements were introduced. More rigorous restrictions were imposed upon able-bodied paupers, the allowance system, by which the wages of a laborer was augmented by relief, was abolished, and the whole system was more ably administered. But the granting of out-door relief, one of the worst evils of the old law, still remained. Whenever this kind of relief has been given pauperism has flourished, but where paupers were compelled to go to the work-house there pauperism has decreased. On the whole, Ireland is a much poorer country than England and yet in all Ireland the total number of paupers does not amount to one-half the number in London alone. The reason for this is found in the fact that throughout England the out-door paupers are to the indoor in the proportion of eight to one, whereas in Ireland the out-door paupers are to the indoor in the proportion of one to five. The evils of out-door relief are only too apparent, and most of those receiving it do so because they have failed to exercise self-denial and providence. "It is manifest," says Fawcett, "that this self-denial and provi-

dence would be more frequent, if the people were made distinctly to recognize that if they brought indigence upon themselves and their children they would not be able to have recourse to out-door relief, but would be compelled to submit to the discomfort and disgrace of residence in a workhouse. (Fawcett P. 28) In Scotland the system of out door relief obtains, the same as in England, but the able-bodied have no legal claim for assistance. We can readily see the great peril the nation incurs by conferring upon every man a legal claim to be maintained, as is the case in England. But what makes it a great deal worse is the fact that he possesses this claim, not only for himself, but also for all his children. The inevitable result must be that among the lower classes, early marriages will be contracted and there will be a reckless increase of population.

Some may argue that these conditions do not apply in ~~xxxxxxx~~ a new country like Canada, or even to the United States. It is true we have no Poor Law, so called, but have a system of relief very similar. Our government subscribes to various charitable institutions, as do also private individuals, and in every city we find some system of giving relief to the poor. So that virtually we have what amounts to a system of legal relief. In Australia, it is claimed that the amount distributed for the relief of the poor represents ^aconsiderably larger tax imposed on each inhabitant than is imposed by the ~~xxxxxxxxxxx~~ Poor Rate in Ireland. In many of the States of the American Republic relief of the poor is left to private charity, whereas in others they have a Poor Law. Thus we see that in every country some system of relief seems necessary, for the poor we have always with us. But the giving of relief indiscriminately is bound to have evil consequences, and especially is this true of out-door relief, for it tends, not to discourage but to encourage pauperism. And it is a notorious fact, that can be verified any day in this city, that where you find the greatest poverty and squalor there you find the largest families.

Are we then to abolish all legal help to the healthy poor? Chalmers, in common with many others contended that there should be no legal claim but that all relief should be left to the sympathy of the benevolent. The fullest enquiry should be made before aid was given, and if the applicant had a living relative, or an old employer, he should be appealed to for assistance. Chalmers proved the feasibility of his system by putting it into operation in one of the worst districts in Glasgow, and the result was that the people were discouraged from applying for relief and were encouraged in self-reliance, industry and providence.

Whatever may be said in favor of a Poor Law as being necessary for the security of life and property and the welfare of the state, it is obvious that in the administration of it, the condition of the pauper must be made less desirable than the condition of the poorest independent laborer. Otherwise there will always be an inducement for some to become paupers. To give relief to the able-bodied who will not work is surely a sin, and to maintain the lazy and improvident at the expense of the man of industry and foresight, is a system that should not and cannot be maintained in a free country. Cases of genuine need should, and will always waken sympathy in the heart of humanity, but the wilfully improvident and lazy should be made to feel the consequence, and should not be helped unless in the last extremity.

We conclude, therefore, after this somewhat hasty review of the problem of population, that there is still much need of enlightenment and reform among vast numbers of the people, both in savage and christian lands. Our examination of the subject has ~~who~~ shown us that, ^{not} until men have become imbued with a sense of their own possibilities, have developed self-respect and have learned to practise self-control, can society be elevated and redeemed. But

once men are conscious of a deep sense of their personal responsibility for the remoter effects of their own acts, then, and only then will they exercise self-restraint. **Only** reform that aims at the uplifting of the masses, must have as its fundamental principle genuine education in the broadest sense of the term. Surely this is a work worthy of the noblest efforts of our best statesmen and scholars, a work that is second to none in building up a nation that is truly great, for,
"self-reverence, self-knowledge, self-control,
These three alone, lead life to sovereign power."