MALTHUS'S ESSAY
AND
ITS PLACE IN POPULATION HISTORY

A Thesis
Presented To
the Faculty of the Department of Social Science
Appalachian State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

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by
Harold Lee Swafford
July, 1967

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The world must eventually face the problem of overpopulation. It is becoming evident that there are simply too many mouths to feed. That the rate of growth for any given population may not be geometric or any other rate is irrelevant. What is relevant is that a population may increase too rapidly. This Malthus made the central theme of his Essay.

The Essay of Thomas Robert Malthus resulted in one of the loudest and most extensive debates in English history. The discussion was carried on in books, letters, and in journals. In the earliest discussion on Malthus population received its most penetrating analysis.

Malthus dared challenge a tradition that assumed that population, if not stable, was declining. It is for this reason that he holds the center of practically any discussion on population. The Essay should be evaluated in terms of the society to which Malthus addressed himself. Discussions of Malthus will continue to be written. Each one is a tribute to a man who towers above all others in a history of population theories. The purpose of this study is to analyze the contributions of selected writers to a history of Malthusianism.

PREFACE

The author wishes to express special thanks to his major professor, Dr. Edward H. Gibson, III, for his guidance and suggestions in the preparation of this study. The author also wishes to acknowledge the encouragement given him at Berry College by Dr. Clyde Ferguson. Assistant professor Allie Austin Hodgin, Reference Librarian of Appalachian State University, was of great assistance in obtaining materials for my use in Chapter IV.

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INTRODUCTION

The world must eventually face the problem of over-population. That there are too many mouths to feed is becoming increasingly evident. The problem of China and India heightens the concern as to whether the limited resources of a steadily shrinking world will be able to keep pace with a world population that possesses the power for almost infinite multiplication. That the rate of population growth may not follow a geometric or any other rate of increase is of little interest. What is signifigant is that world population growth results in more people being born, regardless of how easily one may illustrate that fertility tables have shown a marked decline in the past decade.

The author is of the opinion that declining fertility, far from being desirable, through its effects on age and sex composition of the population, exerts an adverse influence upon economic and technological adjustment. A birth rate that falls so low that an absolute decline begins could, then, spell disaster. The difficulty of labor and social adjustments are increased in proportion to the rate of decline.

A population, too, can increase at too rapid a rate. Malthus made this the central theme of his Essay, and Darwin applied the principle with tenfold force to the animal kingdom, and the "principle of population" found its savior

in John Stuart Mill.

The evolution of population theory, with Malthus at the center, has been a long and difficult process. That Malthus added little originality to the thinking of his predecessors is significant. Steuart, Sussmilch, Hume, Wallace, and Franklin were in many respects Malthusian in their population doctrines, but what they lacked was a statistical application of the principle of population to existing social phenomena. This feat Malthus himself was able to accomplish only after 1801, when the appearance of the first census seemed to confirm his suspicions. None of his predecessors had been able to do this. Malthus's place in population history is not the result of any originality on his part, but through his uncanny ability to crystallize and systematize the writing of those who preceded him.

The Essay resulted in one of the loudest and most extensive debates in English History. Within months after the Essay appeared with an anonymous authorship, several refutations went to the press. The discussion was carried on in letters, journals, and in books. Each refutation or defense that appeared brought new voices and new authorities into the fray. It is in the earliest discussion of Malthus's Essay that the question of population received its most penetrating analysis. So adequately was the question discussed that little was added to it of any consequence

until the declining birth rate of the early part of the twentieth century shifted the attention of writers to an entirely different basis for discussion.

In a five-chapter division of the present study the author intends to discuss the contributions of selected writers to a history of population theories. These divisions will be Pre-Malthusion doctrines of population, by which the author hopes to determine what contributions to Malthus's thinking were made by each of his predecessors, to survey Malthusianism and some of the major misunderstandings about it, to follow the course of Malthusianism in the nineteenth century from Thomas Jarrold to Henry George, and to review the literature on population in the twentieth century. It is hoped that by this approach, we can better realize that the Essay of Malthus, a bold stroke though it was, is one of many contributions to the history of population theories.

CHAPTER I

PRE-MALTHUSIAN DOCTRINES OF POPULATION

Writings on population may be divided into Pre-Malthusian, Malthusian, and Post Malthusian periods. In this scheme the Essay of Malthus stands out as an outstanding contribution to English historical demography. A review of population literature affords a means by which a positive appraisal can be made of Malthus and his work.

Several men have been mentioned as the possible "father of demography". Among them are men such as Giovanni Botero, John Graunt, and Antoine Montogon. Botero wrote in 1606 a treatise in Italian entitled Wealth of Nations. He took a decisive step toward the Malthusian position by stating that while the power to produce the means of subsistence had a definite limit, the means of reproduction knew no such bounds. This work had been preceded in 1598 by a treatise entitled On the Causes of the Growth of Cities. Here he discussed urban-rural differences in fertility. Neither book, however, was really comprehensive, nor was either analytical enough to be considered of paramount significance in the early history of demography.[1]

Much of the early writing on population theory was preoccupied with moral preconceptions and superficial observations.

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[1] Ralph Thomlinson, Population Dynamics, (New York: Random House, 1965), p. 27.

The so-called scholars either did not or could not differentiate between facts and folklore. Pre-Malthusian writers often considered it their responsibility to deal with the intangible emotions of love, lust, greed, and hate. These factors could not be empirically tested or disproved, and were thus very slow in dying. Crude scientific experimentatio often reconfirmed the earlier views, and this kept them alive in their most crude form. Some of the notions were as old as the nations themselves.[2]

Population theories from the sixteenth to the nineteenth century could not free themselves from the ideas of the mercantile system. The success of mercantilist policies depended primarily on the possession of men and money. Many governments resorted to positive encouragements to marriage and to fertility; some even granted special rewards or recognition for large families. Punishment for illegitimacy was modified or abolished, and in many countries hospitals were provided for illegitimate children.

KING, GRAUNT, AND PETTY

The predecessors of Malthus struggled against a multiplicity of statistical impossibilities as well as their own views on the nature of social development among civilizations, and a highly contracted scale of time. Their views could not escape the influence of the Christian Revelation. Illustra-

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[2] D. E. C. Eversley, Social Theories of Fertility and The Malthusian Debate, (Oxford: Clarendon Press), p. 281.

tive is Gregory King's view (1697) on the increase of the population of the world and England. His statement is:

> That the World was repeopled from eight persons after the Flood and that England was peopled originally by two persons, or by a number not exceeding twenty persons, such first peopling was about of the year of the World 2200, viz., 600 years after the Flood.[3]

King (1648-1712) nevertheless is regarded as a landmark in the development of modern demography second only to John Graunt. King was not only methodical in his approach but was fascinated by calculations as such. His Observations Upon the Natural and Political State and Condition of England (1697), though reflecting the intellectual climate of his period, gives every indication of statistical objectivity. King was no doubt motivated by the Registration Act of 1694, designed to levy taxes on burials, births, and deaths, and to levy a fee on bachelors and childless widowers. This Act promised accurate statistics, for which William Petty had clamored a generation earlier.

King was overly critical of Sir William Petty. He was critical of Petty because he believed that Petty started out with the intention of glorifying England and London. King was of the opinion that even if this was a legitimate objective, the government was still entitled to know the facts,

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[3]Gregory King, Natural and Political Observations, Observations on the State and Condition of England. Cited in E. A. Wrigley Introduction to English Historical Demography, (London: Hazel Watson, Ltd., 1966), p. 1.

and resolved himself to uncover the "Touchstone of Truth".[4]

By comparison, King regarded John Graunt (1620-1674) as a master of technique. One of King's Manuscripts consists of a summary of the arguments of both King and Petty. King's attitude toward the two is clearly revealed in that, whereas a single page is devoted to Petty's calculations, several pages, with much more detail, are given to Graunt's analysis, and King closes by comparing the conclusions of Graunt with his own.[5]

The two men about whom King had so much to say, Graunt and Petty, are significant. Graunt's Natural and Political Observations upon the Bills of Mortality was first published in 1662. It was upon the basis of this careful and painstaking study of the London bills of mortality that Graunt

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[4]D. V. Glass, "Two Papers on Gregory King" Population in History, D. V. Glass and D. E. C. Eversley, editors. (London: Edward Arnold, Ltd., 1963). p. 162. King's statement was that "Sr William Petty was lookt upon as the best Computer of his time, but in all his computations of the numbers of people in England and London, it is Evident he designed to represent both much greater than they truly were; And the writings to the Publick make it excusable to do so, yet least those Publick Accots of his should be too much relyed on by those who set at ye Helm, to whom a true accots of the Kingdom is more necessary than to others. I shall endeavor to give such an Account thereof as will beat the Touchstone of Truth."

[5]Little is known of the life of Gregory King. What personal details that survive of him are often blurred behind a maze of computations. He died, to be sure, in 1712, leaving legacies to relatives and friends. No children survived. There were few published works, and had it not been for the work of George Chalmers, the name Gregory King might have been destined to obscurity.

became a model for subsequent enquiries. His concern was with differential fertility: fertility in rural areas as compared with fertility in the great towns. Most demographers were in agreement with him that fertility was smaller in the cities as compared with the country. He concluded that the population of London shows a slower natural increase than the surrounding country; rather than by natural growth, London grows by the large influx of immigrants. His statement is:

> that in London the proportion of those subject to die unto those capable of breeding is greater then (sic) in the country; that is, let there be an hundred Persons in London, and as many in the country; we say that if there be 60 of them breeders in London, there are more then (sic) 60 in the country.[6]

His reasons were several as to why there were fewer breeders than in the country,[7] but only the last reason he gave even related to the married women actually living in

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[6]John Graunt, Natural and Political Observations, p. 44-45. cited in R. R. Kuczynski, "British Demographers' Opinions On Fertility 1660-1760" in Political Arithmetic, Lancelot Hogben, editor, (New York: MacMillan Co., 1938), p. 312.

[7]Ibid., pp. 312-313.
"Now that the Breeders in London are Proportionately fewer than those in the country arises from the following reasons, viz.
1. All that have business to the Court of the king, or to the Courts of Justice, and all country-men coming up to bring Provisions to the city, or to buy Foreign Commodities, Manufactures, and Rarities, do for the most part leave their wives in the country in London out of curiousity.
2. Such as come up to be cured of diseases, do scarse use their wives pro tempore.
3. That many Apprentices of London, who are bound seven, or nine years from marriage do often stay longer voluntarily.
4. That many Sea-men of London, leave their wives

London. He, however, was firmly convinced that apart from the absence of seamen, and clerical celibacy, the natural increase of London was actually reduced by the increased fertility of marriages. The population of London; however, doubles within a sixty-four year period.

Graunt noticed the difference in the number of males and females by about "a thirteenth part". This gave him an excellent opportunity to discuss the problem of marriage, and of reproduction.[8] He first concluded that the reproductive period for women was 25 years (between 16 and 40, or between 20 and 44). The reproductive period for men he estimated at forty years.[9] If the reproductive period of a man were 40 years and that of a woman 25 years, Graunt calculated that the ratio of males to females in the population should be 560 to 325, but that the excess of males in the reproductive age was actually smaller because of the large number who died violent deaths, in wars or at the hands of justice. He estimated that the women in the child bearing age to be about one-sixteenth of the total population.

Graunt's belief was that several factors reduced fertility. He noted that the number of births decreased

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behind them, who are more subject to die in the absense of their husbands, or then to breed either without men or with the use of many promiscuously."

[8] Charles Emil Strangeland, Pre-Malthusian Doctrines of Population, (New York: Columbia University Press, 1904), p. 141.

[9] Kuczynski, op. cit., p. 283.

considerably in periods of plague. He studied extensively the plague of 1603, and discovered that weekly baptisms for London decreased from around 130 to 90 or less in a six month period. His point is then "proven" by his citing of the fact that hardly 20 women a week died of the plague, and this does not represent the death of enough women to reduce the birth-rate by one-fourth. Graunt observed that the total christenings for the year 1603 had been only 4789 as compared with 6000 for the year before the plague and 5458 for the year after it.[10] In 1636, according to Graunt and Petty, the plague accounted for 10,400 deaths in London. This represents two-fifths of the total deaths for the city in that year.[11]

He then concluded that the reduction of births was due largely to an increase in the number of miscarriages. An additional factor was the use of various methods of birth control. He makes reference to unlawful copulations that take place but which are thwarted by "Procured Abortions." Polygamy was looked upon by Graunt as "irreligious", and he was convinced that promisuous sexual intercourse by a wife with

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[10]Charles Creighton, A History of Epidemics in Britain, (Second edition, New York: Baines and Noble, 1965) I, p. 480. Graunt cites various figures for christenings that appear to have been taken from the bills for the respective weeks. But the returns had not been made regularly from the parishes within the bills from the beginning of 1603.

[11]Charles Mullet, The Bubonic Plague and England (Lexington: University of Kentucky Press, 1956), p. 176.

another man other than her husband, or by promiscuity in general is seldom followed by conception. This view was repeatedly expressed by Graunt.[12] In order to increase fertility he encouraged marriage and an end to licentiousness. Graunt also emphasized the role of celibacy in reducing fertility.[13]

Graunt deserves recognition as one of the great pioneers in demography. His listing of the Diseases and Casualties for the year 1632, and his belief that deaths were exceeding births[14] may leave something to be desired, but he was continually probing for weaknesses and seeking numerical irregularities. His contributions can best be evaluated through his conclusions.[15]

Graunt's Chief Contributions were four in number. He stands above his contemporaries, in his ability to measure

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[12] Ibid., p. 295.
"...Adulteries and Fornications ... do certainly hinder breeding: For a woman admitting ten men is so far from having ten times as many children, that she hath none at all.
"...Admitting men as Whores (that is more then (sic) one) commonly procreates no more then if none at all had been used...
"...From what hath been said, appears the reason the law is and ought to be so strict against Fornications and Adulteries, for if there were universal liberty, the Increase of Mankind would be but like that of the boxes at best."

[13] Ibid., p. 302.

[14] Appendix A contains Graunt's estimates for selected parishes.

[15] John Graunt, Natural and Political Observations on the Bills of Mortality (Baltimore: John Hopkins Press, 1939), pp. 9-15.

social phenomena that would appear to depend upon chance, the excess of male over the female births, and the apparent numerical equality of the sexes, the high rate of infant mortality, and the excess of the urban over the rural death rate. His influence on subsequent writers is sufficiently obvious.[16]

Contemporary with Graunt was William Petty (1623-1687). He helped Graunt with his research and did a considerable amount of original work on his own. His pre-occupation was with the administrative advantages of a large population. He wrote extensively on the applications of demography to economic and political issues. His main work and the one on which his greatest fame lies is Political Arithmetic, or A Discourse Concerning the Extent and Value of Lands, People, etc., first published in London in 1692. But he is in advance of his time when he makes the statement that a small country with a small population may be as powerful as a larger one, in both trade and strength. He then shows the relationship between intensive cultivation and increased yields, to the great advantage of the country and its inhabitants. The increased yields being encouraged, are possible, and greatly add to the national strength.[17]

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[16] Kenneth Smith, The Malthusian Controversy, (London: Routledge and Kegan Paul, 1951), p. 11.

[17] Strangeland, op. cit., p. 143.

Petty was convinced that an increase of population was imperative, and without this increase in numbers no rise in prosperity was possible. Petty, however, did not argue in favor of a blind inducement to reproductivity. He anticipated diminishing returns by showing that an increase in numbers must be followed by a correspondening development in productive efficiency. Population growth also must be offset by a division of labor. He was quite correct in his belief that the value of a commodity in exchange increases in direct ratio to the diminishing returns of the factors of production invested. The value of a commodity will always be high so long as it is the product of a single hand.

Petty could not escape the importance of population. Population was vitally connected to the state's revenues. His reasoning was as follows: The more people, the more revenue, and in turn, the more powerful and prosperous the country. His arguments are economic and demographic, and as such excel, but he shows no insight into the administrative workings of government.

Petty, in a Fragment Observation and in one place in a Treatise of Ireland, agreed with Graunt that the reproductive period of a woman extended through a twenty-five year period and that the reproductive period of a man was forty years, but at another place in the Treatise, he figures the span of the child bearing period at twenty-seven years for women (between 18 and 44 years). In still another work, Political Arithmetick, written in 1682, he takes for granted

a reproductive period of thirty years for women (15 to 44) and forty-two years for men (from 18 to 59) years. In yet another place, he makes reference to woman's reproductive period as being between 16 and 45 years.[18] He was, as was Graunt, aware of a sex ratio in the population. He believed that there were in the total population 560 males for each 325 females. Without informing his reader as to how he made the estimation, he assumes a population of 684,000 for London, and among that 114,000 women of child bearing age, 38,000 of whom were married, resulting in 19,000 births. His calculations point toward a birth rate of 27.8 for London. This results in a general fertility rate of less than 167 per 1,000 women. This tendency to estimate fecundity at a rate lower than Graunt is a characteristic representative of Petty's independent approach. A hint at his reasoning may be found in the suggestion that the suckling of children represented an impediment to the more rapid propagation of mankind.[19]

In reference to the differential fertility of rural and urban areas, his two calculations[20] imply a birth rate in

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[18] Ibid., p. 286.

[19] Ibid., p. 293.

[20] Ibid., pp.313-314.
Referring to Graunt Petty Stated:
"...we have good experience...that in the Country, but one of fifty dye (sic) per annum; and by other late Accounts, there have been sometimes but 24 Births for 23 Burials ... Suppose there be 600 people, of which let a fiftieth dye per annum,

the first of around 21, for London and a rural birth rate of 41-2/3, but at other places he seems to be less sure of himself, and suggests rates of from 21 to 38. For this reason, Petty's calculations on the birth rate had little demographic importance.

Petty's calculations are rather arbitrary in character, but are somewhat plausible. The tendency is for population to increase at a geometric ratio, but the time taken for population to double varies with the age of the world, condition and numbers of the population and other impending circumstances. If Petty's statement just presented holds true that there be 24 births for each 23 deaths and allowing for the death of one in fifty per year, this would probably result in doubling about every twelve hundred years. Then in his second calculation he allowed twenty-five births for the same six hundred people and allowed for twenty deaths. This leaves an annual surplus of five births. At this rate of increase, the population would double every one hundred and twenty years. In intermediate populations the rate of increase was much more rapid. Then he calculated for the six hundred people seventy five births and fifteen deaths,

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then there shall dye 12 per annum.

There are also other good Observations that even in the Country, one in about 30 or 32 hath dyed, and that there have been five Births for four Burials. Now, according to this Doctrine 20 will dye per annum of the above 600, and 25 will be born ..."

leaving a surplus of sixty births. At this rate, the same people would double themselves in ten years. This indicates that a population could double itself in a period varying from ten years to twelve hundred years.[21]

Petty believed the conditions in England to represent a compromise between these two extremes. In a reference to Lord Hale's Origination of Mankind he estimates the period of doubling at three hundred and sixty years. This supposedly represented some sort of happy medium, but he believed that if population doubled according to his calculations for the next two thousand years the result would be:

> One head for every two acres of land in the habitable part of the earth. And then, according to the prediction of the Scriptures, there must be wars and great slaughter.[22]

He had none of the Malthusian fear of overpopulation, and proceeded to confidently explain the geometric rate of increase by assuming that the "eight persons who came out of the Ark" are able to double their number every ten years. In a hundred years the eight would be eight thousand, and in three hundred and fifty years, a million, and by the year 1682, the year in which he was writing, the increase would be to three hundred and twenty million, the number estimated to be in the world at the time.[23]

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[21] Ibid., p. 146.

[22] Ibid., p. 147. William Petty, An Essay Concerning the Increase of Mankind (1682).

[23] With these delightful mathematical antics Petty proved his own geometrical rate of increase.

Petty held firm to the Scriptures in his advocacy of marriage. "The first command of God was to increase and multiply", therefore, Petty concluded, the law of marriages "is that which will cause the most increase of People".[24] But he believed that the obstacles to marriage in England were too large to be overcome in the near future, and that only between thirty and forty women out of sixty-five were married, and that among those, the most prolific were fearful of their ability to maintain the children they were likely to bear. The only solution seemed to be a complete reorganization of the entire institution of marriage.

King, by comparison, considered the age of the parties to a marriage as a factor reducing fertility. Both too great an equality and too great an inequality reduced the liklihood that a marriage would be productive. Early marriages contributed little to the increase of mankind. In London, the birth rate was appreciably lower for several reasons,[25] and in another "Great Town", the number of persons

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[24] William Petty, The Petty Papers, Some Unpublished Writings of Sir William Petty. Edited from the Bowood Papers by the Marquis of Landsdowne. 2 vols. London, 1927. Vol. 2, p. 49, cited in Kuczynski, op. cit., p. 318.

[25] Ibid., p. 314.
Gregory King, Natural and Political Observations Upon the State and Condition of England (London, 1810).
"That the reason why each marriage in London produces fewer children than the country marriages seems to be:
1. From the more frequent fornications and adulteries;
2. From a greater luxury and intemperance;
3. From a greater intenseness to business;
4. From the unhealthfulness of the coal smoke;
5. From a greater inequality of age between the husbands and wives."

brought into the world remained at a comparably low rate.[26] This preoccupation with the marriage rate as being of primary importance in determining the number of children born results in King's conclusions falling short of their intended purpose. He could not realize that the statistical relationship between the marriages and births of the same year does not represent an accurate measurement of fertility. Here again, his statements are by no means conclusive. King's calculations raise more questions about fertility and population in general than they answer. His conclusions can be accepted only if his methods and the statistics to which the method is applied are accepted without reservation. Such an assumption is not only unsound, but would entrap us in the same statistical labyrinths from whic King could not escape. His work lacks accuracy and explicitness. In estimating the population of England and Wales his methods are explained only in appearance. He arrives at his estimate by taking certain figures on the number of houses in certain divisions and multiplies them by a series of factors of persons per house.[27] The origin of these figures remains a mystery.

As far as the number of houses in England and Wales is concerned, his starting point was the total as charged in the

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[26] The other "Great Town" he studied was Lichfield, with a population of about 3,000. Even here his figures are not very conclusive.

[27] Glass, op. cit., p. 168.

Books of the Hearth Office at Ladyday 1690. This figure was 1,319,215. By some unexplained method he then adjusted the figure to make allowance for whatever increase may have occurred between 1690 and 1695. The result was a round sum of 1,326,000. A great deal of reliance cannot be placed upon King here. He allowed an additional 6,000-7,000 houses based largely upon the estimated excess of births over deaths, an excess that was simply translated back into houses, using a ratio of person per house.[28]

As a statistician King's method was fallacious. Every statistic at his disposal he found necessary to "adjust" to allow for (1) empty houses and for (2) divided houses. Upon further reconsideration he again changed his starting point in estimating total population. The figure of 1,319,215 "houses" was obviously too high. The exaggeration he then proceeded to explain away as being the result of careless addition by the person transcribing the data from the Hearth Tax books. He then reduced his estimate by about one-eighteenth to above 1,246,000. This is no doubt a more accurate figure.[29] Such

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[28] Ibid., p. 181.

[29] This discussion of Gregory King takes cognizance of his role in the development of statistical demography, and is not intended to diminish his significance whatever. King was a deserving successor to Graunt and Petty. Although hampered by a lack of access to the full official data, he showed an imagination in handling what was available, and identified clearly the issues involved in population trends. The returns available to him were few in number and minor in importance. For London his statistics were limited to seventeen of the 110 parishes of the city and a few districts beyond it. When

juggling of the figures beg the whole question they pretend to illuminate. Additional persons tried their hand at similar mathematical tricks and the great debate on population raged on into the seventeenth century.

In the middle of the seventeenth century appeared a group of writers to which Malthus acknowledged a specific debt, Franklin, Hume and Wallace.[30] The work of Dr. Franklin that is important here is entitled Observations Concerning the Increase of Mankind, Peopling of Countries, etc., written in Pennsylvania in 1751. It was his belief that people increase in proportion to their marriages, which in turn depends upon their ability to support a family. "When marriages can be easily supported, more persons marry, and earlier in life."[31]

Luxury operates as an impediment to marriage in the cities, where the total number of deaths exceed births. The result is similar in fully populated countries, where the competition of landless laborers depresses wage levels, an additional difficulty to being able to support a family, and in turn a postponement of marriage. Franklin observed that Europe was fully settled and would be unable to increase its population a great deal. By contrast America was in an entirely different

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these limitations are taken into account, Gregory King becomes the demographic genius that he was.

[30] Smith, op. cit., pp. 16-32.

[31] Ibid., p. 16. A Select Collection of Scarce and Valuable Economical Tracts (McCullough, 1859). The Dr. Franklin referred to here is Benjamin Franklin.

situation. Since it was inhabited largely by hunters, its population density was low, resulting in large tracts of land being easily obtainable. Since the supply of land was so abundant, men would not be afraid to marry, because there would be ample means to support their families.

The vastness of America afforded ample room for population growth, and it would be many ages before America would be fully populated, and in America labor would never be cheap. The incentive to marry might result in a faster rate of reproduction but never could any people increase beyond the means provided for their subsistence, and in his statement on the power of reproduction Franklin's expression of the principle of population becomes more particular, clearer, and more certain.[32]

HUME-WALLACE CONTROVERSY[33]

The Hume-Wallace Controversy resulted in the most heated discussions on population prior to Malthus. The disagreement between these two men involved the relative populousness of ancient as compared with modern nations. Robert Wallace (1697-1771), in his work entitled A Dissertation on the Numbers of Mankind in Ancient and Modern Times (1753), took the side of the ancients and Hume (1711-1776)

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[32] Ibid., p. 17.

[33] Ibid., pp. 17-22. Strangeland op. cit., p. 275-280.

the side of the moderns. David Hume attempted to show that the population of ancient nations had not been as large as some estimates had indicated. He begins his reasoning with a general statement that there is in all men and women a "desire and a power of generation more powerful than is ever exerted", and that the restriction upon this restraint arises as a result of "difficulties in mens' situation", because he believes that every man who can have a family will do so. Increasing at this rate of propagation, man can easily double his numbers every generation. Even plagues did little to impede the rate of human growth, since within a generation man was able to replace the loss. It was his belief that a wise and mild government "by rendering the condition of its subjects easy and secure will always abound in people, as well as in commodities and riches."[34]

This general point of view is made more explicit and more detailed, as Hume based his arguments upon the classical writings. In his study of ancient population he concluded that slavery represented an obstacle in population growth. This was the main reason that the ancient nations did not possess a population as large as some estimates.

In creating a possible ratio to account for actual rates of growth, Wallace created a hypothetical population. In the

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[34] Observations, Etc., pp. 156, 160. Cited in Strangeland pp. 275-276.

non-existent society he assumed that each marriage resulted in four children who lived to a reproductive age. Assuming that this rate of increase continues, each couple after thirty seven cycles will result in 412,316,860,416 people. The periods of increase he considered to be thirty three years. In a period of twelve hundred years the population would become incredibly large. Using this idea as a starting point he attempted to prove that modern nations were not as populous as the ancient ones, because of the detrimental effects of commercial development on population growth.

Some of the checks to population growth are physical and some are moral. Wallace mentions the several physical checks as being constant, including climate, temperature, and bareness of soil. Among more important physical checks were such things as plagues, famines, and earthquakes.

He looked upon moral restraints as being those that arise from the passions and vices of men. This included wars, poverty, civil and religious evils, debauchery, idleness, and luxury, or anything that reduces man's capacity to reproduce.

Among other "rules" governing population was the maxim that primitive peoples living by hunting and fishing could not expect to grow as rapidly as an agricultural or industrial nation, but that "plenty will always encourage the generality of people to marry".

The studies of Hume and Wallace are the best on population in the eighteenth century. Their disagreement is not on the

fundamentals of the problem involved, but on its historical role -- the comparative populations of the ancient and modern nations. The difference was that Hume emphasized the retarding influence of a political economy founded on slavery, whereas Wallace pointed to the checks developed in an industrialized society, and the resulting maldistribution of wealth.

SUSSMILCH

A German to whom Malthus acknowledged his indebtedness was Johann Peter Sussmilch (1707-1767), a Lutheran Minister and quondam chaplain to Frederick the Great. In his 1200 page study entitled The Divine Order in the Changes of the Human Race he attempted a complete and scientific treatment of population. He asserted that a phenomenon that appeared at first to be accidental often showed regularly recurring features. He based this upon a sedulous gathering of statistics and an even more sedulous analysis. He tried to make his mortality table of universal application by combining French and Swedish data. His life table was based upon a larger collection of data than anyone else had attempted up to this time.[35] He showed that there was an

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[35] Johann Peter Sussmilch, The Divine Order in the Changes of the Human Race, Shown by its Birth, Death and Propogation. (Berlin: 1741, Second Edition, 2 vols., 1762) Referred to in Thomlinson, op. cit., p. 29.

excess of births over deaths everywhere. It was safe to conclude, therefore, that the human race was increasing and would show a natural stability only when the number of births and deaths were equal.

It was obvious to Sussmich that population could not increase indefinitely, because the earth is able to feed only a given number of people, and growth will cease on its own. There would come a time when later marriages and decline in the number of births would result in a stationary population. At this point, one of two things would inevitably happen. Either fertility would diminish or the death rate would rise. The nature of mankind, being inclined to war and violence, helped keep the birth rate at a low level. He concludes by reflecting on the divine foresight which manages to accomplish its purpose in spite of the frailties and shortcomings of mankind. No action of mankind can escape the eternal inevitability of increase.[36]

On possible rates and periods of increase, he made several calculations. One calculation estimated the period of doubling as being as low as 10 7/10 years. In the same breath that he was making his calculations he was denying that such a rate of increase could ever take place. A population might be able to double in a given locality within such a short period, but such a general rate was impossible.

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[36] Kenneth Smith, op. cit., p. 22.

The Divine Order played a dominant role in Sussmilch's population theories. Population possessed a strong tendency to increase, and this increase was possible only through the workings of the Divine Order in and through mankind. Mankind could replace itself after some disaster only through the workings of supernatural force. He recognized also artificial checks such as polygamy, celibacy, and the absence of soldiers in wars. Agriculture and industry he regarded as the sinews of national life.

The major point of difference between Sussmilch and Malthus was that Sussmilch favored a large population. He looked upon luxury as a form of corruption. A high quantity of people was even preferable to a high standard of living. A man should not breed merely for the sake of breeding, but should do so with his financial situation in mind. The responsibility of the state is to attempt to remedy poor conditions, by solicitude for the subject's welfare and the preservation of his life.[37]

JAMES STEUART

Malthus frequently acknowledged his debt to Sussmilch. The same can be said for Sir James Steuart (1712-1780) whose major contribution to population study is contained in his

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[37] Ibid., p. 24. A detailed study of the work and contributions of Sussmilch is also contained in Strangeland's Pre-Malthusian Doctrines of Population, pp. 213-223.

Principles of Political Economy (1767). He assumed that since animals multiplied in proportion to the amount of food available, the reproduction rate was limited only by the fact that a shortage of food kills off the surplus animals. Man's numbers were increased because he is able to augment the natural supply of food through cultivation of the land. The regenerative power of man pressed relentlessly against the unconquerable limitation of food. Even assuming that an increase in the supply of food could by some means take place, the result would be a similar increase in the numbers of mankind. The result would be to revive the previous imbalance between regenerative capacity and food supply. If, on the other hand, the food supply should diminish, man's regenerative capacity would become less than nothing.

Steuart recognized the ease with which a marriage could be entered into, particularly among the lower classes; but the fact of marriage was no guarantee that a man would be able to support the children that might be born. Then if numbers must always be limited by the amount of food produced, the fertility of the soil and the industry of inhabitants, the most advisable population level is that which is compatible with full employment.

RICHARD PRICE, JOHN HOWLETT, WILLIAM WALES

The point of disagreement between Hume and Wallace had been the relative populousness of ancient and modern nations.

The problem dealt with by Price, Howlett and Wales was whether the population of England and Wales was decreasing or increasing since the Revolution of 1688.

Price's (1723-1791) work that is of most relevance here is his Essay on the Population of England and Wales (1780). His view was that the population of England and Wales had declined since the Revolution by almost a quarter. He made the statement that:

> ... the number of houses in England and Wales was at the Revolution 1,319,295. The number of houses now is not a million. Our people, therefore, since that area have decreased near a quarter.[38]

His conclusion was based upon the number of houses declared in the taxation returns taken in conjunction with the average size of families in many areas. For the country as a whole he concluded that:

> ... these accounts makes the number of houses in England and Wales at 1777 to be 952,734. Let it, however, be stated at a million. Five persons to a house is too large an allowance ... It follows, therefore, that the number of inhabitants in England and Wales must be short of five millions. [39]

The decline in population was attributed to several factors; and he maintained that population would continue to increase until it was checked by moral and physical circum-

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[38]Richard Price An Essay on the Population of England and Wales from the Revolution to the Present, (London: T. Cadwell, 1780), pp. 17-18.

[39]Ibid., p. 14.

stances; when it had reached its limit it would either remain stationary or begin a gradual decline as a result of a wider practice of celibacy, increasing infertility or increasing mortality. Contributing factors working to limit the growth of population included (1) the increased size of the Army and Navy; (2) the constant supply of men needed to keep them up; (3) the three destructive continental wars in which England had been involved; (4) the migration away from England, particularly to the East and West Indies; (5) the engrossing of farms; (6) high prices; (7) a capital city to large for the country;[40] (8) and, above all, the increase of luxury and of public taxes and debts.[41]

Price's essay was an outstanding contribution to the depopulation theory. He was not an original thinker, and most of his ideas were drawn from earlier writers. He was, however, able to state them with greater tenacity and obstinacy, backed by an inflexible pessimism.[42]

The increase of population, stated Price, depended upon

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[40] On the growth of London, Price commented (p. 29) that whereas Paris could not contain a fiftieth of the population of France, London contained one-ninth of the population of England; and though, he believed, 7,000 people moved into the city annually, the population of London did not rise.

[41] Ibid., p. 29.

[42] G. Talbot Griffith, Population Problems of the Age of Malthus, (Cambridge; Cambridge University Press, 1926), p. 136.

healthfulness, the cause of fecundity. He believed that country life was healthier than city life, and as a result the birth rate was higher in the rural than in the urban areas. In his examination of the growth of population in the American colonies he concluded that the increase was possible only because of an absence of disease and generally more healthful living.

Price's works did not make a lasting contribution to population studies. He was too preoccupied with his belief that his own statistical method was absolutely accurate. In his effort to be exact he often made statistical miscalculations, and blundered into pseudo-accuracies, clearly attributable to a too confident reliance upon his own mathematical formula.[43]

Price's essay soon invoked two major replies, one from John Howlett (1731-1800), the second from Wales. The Reverend John Howlett agreed with Price in his general observations but disagreed with him in his conclusions. Price agreed with Wallace that population had decreased since ancient times, but proved that the role of the city in the life of the modern nation had increased, in that cities served as incentives to greater agricultural productivity; the cities needed and used

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[43] His method of "proof" often involved page after page of apparently meaningless statistics. He failed also to give a clear definition of "house": was it a habitable dwelling, or was it merely a building subject to taxation?

the produce of farms. As a result of the increased demand for his produce the incentive of the farmer to cultivate his land would double. Everyone would benefit from an increased supply of farm produce. Without the increase the existence of the city itself would not be possible. In the meantime additional numbers would be employed in transporting the produce to the city. The key to the entire prosperity of the nation, according to Howlett, is involved in the incentive provided by the city for expanded agricultural production.

Howlett's view, then, was that population had increased; but he rejected Price's contentions in detail. Of particular interest is his belief that the engrossing of farms increased the number of parish poor, and was responsible for not only the rise in the Poor Rates, but also for the increase in population.

Howlett did admit that the big cities were prejudicial to population increase. Conditions were not usually healthful, and the inhabitants of cities were more given to wild living and vice. These provided obstacles to marriage and shortened the lives of individuals. He strongly opposed Price's view that:

> ... great towns do more towards obstructing the increase of mankind than all the plagues, famines, and wars. I have often thought of the pity and surprize of the zeal with which Sir William Petty and Mr. Maitland contended, in opposition to some French writers, for the superiority of London to Paris, or any other city in the world. They did not consider that they were maintaining that England had a greater evil in it than any other

kingdom.[44]

Howlett believed that the social evils of cities that affected birth rates were more than offset by the favorable effect on the whole country of urban industry and commerce. Unlike Malthus he believed in the desirability of an increase in population; and, contrary to Price, he believed the population had increased by about one-third since the Revolution, and one-sixth in the previous twenty years.

William Wales (died 1798), entered the picture with his Inquiry Concerning the Present State of the Population of England and Wales. Strangeland dismisses Wales work by saying that it "contributes nothing in regard to general phases of the question".[45]

ADAM SMITH, WILLIAM PALEY AND ARTHUR YOUNG

Several other predecessors of Malthus deserve mention. In their works population theories were given a final shaping that prepared the way for Malthus.

Malthus's debt to Adam Smith (1723-1790) is an indirect one, because Smith did not make a systematic study of the questions of population. Malthus, nevertheless, quoted him in several places. It is not possible to put together from Smith's scattered comments on the subject a definite theory

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[44] Price, op. cit., (Appendix) p. 63.

[45] Strangeland, op. cit., p. 348-349. The author agrees.

of population. In his chapter on the "wages of labor" he gave more attention to the question than at any other place. In this chapter he held to the belief that it was the produce of labor and not money which really made up the wages of labor, and it was through this that labor obtained the means of subsistence. A betterment of the conditions of the lower classes, Smith believed, would be desirable because the nation's welfare ultimately depended upon it. He recognized that

> Poverty, though it no doubt discourages, does not always prevent marriage. It seems even to be favorable to generation. A half-starved Highland woman frequently bears more than twenty children, while a pampered fine lady is often incapable of bearing any, and is generally exhausted by two or three. Bareness, so frequent among women of fashion, is very rare among those of inferior station. Luxury in the fair sex, while it inflames perhaps the passion for enjoyment, seems always to weaken and frequently to destroy altogether, the powers of generation.[46]

But poverty, according to Smith, is a hardship "unfavorable to the rearing of children."[47] He pointed out that although a woman in the Highlands of Scotland may have given birth to as many as twenty children, only one or two may live. The possible rapid increase among the poor is thus offset by an enormous infant mortality. In one place, Smith pointed out, "one half of the children die before they are four years of age; in many places before they are seven; and in almost all

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[46] Adam Smith, An Inquiry into the Nature and Causes of the Wealth of Nations, (London: Methuen and Co., 1904), Bk. I, Ch. VIII, p. 88.

[47] Ibid.,

places before they are nine or ten ..."[48] This high rate of infant mortality was prevalent only among the poor, because the poorer classes could not give their children life preserving care within the reaches of the well-to-do. The incapacity of the poor then was a positive restraint to multiplication.

> Every species of animal naturally multiplies in proportion to the means of their existence, and no species can ever multiply beyond it. But in civilized society it is only among the inferior ranks of people that the scantiness of subsistence can set limits to the further multiplication of the human species; and it can do so in no other way than by destroying a great part of the children which their fruitful marriages produce.[49]

Higher wages increase population. Besides permitting more marriages, they permit parents to support and raise their offspring, and as a result a larger proportion will live. As long as wages advance population continues to grow. If on the other hand, wages suffer a setback, population must suffer and will remain either stationary or will show a decline. In one case the market is overstocked with labor, and in the other, understocked. In either case the price for labor is forced toward an equilibrium point, or to "that proper rate which the circumstances of the society" require. It was doubtful, thought Smith, that the hardships of the

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[48] Ibid., p. 88-89.

[49] Ibid., p. 89.

poor associated with the raising of children, "diminished the useful population of the country.[50]

> It is in this manner that the demand for men, like that for any other commodity, necessarily regulates the production of men; quickens when it goes too slowly, and stops when it advances too fast. It is this demand which regulates and determines the rate of propagation in all the different countries of the world, in North America, in Europe and in China, which renders it rapidly progressive in the first, slow and gradual in the second, and altogether stationary in the last.[51]

Any rise in the price of necessaries would adversely affect the ability of the poor to raise children unless it was offset by a corresponding rise in wages. This would diminish the supply of labor, whether the state of that demand was increasing, decreasing, or stationary. Such a situation would require either an increasing or a decreasing population.

Dr. William Paley (1743-1805), composed the most systematic treatment of population in the last quarter of the eighteenth century. His contribution to population history is contained in his Principles of Moral and Political Philosophy (1785). He believed that an improvement in the condition of the population should be the primary objective of any country, and that a decay in the population was the greatest evil any nation could suffer. He believed that both

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[50] Ibid., Bk. V., Ch. II., p. 402.

[51] Ibid., Bk. I., Ch., VIII., p. 89-90.

animal and human fecundity make possible an indefinite multiplication, and that under favorable conditions, some populations have doubled themselves every twenty years. Mankind had increased to his present number from "a single pair".[52] Certain impediments to growth such as wars, earthquakes, and famines have only a temporary effect, and the damage is "usually repaired in a short time". There is a natural tendency in mankind toward continued increase. The question then, as far as Paley is concerned, is what checks can possibly halt the natural rate of increase. The answer is that population growth will halt when the country can maintain no more, "that is when the inhabitants are already so numerous as to exhaust all the provision which the soil can be made to produce".[53] This check to increase, Paley found to be inoperative.

> Because the number of the people have seldom, in any country, arrived at this limit or even approached to it. The fertility of the ground in temperate regions is capable of being improved by cultivation to an extent which is unknown.[54]

Paley then admitted that population is not only restricted by the amount of food that could be produced, but by what was actually produced. His belief that production could be

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[52] For an excellent discussion of Paley, see Strangeland, op. cit., pp. 344-346.

[53] William Paley, Principles of Moral and Political Philosophy, Bk. 6, Ch. XI, cited in Strangeland, p. 345.

[54] Ibid.

increased almost indefinitely was an admission that population could continue to grow in a similar fashion with little concern for a possible lack of food.

Arthur Young (1741-1820), had quite a bit to say on the subject scattered throughout several works. He objected emphatically to the idea that population was the real test of national prosperity. It was not the numbers of the population that counted but the working population. France presented an example of an over populated country, and he believed this over population resulted from the practice of dividing the land into small holdings. In his Travels in France he stated that:

> Of all the subjects of political economy I know not one that has given rise to such a cloud of errors as that of population. It seems, for some centuries, to have been considered as the only sure test of national prosperity. ... no nation is rich or powerful by mere numbers of people; it is the industrious alone that constitute a nation's strength.[55]

Young believed that France presented a good example of the effects of too little subsistence on a particular population. He believed that the population of France was so far beyond the proportion of her labor and industry that France would be better off with five or six million less people; but as the people had just about reached the lowest level that they could exist and propagate, the "least check

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[55] Arthur Young, Travels in France. In A General Collection of the Best and Most Interesting Voyages to all parts of the World, Vol. IV, pp. 428-433. Cited in Strangeland, p. 341.

to subsistence is attended with great misery". The tendency was for population to increase faster than food supply. His idea here was almost identical with Malthus's ratios, and different from Adam Smith's view that population regulates itself by the demand for labor.

Young's theories may be summarized by saying that they are presented in the form of arguments against irrational increases without the means for caring for all. His general views are similar to those of Malthus, who found in Young's work a great deal of information in developing and proving his "principle".

JOSEPH TOWNSEND

Joseph Townsend (1739-1816), put the case even more strongly against those who were crying for a continued increase in population. His views are contained in A Dissertation on the Poor Laws, published in 1786 and A Journey Through Spain in the Years 1786-1787 published in 1791. In his reprint of Townsend's Dissertation, McCulloch commented as follows:

> The statements given in it, in reference to the Island of Jaun Fernandey, afford as perfect an illustration as can well be imagined of the balance between population and food, and of their influence on each other. They are not so much a forerunner of Malthus's theory as the theory itself. And only required to have been presented in a more detailed and systematic manner to have anticipated the Essay on Population.[56]

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[56] Joseph Townsend, A Dissertation on the Poor Laws. Reference is to McCulloch's Reprint 1859. Cited in Smith, op. cit. p. 28.

Townsend's views on the Poor Laws are clearly Malthusian. He opens his Dissertation with an attack on the Poor Laws, and extols the virtues of hunger as a motive force. Like Malthus, Townsend believed the Poor Laws helped perpetuate the evils they sought to remedy. Wretchedness would increase in proportion to the efforts made to relieve it. In general, only hunger could goad the poor to labor, and he condemned the Poor Laws for saying the poor should never hunger because it provided a further incentive to reproduce.

He believed that it was a law of nature that the poor should be to a certain degree improvident, so there would always be people to fill the more base, sordid and servile offices in the community. Total human happiness was augmented by relieving the upper classes from drudgery, and by freeing them from types of employment that would make them miserable. Everyone then should be left at liberty to pursue the calling that is most suited to his disposition, and most useful to the state.

The Poor Laws were a real source of misery and vice. They served to make poverty more bearable, but also more continuous. Subsistence did not increase as fast as population, and is unable to do so; the problem of the poor then is a problem that will always be present. Poor laws aggravate and increase the evil. His arguments are obviously the source of many of Malthus's ideas.

MONTESQUIEU AND ROUSSEAU

Any survey of pre-Malthusian population theories should take some not of Montesquieu and Rousseau. Rousseau (1712-1778), in his Social Contract noted that there must be a relationship between the territorial extent of the government and the form of government. The Republic, or as he understood it, direct government by the people without the device of elected representatives, would be suitable only for very small countries; very large countries could be ruled only by a despot.[57] The liberty of the individual would suffer as the result of an enlargement of the state.

> Thus, as the subject remains always one, the Sovereign's proportional power increases according to the increased number of citizens. From whence it follows that liberty is diminished by the enlargement of the state.[58]

Rousseau, however, was not foolish enough to discount the role that population played in the power of the state:

> The body Politic may be measured in two different ways: by the extent of its territory, and by the numbers of its people; and there must be a right proportion between both to give true greatness to the state. The

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[57] Maurice Halbwachs, Population and Society: Introduction to Social Morphology, (Glencoe, Illinois: Free Press, 1960), pp. 55-56.

[58] Jean Jacques Rousseau, The Social Contract, (New York: Harper and Row, 1947), Bk. III, Ch. I, p. 52. This translation of The Social Contract is based on an anonymous translation published in London in 1791. It was prepared with the statement that Englishmen should be acquainted with it, because it "had prepared the way for the Revolution".

> men form the State and the land must sustain the men; therefore, the due proportion is that the land should be sufficient to maintain the inhabitants as numerous as the land can support. It is in this right proportion that there is found the Maximum of force in a given number of people; for there can be too large a domain; protection of it is troublesome, the cultivation insufficient, the product superfluous, and it is in time the cause of involving the State in a defensive war. If the proportion of land is too small, the State must depend upon the favors of its neighbors for the additional provision it requires; and this proves in time the cause of an offensive war.[59]

Montesquieu (1689-1755) even before Rousseau, investigated the relationship between geography and the means of procuring subsistence. He dealt with the problem with the intention of determining in what proportion countries were peopled where the inhabitants did not cultivate the earth. He concluded that it would take a large area to support a population of herdsmen because they are dependent upon natural foods alone. The same was true for hunters, and "in order to find the means of life they must constitute a very small nation".[60] "Thus if we take as an example a nation that abounds with forests in which the inhabitants do not know the art of draining off the waters, we will see a petty nation."[61]

GEORGE CHALMERS

The last writer that will be mentioned in this survey of

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[59] Ibid., pp. 275-276.

[60] Baron Montesquieu, The Spirit of the Laws, translated by Thomas Nugent, (New York: Hafner Publishing Company, 1949), Bk. I, Ch. X, p. 275.

[61] Ibid., pp. 275-276.

pre-Malthusian population theories is George Chalmers. His work, An Estimate of Strength of Great Britain During the Present and Four Preceding Reigns, appeared in 1794. The following paragraphs indicate that he was abreast of the most advanced theories on population in his time.

> It is instinct then, which, according to those illustrious authors, is the cause of procreation; but it is food that keeps the population full and accumulates numbers, whether of the fish of the sea, the fowls of the air or beasts of the field, which are yearly produced; we perceive, however the essential consequence of the last, from the vast numbers that annually perish from want.
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> Experience indeed evinces to what an immense extent domestic animals may be multiplied, by providing abundance of food. In the same manner mankind have been found to exist and increase in every condition and in every age according to the standard of their subsistence and the measure of their comforts.[62]

Chalmers, like most of the writers of the latter part of the eighteenth century, may be regarded as a predecessor of Malthus. The major difference in the opinions and theories of these writers consisted in the over-dependence on mathematical formulas by some, and the absence of such expressions in others. Writers disagreed considerably on the dangers of overpopulation. This was not feared if government intervention was considered beneficent. Really superfluous numbers would not be a genuine concern until some time in the future.

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[62] George Chalmers, An Estimate of the Strength of Great Britain during the Present and Four Preceding Reigns, (London: 1794), pp. 1-2. Cited in Strangeland, p. 349.

CHAPTER II

THE PLACE OF MALTHUS IN THE HISTORY OF POPULATION THEORIES

The Essay

Malthus (1766-1834), from the first was not ignored. His failure to take English statistics into account[1] did little to diminish his fame, nor did his sharing the general belief that the population was decreasing. He, along with everyone else, was surprised that the census report in 1801 showed a population of 8,331,434.[2] Therafter his followers attributed to him a prophetic genius.

Malthus contended that:

> ... taking the whole earth ... the human species would increase as the numbers 1, 2, 4, 8, 16, 32, 64, 128, and 256, and subsistence as 1, 2, 3, 4, 5, 6, 7, 8, 9. In two centuries the population would be to the means of subsistence, as 256 to 9; in three centuries as 4,096 to 13 and in two thousand years the difference would be almost incalculable.[3]

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[1] Paul Mantoux, The Industrial Revolution in the Eighteenth Century, (New York: Harper and Row, 1961), p. 342.

[2] The official figures of the population heightened the surprised effect of the Essay, and confirmed what Malthus had said about the increase of population. The Essay backed by the census destroyed the idea that under all circumstances an increase of population was desirable.

[3] T. R. Malthus, An Essay on Population, (Homewood, Illinois: Richard Irwin, 1963), viii.

Blind criticisms of this paragraph have pointed to the shallowness of Malthus's thinking in devising his ratios of increase: Glass points to the impossibility of population growing faster than the means of subsistence, reasoning that "population could not in reality grow faster than the supply of food".[4] Malthus was not so foolish as to fail to realize that. In a famous Study in Malthusianism, Warren S. Thompson pointed out that similar criticisms hardly did the man justice. It was apparent to Thompson that Malthus himself attached little importance to the exact statement of arithmetic and geometric ratios in the relationship between population and the growth of subsistence. It was also evident to Thompson that Malthus was not unaware of the social and economic implications of the population question. Entirely aside from the theoretical rate of population increase.[5]

The question of the ratios was a thorny one. William Godwin, a contemporary, dealt with the question at length. He argued that the rate of increase for population can never be exactly geometric. Bonar points out that this point Malthus would gladly concede, but that America was the exception; and that in order to suppose the population doubling itself in the United States, we would have to regard

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[4]D. V. Glass, Introduction to Malthus, (London: Watts, 1953), p. 27.

[5]Warren S. Thompson, Population: A Study in Malthusianism (New York: Columbia University Press, 1915), p. 12.

it in relation to births, just as would be done for the population of Europe.[6]

Malthus's thinking on population progressed through long years of study and serious contemplation. The first seeds of the Essay were no doubt formed in his mind long before he put pen to paper. At least two contemporary writers in addition to his father were largely responsible for turning Malthus's attention to population. One of these was the Marquis de Condorcet, a French Philosopher, who had written a History of Mankind while hiding in an attic during the French Revolution. It was Condorcet's belief that once man was released from the corrupt rule of the clergy and royalty, inequalities would cease between nations, classes, and men. Pure reason would prevail, and all would be right in the world. In England the other contemporary was William Godwin, who believed in the perfectibility of man, and looked forward with anxious expectation to the day that there would be no war, no strife, and a thirty-minute work day.[7]

Malthus destroyed the vision of a land of promise. He intended to do just that.[8] The immediate occasion for the

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[6]James Bonar, Malthus and His Work (London: MacMillan and Co., 1885), pp. 368-369. William Godwin in Of Population ...Being an Answer to Mr. Malthus's Essay (London: 1820) did not settle the question of ratios.

[7]Ralph Thomlinson, Population Dynamics: Causes and Consequences of World Demographic Change (New York: Random House, 1965), p. 52.

[8]G. Talbot Griffith, Population Problems of the Age of Malthus (Cambridge: Cambridge University Press, 1926), p. 91.

composition of the Essay was a debate with his father in which the elder Malthus defended the views of Godwin and Condorcet on the perfectibility of mankind, which the younger Malthus attacked, partly from conviction, partly for the sake of argument.[9] The discussion between them had in 1797 received a new matter for disagreement. In this year Godwin's book The Enquirer had appeared. Malthus's biographer, Bonar, tells how the son, hard pressed by his brilliant father, had been forced to use arguments he had not thought of before. In calmer moments the son followed his own arguments to their logical conclusions. Malthus describes the occasion for the writing of the essay as follows:

> The discussion started the general question of the future improvement of society, and the author set down his ideas with an intention of merely stating his thought to his friend upon paper in a clearer manner than he thought he could do in conversation.[10]

This is the story of the writing of the Essay in its most simple form. When everyone else in the world was thinking and writing of prosperity, Malthus's view of the future could hardly be described as optimistic. The advocates of reform, in both England and France, were looking forward to peace and equality. Malthus did not see it that way. He saw the insurmountable obstacle of population increase.

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[9]Bonar, op. cit., p. 7-8.

[10]Ibid.

Equality was the forlorn hope of dreamers and philosophers.

Bonar attributes to Malthus the ability to turn the light of political economy on the political fashions of the day.[11] But what seemed to startle the contemporaries of Malthus was not his challenge to perfectibility, but their realization that the Essay was unanswerable. Under the prevalent social conditions the propositions of Malthus were inherently true. Many realized that an island such as England was most vulnerable, should she become engaged in a major European war with only limited means of subsistence.

Malthus did not, nor did he intend to, tell people what they wanted to hear. The optimism of Adam Smith had somehow to be broken. This task was accomplished by Malthus. Godwin condemned Malthus's philosophy in demonic overtones. He wrongly concluded that it was Malthus's intention to prove how pernicious was the error of those who aimed at any considerable and essential improvement in human society.[12] The capacity for geometric growth was there, though it was consistently held back by the preventive checks of vice and misery, or by restraint within marriage.[13]

The checks to population growth were emphasized in later editions of the Essay. The postponement of marriage, if it

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[11] Ibid., p. 5.

[12] William Godwin, Of Population (new York: A. M. Kelly, Bookseller, 1964), p. 616-617.

[13] Glass, op. cit., p. 27.

did not lead to vice was undoubtedly the least evil that could come from the principle of population. This was possibly a correction that was bound to follow careful revision in response to the outcry created by the first edition. Vice and misery as checks to population growth could not have held the field indefinitely, and by introducing in his later writings the element of moral restraint, Malthus was able to re-establish his own position. It is probable that some of the most violent attacks upon Malthusianism are in fact admissions of the existence of that moral restraint. Attacks on this level have proven to be overly prone to attribute to Malthus the advocacy of birth control measures -- a means he would have condemned. It is entirely possible that Malthus held some specific prejudice toward birth control.[14]

On several occasions Malthus attempted to make his position clear. He emphasized that once marriage had been contracted he had no idea of any further check. He not only thought that once the marriage was made children would have to come as they may, but he also condemned the more direct checks that were later to distort the interpretation of his theory through the adoption of the term "Neo-Malthusianism". In a famous answer to the accusation that he advocated birth control checks, Malthus wrote:

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[14]E. F. Penrose, Population Theories and their Application, (Stanford, California: Stanford University, 1934), p. 37.

> I have never adverted to the check suggested by Condorcet without the most marked disapprobation. Indeed I should always particularly reprobate any artificial and unnatural modes of checking population, both on account of their immorality and their tendency to remove a necessary stimulus to industry. If it were possible for each married couple to limit by a wish the number of their children, there is certainly reason to fear that the indolent of the human race would be very greatly increased, and that neither the population of individual counties, nor of the whole world would ever reach its natural and proper extent.[15]

The test of truth for Malthus lies in the writings by him, not in the criticisms of those who followed him and often did not understand him. The validity of the Malthusian doctrine does not suffer by attributing to Malthus the advocacy of checks which are in widespread use today, a position repugnant to his own principles of population. "Birth Control" to Malthus meant only the postponement of marriage. To use the term at all in connection with Malthus only tends to lend further confusion as to what Malthus did or did not stand for.

When Malthus's own statement about his position is taken into consideration, many of the criticisms of the type just noted become meaningless. He simply did not hold many of the views his critics wrote into his doctrine. He says that lack of substance was not the only check in population growth, except in the case of famine. Malthus proceeds then to list the preventive forces he thinks play such an important role.

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[15] Malthus, Essay, 1817, edition. Appendix, p. 393, or p 512 in the (7th) 1872 edition. Cited in Griffith, op. cit., p. 94.

To be sure, he certainly held in the background the idea that preventive forces are called into play only because of the many hardships that would result if the birth rate could ever exhibit the phenomenal rise that it no doubt would in case the full reproductive capacity of mankind be unleashed. There were a number of forces of a preventive kind that Malthus recognized as operating in society to stop the growth of population; and it was the study of these forces along with the potential and actual increase of food which formed the proper study of the population problem.[16] Malthus should be assessed in view of what Joseph Spengler has called his "total population theory".

Thompson's Study in Malthusianism, published in 1915, is considered by this author to be a significant contribution to a rational, impartial investigation of Malthus. In his chapter on "the meaning of Malthusianism"[18] Thompson attempts to clarify the stand of Malthus and to place some of the more bellicose critics in their place. He defends the doctrine of Malthus by showing that the population of any given

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[16]D. E. C. Eversley, Social Theories of Fertility and the Malthusian Debate, (Oxford: Clarendon Press, 1959), p. 255.

[17]Ibid., p. 236. This misrepresentation has come about because Malthus rarely stated his assumptions clearly enough and because he often undid in a footnote what he had taken several chapters to build up.

[18]Thompson, op. cit., pp. 9-19. The following discussion of Malthusianism draws heavily upon Thompson's study.

country by the amount of food it can produce. He points out that this was not one of Malthus's explicit propositions, but he did seem to imply that the populations of several countries were limited by the amount of food that those countries could produce. Malthus was largely correct in his own time, reasons Thompson, and that situation ceased to be true only when rapid and cheap transportation increased the amount of food available to any given population. Thompson dismisses various criticisms of Malthus by saying that these arguments have no direct relation to his main proposition, which stands unharmed.

Thompson then follows up his dismissal of the previous critics of Malthus by offering his own definition of Malthusianism:

> The Malthusian position then really is this: Although at any normal time there is food enough to keep alive all members of the population, yet it is only actual pressure upon subsistence (operating in certain portions of the population) or fear of pressure upon subsistence (which assumes manifold forms) which keeps population from multiplying more rapidly than it actually does.[19]

The author of the present study is in agreement with this definition of Malthusianism. Notable is the "fear of pressure upon subsistence" idea. Here Thompson is making reference to the fluctuations of the birth rate throughout English history, a fluctuation that has depended upon, among other things, the economic status and prospects of the family. It has been high during periods of prosperity such as the twenty years

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[19] Ibid., p. 14.

following the mid-nineteenth century, and has been low during periods of depression, when families already containing one or more children desperately refrained from having an additional one. In these instances, the fear of not being able to provide for a larger family has taken its toll on the potential growth of the British population.

To further clarify the position of Malthus, it would be well to take note of several things that he did not mean. It is clear, first of all, that Malthus did not mean that fear of the want of food was literally the motivating force that kept people from bearing children. It also does not mean that all of any population is in want at any given time. Malthus was aware of the abilities of different people and classes of people to procure food at differing rates, and was well aware of the effects of a maldistribution of food on the sizes of families and on the total population growth.

Thompson defended Malthus and criticized those who refuted Malthus by assuming too rigid arithmetic-geometric ratios by pointing out that Malthus was aware of oscillations in the rate of growth; and that, in fact, he calls attention to them. He devoted considerable time and effort to showing how a population could possibly remain stationary, or even decline, during a given period, and yet increase rapidly at another. He did not, nor could he have presented evidence that any single population that he studied had doubled in any period for which statistics were available to him. Malthus was also aware that the rate and trend of wealth

distribution also had its effect on population growth. Wealth that channeled down to the lower strata would normally relieve that social class of the threat of lack of food and thus raise the birth rate among the poor.[20] On the other hand if newly produced wealth found its way only into the hands of the upper classes, it would have no effect on the relaxing of population pressure on the laboring classes.[21]

Thompson then proceeds to divide Malthusianism into what he believes to be its two major parts, first, that the tendency of labor was to increase more rapidly than the demand for it. This was particularly true among the poorer classes, in which the system of relief perpetuated and further aggravated the evils that it proposed to alleviate, ill administered system, but attributed "still more evil to the ill conception than to the subsequent ill execution of the system".[22] To grant relief was to pour oil on the flames.[23] The second part of his thesis dealt with the tendency of population to increase in proportion to the increase in food. Malthus considered the misery and vice that attended

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[20]This reasoning largely explains Malthus's objection to the Poor Laws.

[21]Thompson, op. cit., p. 15.

[22]J. H. Clapham, An Economic History of Modern Britain, (London: Cambridge University Press, 1959), Vol. I, p. 350.

[23]T. S. Ashton, The Industrial Revolution, (London: Oxford University Press, 1948), p. 4.

the growth of population as proof of his thesis. This would almost inevitably lead him to the remaining part of his thesis. In other words, the conclusion was inevitable that if labor showed an increase faster than the increase in demand for it there would hardly be enough necessities to meet all the needs of the entire population. Thompson contends that it would be a mistake to believe that Malthus looked upon the evils of over population as irremediable. True, there would always be suffering arising from the principle of population, but Thompson condemns criticisms of Malthus that do not take into account the modifications Malthus made in later editions of the Essay. Malthus both broadened and expanded his principle. It is possible that Malthus believed he had discovered some universal truth, though in later editions less emphasis was placed upon the tendencies of the increase of population and the means of subsistence.[24] In his Study in Malthusianism, Thompson quotes the sixth edition extensively to show the modifications of Malthus's views on the evils arising from the principle of population, that they would become proportionately less as civilization progressed.[25]

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[24]Warren S. Thompson and David Lewis, Population Problems, 3rd. ed., (New York: McGraw Hill, 1942), p. 23.

[25]Malthus, Essay, 6th. edition, Vol I, p. 12. cited in Thompson, p. 17:

On the whole therefore, though our prospects respecting the mitigation of the evils arising from the principle of population may not be so bright as we would wish, yet they are far from being entirely dishaartening, and by no means preclude that gradual and progressive improvement in human

The doctrine of Malthus is too often discussed as if it consists of the first essay alone. In this version, his views were decidedly pessimistic, and his basic propositions reflect the pessimism. In the earlier version his statements were as follows:

> 1. That population cannot increase without the means of subsistence, is a proposition so evident that it needs no illustration.
>
> 2. That population does invariably increase where there are the means of subsistence, the history of every people that have ever existed will abundantly prove.
>
> 3. And that the superior power of population cannot be checked without producing misery and vice, the ample portion of these two bitter ingredients in the cup of human life, and the continuance of the physical causes that seem to produce them present too convincing a testimony.[26]

This is in clear contrast to the seventh and last edition of the Essay. Here he stated his thesis as follows:

> 1. Population is necessarily limited by the means of subsistence.
>
> 2. Population invariably increases where the means of subsistence increase, unless prevented by some

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society, which before the late wild speculations on that subject, was the object of rational expectation. To the laws of property and to the apparently narrow principle of self interest which prompts each individual to exert Himself in bettering his condition, we are indebted for the noblest exertions of human genius, for everything that distinguishes the civilized from the savage state. A strict inquiry into the principle of population obliges us to conclude that we shall never be able to throw down the ladder, by which we have risen to this eminence; but by no means proves, that we may not rise higher by the same means.

[26] Ibid., p. 23. Quoting Malthus's Essay, First Edition, London, 1798, pp. 1-2.

powerful and obvious checks.

3. These checks and the checks which repress the superior power of population and keep its effects on a level with the means of subsistence, are all resolvable into moral restraints, vice and misery.[27]

In his first edition Malthus held that man is doomed to endless suffering because he cannot escape the tendency of his own members to exceed the food supply. In the seventh edition that view was largely modified through a combination of maturity and additional research. He took note of the mitigation of the evils arising from population growth, and he saw additional progress in sight. It is only fair that Malthus should be remembered as the author of the last as well as the first edition of his Essay. His earlier extreme doctrine was seriously altered by further study and reflection. Bonar points out that the first edition of the Essay was just written by Malthus in an effort to clarify his own views to his father. In so doing he freely and frankly drew upon several predecessors. The Essay in the strictest sense was not original; Malthus drew many of his phrases and his thoughts from his forerunners. He differs from them in that he was able to see them in their "connection, perspective, and wide bearing".[28] In the works of Franklin, Wallace, Hume,

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[27]Ibid. Taken from Everyman's Library edition, in two volumes, issued by J. M. Dent and Sons, Ltd., London and E. P. Dutton and Co., Inc., New York, 1914. Vol. I, pp. 18-19.

[28]Bonar, op. cit., pp. 32-33.

Steuart, Paley, Smith and others Malthus found information and inspiration.

The geometric ratios found expression in the works of Graunt, Petty, Sussmilch and others. Both positive and preventive checks had been recognized and discussed by most of these writers, but with emphasis placed upon the idea that these restraints could be removed by wise and frugal governments.

Malthus, while on the one hand acknowledging his debt to his predecessors, on the other recognized the statistical impossibilities with which they were faced.[29] He recognized that his Essay did not make any significant contribution to the study of population. He was, however, convinced that his own study was better and more systematic than any of the few predecessors with which he was familiar. Malthus was particularly proud of his own statement of the ratios and of his definition of the positive and preventive checks, but his discussion of neither was any significant advancement over the simple explanations of several other writers. The use of the terms geometrical and arithmetrical was intended more as a literary device than as the statement of a scientific law.[30]

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[29]Charles Emil Strangeland, Pre-Malthusian Doctrines of Population, (New York: Columbia Unviersity Press, 1904), pp. 351-356.

[30]Warren B. Catlin, The Progress of Economics, (New York: Bookman Associates, 1962), p. 266.

Malthus's work was a truly great one, written at a time when the world was convinced that the future offered only progress and peace. It cannot lay any claim to originality, as far as the theories contained in it are concerned. Its success can be seen largely in that it explained more fully and more clearly that population growth was dependent upon subsistence, and that the growth of population is restrained by want, vice, and misery.[31]

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[31] Ibid., p. 356.

CHAPTER III

THE NINETEENTH CENTURY DEBATE ON MALTHUS

Bonar says that from the first Malthus was not ignored. For thirty years his work brought almost countless refutations. The Essay passed in Malthus's lifetime through six editions (1798, 1803, 1806, 1807, 1817, and 1826). Immediately after the initial publication in 1798, Malthus became the center of a raging controversy, and numerous responses were penned, often quite heated. Some supported and many opposed the theory. The book had appeared at a time that was ripe for it; mass poverty was a real problem of the day,[1] and the discussion was carried on in private correspondence, in public journals, and in parliamentary debates. These earlier discussions treated the subject in such depth that little has been added by recent writers. The pros and cons of the case were fully aired. A consideration of the extent and depth of the discussion and the ability of the disputants will bring us to the conclusion that in this controversy we have more than enough material for forming our own opinions on the question under discussion.

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[1]Ralph Thomlinson, Population Dynamics: Causes and Consequences of World Demographic Change, (New York: Random House, 1965) p. 57.

GODWIN

If the Essay owed in part its creation to Malthus's disagreements with Godwin, then against Godwin's philosophy Malthus soon found himself arrayed. Godwin condemns Malthus for foreseeing a world that "would not be worth living in".[2]

He inadvertently acknowledged his debt to Malthus by introducing Of Population, published in 1820, by saying he had remained silent while Malthus's Essay had gone through five editions, but that he could remain silent no longer. In his mind Malthus had struck a foul blow at "something exhilarating and cheerful" in the "old world", and continues:

> We felt that there was room for a generous ambition to unfold itself. If we were under the cloud of the grief of calamity, we had still something to console us. We might estimate our courage with reflections on the nature of man, and support our constancy by recollecting the unlimited power we possess to remedy our evils, and better our condition. We felt, as I said before that we belonged to a world worth living in.[3]

The following paragraph contains the statement that "Mr. Malthus blots all this out with one stroke of his pen." Malthus, then:

> By a statement of six pages, or rather of six lines, he undertakes to show us what a fool the man is who should be idle enough to rejoice in a world such as this ...[4]

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[2]William Goswin, Of Population, (London: Longman, Hurst, Rees, Orsne, and Brown, 1820), p. 619.

[3]Ibid.

[4]Ibid.

Godwin further believes that the main and direct moral lesson of the Essay is a message of passiveness:

> Human creatures may feel that they are unfortunate and unhappy; but it is their wisdom to lie still; and rather bear the ills they have than fly to others they know not of.[5]

Malthus looked upon the criticism of Godwin as "scurrilous" and seemed almost to resent Godwin's questioning of his authorities.[6] Godwin had termed Malthus's proof as being "distinguished for brevity". He then proceeded systematically to dismiss "certain authorities" upon which Malthus "found his expectation of inducing the public to acquiesce in his statement."[7]

Malthus for the most part ignored Godwin's Of Population and regarded it as rhetoric and as the thunder of ignorance. Godwin had given two years to writing it.[8] Publicly the book was a failure. It did not end the population controversy.[9] In a letter to Francis Place Malthus made the following statement regarding Godwin's book.

> "r. Godwin, in his last work has proceeded to the discussion of the principles of population with a degree of ignorance of his subject which is quite

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[5] Ibid., p. 616-617.

[6] Appendix B contains an exchange of letters between Malthus and Godwin. In their old age they corresponded quite frequently.

[7] Ibid., pp. 118-119. Appendix C. contains Godwin's statment on Malthus's authorities.

[8] Bonar, Op. cit., p. 367.

[9] Neither did it bring in the funds Godwin needed so badly.

inconceivable.[10]

As late as 1885 James Bonar upheld Malthus's condemnation of Godwin.[11] But such a judgment is hardly fair to Godwin who never gave up his hope of the perfectibility of mankind.[12] Of Population exhibited considerable analytic power. In spite of Bonar's criticism it should be admitted that Godwin succeeded in making several real contributions.[13] It would be equally simple and equally unjust to treat Malthus in the same way. It would also be unprofitable.[14]

Godwin replied to the criticism of Malthus and lesser informed critics patiently and courteously. It was true that Godwin recognized the principle of population as a major contribution to political economy and to the understanding of society. This principle, though, Godwin argued, denied the possibility of any great amount of progress, and had no relevance to his own proposals.[15]

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[10]Letters of Ricardo to Malthus 1910-1923, edited by James Bonar, (Oxford: Clarendon Press, 1887), note, p. 207.

[11]Bonar, Malthus and His Work, op. cit., pp. 369ff.

[12]It should be noted to the credit of Malthus that when his essay first appeared, Godwin considered its arguments not only convincing, but new.

[13]Joseph Schumpeter, History of Economic Analysis, (New York: Oxford University Press, 1954), note p. 579.

[14]Kenneth Smith, The Malthusian Controversy, (London: Routledge and Kegan Paul, 1951), p. 124.

[15]George Stigler, "The Ricardian Theory of Value and Distribution" in Essays in Economic Thought, edited by Joseph Spengler and William R. Allen. (Chicago: Rand McNally, 1960), p. 411.

Malthus's replies to Godwin were largely restricted to the framework of reference that had been narrowly defined by Godwin's criticisms. Its substance, however, clearly reflected Malthus's ideas on mankind, and the ends of mankind, and his expectations concerning human progress. Malthus made it abundantly clear that while he subscribed to the democratic theory of things, he did not believe that democracy was as easily attainable as did Godwin.[16]

CHARLES HALL

It should be noted that the first book after Malthus's Essay to concern itself directly with the effects of civilization on population growth was Charles Hall's The Effect of Civilization on the People in European States, published in 1805. In it Hall (c.1745-c.1825) stated his belief that the people are divided into two orders, the rich and the poor are by far the more numerous. It is the condition of the poor that Hall regarded as being of greatest social importance. The present state of the poor, Hall represented as being one of squalor and hardships.[17] Responsibility for the state of the poor, said Hall, must ultimately rest with the refinements of society, for the rich bought at the expense

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[16] Ibid., p. 378, Joseph J. Spengler, "Malthus's Total Population Theory: A Restatement and Reappraisal".

[17] Kenneth Smith, op. cit., p. 50.

of the multitude. This is an early socialist work in which the author exhibited such little faith in the possibility of a check to over population that he advocated if necessary the regulation of marriage. It is worth noting at the start that the author was not opposed to progress as such:

> We understand by civilization that manner of living in societies of men, which is opposite to that of those who are called savages ... it consists in the study and knowledge of the sciences, and in the production and enjoyment of the conveniences, elegancies, and luxuries of life.[18]

The last line is an echo of Malthus and an inticipation of Nassau Senior.

THOMAS JARROLD

In the meantime others had seized on Malthus's ideas and had written on the question of population, adding their own conclusions. One such writer was Thomas Jarrold, whose Dissertation on Man, Philosophical, Physiological, and Political appeared in 1806. Jarrold's work represents an ambitious effort to relate mankind to his total environment and to explain the changes man was undergoing. Using his wide experience as a doctor, Jarrold attempted to refute point by point the tenets of Malthusianism. He reasoned that as life

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[18]Charles Hall, The Effects of Civilization on the People in European States, (London: 1805), p. 1, with Appendix: Observation on the principal conclusion in Mr. Malthus' "Essay on Population", cited in D. E. C. Eversley, Social Theories of Fertility and the Malthusian Debate, (Oxford: Clarendon Press, 1959), p. 212.

progressed through several stages, fertility was controlled to an increasing degree. His examination of society led him to the conclusion that several segments of it were free from the Malthusian checks. The outstanding feature of a civilized society is that men exercise their minds, and that affects their fertility.

Jarrold examined the theory first in its short run implications. Malthus, he says does not distinguish between avoidable and unavoidable evils. It is his belief that Malthus realized that common diseases and unwholesome living conditions were beyond the control of mankind, and that war is an involuntary act. By Malthus's reasoning, concludes Jarrold, all deaths are natural deaths. War is necessary because if there were no war there must be misery in some other form. Therefore, those who die by war do so as a result of the workings of a law of nature.

> It would add considerably to the perspicuity of Mr. M's reasoning, if he had made a distinction between the natural tendency to death, implanted in the constitution, and the acceleration of it by wars and other causes.[19]

His theme was found in several other writers of the period. In some of them civilization was pictured as a shorthand term for the forces producing an automatic equilibrium.

Most of the investigators of the immediate post-Malthus period abandoned the physiological approach altogether, but

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[19]Thomas Jarrold, Dissertation on Man, Philosophical and Political, In Answer to Mr. Malthus's Essay on the Principle of Population, (London: 1806), p. 18. Cited in Kenneth Smith, The Malthusian Controversy, p. 59.

some helped prepare the way for Sadler and Spencer. The most outstanding idea of the period was that the human mind was capable of becoming the master of its environment. This observation was intended to overcome Malthus's belief that man's desire to improve his condition was not so strong as his sex instincts.

RICHARD JONES

Richard Jones (1790-1855), was one of Malthus's most bitter opponents. Jones, a "vital person of strong conviction,"[20] early in his first lecture postulated his ideas on population. He contributed the idea of neutral checks, those that were neither vice nor misery nor moral restraint. He held this type of check to be sufficiently powerful to lead him to declare that "population does not outstrip the supply of food."[21]

This state of affairs arises as a result of man's tendency to increase faster than the subsistence available. Man increases in number, and as society becomes more refined the pleasures and gratifications of man become more refined. Jones then proceeds to ask himself:

What is it that prevents the power of increase

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[20]Schumpeter, op. cit., p. 822.

[21]Richard Jones, Literary Remains, Consisting of Lectures and Facts on Political Economy, (London: W. Whervell and Cazenove, 1859), p. 100.

> from pushing all nations to these extremes, what causes are at work to check the full exercise of the mere physical power of the human race to multiply indefinitely, is the chief object of our enquiry.[22]

Jones answered his own question by using the Malthusian classification and adding his neutral causes, that defy classification, but the results of their application were evident. The operation of these neutral restraints rested upon two facts, first, that man possesses the capacity for foresight, and secondly that he possesses secondary wants. In this respect, Jones believes the society of man to be distinguished from the society of animals. The following discussion involves division of man's wants into what Jones considers primary and secondary catagories. The first is limited, and the second is unlimited.[23] The check as regards the primary wants of any nation is fairly fixed, but the wants vary depending on the degree of comfort desired and the social class that is being discussed.[24]

The contribution of Richard Jones consists in the fact that he was able to take the subject of population checks out of the crude controversy about facts that characterized the Malthusian period. The first real steps were taken in Jones toward an explanation of checks that would eventually

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[22] Ibid.

[23] D. E. C. Eversley, Social Theories of Fertility and the Malthusian Debate, (Oxford: Clarendon Press, 1959), p. 96.

[24] Ibid.

be able to free itself of contemporary bias. Malthus, it might be noted, had failed in achieving such a system. The result is that when modern writers on population construct their models, it is done more on the outlines laid down by Richard Jones than those of Malthus.

WILLIAM THOMPSON

William Thompson (1783-1833), the Irish Socialist, penned his Inquiry Into the Principle of the Distribution of Wealth in 1824. He believed that his projected cooperative communities based on an enlightened public opinion would put a check on any reckless growth of population. Want of employment, excess of a miserable population living on mere potatoes, or other unappealing foods, Thompson dismisses:

> Not as causes of the misery of the majority of the community ... but effects of some or other of the ever-varying combinations of expedients, to which insecurity ... gives birth.[25]

He believed that if mankind could "remove these mighty mastersprings of evil," population and food "would find their level and regulate themselves."[26] Malthus was looked upon as being the leader of a "school of political and economical fatalists," who spread alarm when there was no call for it. In Thompson's cooperative communities there would be

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[25]William Thompson, An Inquiry into the Principles of the Distribution of Wealth, (London: Longman, Hurst, Rees, Orme, Brown, and Green, 1824), p. 425.

[26]Ibid.

no population problem because an educated and enlightened public would not permit it. His community would always contain the proper number of people because population:

> Cannot be further increased without lessening actual comforts attended in the opinion of the people with preponderant good; it will then cease to increase; and reproduction will exactly balance the waste of life.[27]

The method in which public opinion would operate Thompson believed to be self evident, and could be conducted on a basis of "confidence and accuracy which they have never before attained."[28]

The state of complete freedom under which individuals lived in the cooperative communities would present a wonderful opportunity for moralistic investigation, because Thompson states that only in a state of freedom can man give full expression to the forces that motivate him, motives "the existence of which his science had hardly suspected," and the efficacy of which has never been tested. Human society has never given them an opportunity for development.[29]

In explaining the reason that educational advantages of cooperative living were not put so "prominently forward here", he states that the major moral improvement would be produced

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[27] Ibid., p. 427.

[28] Ibid.

[29] Ibid.

by the "altered circumstances of the community," not by writing and talking about duties "to induce one line of conduct." Literary education should always be directed toward the younger generation, and even to them would be more prospective, than the other motives, the advantages of which would be immediately reaped.[30] For the general public there would be no charge for tuition of any form of instruction.

An additional advantage arising out of the cooperative communities would be the equality of the sexes. This, says Thompson, "is included in the more extended equality of all the members of the community."[31] The weaker sex have always been the prey of the stronger. Disputes about the possession of property and children would end because property and children are held in common. On the other hand, unmarried women would be at perfect liberty to refuse any connections except those "perfectly equal and voluntary, which might take place within the community itself."[32]

Population would not increase beyond the means of subsistence. History has taught, contrary to Malthus's belief, that numbers tend to increase at a pace faster than food, that "the real facts ...are directly the reverse."[33] The truth is that:

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[30] Ibid., P. 429.

[31] Ibid., p. 431.

[32] Ibid., p. 432.

[33] Ibid., p. 538.

> ... every advance made in the career of industry and comfort, has a tendency to engender habits of prudence, and instead of producing a superfluous population greater in proportion to food and comforts than the previous numbers under a smaller share of industry and comforts; their uniform tendency on the contrary is to produce a lesser proportion.[34]

Thompson recognized that an absolute increase was a natural result of increased industry, but the relative increase diminishes "in proportion to the necessities of life." Thompson's conclusions are that:

1. Increased comforts of life have always produced in every community, permanently enjoying them, increased (instead of diminished) prudence respecting the increase of their numbers.

2. Increased comforts of life permit an absolute increase of population consistently with the exercise of that prudence.

3. Increased comforts of life prevent any relative increase of population, proportioned to food, which would lessen those increased comforts.[35]

In these propositions of Thompson, utopianism found its most refined defense. The adverse effects of the potential growth of population were not only denied, but the increase was used as an advantage for the community. Once the restraints of insecurity were removed free competition could do much to recreate health and happiness. By mere argument among the members of the community a whole host of fears could be shaken off.

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[34] Ibid.

[35] Ibid., p. 539.

Thompson contributed little or nothing to the study of population. The failure of communities similar to the ones he proposed discredited Utopian Socialism. The debate on population continued as disagreement became more and more evident.

MALTHUS AND RICARDO

The debates between Malthus and Ricardo (1772-1823), led to nowhere because, as Ricardo pointed out, they started from different premises. Each gathered about him a group of most loyal followers. The division between the two was fundamental. The Ricardian optimists held to the belief that an increase in numbers was accompanied by not only a positive but a relative growth in productive power. The Malthusians, on the other hand, implied that regardless of the rate at which subsistence increased, population must inevitably surpass it, but that population growth was held back by the struggle for survival which the lack of food engenders.[36] On this point Malthus found strong opposition in Ricardo. In his Principles of Political Economy and Taxation Ricardo devoted an entire chapter to the question of "Malthus on Rent." Ricardo believed the propositions of Malthus to be based too exclusively on the assumption that "population is increased by the previous pro-

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[36]S. E. Finer, The Life and Times of Edwin Chardwick, (London: Methuen and Co., 1952), p. 22.

vision of food."[37] Malthus ignores the many contributing factors that have a bearing on the increase of population. The increase in population must take into consideration not only the supply of food but also "the increase of capital, the consequent demand for labour, and the rise of wages."[38]

Ricardo continues his discussion of Malthus and rent by saying that the increase in population is not a necessary effect of high wages. Here Ricardo was attempting to establish the idea that the projects of labor do not fail because the demand for capital is infinite; only a rise in the price of food could endanger the position of labor. Stated simply, the laborers employed by capital continually reproduce what they consume, and thereby furnish the means of sustaining in increased number of people.[39] Both Malthus and Ricardo, however, did wish to see the laborer postpone his marriage until he could support a family. The praises of Ricardo and Malthus were reserved for the laborer who hesitates before marrying with a minimum income. Ricardo even proposed some form of legislative intervention in an effort to decrease the number of improvident marriages. What the

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[37]David Ricardo, Principles of Political Economy and Taxation, (Homewood: Richard Irwin, 1963), p. 240.

[38]Ibid.

[39]Morton Paglin, Malthus and Lauderdale: The Anti-Ricardian Tradition, (New York: Kelly, 1961), p. 133.

legislature might do, according to Malthus, was to make it mandatory on every clergyman when performing the marriage ceremony to forewarn the young couple that should they bring into the world more children than they can support, they would receive no aid from the parish.[40]

Ricardo had earlier accepted the simple version of the first Essay, in which Malthus argued that wages were always equal to some fixed ("subsistence") level in the long run:

> ... no point is better established than that the supply of labourers will always ultimately be in proportion to the means of supporting them.
>
> ... so great are the delights of domestic society, that in practice it is invariable that an increase of population follows the amended condition of the labourer.[41]

This is the assumption upon which Ricardo's discussion is based, but in his analysis of wages the Malthusian ideas were all but ignored.

> Notwithstanding the tendency of wages to conform to their natural rate, the market way, in an improving society, for an indefinite period, be constantly above it; for no sooner may the impulse, which an increased capital gives to damand for labor be obeyed, then another increase of capital may produce the same effect; and thus, if the increase of capital be gradual and constant, the demand for labour may give a continued stimulus to an increase of people ...
>
> It is not to be understood that the natural price of

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[40]Oswald St. Clair, A Key to Ricardo, (London: Routledge, and Kegan Paul, 1957), p. 113.

[41]Ricardo, op. cit., p. 46.

> labour, estimated even in food and necessaries, is absolutely fixed and constant; it varies at different times in the same country, and very materially differs in different countries.[42]

Ricardo even questioned the arithmetic rate of growth of subsistence:

> It has been calculated, that under favorable circumstances population may be doubled in twenty five years; but under the same favourable circumstances, the whole capital of a country might possibly be doubled in a shorter period.[43]

Ricardo insisted that as between himself and Malthus as to the effect of the interplay of supply and demand on the wages of labor, there is no real difference. The difference between them was merely a difference of words. Ricardo says it was unavailing to insist as Malthus did that the principle of supply and demand was the paramount regulator of the wages of labor, as well as of commodities, not only temporarily, but permanently, but in the same sentence to admit that the costs of production were the necessary condition of the permanent supply. A dispute over definitions clearly forestalled agreement, because "whatever regulates the supply regulates the price," and a little later, in a similar connection, Ricardo pointed out that:

> Because I give different names to Mr. Malthus (terms), he thinks there is real difference between us. In this case I think there is none.[44]

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[42] Ibid., p. 46-47.

[43] Ibid., p. 48.

[44] David Ricardo, Notes on Malthus's Principles of Political Economy, edited with an introduction by J. H. Hollander and T. E. Gregory, (Baltimore: Johns Hopkins Press, 1928),

Writing to Malthus in October, 1817, Ricardo reaffirmed his beliefs in the assumptions upon which the Essay had been based. Ricardo wrote as follows:

> I thought I had written you about the additional material in your excellent work, although I had not given it all the examination I intended. I read it as I was traveling, and noticed the pages wherever I saw the shadow of a difference between us, that I might look at the passages when I got home, and give them my best consideration. I have it now here, and have been writing all the new matter again, and am surprised at the little that I can discover with the utmost ingenuity to differ from. In every part you are exceedingly clear, and time only is wanted to carry conviction to every mind.[45]

In an earlier letter, dated January of 1816, Ricardo expressed himself similarly. In a statement about an edition of Malthus's Essay that he erronously called the first, but which was probably the 1803 edition, he commenced:

> The edition which I have of your work is the first, and it is many years since I read it. The general impression which I retain of the book is excellent. The doctrines appeared so clear and so satisfactorily laid down that they excited an interest in me inferior only to that induced by Adam Smith's celebrated work.[46]

The last sentence of the last letter from Ricardo to Malthus was a fitting conclusion to what became a close friendship in the old ages of the two men.

> And now, my dear Malthus, I have done. Like other disputants, after much discussion, we each retain our own opinions. These discussions, however, never

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[45]Letter from Ricardo to Malthus Oct., 1817 cited in William Empson, "Life, Writings, and Character of Mr. Malthus", an Essay contained in Occasional Papers of T. R. Malthus, edited by Bernard Semmel, (New York: Burt Franklin, 1963), p.257.

[46]Ibid.

> influences our friendship; I should not like you more than I do if you agreed in opinion with me.[47]

Such statements are representative of Ricardo's personal veneration of Malthus. Only on afew occasions did the correspondence wander into diatribes on the persons of the disputants. The friendship was a consolation to both as one by one the life long friends of both died.

WILLIAM FARR

The office of Registrar General was created by the Whigs in 1837. The office was given to Thomas Lister, with William Farr attached to the office as secretary. Lister had proven to be an extremely good Whig, as he was the brother-in-law of not only Lord Clarendon but also of Lord John Russell himself. Lister was described by his contemporary, Edwin Chadwick, as caring nothing for the office and as not being fitted for it. All the work of the office was done by William Farr, a young doctor who had been appointed through the influence of Chadwick.

The reports of the Registrar General were prefaced by discussions by Farr on a number of subjects. One of his concerns involved the Poor Laws, population and Malthus. In his mind the most significant fact about Malthus's writing was its being so wrong. His objections to Malthus were directed against not only Malthus's assumptions but against his ratios.

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[47] Ibid., p. 261.

Farr makes the statement that the "population a country sustains does not depend exclusively on the amount of subsistence existing at any one time."[48] Rather the "produce of a country is limited by the character of the inhabitants."[49] Both People and produce vary with the industry of the people.

He cannot agree with Malthus that any decrease in population would result in a larger share of wealth falling to the survivors. "In 1800, a crop failure was followed by a famine." although the population of England then was, as Farr points out, only one-half what it was when he was writing. On the other hand, it cannot be assumed that an increase in population will result in a diminishing share of wealth being allotted each person. This Farr illustrates by pointing out that the share of produce of every kind that falls to a family in the most populous states in the United States, even though he might be living in an area in which there was less than one person for each square mile of land.[50]

In a backward civilization population is rarely limited by the means of subsistence, but is limited by the skill, industry and knowledge of the population. Any improvement in the bow or other means of obtaining food is followed by an

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[48]William Farr, Vital Statistics, [A Memorial Volume of Selections from the Reports and Writings of William Farr] (London: Offices of the Sanitary Institute, 1885), p. 14.

[49]Ibid.

[50]Ibid., pp. 14-15.

increase in numbers. Any deterioration in the courage and running of the tribe is followed by a corresponding decrease in numbers. Farr concludes by saying that the real limitation to population growth was the character of the people.[51]

Farr conceded that there could be population problems arising from a maldistribution of people, or from "accidents of position and time". Population could be out of place where it was wanted but the "population of the world is not, as Malthus assumes, redundant". Nor does Farr foresee a time when the world will be over-populated because there was a "super-abundance" of men of skill in all countries. The contributions of these brilliant men to technological advances means that not only can subsistence inrease as rapidly as, but even more rapidly, than population.

Farr rejected Malthus's assumption that subsistence increased at some arithmetical progression by pointing out that the value of property of England has never been valued at any given intervals. Farr assumes that when terms of years are considered, at a geometrical progression, and at compound interest the increase in capital would be much more rapid than any increase in population. The produce of Great Britain was always convertible into subsistence, and had increased more rapidly than the population.[52]

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[51] Ibid., p. 15.

[52] Ibid.

Farr believed the New Poor Laws to be a natural corollary of the Malthusian Doctrine. The Poor Law Commissioners had leaned heavily on the Malthusian Doctrine in declaring that no child born of any marriage taking place after a given date should ever be entitled to parish assistance. In the Report was the following statement:

> If (he continued, paraphrasing the Malthusians) by refusing outdoor relief, or driving able bodied paupers by any other means to seek their own subsistence and compete in the labour market; since the labour market is already full, what other effect can the competition have than to depress much more the condition of the independent labouring class? By good fortune the power was obtained; wages did not fall but increased.[53]

Farr had no doubt that under the principle of less eligibility the productivity of labor could increase. Malthus had argued that the Poor Laws were harmful becuase they increased the pressure of population. Chadwick, in agreement with Farr, felt that this was all theory and was not founded on statistical proofs. It was not a fact. While the Poor Laws might be harmful, they were harmful not because of the principle upon which they were based, but because of the way they were administered.[54]

For Chadwick and Farr the idea that improvements could be made in the condition of mankind was so basic that both rebelled against Malthus's pessimism. They argued that there was no reason that wages could not increase indefinitely or

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[53] Poor Law Report, p. 227, cited in Finer, op. cit., p. 58.

[54] Ibid., pp. 44-45.

why subsistence should not outrun population. The effects of the Poor Laws had been to decrease the productivity of labor by making it possible for pauper labor, subsidized from the rates, to compete with the free laborers. The good conduct, skill, and diligence of free laborers then have little value.

MARX, ENGELS, AND COMMUNIST DOCTRINES OF POPULATION

Marx (1818-1883), did not formulate a systematic doctrine of population. His views on the subject were incidental to his conviction that communism was the only means by which man's problems could be solved. The total social impact of the communist doctrine rested upon its being a cure all for all the evils of mankind, regardless of how slowly or how rapidly population might grow.

Marx himself believed his own views on population to be opposite those of Malthus, but gave little evidence of even being familiar with Malthus. An examination of Marx's views on population leads to the conclusion that Marx spent little time studying Malthus. It is doubtful that he ever read the Essay in its entirety in any one edition. He was unaware of the modifications that Malthus had made in his views on Population as the Essay passed through six editions in his own lifetime.

If there existed a tendency for population to increase more rapidly than subsistence it was not because of any lack of food, but because of evils inherent in the capitalistic system, evils which would disappear once the last vestiges of

exploitation of the proletariat by his bourgeois masters had been destroyed in a revolution of the working classes. Marx believed capitalism to be responsible for the poverty that kept the working classes in check. There was no such thing as overpopulation. Rather, what might appear as "overpopulation" was merely a surplus laboring population called into existence by the capitalistic system. Under these circumstances the laboring force is faced with the threat of unemployment, and is thus more easily exploited.

Malthus irked Marx by insisting that misery and vice was unavoidable. Biological causation simply resulted in too many people. Neither could Marx accept Malthus's objections to the Poor Laws and other welfare legislation. In Marx's view Malthus was an apologist for the exploiting classes and an oppressor of the underprivileged.[55]

Frederick Engels (1820-1895), was in full agreement. He referred to the Malthusian doctrine and "the New Poor Law to which it gave rise" as the "most flagrant warlike aggression of the middle classes against the workers."[56]

It was not surprising to Engels that such a harsh doctrine should be held by the English middle classes. By accepting the teachings of Malthus, says Engels, the ruling

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[56]Frederick Engles, Condition of the Working Class in England, Translated and edited by W. O. Henderson and W. H. Chaloner (Oxford: Basil Blackwell, 1958), p. 320

[57]Ibid., p. 321.

class "can cheerfully stand on one side and ignore the whole problem of poverty."[57] It was easy to solve the problem of pauperism if no attempt was made to turn the surplus population into useful members of society. This is assuming that the poor have no objection to dying of starvation.

Engels believed the workings of the old Poor Law to be bad enough, but the Malthusianism of the new Poor Law made it worse still. The Poor Law of 1834 came about when Malthus and other supporters of free competition were convinced that the:

> best thing to do is carry the laissez faire doctrine to its logical conclusion and leave everybody to his own divices.[58]

This, however, proved to be a more barbaric policy than laissez faire, because it was an active policy and laissez faire was a passive one.

One can understand Marx's and Engel's sincerity in blaming the bourgeous with all the evils of the world, and as the source of poverty, but it is not so easy to understand why Marx, when dealing with Malthus, should confine his criticism to personal ridicule. Perhaps in this form of ridicule we find in Marx a confession that Malthus's arguments cannot be disposed of by an appeal to history and to historical facts.

Marx's position, however, made a refutation of Malthus

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[57] Ibid. p. 321

[58] Ibid.

necessary and he chose the route of least resistance. An example of this type of criticism is Marx's accusation of plagiarism, and his dismissal of Malthus's Essay as being primarily a transcription from Steuart and others.[59]

Neither Marx nor Engels was familiar with what Malthus actually said.[60] Marx, after his at best superficial examination, could see little of value in Malthus. Every system of production known to history had its own valid law of population. Malthus neither added to nor subtracted from the law of population peculiar to the capitalistic mode of production. Malthus's historical and analytical approach contained little of value on population.

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[59]Karl Marx, Capital: A Critique of Political Economy, Translated from the Fourth German Edition by Eden and Cedar Paul, (New York: International Publishers, 1929), note 3, p. 675-676: "If the reader reminds me of Malthus, whose "Essay on Population" appeared in 1798, I remind him that this work in its first form is nothing more than a schoolboyish, superficial plafiary (sic) of De Foe, Sir James Steuart, Townsend, Wallace, etc., and does not contain a single sentence thought out by himself. The great sensation this pamphlet caused, was solely due to party interest; the French Revolution had found passionate defenders in the United Kingdom; the "principle of Population," slowly worked out in the eighteenth century, and then in the midst of a great social crisis, proclaimed with drums and trumpets as the infallible antidote to the teachings of Condorcet, etc., was greeted with jubilance by the English oligarthy as the great destroyer of all hankering after human development. Malthus, hugely astonished at his own success, gave himself to stuffing into his book materials superficially compiled and adding to it new matter, not discovered, but annexed by him."

[60]Both were guilty of misquoting Malthus on several occasions. See Condition of the Working class, p. 321.

In a capitalistic system it was the working class that not only effects the accumulation of capital, but is also the means by which labor becomes superfluous, and this it does to an ever increasing extent. This was, in Marx's view, the real law of population in the undustrial society that he was examining. This same law would not be valid if applied to some other system of production. Population and laws of population were relative to productive systems,

Marx here was attempting to demonstrate the hopelessness of the position of labor. True, the laboring man might be the source of all wealth, but he had no share in it. Marx was intelligent enough to realize that his own position would be weakened if he admitted even the possibility of the adoption of healthful habits by the working population. This seems largely to account for Marx's personal attacks on Malthus, attacks which no doubt accomplished a destruction of Malthusianism for the more loyal followers of Marx.

Marx rants and raves about parsons, considering this an adequate refutation of Malthusianism. Marx, in an effort to destroy Malthus in the Heart of the Malthus's camp, considered personal villification adequate to the task.

Lenin joined Marx in rejecting Malthus. His statement was that "the main task is to draw women into socially productive labor, extricate them from domestic labor."[61]

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[61]V. I. Lenin, Women and Society, (New York: International Publishers, 1938), p. 14.

Following Lenin, communist writings on population became a little more objective. Lubyn-Gertsky and other communist writers of the 1920's were able to discuss population with some degree of objectivity. 1935 and 1936 witnessed the appearance of two books by Smulevich denouncing the bourgeois population theories, especially the theories of Malthus. As late as 1959, he claimed that "the problem of population and public health is fully resolved only in a socialist state." He further pointed out the "insolubility of population and public health problems with the frame work of capitalism.[62]

The position of the Soviet Union on birth control was made clear in 1947 by a speech delivered by the Soviet delegate, Mr. Rabichko, who said that:

> We consider any proportion formulated by this commission in favor of limiting marriages or births in wedlock as barbarous. Overpopulation is only a fruit of capitalism; an adequate social regime (socialist being understood), can meet any increase in population. It is the economy which should be adapted to the population and not vice versa.[63]

The twentieth century communist denunciation of poverty

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[62]B. Y. Smulevich, A Critique of Bourgeoisie Theories and Population Policy, (Moscow: Publishing House of Socioeconomic Literature, 1959); quotations from G. A. Kulov, translated by R. A. Feldmesser in Sociological Abstracts, IV, No. 2 (April, 1961), 152.

[63]Quoted in Alfred Sauvey, Fertility and Survival: Population Problems from Malthus to Mao-Tse-Tung, (New York: Criterion Books Inc., 1961) , pp. 201-202.

as arising from the capitalistic system follows the outline designed by Marx, i. e., that there will never be a population problem in a communist state. It follows then that the communist stand on population theory has not changed a great deal since Marx. Communists still cling to the belief that poverty is inevitable under capitalism, and that the only solution is the establishment of a communist state.[64]

CHARLES DARWIN

In his Origin of the Species Darwin (1809-1882) acknowledged his indebtedness to Malthus. The struggle for survival was Malthusian, a struggle that inevitably results from the high rate with which all organic matter has a tendency to reproduce. But more individuals are produced than can possibly survive, and a struggle for survival must result, either between individuals of the same species or between two distinct species.

> It is the doctrine of Malthus applied with manifold force to the whole animal and vegetable kingdoms; for in this case there can be no artificial increase of food, and no prudential restraint from marriage.[65]

At any given time any given specie of animal may be reproducing at a rate faster than subsistence during the same period. The total population of any species is limited by

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[64]Warren S. Thompson and David Lewis, Population Problems, 5th. ed., (New York: McGraw-Hill, 1963), p. 50.

[65]Charles Darwin, On the Origin of the Species, (Cambridge Mass.: Harvard University Press, 1964), p. 63.

the harsh realities of life. The world simply would not hold them. Malthus, agreed Darwin, was quite right. Vice and misery did limit total numbers. The doctrine of Darwin was the Essay of Malthus applied in most cases with tenfold force.[66]

Although legend often attributes to Malthus the origin of the phrase, "struggle for existence," its origin remains dubious. Darwin made no mention of finding it in Malthus. He did comment; however, after reading Malthus's Essay, in October, 1838, that

> being well prepared to appreciate the struggle for existence which everywhere goes on from long-continued observation of the habits of animals and plants, it at once struck me that under these circumstances favorable variations would tend to be preserved, and unfavorable ones to be destroyed.[67]

This struggle for survival concept was a natural corollary of Darwin's literal acceptance of Malthus's ratios. And his work was Malthusian in method and manner of thought.

That he began with the Malthusian ratio is more important for the question of the success of Darwin's theory than its validity. It was of paramount significance. The function of selectivity in Darwinanism was to determine the quantity of living beings that could survive in a given set of objective

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[66]Marston Bates and Philip S. Humphrey, The Darwin Reader, (New York: Scribner, 1956), p. 101.

[67]Ibid., p. 23.

circumstances.[68]

In Darwin's philosophy, a struggle for existence follows from the rapid rate at which population increases. Every individual that produces several eggs during his lifetime must suffer destruction during some period of his life. Thus, as more individuals are produced than can be supported by food available, a harsh war for the necessaries of subsistence develops. Here Malthus's doctrine found its savior, and Darwin is to a degree responsible for the continued popularity of Malthusianism into the last half of the century. In Darwin there can be no artificial increase of food, and no restraint from marriage, and those that survive are well fitted to live until the next wave of population growth renews the struggle for survival.

There were no species exempted from the struggle for survival, as all possessed the capacity for rapid multiplication. All animals without exception will increase to the point at which there is a lack of the type of subsistence upon which that animal feeds. Unless that specie is able to modify the type of food it consumes to the different circumstances, it is either doomed to extinction or must become preditory to satisfy its needs.

Evidence on this count was not difficult to gather.

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[68]Bentley Glass, Oswei, Temkin, and William Straus, Jr. Forerunners of Darwin, 1745-1859, (Baltimore: John Hopkins Press, 1959), pp. 287-288.

There were numerous instances of astonishingly rapid increases when circumstances favorable to increase remained constant through several seasons.

The Malthusianism in Darwin is quite evident. Malthus was popular, and proved to be a powerful ally for Darwin. The role of Malthus in shaping Darwin's thoughts was to act as one of several catalysts giving final shape to the Darwinian thesis. The mathematical aspect of Malthus never ceased to fascinate Darwin.[69]

SADLER, DOUBLEDAY, AND SPENCER

Sadler's theory was published during Malthus's lifetime.[70] Sadler was an English social reformer and believed that the natural law of population was exactly opposite that of Malthus. He insisted that the rate of population growth would decrease as population grew more dense, and that population would somehow quit growing just as population reached the point at which members of society could enjoy the greatest happiness, provided all other things remained equal.[71] Sadler, in Ireland: Its Evils and Their Remedies, made the following statement:

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[69]Loren Eiseley, Darwin's Century, (New York: Doubleday, 1958), p. 182.

[70]Warren S. Thompson, Population Problems, (New York: McGraw-Hill, 1942), Third Edition, p. 32.

[71]Thompson and Lewis, op. cit., p. 38.

> The principle of human increase thus obtained may be briefly enunciated and is simply this: The fecundity of human beings is, ceteris paribus, in the reverse ratio of the condensation of their numbers; and still in direct condensation to the theory now maintained (Malthus's), the variation in that fecundity is effectuated not by the wretchedness and misery but by the happiness and prosperity of the species.[72]

Just as Malthus thought he had discovered a natural law of population, so did Sadler believe that he had discovered a law of population growth that would reaffirm his belief in the rapid perfectibility of the lot of mankind. He says:

> The law of population by which the increase of mankind has been and still is, regulated, is simply this: The fecundity of human beings under similar circumstances, varies inversely as their numbers in a given space.[73]

Warren S. Thompson sharply criticizes Sadler's theory.[74] Sadler's law did not take into consideration all the known facts about population. Neither did Sadler clearly distinguish between "fecundity" and "principle" of increase. Malthus had shown how a population could be fecund and yet show little or no increase, as a result of a high death rate. At times Sadler, as Thompson points out, almost used the term as modern writers on Population use it. Since Sadler was interested in proving that man's happiness was not diminished

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[72] Michael Thomas Sadler, Ireland: Its Evils and Their Remedies, 2nd. ed., (London: John Murray, 1829), pp. xviii-xix.

[73] Ibid., p. xxviii.

[74] Thompson., op. cit., p. 33; also Thompson and Lewis, op. cit., p. 39.

by population growth, he held to the belief that man's fecundity decreased as the density of population rose. When he makes the statement that variation in fecundity is "effectuated", not by wretchedness and misery but by happiness and prosperity, his definition of the terms is not quite clear. He was either using fecundity to mean the actual reproduction, or fertility. Since he saw no difference between fertility and fecundity, Sadler's ideas on population clearly lacked the perception and analytical preciseness of Malthus.

Thompson continues his criticism of Sadler by pointing out that a population can have a high fecundity with low fertility, but cannot have high fertility without a correspondingly high fecundity. On this point Sadler lacks clarity. He seemed to assume that there were no antagonism between man's capacity to produce high numbers and his ability to produce large amounts of subsistence for all and any children that might be born. There was no evidence on the declining English fertility that would lead him to the belief that there was a similar decline in the capacity to produce.

A similar theory was that held by Thomas Doubleday, an English economist and social philosopher. He wrote about twenty years after Sadler and thought he had discovered a different law upon which the growth of population operated. Sadler had believed that as population grew more dense, the fertility declined, and by this reasoning eliminated the influence of positive checks to the growth of population.

It was held by Doubleday that man's numbers could not escape its ties with the food supply. The better the food supply, the slower was the increase in numbers.

> The great general law, which, as it seems, really regulates the increase or decrease of animal life, is this, that whenever a species or genus is endangered a corresponding effort is invariably made by nature for its preservation and continuance, by an increase of fecundity or fertility; and that this especially takes place whenever such danger arises from a diminution of proper nourishment or food, so that consequently the state of depletion, or the deplethoric state, is favorable to fertility, and that on the other hand, the plethoric, or state of replention, is unfavorable to fertility, in the ratio of the intensity of each state, and this probably, throughout nature universally, in the vegetable as well as the animal world.[75]

This principle applied universally throughout the animal and vegetable kingdom would result in a most rapid increase among those that were worse supplied with food, in short, the poor.[76]

Among the most affluent there would be a steady decline in the total number of children born, and in the middle classes, population has a tendency to remain stationary. Upon the increase or decrease in the population of these three groups depends the increase in the total population.[77]

If on the other hand, the increase among the poor was rapid enough to offset the decline among the upper classes, population would still remain stationary. It follows then

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[75]Thomas Doubleday, The True Law of Population Shown to be Connected with Food of the People, (London: George Pierce, 1847), pp. 5-7.

[76]Ibid.

[77]Ibid.

that a nation given to luxury will have a tendency to decrease in population, and the decline in population will result in a deterioration of the power and prestige of the country. In poorly fed countries population will increase in ratio to the population. This is the real law of population growth.[78]

Doubleday's theory needs little comment. It is not supported by the statistics of population growth. He seems to indicate that people who possess the highest rate of fecundity will always be those who must suffer most. Here too, reappears Sadler's confusion over terms. Neither he nor Doubleday could distinguish between the actual increase of mankind and his capacity to do so. The theories of Doublday and Sadler suffer as a result of their failure to make this distinction.

Spencer (1820-1903), too, searching for a natural law theory of population foresaw the disappearance of population pressure and its evils. His theory was contained in his biological writings, which made up a large portion of his Synthetic Philosophy. Spencer's law of population did not differ greatly from either Doubleday's or Sadler's. When population growth has completely eliminated all the evils that accompany it, the result will be "a state of things requiring from each individual no more than a normal and

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[78] Ibid.

[79] Herbert Spencer, The Principles of Biology, Vol. 2, (New York: D. Appleton and Co., 1867-68), pp. 485-486)

pleasurable activity."[80]

This end would be achieved by a weakening of man's reproductive instincts. This would make it possible for mankind to devote more effort to personal and scientific development.

There was in nature a conflict between individuation and genesis. Then the stronger any person attempts to advance himself personally, the weaker he will be in production. As personal endeavors continued to take up more time, the reproductive rate would naturally fall. This Spencer held to be a well proven fact of population growth.

The only comment that is needed is that there is no proven basis for the belief that either density of population, protein in the diet, or calorie intake, has any appreciable influence on fecundity. Neither Doubleday nor Sadler had statistical proof for his theories. It is known now that urban areas usually have lower rates of fertility than country areas. But this is entirely different from the process described by Sadler and Doubleday. In the twentieth century, the number of live births has been seriously affected by contraception and other influences while fecundity has remained, so far as we know, unchanged.[81]

JOHN STUART MILL

John Stuart Mill (1806-1873), might well be described as

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[80] Ibid., p. 506.

[81] Thompson and Lewis, op. cit., p. 40.

a Malthusian with qualifications. He agreed with Malthus on many points but differed with him on the questions of birth control and the effect of poverty on fertility. This point Mill carried to the extreme, and he was one of the early leaders of the family planning movement. In his Principles of Political Economy (1848) Mill related population increase to the question of production. He recognized three factors of production, land, labor, and capital, and that population phenomena underlay the supply of labor and, in an indirect way, the availability of land.[82]

Graham, writing on the social problem, attributes to Mill an acceptance of the Malthusian doctrine and says that Mill makes it "the central position round which the whole social problem turns."[83] Mill, says Graham, refutes in detail, the "various projects for improving the labourers condition, which evade or ignore the theory of Malthus".[84] Mill decided, as Malthus did, that there was little or no hope for the laboring classes.

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[82]Thomlinson, op. cit., p. 61. Mill, of course, was greatly influenced by the Utilitarians, whose ideas rested upon the teachings of Jeremy Bentham. This paper, for lack of space, and in order to include the major writers directly concerned with the population problem, will omit here any consideration of Bentham's views.

[83]William Graham, The Social Problem, (London: Kegan Paul, Trench and Co., 1886), p. 54.

[84]Ibid.

Mill believed that the trials and tribulations of mankind arise from the powers of increase inherent in man. But Mill also believed that the Essay of Malthus had firmly established what Mill believed was a self-evident truth, but a truth that was not yet universally accepted.[85]

The power of infinite increase was inherent in all organic matter. There was no specie exempted from the potentially rapid increase, but the rate at which the population of each species increases varies from specie to specie, and at different times for the same specie. He says that "the capacity of increase is necessarily in a geometrical progression: the numerical ratio alone is different."[86]

The human specie was no exception. Mankind's power to increase was infinite, and the actual multiplication would be rapid if the power of increase were ever exercised to the utmost.[87] The power of reproduction is never exercised to its fullest, and population usually remains in bounds.[88] If the increase of mankind ever proceeded like the animals, the the only check would be that the "births would be as numerous as the physical constitution of the species admitted of, and

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[85]John Stuart Mill, Principles of Political Economy, (London: Longman, Green and Co., 1909), p. 156.

[86]Ibid.

[87]Ibid., p. 157.

[88]Ibid.

the population would be kept down by deaths."[89]

In a footnote to the first quotation, Mill points out that Malthus was of the belief that population was not limited by any given increase in the total supply of potatoes or any other food produced, but was limited by the limited amount of land upon which food could be produced. As long as the supply of land was unlimited population could continue to grow as it pleased, but at some point in the growth of population, the supply of land relative to it, must decline. At that point the likelihood that the rapid increase will continue ceases.

As long as man lived in a barbaric state there was little concern (or little reason for it) over a population growth. The continued growth of the numbers of mankind, in an industrial society, however, makes limitation imperative.[90]

From this point Mill wanders into a criticism of writers who attack "any incidental position of Malthus," pretending thereby to refute the principle of population. As an example, he remarked that many had achieved an "easy victory" in attempting to attribute to Malthus an uncompromising defense of his ratios. Mill says that any candid reader "knows that Mr. Malthus laid no stress upon this unlucky attempt to give numerical precision to things that do not admit of it..."[91]

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[89] Ibid., p. 158.

[90] Ibid., p. 358.

[91] Ibid., p. 359.

Mill goes on to say that Malthus's ratios were "superfluous to his argument." Some writers had used the phrase that it is the tendency of population to increase faster than the means of subsistence. This was true, Mill admitted, but it did not go far enough because these checks act with different force at different times and under different circumstances.[92]

With this realization it was not difficult for the critics of Malthus to conclude that populations are usually gaining in the amount of subsistence available, and as subsistence increases the poverty of the people decreases. Under Mill's interpretation it was argued that the reverse was the truth:

> That as civilization advances, the prudential check tends to become stronger, and population to slacken its rate of increase, relatively to subsistence.[93]

Mill said that it was an error to insist that the population of any given community was increasing faster than the means of subsistence. He critizes the writers on Malthus for using the word tendency in a sense in which Malthus did not use it. Mill conceded that pressure upon subsistence might diminish if the lower classes were enlightened and educated toward family limitation. Traces of any such

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[92] Ibid.

[93] Ibid.

enlightenment Mill believed to be at best faint; and he states that, in his opinion the rapid growth of population was out of all proportion to the prevailing wage-fund, and the result was a depressing effect on wages.[94]

If, then, there is poverty it is because there are too many people being born. If the total number of people brought into the world could somehow be reduced, pressure upon subsistence would no doubt diminish. In this interpretation of Malthus, Mill varied not an inch from Malthus. Before Malthus it was assumed (says Mill):

> that in the natural and normal state of human affairs population must constantly increase, from which it followed that a constant increase of the means of support was essential to the physical comfort of the mass of mankind.[95]

Under the influence of the idea of inevitability and desirability of population increase, little advance could be made in population theory. It is the appearance of Malthus's Essay from which "better views on this subject" may be dated. Mill further believed that, once the errors and shortcomings of the first edition are recognized, it would not be difficult to see that few writers had done more than Malthus in his later editions to promote more valid arguments relating to population growth and its social consequences.[96]

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[94] Ibid.

[95] Ibid., p. 747.

[96] Ibid.

HENRY GEORGE

The fame of Henry George (1839-1897), spread through his advocacy of the "single tax." It was his belief that if the government took in money that the people ordinarily paid in "rent" there would be no need for any other tax. He further believed that were the rights of landlords in respect to property not so rigidly enforced that property would soon fall into the hands of people better suited to make use of it. Land would, as a result, produce a larger yield, and this increased production would eliminate any fear of overpopulation. His proposal was clearly a "cure all" and the position he took made it necessary for him to deny the proposition that there was any antagonism between man's natural tendency to increase and his ability to produce food for his growing numbers.[97]

Any overpopulation that might arise, then, was not the result of man's inability to produce enough food, but the inequities of land distribution, which made the most efficient production impossible.

His Progress and Poverty appeared in 1881. He was convinced that Malthus was wrong and attributed the entire population problem to a lack of access to land. He refuted Malthus by saying:

I go to the heart of the matter in saying that there

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[97]Thompson and Lewis, op. cit., pp. 44-45.

> is no warrant, either in experience or analogy, for the assumption that there is any tendency in population to increase faster than subsistence.[98]

Populations pressing upon subsistence were prevented by the "physical fact that no more people can exist than can find subsistence". Hence, he says Malthus's conclusion is that population growth must be held back either by moral restraint or by any one or more causes that increase mortality. Malthus, says George, styles as preventive those actions that prevent propagation.

George cannot see any fear of population:

> The fact is, there is no more reason for us to trouble ourselves about the pressure of population upon subsistence than there was for Adam to worry himself about the growth of his baby.[99]

George's own statement of the law of population was that the tendency to increase was strongest in instances in which an increase in population would result in increased comfort for the population, and "where the perpetuity of the race is threatened by the morality induced by the adverse conditions," but is weakest at the point at which the highest development of the individual is possible and the perpetuity of the race is assured. The law of population growth, in other words, was subordinate to the process of intellectual development,

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[98]Henry George, Progress and Poverty, (New York: Doubleday, Doran and Co., 1928), p. 103.

[99]Ibid., pp. 137-138.

and the danger that individuals may be brought into a world that cannot provide for them is not a problem of nature but a problem of social maladjustment.[100]

Poverty, therefore, was not due to overpopulation. This conclusion, George feels, may have been wrongly reached in an effort to resolve the contradiction that it is among the most advanced societies that the greatest poverty existed. The Malthusian theory could not resolve this enigma because:

> That theory is utterly inconsistent with all the facts. It is really a gratuitous attribution to the laws of God of results, which even from this examination, we may infer really spring from the mal-adjustments of men.[101]

Increases in population, far from resulting in misery, increase the productive power of society, because "increased population, of itself ... implies an increase in the productive power of labor." One hundred men will produce more than one hundred times what can be produced by one man, and a thousand men can produce more than ten times as much as one hundred men. It is, therefore, safe, says George, to draw the conclusion that:

> With every additional pair of hand which increasing population brings, there is a more than proportionate addition to the productive power of labor.[102]

Increased population has the effect of making labor more

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[100] Ibid., pp. 138-139.

[101] Significant paragraphs from Henry George's Progress and Poverty (New York: Doubleday, Doran and Co., 1928) p. 16.

[102] George, op. cit., p. 232.

efficient. George supposes the situation in which there are large quantities of land of diminishing qualities. It is only natural that the most productive land be settled first. But the increasing population demands that land of increasingly inferior quality be drawn into production. The very cause which brought the inferior land under cultivation would result in its more effective use. It would do more than this; it would result in a power of increasing larger quantities of wealth in all the superior lands that are already in cultivation.[103]

On the question of the effects of an increasing population on the distribution of wealth, George makes the statement that the increased demand for subsistence forces inferior land to be brought into cultivation. If, in a given situation the marginal productivity is thirty, that means that all lands with a productivity of over thirty will pay rent. Should the population double itself, an additional amount of food will be required, a supply that cannot be produced unless inferior lands not previously cultivated, are called into cultivation. The result will be that lands that did not previously pay rent would now do so.[104]

George was a perfectionist and like all perfectionists, he placed too much emphasis on his reform as being able to release mankind from whatever might ail him. Too, he seemed

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[104] Ibid., p. 243. George here reflects, of course, the Riccardian theory on Rent.

to have believed that a decrease in fertility would naturally result from a rising population, but he did not make it clear whether this drop in fertility would result from a natural weakening of fecundity or by measures of birth control, as there is little doubt that he believed contraception to be a factor in reducing fertility.

CHAPTER IV

TWENTIETH CENTURY LITERATURE ON POPULATION

The writings of the early part of the twentieth century on population reflect a genuine concern over the steadily declining birth rate. The decline was pictured as a possible threat to national security. Exactly when the decline began cannot be ascertained, but the trend was definitely down shortly after 1877.[1] An examination of the table in Appendix D will make it clear as to the reasons for this concern. The English had accepted the fact of a rapidly increasing population as being necessary. By the 1880's the population of England had almost doubled since Waterloo.[2] In the decade preceding 1881 the population of England had increased by eleven per cent.[3] Some industrial towns still maintained a crude birth rate of near forty.

Nevertheless, the population of England and Wales began to increase at a decreasing rate, toward the end of the nineteenth century, and the introduction of a declining birth rate is generally associated with events occuring in the year 1877.[4]

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[1]Appendix D presents the statistics for the birth rate of England and Wales from 1850 to 1938.

[2]Helen Lynd, England in the 1880's, (London: Oxford University Press, 1940), p. 24.

[3]Ibid.

[4]Ethel M. Elderton, Report on the English Birth Rate - Part I: England North of the Humber, (London: Cambridge University Press, 1914), p. 233.

In her classic Report on the English Birth Rate, published in 1914, Ethel Elderton believed that several factors contributed to the falling birth rate. She recognized the potential effect of the Bradlaugh-Besant trial. The trial and the propagandism that followed "... have too close a chronological relation to a start in the fall of the birth rate to be put on one side as secondary matters."[5] Additional influence contributing to a declining birth rate was said to have been "economic change and industrial pressure."[6] Also included is the "... relative ease with which knowledge can be conveyed and a tradition established."[7]

Exactly what Miss Elderton meant by this was not made very clear. It is implied that a combination of propaganda and its influence on public opinion brought about a further limitation of the family.

Elderton shares the beliefs of most of the writers of the twentieth century prior to World War I. This is obvious when she presents the state of affairs as being "... one of the most serious national gravity."[8] She recognized the decline as a differential one, that inevitably leads to social degeneration. Her forecast for the future was a

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[5] Ibid., p. 234.

[6] Ibid., p. 235.

[7] Ibid., p. 236.

[8] Ibid., p. 237

bleak one. She makes the statement that if the decline continued for another forty years, national disaster would result, "complete and irremediable."[9] There was only one area that had not experienced a decline in the birth rate. That was Liverpool. This was due, she believed, to the large influx of Irish immigrants who were too ignorant to learn the methods for limiting their families.[10] Her method was valid, because it was based upon a statistical study of all the counties North of the Humber.

No one can say with certainty what were the statistical effects of the widespread dissemination of various birth control techniques. The English birth control movement had probably had its origin with Francis Place. In 1822 he had published Illustrations and Proofs on the Principle of Population.

> If, above all, it were clearly understood, that it was not disreputable for married persons to avail themselves of such precautionary means as would, without being injurious to health, or destruction of female delicacy, prevent contraception, a sufficient check might at once be given to the increase of population beyond the means of subsistence; vice and misery, to a prodigious extent, might be removed from society, and the object of Mr. Malthus, Mr. Godwin, and of every philanthropic person, be promoted.[11]

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[9] Ibid., p. 237.

[10] Ibid.

[11] Margaret Sanger, An Autobiography, (New York: W. W. Norton and Company, 1938), p. 126.

In forming his conclusion that the practices of contraception by married couples would reduce much vice and misery by preventing the growth of numbers beyond the means of subsistence, Place repeatedly acknowledged his indebtedness to men such as Adam Smith, John Locke, Hume, Thomas Paine, and Edmund Burke. To his remarkable library came many men of renown and men of letters. The more "orthodox" Malthusians condemned as heresy his encouragement of contraception by married couples. Such proposals were considered sacrilegeous and some of the more conservative followers of Malthus even advocated infanticide as being preferable to contraception.[12]

In 1824 it became illegal to exhibit books relating to birth control. In 1857 the Obscene Publications Act gave police the power to search for, sieze, and destroy obscene materials. By the Post Office Act the British post office was granted the right to open and impound packages containing these materials, and to prosecute the sender.

The Magna Carta of the Birth Control Movement came in 1876 with the Bradlaugh-Besant trial. A long series of legal maneuvers began when an American essay, The Fruits of Philosophy, written by a Massachusetts doctor, Charles Knowlton, appeared in England. It had been published for several years without molestation by first, James Watson,

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[12]Arthur H. Nethercot, The First Five Lives of Annie Besant, (Chicago: Chicago University Press, 1960), p. 109.

then by his brother Austin. Charles Watt obtained the plates and all went well until a Bristol bookseller, Henry Cook, conceived the idea of adding to the original text several pertinent illustration of his own. He was arrested and sentenced to two years hard labor. At this point, the brilliant free-thinker Charles Bradlaugh and Annie Besant, formed a printing partnership with the objective of proving that there did exist a legal right to print such a book. The outcome left the situation muddier than ever. The foreman of the jury delivered the decision of the jury, that "... the book in question is calculated to deprave public morals, but at the same time we entirely exonerate the defendents from any corrupt motive in publishing it."[13] As Miss Besant ironically commented, this was saying, "... not guilty but don't do it again."[14] Although the Obscene Publications Act remained unchanged, The Fruits of Philosophy enjoyed a renewed popularity.

The immediate result of the trial was a strengthening of the Malthusian League. The trial had settled the question of whether writings on contraception were to be classed among the obscenities punishable by law. In February of 1879 the monthly journal of the League, The Malthusian, appeared for the first time. It was sold out within a week. It continued

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[13] Ibid., p. 103.

[14] Ibid.

publication without a break until 1921, when it was replaced by The New Generation which has continued until the present. The Malthusian League until 1913 was concerned only with the gospel of family limitation and until that time did not produce an account of the techniques of contraception.[15] The emphasis was still upon moral and economic aspects rather than the personal tragedies of women; a man's station in life would determine the number of his children.

The Malthusian League has too often been assigned an overly significant role in the decline of the birth-rate. Criticisms of its efforts have often blindly assumed that the neo-Malthusians aimed at a ceaseless fall in the birth rate. This is simply not true. Neither is it true that the Malthusian League merely wished to reduce poverty by encouraging a satisfactory equilibrum between available resources and family size. Instead, what they aimed at was an "optimum population", and their argument was largely economic.[16] The final conclusion that can be made as far as the Malthusian League is concerned is that to attribute to it a significant role in the beginning of the decline of the birth rate as early after its origin as 1880 is too much of a tribute to it. The author is in agreement with Banks that the Malthusian League acted merely as a catalyst, crystallizing ideas of

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[15] D. V. Glass, Population Policies and Movements in Europe, (Oxford: Clarendon Press, 1940), p. 42.

[16] Ibid., p. 43.

birth control latent in the social order.[17] The desire for a smaller family already prevailed. One of the anomalies of the birth control movement is that a rapid expansion in the standard of living followed by a sense of restriction should necessarily have led to the acceptance of birth control by a generation that had restricted it earlier. Too, it is well to remind ourselves that while the work of the Malthusians was an English social phenomenon, the birth rate in all the countries in Northwestern Europe had begun to show a comparable decline at the same time before 1900.[18] The objective of the Malthusians was to educate the educators. They believed that once the idea of birth control had been accepted by the upper classes, it would be adopted by the lower classes. Their efforts seem to have fallen on deaf ears, in that for forty years after the formation of the Malthusian League the laboring classes not only were unaware of the benefits of family limitation, but hardly knew that such a thing existed.

Exactly what effect World War I had on the birth rate is difficult to calculate. The National Birth Rate Commission, in 1917 and 1920, issued reports on the level of the birthrate.

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[17] J. A. Banks, Prosperity and Parenthood, (London: Routledge and Kegan Paul, 1954), p. 200. Of special note is Chapter XII, "The Standard of Living and the Fall in Fertility," pp. 197-209.

[18] A. M. Carr-Saunders, World Population: Past Growth and Present Trends, (New York: Barnes and Noble, 1936), p. 92. Also Sir Arthur Newsholme, The Declining Birthrate: Its National and International Significance, (New York: Moffat Yard and Co., 1910.

Their findings and conclusions are worthy of note. Their concern is evident. Upon an examination of the evidence, the commission concluded in 1916, among other things, that the voluntary limitation of family size was taking its toll particularly among the middle and upper classes.[19] This Commission took note of Miss Elderton's Report on the British Birth Rate in concluding that the decline of the birth rate was not uniform throughout the entire country. Miss Elderton's view was accepted that the decline was more marked in the areas embracing the highest standard of living. The

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[19]National Council on Public Morals, Declining Birth Rate: Its Causes and Effects, (London: Chapman and Hall, 1916), p. 3. We consider that the following propositions are definitely established:

1. That the birth rate has declined to the effect of approximately one-third within the last thirty-five years.

2. That this decline is not, to any important extent, due to alterations in the marriage rate, to a rise of the mean age at marriage, or to other causes diminishing the position of married women or fertile age in the population.

3. That this decline, although general, has not been uniformly distributed over all sections of the community.

4. That on the whole the decline has been more marked in the upper classes.

5. That the greater incidence of infant mortality upon the less prosperous classes does not reduce their effective fertility level to that of the wealthier classes.

6. Conscious limitation of fertility is widely practiced among the upper and middle classes, and there is good reason to think that, in addition to other means of limitation the illegal induction of abortion frequently occurs among the industrial population.

7. There is no reason to believe that the higher education

Commission noted discrepancies in the case of London, where the corrected birth rate for Hampstead, a typical upper class residential district, fell from 30.01 in 1881 to an alarming 17.75 in 1911. Nor, as the Commission found, did the agricultural areas escape from the decline.[20] It found that in the county of Norwich, the corrected birth rates for Norwich was, in 1881, 31.71. In 1910 the rate was 23.97.[21]

The First World War probably did not seriously alter the trend of the birth rate either in England or in the countries of Northern Europe. An examination of Appendix D will confirm this for England and Wales. As far as England and Wales are concerned in 1908 there were 26.7 live births per 1,000 population and 107.6 live births per 1,000 women aged 15 to 44. Six years later, in 1914, the last year for which the figures were not seriously affected by the war, the statistics were 23.8 and 96.2 respectively.[22] It is likely that the decline would have continued had there been no war. What is debatable is whether the figures would have dipped as low as 17.7 and 71.1, as they did in 1918. Kuczynski offers the proposition that in Northwestern Europe the downward trend of the birth rate was a well-established social reality long

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of women has any important effects in diminishing their physical aptitude to bear children.

[20] Ibid., pp. 3-7.

[21] Ibid.

[22] Ibid.

before World War I. He comes to this conclusion in dealing with the countries of Northwestern Europe by pointing out that during the war the birth rate was low, dropping as low as 17.0 for the years 1915-19 combined. Then, following the war, many marriages took place that had been postponed for the duration of the war. This resulted in a temporary rise in the birth rate, reaching 23.8 in 1920-21. That the war played a small role in influencing the downward trend of the birthrate is indicated by the fact that after the big rise, the birthrate fell again to 21.1 in 1922-23, 19.9 in 1924-25, and 19.2 in 1926.[23]

The National Birth Rate Commission, publishing its second report in 1920, devised an interesting formula in determining the influence of World War I on the total population. The commissioners seemed reluctant to admit the actual loss, and were prone to emphasize the importance of the population of England and Wales maintaining a rate of natural increase. The Commission was horrified to note that at one time, the population of England and Wales seemingly lost its capacity for natural increase,[24] Natural increase

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[23]Robert R. Kuczynski, The Balancing of Births and Deaths, (New York: MacMillan Company, 1928), I, p. 9. The same reasoning could be applied to England and Wales. The purpose of this introduction, however, is merely to survey the statistical and logical methods of the major twentieth century writers on population.

[24]This is somewhat like the member from York who, in 1753, spoke against the taking of a census as being a means of giving "foreign foes a knowledge of our strengths and weak-

of course, refers to the normal excess of births over deaths. The Commission noted that in the six months period ending March 31, 1919, the statistical increase in the population of England and Wales ceased for the first time. During this one period, the Commission pointed out that the deaths exceeded the births by 126,445. Several contributing factors, including influenza, are taken into consideration, but the superintendent of statistics stated that:

> The loss of population caused by the fall in the birth rate as a consequence of the war may be estimated in various ways. The number of births in England and Wales in 1914, the last year unaffected by war conditions, was 841,767. If the number had been maintained in each of the next four years there would have been 588,487 more births than actually occurred. It is estimated that the population increased during those years by 550,000 so that if the birth rate had been maintained the number of births would have slightly increased, but as against this it has to be remembered that the birth rate had been steadily falling for many years before the war, and would presumably continue to do so even if peace had been maintained ... During the last four years of peace the births registered had fallen, notwithstanding increase of population, from 860,327 in 1910 to 841,767 in 1914, and if the same yearly rate of fall had been maintained till 1918 the number registered in that year would have been 823,607 and in the four years 1915-1918, 3,321,668, as against the 2,778,581, which actually were registered. The difference, 543,087 probably affords as good an estimate as we can get out of the loss of birth in England and Wales attributable to the War. Nonetheless, the more permanent and effective cause of the natural decrease has been a decline in fertility, which even without influenza, would have practically wiped out the whole normal excess of births over deaths for the six months.[25]

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nesses." See H. L. Beales, The Industrial Revolution, (London: Longmans, Green and Co., 1954), p. 47.

[25] Problems of Population and Parenthood /Being the Second Report taken by the National Brith Rate Commission, 1918-20/, (London: Chapman and Hall, 1920), xxxviii.

It goes without saying that any nation that cannot maintain a natural increase faces the threat of depopulation. The continued decline of the birth rate from a high of 25.5 in 1920 to a low of 14.9 in 1937 threatened the capacity of the population to replace itself. The country was faced with the challenge of formulating a program of national action that would ultimately correct the declining birth rate. If the birth rate were going to increase, the impetus and the incentive for it in the form of various types of rewards would have to come from the British government itself. Elderton as early as 1914 had alluded to the positive influences that legislation could have on checking the declining birth rate.[26] Keynes in 1927 wrote that "the time has already come when each country needs a considered national policy about what size of population whether larger or smaller than at present or the same, is most expedient."[27] In Keynes we see the demand for national action.

Concern mounted as the birth rate continued to decline during the inter-war period. The classic study of the population of Great Britain was undertaken by Dr. Charles in 1935, and was originally published in 1935 as "Special Memorandum No. 40" of the London and Cambridge Economic Service. Charles made three estimates based on the following

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[26]Elderton, op. cit., p. 237.

[27]John Maynard Keynes, The End of Laissez Faire, (London: Hogarth Press, 1927), p. 49.

assumptions:[28]

(a) That fertility and morality rates would remain the same as in 1932 (the latest year available).

(b) That birth rates would continue to decline in much the same way as they had in the past.

(c) That mortality rates would fall, but that fertility would rise by about ten per cent to the 1931 level and remain constant.

W. B. Reddaway, from whose book these statements come, was aware of the necessity for revision. He criticized Charles for assuming that fertility in the years 1935-1938 would fall below that of 1933. Such an assumption, contended Reddaway, seems most improbable even if made for some short period. A rise from the slump level was virtually assured as postponed marriages took place.[29] The decade of the 1930's however, we would probably be safe to conclude, was a period of continued decline in fertility, but Reddaway's point of contention with Charles involves her use of the rates of 1933 as a maximum fertility rate, even for the purpose of short range forecasting.

Reddaway's study was concerned with the effect of a declining population on the economic future of Great Britain. In the study of underpopulation and its relationships to employment he divided employment into catagories of general and particular.[30] It was his belief that the advent of a

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[28]W. B. Reddaway, The Economics of a Declining Population, (London: George Allen and Unwain Ltd., 1939), p. 30.

[29]Ibid., p. 31.

[30]Ibid., p. 48.

declining population would aggravate the effects of changes in technology, demand, and industrial location in throwing people out of their jobs. Reddaway was aware that a rising population was only one factor in determining the demand for a particular product, but could not let the matter drop without impressing upon his reader the idea that population may "be a decidedly important one."[31] His distinction of the two was that:

> General unemployment, alias depression unemployment (alias cyclical unemployment) and particular unemployment (are distinguished in that) the latter is, broadly speaking, due to the failure to adapt the supply of particular sorts of labor to the demand with sufficient speed or exactitude. The former is due to the inadequacy of general demand. i.e., the case of necessaries or the material for making them.[32]

As far as particular employment was concerned, Reddaway identified the question as being one of how smoothly the system could carry out adjustments with a minimum of loss. His thesis was simple. It was simply that it was much easier for a young man to change his employment than an older one. Then if the adaptability of a labor force is to be very great, it is imperative that the age distribution of the population be favorable to the younger employable ages. On the eve of World War II, Reddaway makes the statement that the prospects for the age distribution of the population of

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[31] Ibid.

[32] Ibid., p. 60.

England will be "exactly in the opposite direction."[33] and at another point he states the tendency towards reduced adaptability is an inevitable accomplishment of a declining population"[34] and again that:

> The conclusion is inescapable that a declining population will both increase the amount of adjustment which is necessary and reduce the ability of the system to effect it smoothly.[35]

On general unemployment his conclusions were similar to those relating to particular unemployment. His conclusion was that, looking forward from 1939 it would be difficult to avoid general unemployment. His reasons reflect his pessimistic conclusions.[36]

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[33] Ibid., p. 61.

[34] Ibid., p. 237.

[35] Ibid., p. 67.

[36] Ibid., p. 237. The difficulty of avoiding heavy general unemployment in the future would be greater in the future than in the past, mainly for the following reasons:

1. Per head of population, the stock of material capital in existence at any time would be greater both as a result of accumulation in the meantime and because of a fall in population; this would reduce the number of obvious openings for capital outlay.

2. The average income would be larger, both because of the increased amount of capital per head and because improvements have been made in technique; this would make for greater instability in demand, and also for more savings.

3. The trend of population would be downwards, further reducing the openings for capital outlay, and making those that remained risky and very much dependent on "confidence"; they would appear unattractive exept in periods of good trade, whatever the rate of interest may be.

Using 1935 as a starting point, Reddaway examines Dr. Charles' results. Reddaway reasoned that in the years following 1935 there would be a slight rise to a maximum in 1940 at which time the absolute decline would begin, slow at first, but soon becoming catastrophic.

Reddaway includes a word of caution. The reader, he says, should be able to account for the apparent paradox of a growing population with a reproduction rate under 0.8, because while the population was expanding there was a high proportion of people in the younger age-group, and Reddaway says that the transition from a high to a low fertility explains why "our present age-composition is so wholly abnormal,"[37] and at the conclusion of his chapter on "the Present Position in Great Britain", he offers a few statements to impress upon the reader the nature and complexity of the condition of the population of Great Britain on the eve of World War II.[38]

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[37] Ibid., p. 287.

[38] Ibid., p. 39. A few brief statements may help the reader to appreciate the situation.

I. Not even a complete elimination of deaths below the age of forty-five would prevent the ultimate decline in numbers, unless fertility rises.

II. Nor would the decline be averted if the older couples married, not even assuming they bore as many children as the average married woman does now.

III. With the present figures for mortality, childless marriages and non-marriages, a decline in population is inevitable unless fertile marriages produce an average of nearly three children. This is almost impossible if a family of two continues to be typical.

Reddaway is aware that a substantial decline would not come for several years, but he contended that a change from a "... substantial rise to an almost stationary total is equivalent to a change from a stationary level to a substantial decline."[39]

The reasoning here is that a declining population affects adversely the impulse for capital outlay, and in turn, capital saturation. This assumes that the "slack" created by a diminishing supply of labor will not be compensated for by the increased marginal productivity on the part of the diminishing labor force. The economic system stabilizes because calculations and responsible decisions are made. In a famous study on Keynsianism, W. H. Hutt states that the view that population growth "creates investment opportunities" is not justified.[40] An expanding population contributes to economic growth only in the sense that:

> All growth of productive capacity (if utilized) leads to an increased flow of income, and hence a greater ability to save and a greater incentive to save. Similarly, a decline in population, unless offset by growing net accumulation in non-human resources, or by investment in human capital, or by the sacrifice of leisure, will mean a decline in the source of future demand and ..., a decreased rate of growth.[41]

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[39] Ibid.

[40] W. H. Hutt, Keynesianism: Retrospect and Prospect, (Chicago: Henry Regnery Co., 1963), Chapter 16, "Capital Saturation", pp. 357-386.

[41] Ibid., p. 381.

Hutt holds to the belief that a personal savings account impedes capital circulation, in that as the supply of labor decreases, and its wages rise in relation to the other factors of production, the proportion of savings increases. This results in an additional cost in increasing productive capacity. But the important determinant is the form taken by the replacement and not accumulation. It may be of such a kind that it augments further net accumulation in spite of the rising value of labor relative to other services.[42] The real concern should be directed toward the effects of a contrived labor scarcity, "When labor is priced too high for its full or optimal utilization, that demand (for labor) will be restrained owing to a decline in real income.[43]

Various estimates on the effects of a declining population proved to be wrong in that the assumptions upon which they were based were fallacious. The errors of the Birth Rate Commission, Charles, Reddaway, and others are evident. Britain was exceptional, in that the experience was common to all the countries of Western Europe, and fairly reliable statistical estimates indicated that had the trend of birth and death rates continued as the were in 1933, the total population of England and Wales would have fallen from forty million to under thirty-six million by 1965. Even if the

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[42] Ibid., p. 378.

[43] Ibid., p. 376.

rates for 1933 had remained unchanged, total population by 1965 would have been down to 38,500,000 and its age composition would have changed decidely. The proportion of the total aged over sixty years would have shown a rise from 12.5 per cent in 1935 to 16.8 per cent in 1965. During the same period of time the proportion of children under fifteen would have fallen from 23.2 to 19.0.[44]

The prospects were not so bleak as the forecasters of 1939 would have us believe. In fact the anticipated decline did not come about; on the contrary a moderate rise in the birth rate began in 1942. Cole points out that a "bulge" in the birth rate occurred in the years immediately following the Second World War. In a post-war report, published in 1948 by P. E. P, it was found that the problem of population decline was solving itself. The committee, however, attributed the rise in the birth rate in the years 1942-48 to the early contraction of marriages and to an effort to catch up with a "backlog" of first and second children, rather than to an actual rise in the size of the family.[45] The concern here was whether the Royal Commission on Population made the statement that a return to the old birth rate was not desirable. The Royal Commission conceded that Malthus was quite

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[44] G. D. H. Cole, The Post-War Condition of Britain, (New York: Henry Praeger, 1957), p. 1.

[45] Population Policy in Great Britain - A Report by Political and Economic Planning, (London: Stratford Press, 1948), p. 80.

right when he argued that it was impossible to combine low mortality rates with the birth rate that would result from giving free reign to reproductive instincts. The geometric increase would soon lead to overcrowding.[46] It is startling that in a two-year period such a change of attitude could have taken place. The commission made the statement that "birth control in its widest sense is a precondition of continued civilization." The implication was that any increase above the minimum reproductive rate of 1.0 presented a potential threat ov overcrowding.[47]

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[46] Papers of the Royal Commission on Population, Volume V. Memoranda presented to the Royal Commission, (London: Her Majesty's Stationery Office, 1950), p. 1.

[47] Ibid., p. 81. The reproduction rate was above 1.0 for every year since 1946, whereas in 1953 it was 1.033 for England and Wales and 1.121 for Scotland. In 1938 it was only 0.805 for England and Wales and 0.933 for Scotland.

CHAPTER V

MALTHUS: A RE-EXAMINATION

That there is no law of population growth should be clearly evident. What is evident is that no single explanation suffices. Any statistically validated approach must encompass a multiplicity of variables. In fact, one might ask if there were only variables in dealing with the population. Fecundity, fertility, and total population growth are continually subjected to a host of intangible factors which cause each to exhibit particular characteristics under a defined set of circumstances.

The birth rate, for example, has shown itself to be influenced by a number of factors. It has been high during periods of prosperity such as the third quarter of the nineteenth century, when there was a feeling that the economic status of the family seemed to justify its containing an additional member. On the other hand, it has been low during periods of economic uncertainty, such as the depression of the 1930's. It began a period of decline around 1881, and continued an almost steady drop right on up to the eve of World War II.

The birth rate, at least as far as English history is concerned, has been the most important factor in population growth. Whatever criticisms may be made of Malthus, he cannot be condemned for his emphasis on the birth rate. In this point he was quite correct. A birth rate maintaining a minimum

reproductive rate will under peaceful circumstances insure a growing population. However, once a declining birth rate sets in, not only does the population begin to increase at a decreasing rate, but the age and sex distribution of the population, should the decline in the birth rate continue, becomes increasingly unfavorable to fertility and reproduction.

With the exception of several of the pre-Malthusian writers such as Price, the authors mentioned were concerned with the effects of an increasing population. There was little agreement among them on the rate at which the population grew. That Malthus did not attempt to doctrinally defend his ratios is a clear indication to the author of the present study that they were not used in a mathematical but in a literary sense. They were used merely as a means by which Malthus might clarify his view to his readers. He himself could hardly understand the furor that he had created when dealing with the rates of increase for food and population.

Nineteenth century critics of Malthus too often directed their criticisms solely against Malthus's statement of the ratios contained in the first edition of his Essay, taking little or no cognizance of significant modifications Malthus made in his thinking as later editions of the Essay became more detailed and more bulky.

These critics have overlooked important passages in the

Essay dealing with the circumstances under which the availability of subsistence will increase, and upon which the growth of population depends. Too, these critics have overlooked extensive passages in Malthus's Principles in which Malthus dealt extensively with the question of the increase of supplies, without which there could be no growth of population. Criticisms of Malthus such as this have missed his "total population theory," and must be discarded.[1]

Malthus was aware that population could not grow beyond the means of supporting it. The importance of food supply as a limiting factor became more and more important as population grew, until at a given point in population growth, the lack of food became the sole limiting factor.

The realization of this by Malthus makes a refutation of his ideas based upon his "geometric theory" meaningless. Critics of Malthus, who argue from this point of view, are unwittingly agreeing with him.

In this group might be placed Godwin, who went to great lengths and to great pains to show that there was no population of which he was aware that had increased at an exactly geometrical ratio. Mathus would concede this much. Malthus's view was not that population would under all circumstances grow at some specified rate. What he did say

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[1]Joseph Spengler, "Malthus's Total Population Theory: A Restatement and Reappraisal" in Essays in Economic Thought, Joseph Spengler, and William Allen (eds.) (Chicago: Rand McNally, 1960), p. 349.

was that under varying circumstances population does increase at varying rates, and that the availability of food is not solely dependent upon the growth of population, but depends upon other things, among them being the speed and ease with which it can be transported to all members of the population.

That subsistence was necessarily available in a limited quantity was, then largely the outcome of the mathematical juggling of Malthus's critics. To say that Malthus was unaware of the potential of technological improvement defies all the laws of historically valid criticism. He cannot be criticized for his failure to anticipate the improved standard of living brought on by the technological innovations of the industrial revolution. His Essay should be evaluated in terms of the society to which Malthus addressed himself. Malthus wrote his Essay in an intellectual climate in which it was assumed that population, if not stable, was declining.

Malthus dared challenge this tradition, and it is largely for this reason that he holds the center of practically any discussion on population. Criticisms, some excellent, some poor, will continue to be written. Each one inadvertently is a tribute to a man who towers above all others in the history of population theories.

APPENDIX

APPENDIX A

Table I

From John Graunt, Natural and Political Observations made on the Bills of Mortality, (Baltimore: John Hopkins Press, 1939), p. 24.

The Diseases, and Casualties this year being 1632

Bortive and Stilborn	445	Grief	11
Affrighted	1	Jaundies	43
Aged	628	Jawsln	8
Ague	43	Impostume	74
Apoplex and Meagrom	17	Kil'd by several accidents	46
Bit with a mad dog	1	King's Evil	38
Bleeding	3	Lethargie	2
Bloody flux, scowring, and flux	348	Livergrown	87
Brused, Issues, sores, and ulcers	28	Lunatique	5
Burnt, and Scalded	5	Made away themselves	15
Burst, and Rupture	9	Measles	80
Cancer, and Wolf	10	Murthered	7
Canker	1	Over-laid, and starved at nurse	7
Childbed	171	Palsie	25
Chrisomes, and Infants	2268	Piles	1
Cold, and Cough	55	Plaque	8
Colick, Stone, and Strangury	56	Planet	13
Consumption	1797	Pleurisie, and Spleen	36
Convulsion	241	Purples, and spotted Feaver	38
Cut of the stone	5	Quinsie	7
Dead in the street, and starved	6	Rising of the lights	98
Dropsie, and swelling	267	Sciatica	1
Drowned	34	Scurvy, and Itch	9
Executed, and prest to death	18	Suddenly	62
Falling Sickness	7	Surfet	86
Fever	1108	Swine pox	6
Fistual	13	Teeth	470
Flocks, and small pox	531	Thrush, and Sore mouth	40
French Pox	12	Tympany	13
Gangrene	5	Tissick	34
Gout	4	Vomiting	1
		Worms	27

Christened	Males....4994	Buried	Males....4932	Whereof,
	Females..4590		Females..4603	of the
	In all...9584		In all...9535	Plague, 8

Increased in the Burials in the 122 Parishes, and at the Pest-house this year.....993

Decreased of the Plague in the 122 Parishes, and at the Pest-house this year.....266

APPENDIX A

From John Graunt, Natural and Political Observations made on the Bills of Mortality, (Baltimore: John Hopkins Press, 1939), p. 25.

Table 2

Ibid., p. 25

In the year 1636, the Accompt of the Burials, and Christnings in the Parishes of Islington, Lambeth, Stepney, Newington, Hackney, and redriff, were added in the manner following, making a seventh Canton, viz.

In Margaret Westminister	Christned..	440	Newington	Christned..	99
	Buried.....	890		Buried.....	181
	Plague.....	0		Plague.....	0
Islington	Christned..	36	Hackney	Christned..	30
	Buried.....	113		Buried.....	91
	Plague.....	0		Plague.....	0
Lambeth	Christned..	132	Redriff	Christned..	16
	Buried.....	220		Buried.....	48
	Plague.....	0		Plague.....	0
Stephney	Christned..	892			
	Buried.....	1486			
	Plague.....	0			

The total of all the Burials in the seven last Parishes this year 2958

Whereof of the Plague 0

The total of all the Christnings 1645

APPENDIX B

From William Godwin. Of Population, Bk. II, Ch. I, pp. 116-123.

A letter from Godwin to Malthus:

October 24, 1818

Sir,

I am at this moment engaged in a careful study of your Essay on Population, and may possibly commit something to the press on the subject. I, therefore, take liberty to request your answer to the following question.

In page 7 of the fifth edition, Vol I, you say "In the Northern States of America ... the population has been found to double itself, for over a century and a half successively, in less than twenty-five years. Will you have the goodness to state to me by letter your authority for this assertion.

I am, Sir, very respectfully

Your most obid'ent servant,

Malthus's answer:

October 25, 1818

Dear Sir,

Upon referring to the passage you mention in your letter, I find that the authorities on which I principally rest, are the details mentioned by Dr. Price in his Observations on Revisionary Payments, pp. 282, etc., and the pamphlets of Dr. Styles, to which he particularly refers. I afterwards saw some statements and calculations, which make the period of doubling only twenty years from the first settlement of America to the year 1800. But in the fifth edition, I find that the reference is wrong, and that it should have been Book ii, Chapter 13 instead of 11.

To this note which occurs Vol. II, p. 194, of the fifth edition, I would refer you for my principal authorities at the time I published the quantro edition: but since that,

the late statistical view of America by T. Petkin, in which are contained the three regular census's of 1790, 1800, and 1910, together with an estimation in 1749, more than confirms what was there stated. Comparing the two census of 1790 and 1810 together, it appears that the population during that period doubled itself in about twenty three years; and from the estimate in 1749, in about the same time or less. This would admit of sample allowance for foreign immigration.

Truly yours,

APPENDIX C

William Godwin, Of Population, Bk. II, Ch. I., "Proofs and Authorities for the Doctrine of the Essay on Population." pp. 116-123.

As Mr. Malthus's position is simple, his proof is not less distinguished for brevity. It is, I think all summed up in the following sentence: "In the Northern States of America, the population has been found to double itself, for above a century and a half successively, in less than twenty-five years." This is a rate of increase in which all concurring testimonies agree, and has repeatedly been ascertained to be from procreation only.

This, and this only, is the entire basis upon which Mr. Malthus's doctrine relies for its stability. He added, however, certain authorities upon which he founds his expectation of inducing the public to acquiesce in his statement. They are these:

1. Dr. Franklin - The statement of this author as quoted by Mr. Malthus is "There is no bound to the prolific nature of plants or animals, but what is made by their crowding and interfering with each other's means of subsistence. Were the face of the earth vacant, of other plants it might be gradually sowed and overspread with one kind only, as for instance with fennel: and were it empty of other inhabitants, it might in a few ages be replenished from one nation only, as for instance with Englishmen."

The essay from which this extract is taken is entitled

"Observations Concerning the Increase of Mankind, Peopling of Countries, Etc." It occupies nine pages in the late edition of Franklin's works, 1806, and was written in 1731, when the author was twenty-five years of age.[1]

2. Dr. Ezra Styles - This gentleman published in Boston, New England, in 1761, a "Sermon on Christian Union," some abstracts which Mr. Malthus has had an opportunity to see. Dr. Styles, it seems, "speaking of Rhode Island," says that "though the period of doubling for the whole colony is twenty-five years, yet that it is different in different parts, and within /the/ land is twenty and fifteen years."

3. Dr. Price - This, however, seems not to be an authority distinct from the preceding. Dr. Price, in a letter to Dr. Franklin, which was read to the Royal Society, April 27, 1769, and published in the Philosophical Transations, Vol. LIX, and againrepublished by the author in his "Observations on Revisionary Payments", says to his correspondents "A doubling of population in eighty-four years is, as you see, well known /probably referring to Dr. Franklin's Observations Concerning the Increase of Mankind above - quoted/, a very slow increase, compared with that which takes place among our colonies in America." At the bottom of the page Dr.

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[1]Godwin's date of 1731 is incorrect. Benjamin Franklin wrote his essay "Observations Concerning the Increase of Mankind, Peopling of Countries, etc." in 1751, not 1731.

Price refers us for further information to Dr. Styles' sermon.

4. Euler - Who in a table inserted in Sussmilch's Gottliche Ordnung "Count on a mortality of one in thirty-six, that if the births be to the deaths in proportion of three to one, the period of doubling will be only twelve years and four-fifths."

5. Sir William Petty - Who "supposes a doubling possible in as short a time as ten years."

Note: Malthus's reference for this statement is to Sir William Petty's Political Arithmetic, where it is not to be found. It occurs in his Essay Concerning the Growth of London.

APPENDIX D

From B. R. Mitchell, Abstract of Historical Statistics: Cambridge: Cambridge University Press, 1962, p. 29-30.

Birth Rate, 1850-1938

Year	Per 1,000 Population	Per 1,000 Women aged 15-44
1850	33.4	141
1851	34.3	145
1852	34.3	145
1853	33.3	141
1854	34.1	145
1855	33.8	143
1856	34.5	147
1857	34.4	146
1858	33.7	143
1859	35.0	149
1860	34.3	146.5
1861	34.6	147.4
1862	35.0	149.4
1863	35.3	150.7
1864	35.4	151.7
1865	35.4	151.7
1866	35.2	151.4
1867	35.4	152.6
1868	35.8	154.8
1869	34.8	150.5
1870	35.2	152.9
1871	35.0	152.1
1872	35.6	155.4
1873	35.4	153.9
1874	36.0	165.5
1875	35.4	153.6
1876	36.3	156.7
1877	36.0	156.1
1878	35.6	154.8
1879	34.7	150.7
1880	34.2	149.1
1881	33.9	147.6
1882	33.8	146.2
1883	33.5	144.4
1884	33.6	144.9
1885	32.9	140.8
1886	32.8	140.4
1887	31.9	135.7
1888	31.2	132.9
1889	31.3	132.0

1890	30.2	127.9
1891	31.4	132.6
1892	30.4	128.2
1893	30.7	128.2
1894	29.6	121.2
1895	30.3	124.9
1896	29.6	121.9
1897	29.6	120.9
1898	29.3	119.1
1899	29.1	180.0
1900	28.7	115.9
1901	28.5	114.5
1902	28.5	114.6
1903	28.5	114.3
1904	28.0	112.7
1905	27.3	109.7
1906	27.2	109.2
1907	26.5	106.2
1908	26.7	107.6
1909	25.8	103.6
1910	25.1	100.7
1911	24.3	98.0
1912	23.9	96.6
1913	24.1	97.1
1914	23.8	96.2
1915	21.9	88.8
1916	20.9	85.2
1917	17.8	72.1
1918	17.7	71.1
1919	18.5	73.9
1920	25.5	101.7
1921	22.4	89.7
1922	20.4	82.1
1923	19.7	79.4
1924	18.8	75.8
1925	18.3	73.5
1926	17.8	71.9
1927	16.6	67.5
1928	16.7	67.9
1929	16.3	65.8
1930	16.3	66.2
1931	15.8	64.4
1932	15.3	62.6
1933	14.4	59.4
1934	14.8	61.4
1935	14.7	61.0
1936	14.8	61.2
1937	14.9	61.4
1938	15.1	62.4

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