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Malthus: 200 Years Since the First Essay[1]

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For the past 200 years, population debate, research and policy have been widely stimulated and influenced by the writings of **Thomas Robert Malthus** (1766-1834). The first edition of his most renowned work was published in 1798 as an anonymous pamphlet carrying the cumbersome title *An Essay on the Principle of Population as it Affects the Future Improvement of Society, with Remarks on the Speculations of Mr. Godwin, M. Condorcet, and Other Writers.* This version is commonly called the *First Essay.*

According to Malthus, the essence of the population problem was the tendency of population to outrun food supplies. In the *First Essay,* he illustrated this differential by suggesting that population tends to grow in a geometrical ratio (1, 2, 4, 8, 16 ...), redoubling in each generation of some 25 years, whereas food supplies may at best increase arithmetically (1, 2, 3, 4, 5 ...). Although he did not repeat this metaphor in the later editions, it has remained the best-known part of Malthus' argumentation.

The pamphlet immediately gave rise to a lively public debate. Subject to criticism, Malthus started collecting ample material in order to find empirical evidence to support his arguments. As continental Europe was out of question because of the Napoleonic wars, Malthus used a lucky opportunity of taking part in a study tour to Scandinavia and St. Petersburg in 1799 (James, pp. 69-78). Later, in 1802, during the Peace of Amiens, he visited France and Switzerland. Unfortunately, his travel diary concerning Sweden and Finland has been lost, while the Norwegian diary is still available. Nevertheless, the main findings and conclusions Malthus made in Scandinavia are presented in the second and later issues of his *Essay.*

Malthus published the substantially enlarged and modified version of *An Essay on Population* (called *Second Essay*) in 1803 under his own name. In fact, it was a new book, not only more voluminous but also more erudite and more balanced. Two chapters in it were devoted to Scandinavia, one to Norway and the other to Sweden (including Finland, which at the time

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of Malthus' journey still was an integral part of Sweden). In the last, 1826 edition of the *Essay*, he supplemented the chapter on Sweden-Finland by a note on the advances in health and population growth in "Sweden properly so called", brought about by progress in agriculture and industry, and by vaccinations.

Malthus' observations in Scandinavia

Malthus travelled in Scandinavia in the summer of 1799, when the conditions of the people were being affected by the extensive crop failures of the year before. For example, in the provinces bordering on Norway he observed that "the cattle had all suffered extremely during the winter from the drought of the preceding year, and in July, about a month before the harvest, a considerable proportion of the people were living upon bread made of the fir and of dried sorrel ... The sallow looks and melancholy countenances of the peasants betrayed the unwholesomeness of their nourishment." (*Second Essay, Vol. 1*, p. 173). He thought that the patience with which the lower classes in Sweden bore these severe pressures was astounding, and that it arose from their belief that they were submitting to necessity and not to the caprices of their rulers.

Such personal observations may have reinforced his dismal conclusions based on statistical and other evidence. Thus, he stated that "Sweden does not produce food sufficient for its population." Although grain is imported, it was sadly noted by Malthus that about an equal amount was used for the distillation of spririts. Food production was insufficient because of "the natural poverty of the soil in Sweden" and also because of the low efficiency of the workforce. Thus, "a given number of men and of days produces in Sweden only a third of what is produced by the same number of each in some other countries ..." (*ibid.*, p. 169). An explanation for the low productivity was the still widespread practice of slash-and-burn cultivation.

Malthus was surprised that "notwithstanding this constant ... tendency to overflowing numbers ... the government and the political economists in Sweden are continually calling out for population! population!" (*ibid.*, p. 168). He concluded that "... the habits of the people, and the continual cry of the government for an increase of subjects, tend to press the population too hard against the limits of subsistence, and consequently to produce diseases which are the necessary effect of poverty and bad nourishment ... " (*ibid.*, p. 165).

Malthus travelled long distances by horse and carriage, using the system of conveyance by relay. He found the system very cheap and convenient to the traveller, but it was in his opinion conducted in a manner that caused a great waste of labour to the farmer, both in men and horses. He referred to some Swedish economists who had calculated that, if the conveyance obligation were abolished, it would have been possible to produce 300,000 tons of grain by the saved labour input alone, equal to 3/4 of the annual grain imports (*ibid.*, p. 170).

Malthus was impressed by Scandinavian population data, which covered the countries in full and were fairly complete and reliable. From the Swedish statistics he noted that mortality was quite high in Sweden: annually 1 in about 34 persons on average (i.e. almost 30 per 1,000

population). Based on Wargentin's calculations, he estimated that mortality ranged (according to our way of presentation) from 25 to 35 per 1,000 between the best and the worst years. In Norway the situation was definitely better, as mortality there averaged around 20 per 1,000 population.

In the chapter on Norway, Malthus noted that during the 18th century, the country had been free from war casualties to a peculiar degree. Moreover, the climate was remarkably free from epidemic sicknesses. Hence, in normal years, mortality was less than in any country in Europe. (*ibid.*, p. 154). He presumed that a principal reason for the low mortality was that Norwegian towns were few and inconsiderable, and that few people were employed in unwholesome factories (*ibid.*, p. 159).

Despite the low mortality, the population of Norway never seemed to have increased with great rapidity. One explanation for the slow population growth was the low rate of marriages; the average annual number of marriages in Norway was 1 in 130 (7.7 per 1,000 population). Malthus had found no lower figures in the population registers of any country, apart from Switzerland. He discovered a major cause for the low marriage rate in the mode of enrolments for the army: every man in Denmark-Norway born of a farmer or labourer was a soldier, and was therefore deterred from marrying until the ten-year service had expired. Moreover, as the Norwegians depended very much upon their cattle, the farming system required a great number of servants. Young men and women remained with farmers as unmarried servants till a houseman's place became vacant (*ibid.*, pp. 154-157).

Quoting Wargentin, Malthus reported that in Sweden the years which were the most fruitful in produce, also were the most fruitful in children (*ibid.*, p. 167). Marriages and births thus varied directly in accordance with crops, whereas a contrary cycle prevailed in mortality.

Malthus' theory

Malthus argued that the power of the population to increase is much greater than the capacity of the earth to produce food supplies. Many of his critics have paid no notice to a central observation of his that the population problem also has other dimensions than the global one. Thus, the delicate population-food balance varies from family to family, and from country to country according to, for example, the following factors (expressed in modern English, see Fogarty's Introduction, p. vii):

- supply of capital, and technical development;
- level of health care and medical techniques,
- degree of urbanisation and industrialisation;
- level of education, and people's capacity to understand social processes and their readiness for change;
- authority structure in society and families, and the position of women (Malthus advo cated women's rights);
- economic factors, such as the distribution of income and capital, the level of employment, methods of wage payment and social security, consumption and savings patterns, the extent of foreign trade, the volume of migration, etc.

According to Malthus, all these factors are interdependent and constitute a continuous process of change. He regarded a balanced industrial structure as an essential feature of the economy: an agricultural society cannot flourish without manufacturing industries while an industrialised country may not thrive without well-developed agriculture.

For Malthus, the population problem was not merely an economic issue: it also depended on the culture prevailing in a society or a group. The population-food balance may break at one point in Polynesia and at another in China, and at a different point in Norway, etc. And the strain may appear in quite different ways in the working, middle and upper classes.

Checks to population

According to Malthus, no population ever grows to its full potential. To maintain a balance between population and food supply, population growth is inevitably checked by two kinds of factors, named by him as positive and preventive checks. The positive checks are various types of "misery" or demographic crises, such as famine, disease and war, constituting the ultimate regulators of population increase. Malthus analysed at length situations where a population is not able to produce or otherwise obtain foodstuffs sufficiently for keeping up population growth. He concluded that if the population increase resulted in food shortage, the consequences would be disastrous for the economic, social and political conditions, and for family life. Under the prevailing level of fertility, people would be deprived in many ways. The level of living would get lower and lower, morbidity and especially infant mortality would rise, and people would suffer from famine. The growing discontent would lead to riots and even to war.

Malthus realised, however, that population does not necessarily increase in such catastrophic manner because of the operation of so-called preventive checks. In his terminology these are of two main types, namely "vice" and "moral restraint". By vice he meant abortion, sexual perversion (including contraception, homosexuality and prostitution) and infanticide, and by moral restraint, late marriage and sexual abstinence. His favourite method of population control was delayed marriage (Malthus himself got married at the age of 38 and fathered three children).

Malthus was a clergyman of the Church of England, but in matters relating to sexual morals, birth control in particular, he was in line with the Catholic Church. He opposed all other ways of family planning besides abstinence, due to their immorality. In addition, they removed the necessary stimulus to hard work. By stressing the importance of diligence and thrift he preached like a Non-Conformist minister. He strongly criticised the Poor Law of England because, in his opinion, it tended to stimulate population growth among the lower classes without giving rise to matching increases in food production.

The significance of Malthus for population research

Was Malthus right? It may be pertinent to start by looking at his hypothesis about the speed of population growth. Later evidence - the much fuller statistical material than what was available to him - indicates that in essence he was right. In the England of his time, and also elsewhere where no birth control was practised, women generally gave birth to 5½ - 6 children on average. Under the mortality conditions prevailing in the 19th century, that level of total fertility implied a reduplication of the population over a generation of 25 years. Such fertility and mortality levels imply a population growth of 2-3 percent a year.

Malthus' hypothesis concerning food production is more open to doubt. At hindsight it is obvious that he underestimated the development of agricultural and other technologies, and the importance of investment expansion. Moreover, he seems to have underestimated the contributions by know-how transfers or the fact that techniques successfully applied in an advanced society may be adapted in less developed areas.

Population growth, especially in the Third World, has, after the Second World War, been faster than ever before. At the same time, however, the production of foodstuffs has grown even faster, although the increases in food supplies have occurred unevenly in the various parts of the world. The Green Revolution does not, however, prove that Malthus was wrong, or that his critics were right. Although the overall situation may be satisfactory, many countries and population groups are facing grave difficulties. Even today, as certainly in Malthus' time, local population problems require local solutions.

As a researcher Malthus was an empiricist who, based on his observations, worked out a theory that has inspired successive generations of demographers, policy-makers and others to study and discuss population problems. He skilfully used the meagre and deficient demographic material available at the time for deductive purposes. Perhaps his most important contribution has been the insight that population growth and economic development are interdependent and that population increase may ultimatetely result in the depletion of natural resources.

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