

is hardly a major demographic study in the twentieth century in which change over a period (usually of years) is not important.

- 13. Demographers, in contrast to epidemiologists, are usually concerned with total mortality decline, and are suspicious of approaches singling out advances in treating specific diseases, and of any attempt to treat total mortality decline as the sum of individual medical breakthroughs. When they do trace mortality changes from one cause, they usually want to see what has also happened to mortality from other causes.

Source: John C. Caldwell in <http://cph.georgetown.edu/Conference/papers/Caldwell.pdf>

The history of the development of demography can be divided into different phases. They are discussed in the following.

### First Phase

English Economists Demographers

The credit for systematically and scientifically analysing population dynamics goes to Robert Malthus. In his work An Essay on the Principles of Population, as it Affects the Future Improvement of Society, he concluded that population grows in geometrical proportion, whereas food production grows in an arithmetic proportion. This results in an imbalance in the availability of food production to the existing population, and subsequently there will be a situation where there will be acute food shortage. Malthus drew the attention of the world to the dangers of rapid population growth. As a result, population trends and problems were given more attention, and were critically analysed in different parts of the world. Though Malthus's study and approach came in for considerable criticism, it is considered the first phase of population study.

1, 3, 9, 27, 81  
1, 2, 3, 4  
2, 4, 6, 8

Changes over a time  
Size, dist. History

At the time that Malthus was propounding his theory of population growth, a Chinese philosopher Hingliange Chi was also studying population problems, and came to similar conclusions as Malthus—that moral restraints were essential for checking population growth. Like Malthus, Hingliange Chi also stated that population growth was responsible for poverty. These ideas were, however, subsequently challenged by Karl Marx, who stated that poverty would not end merely by checking growth of population but through powerful social revolution.

Karl Marx: -  
German Economist  
socialist revolution

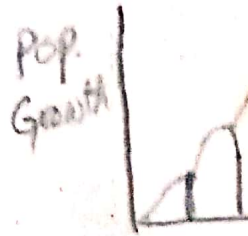
society, culture, technology  
political system

### Second Phase

1917

With the beginning of the nineteenth century, the second phase of population studies began. Several studies were conducted in the later part of the

first phase, though it was difficult to find out uniformity in them. During this phase, Joshua Milne and William Farr tried to improve the field of demographic studies. Farr tried to establish a relationship between actuaries and demography. He was appointed in the General Registrar Office in England and made significant contributions to the methodology of population analysis by constructing life tables. He also studied occupational mortality. John Finalison concluded that in order to have realistic population estimation, there should be proper registration of births, deaths and marriages. This resulted in help being sought from birth and death registration offices for every study on social progress. As a result of the efforts of these demographers, the study of population problems became a matter of serious concern in many European countries. England became the country where substantial contribution was made to the field of population studies.



In the second phase, relationship of mortality with fertility was studied. Demography was being accepted as an important field of study, and was recognized by the International Congress of Hygiene and Demography. It gained recognition as a science dealing with births, deaths, migration and marriages. In this phase, Acille Guillard published his study *Elements de Statistique Humaine ou Demographic Comparee.* (-1955)

**Third Phase**

20th

The third phase of population studies started at the turn of the twentieth century. In 1922, Carr Saunders brought out his famous work *The Population Problem: A Study of Human Evolution*, in which he tried to develop demography as a new branch of knowledge. He also developed the optimum theory of population. He also tried to make demography a part of the family of social sciences. He believed that population problems were related to human behaviour and control. According to Thompson and Lewis,

lowest pop. highest per capita & minimal fare

Carr Saunders may be said to sponsor the theory that man's growth in numbers has been largely determined by the economically desirable numbers under his conditions of life ... But, since Carr Saunders regards man's growth as wholly within his control and as conditioned by the attitude of mind he has developed under his institutions and particular physical conditions of his life, his theory stands in sharp contrast with those which were based on natural law.

During this phase, Arsene Dumont developed the Theory of Social Capillarity, based on a study of the population of France. According to him, a rigid social structure prevents upward movement in the society, which prevents individual development from becoming so engrossing that individuals have no time for rearing a family. Other important contributions to the field of population

(2) governs the fertility beh of pop

studies and demography came from Euler, Dudwig Moser and Alfred Lotka, who developed the quantitative theories of population.

In the USA, Walter Wilcox published his statistical analysis of divorce. Louis Dublin and Lotka published their work on stable population model, considered to be an important landmark in the growth of population studies. The Scripps Foundation for Research in Population Problems was established with an important demographer, Warren Thompson as its Director. In 1937, the Population Association of America was established in Princeton University. Attempts were made to collect figures and facts about America's population, and demographers tried to classify the population under various categories. Population predictions were made on the basis of data collected. The Mathematical approach was used to analyse aspects of population change and growth. Verhulst developed the Logistic Curve theory of population growth, which stated that over a period of time, the population of a country will become zero and stabilize.

Experts who carried out demographic studies included Cannan, Bowley, Pearl and Whepton. Organizations that were involved in demographic studies included the British Royal Commission and the UNO, the International Union for the Scientific Study of Populations, which enrolled several eminent demographers from different parts of the world. Other important organizations included the Population Council, USA; the Institute National D'Eludes Demographiques in Paris; the Population Investigation Committee, London; and the Population Commission appointed by the UNO.

Demographic and population studies received a considerable attention after World War II. The efforts of individuals and national and international organizations helped in making demography an independent subject. The UNO and other international bodies made significant contributions in the field of population studies. The International Union for the Scientific Study of Population, sponsored several congresses of which the first on a worldwide scale was held in Rome in 1954 under the auspices of the United Nations Organization. This is known as the first World Population Conference, 1954. The Conference consisted of 51 meetings held over 11 days, and more than 400 papers were presented. There were two main groups of topics—the 'happenings' and the 'methods.' The 'happenings' included topics such as fertility and mortality trends, distribution of population, migratory movements, ageing and its consequences, population in relation to resources and social aspects of demographic changes. The aspects included under 'methods' were evaluation of the quality of demographic data, techniques of measurement, definitions and concepts, legislation, administration, actuarial and other studies, and training and recruitment.

This conference was followed by other conferences at Belgrade in 1965 and in Bucharest in 1974. The year 1974 was celebrated as UN World

Population Year, and several population-related activities were taken up across the world. The UNO, in collaboration with the Government of India, set up the Demographic Training and Research Centre at Bombay, now known as the International Institute for Population Sciences. Other such centres were set up in Chile, Cairo, Aracia, Yaounde and Bucharest. The Economic and Social Commission for Asia and the Pacific at Bangkok has been actively promoting regional population studies. The UN Demographic Year Book is an authentic source material for demographic data. World population problems are of interest to various organizations such as the World Health Organization (WHO), Food and Agricultural Organization (FAO) and the United Nations Economic, Social and Cultural Organization (UNESCO).

### Fourth Phase

It was this phase that witnessed the emergence of the communist population doctrine. Communism was a well-established philosophy and ideology in the twentieth century. Karl Marx, the founder of this philosophy, also discussed population problems. Marx did not agree with Malthus that population was the most important cause of human poverty. He was of the opinion that overpopulation was the creation of capitalist society. Poverty was the result of unemployment, a consequence of the inability of the capitalist system to provide jobs for all. He also believed that under communism, there would be no human poverty, regardless of population growth. Even today, Communists adhere to the view that it is capitalism and not population growth that is responsible for poverty. In other parts of the world, however, it is believed that population growth and poverty go hand-in-hand. This applies more to countries where natural resources are limited and do not meet the needs of the existing population.

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each person contribute acc i  
Com. Control  
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