

A Note on History of Demography

RUDRA PRASAD GAUTAM*

INTRODUCTION

The term demography is derived from Latin word demos, it means people. Thus, demography is the study of human population and the social condition of a nation. In demography, particularly we study the size, distribution, composition and their changes in a society. It is a science which ascertains the state and studies chiefly of births, deaths, marriage and migration. It tries to discover the laws which control the movement of population. Thus, demography may be defined as the numerical analysis of the state and movement of human population inclusive of census enumeration and registration of vital events.

The focus of demography is on studying the regularities in socially and historically determined population reproduction understood as continual population renewal due to the interaction of mass-scale process of fertility and mortality. Demography uses quantitative statistical analysis of the state and movement of population on the basis of census and registration data. It studies as to how and when the quantitative aspect of population is affected. Thus, demography uses quantitative analysis. However, demography in another sense is concerned with qualitative analysis also. It studies the reasons for fertility differentials, the trend in mortality and fertility. It also studies the impact of public health measures, diet and nutrition, qualitative aspect of population, migration etc. Therefore, demography has both quantitative and qualitative aspects.

In modern world demography has become a wide subject of study for academicians, politicians and administrators. A leading French demographer of the first half of the 20th century Adolphe Landry gave a statement by saying that the history of demography merited more through study, and that even demographers themselves knew too little of the history. Since the publication of Landry's Traite de demographie, the demographic situation of the world has changed considerably. The world population was 2.5 billion when Landry's book first appeared, but now it has doubled and reached 5.0 billion. (July 11, 1987 is considered to be the Day of Five Billion People¹).

An American scholar and the author of the history of demography believed that the importance of demography was due to its interdisciplinary approach, perhaps that is an overstatement. Nevertheless, it shows that in order to reveal the content of demographic research it is necessary to step outside the realm of this science and look at its formation from a broader historical stance, to see its origin and development of demogra-

*Mr. Gautam is Asst. Lecturer in Economics at Central Department of Economics, TU, Kirtipur.

phic history. The history of demography must be studied not for the purpose of popularising the science, but for internal development and progress at a time when the practical importance of demography is rising sharply. The world's demographic situation in recent decades has been forced to focus on urgent questions, to put all its forces into studying the most critical concrete population problems. Since subject of the history of demography differs not fit directly into the structure of demography but it is a joint field of historical study at the juncture of history and demography.

ORIGIN OF DEMOGRAPHY

In the real sense it is difficult to point out the time period when demographic studies began in the world. From the historical evidence it is clear that demographic studies are as old as human society itself. The most widely accepted view is that demography originated in 1662 with the publication of an English shopkeeper John Graunt's pamphlet, Natural and Political Observations Made Upon the Bills of Mortality, which is the first important landmark in the history of demography, though it was not until the middle of the 19th century that the discipline received its technical name. Graunt's observations were based on the weekly reports on burials and christenings in a population of nearly half a million persons in London and environs, for the period 1604 to 1661. Today, this report is regarded as the first systematic and objective study of population. In this report he analysed the number and causes of death. He also discussed the need and necessity of such analysis and approach followed by him and also in some details were births, migration, family growth and other population problems. Further he analysed the population which was capable of serving in the army and suggested that the population should be studied on the basis of sex, age, religion, occupation etc.

Graunt believed that fertility, mortality and migration were inter-related process and that these were based on definite postulates. In this report Graunt concluded that on the one hand male birth was always greater than female birth, and on the other hand mortality rate was always higher in urban area than in rural area, and also it was higher at lower age in comparison to the higher ages. He also used the sample survey where records were not available. Lastly he attempted to construct a mortality table.

Sir William Petty, an English scholar and Graunt's contemporary, inspired and encouraged Graunt in his undertakings. He published his famous treatise entitled Essays on Political Arithmetic. In this essay he has given his view about population growth, urbanisation, unemployment of labourers and national income etc.

Edmund Halley, an English astronomer made another contribution to the advancement of demography. In 1693 he constructed the first empirical life table based on the data of births and deaths and he was known as the first person to use the term expectation of life. He concluded that there was a close relationship between population studies (demography) and other social sciences.

John Peter Sussmilch in 1761-62 wrote a massive book on population combining Swedish, German and French data and tried to construct a mortality table of universal applicability. In this work he studied natality, fertility and mortality, and concluded that generally there was an excess of females over males.

There has to be a father of demography. Those who advocate this position maintain that Graunt was the father, but also name other scholars - Sir William Petty and Edmund Halley. Despite the diverse list of fathers of demography, each of the scholars was involved in the birth in modern history of the quantitative study of mass-scale phenomena. Here it lies the main point behind the conception that the new science was discovered by Graunt or any of the other scholars cited above. It reduces all the diverse factors in the formation of demography to just one - the origin of the quantitative study of population. This approach has led to the incontestable opinion that demography developed as a part of statistics and then separated from the study.

Graunt's work opened the door to the still unknown world of demography. From that time on the door remained open although a long time passed before it was entered. It should be stressed that Graunt, Petty and Halley not only laid foundation for the quantitative study of population, but also dealt with some general matters related to population.

DEVELOPMENT OF DEMOGRAPHY

Historical Development

It is impossible to name an exact date of the birth of demography. The term demography began with the origin and development of the scientific study of population, where the term population was first used at the turn of the 17th century by the founder of English materialist Frances Bacon. However, the term was not used in England for a long time. Graunt, Petty and Halley did not use the term. According to a modern French demographer Alfred Sauvy, the term population was in general used by 1750 in France and finally crossed French borders, returned to England gradually and spread to other European countries.

First time the term demography was used in 1855 by French naturalist and mathematician Achille Guillard in his book entitled; Elements de statistique humaine ou demographie comparee. It is paradoxical that Guillard, who named the science of demography, did not contribute anything substantial to its development. However, he was among the first who in one way or another realised that a new science was being born.

According to Guillard, demography is generally a natural and social history of human race and at the same time it is only a mathematical understanding of human populations, their general development, their physical, civic, intellectual and moral state. This was criticised by some of his contemporaries who did not agree with his view that demography could be equated with population statistics. A German scholar Ludwig Von Stein criticising Guillard attempted to make the science of population as an independent discipline within the system of political and

administrative sciences. In 1958 another German scholar Robert Von Mohl, suggested the term population science as the only one suitable name for this subject.

In 1874 a book entitled La démographie comparée de la France, by Louis Adolphe Bertillon, a physician and head of the Paris Bureau of Statistics, viewed demography as an independent science as Guillard. In the beginning of second half of the 1870s the Annales de démographie internationale was published in France. Soon afterwards demography was officially recognised on an international level. In 1878 a permanent committee of the International Statistics Congress (ISC) was established. In order to maintain international cooperation in the field of population studies the International Hygiene Congress was used to discuss questions of demography in a special section. In 1883 the name of the Congress was changed to the International Congress of Hygiene and Demography. The Congress were held regularly until 1912, and the last was in Washington in the year 1912.

The term was defined by various scholars differently. At the end of the 1880s the French historian and economist, Pierre-Emile Levasseur defined that demography was the application of statistical methods to the study of population or in more general terms, human entities. This definition quite clearly singles out the study of population as the main objective of the science. By this time the discipline had gained distinct traits and had defined its subject matter. According to Jacques Bertillon, head of the Paris Bureau of Statistics (1883-1913), demography was supposed to have two divisions, one relating to statics and the other to dynamics of population.

Yuly Yanson, however did not see any differences between population statistics and demography. Like Bertillon, he divided the study of population into its static and dynamic condition. According to Yanson the static condition of population was the number, density of settlement, distribution, composition and physical characteristics. In studying the dynamics of population he included marital status, births, deaths, changes in the coefficients of population movement in time.

By the end of the 19th century demography existed as a science of facts. Despite the contradictory nature of its formation and its usual traits in the specific conditions of one or another country, in this period demography became a single science. Because of this contradictory and unusual origin, the name of this science was not commonly accepted for a long time.

The direct formation of demography as a science in the 19th century covered several decades, whereas the birth and progress of scientific studies of population developed even longer. The French scholar D. Valley believes that statistics and demography were born at the same day, the day of the first population census.

The appearance of demography was a major development in the entire history of population studies. However, the appearance of demography in the second half of the 19th century certainly did not mean that the features of this science were clearly distinguished right away. This process continued in the next century as well and is still under way

today. The formation of demography created crucial conditions for efforts from the end of the 19th century and especially in the 20th century to study the crucial problem - population reproduction and its relation to social, economic and other process in social development.

RECENT DEVELOPMENT

The end of the last century (19th century) winds up the prehistory of demography. The 20th century sees demography's development strictly as a science. This development covers the period from the end of the 19th century to the present. Any historic events occurred in the world affects to the study of population. The specific features of the development of this science are directly connected to the changes in the demographic situation at the end of the 19th century and in the 20th century. To know the recent development of demography, it is necessary to define the principal periods in the history of demography. Some demographers had divided the period into three stages: (i) Pre-war period, (ii) between war, and (iii) post-war period. But it would be better to divide the history of demography from the end of the 19th century to the 1950 and 1950 onwards.

The first period starts from the end of the 19th century and goes until the middle of the 20th century. By the end of the 19th century the differentiation in scientific knowledge about population was quite clear. The most vivid evidence of this was the inception of demography. But, at the same time to one or another degree, the study of population was developing in many social and in a number of natural sciences.

At the beginning of the 20th century the concept of Population Problems was first incorporated in the scientific vocabulary and then the study of population became much more complicated. Edward B. Reuter, an American sociologist published a book entitled Population Problems in 1923. After seven years of this publication an American demographer Warren S. Thompson published a book by the same name, which dealt with the structure of population, births, deaths, illness, natural population growth, the problems of industry and agriculture connected with population growth, demographic aspects of urbanisation and ended dealing with migration, problems of optimum population and population control. As a commentator Vance wrote that the book Population Problems written by Thompson and other similar publications not only confirmed the importance of studying demography but also comprised the nucleus of the study, and their very existence helped create new courses in the developing discipline of demography.

The main feature of this period was the formation of modern thinking about the study of population reproduction, which is the central problem of demography. Initially each of the main demographic processes were studied more or less in isolation from one another. With the appearance of demographic science it became more clear that there was a connection and interdependence between these phenomena as parts of the single process of population reproduction. Increased studies and continuous research on natality and mortality was a growing understanding of population reproduction.

In the 1920s there was considerable interest in attempts to establish the 'law' of population growth using the biological-mathematical method. In this day Quetelet had believed that population growth progressed until it reached a certain point and then began to decline. In 1925 Raymond Pearl attempted to prove that population growth followed a so-called logistic curve theory and that in this way he had discovered the 'law' of this growth and it was criticised saying that logistic curve could not be applied in predicting population growth and used in limited way in demographic analysis.

Alfred J. Lotka in his studies devised a mathematical theory of stable population. On commenting the theory of Lotka, Romanian demographer Vladimir Trebici said that this theory launched the period of formal demography, and the numerous theoretical and methodological studies made in the past three decades signified the most fruitful stage in the development of statistical demographic analysis.

Malthusian and neo-Malthusian outlooks continued to play a significant role in developing the theoretical foundation of demography. This was furthered by the increased one sided approach to population studies, their formalisation, and reduction essentially to divising quantitative regularities characteristics of population. This approach was also demonstrated in special demographic theories, as well as mathematical, biological and sociological theories.

The first international level congress on population was held in 1927. The second and the third international congress on population organised by the International Union for the Scientific Study of Population took place in 1931 (Rome) and in 1937 (Paris), played a significant role in strengthening demography. However, they did not do as much as expected to considerably activate demographic research. It was only in 1939 that its council set up a committee of experts to study demographic problems. But nothing was accomplished due to world war II.

A fundamentally new stage in international cooperation in population studies began with the creation of the United Nations, when in 1946 the Population Commission was set up under the Economic and Social Council. Between 1920s and 1940s attempts were made to do demographic research in connection with the study of other social phenomena. However, these efforts failed because a serious theoretical base was lacking for such research. Although certain conceptions like optimum population, demographic revolution and demographic transition were put forth in those decades, the study of the regularities of demographic development in general did not meet the demands of reality. But these research were unable to provide timely predictions of the changes that occurred in the world's demographic situation. First time Julian Sorell Huxley, then General Director of UNESCO, Binay Ranjan Sen, the head of the FAO, and number of other scholars call public attention to the consequences of changes in world's demographic situation.

Throughout the decades demographic problems had been regarded in most western countries as secondary, and the attitude to the science had been

likewise. The caprices of world demographic development in the second half of the 20th century, however, changed that situation radically. The transition did not take place all at once. A gradual change in the orientation demographic research had preceded demography's entry into the forefront of science. United Nations publication note that as early as the beginning of the 1950s demographers were showing a growing interest in the economic and social aspects of demographic changes.

The transition in the development of demographic science was mostly clearly evident for the first time at the first World Population Conference held in Rome in 1954. The overwhelming majority of conference participants decisively rebuffed efforts by Malthusians to impose their views on demographic development. They also put forth new objectives for demographic science which required its reorientation. This was reflected for instance, in the speech presented at the closing meeting by the then President of the International Union for Scientific Study of Population, Liebmann Hersch. In his own words "the conference may lay claim to certain rather than substantial accomplishments. It has in various ways brought to light the multitude and variety of the links between demography and social phenomena in general and has thus at long last broken through the narrow circle of pure demography and the scientific isolationism so dear to the demographers of the 19th and the early 20th centuries."

Hersch's statement was significant. First, one of the authoritative representatives of demography say that it could not develop within "the narrow circle of pure demography" which has been responsible for its scientific isolation, that is its being divorced from other sciences and the demands of reality. Secondly, he expressed a growing scientific interest in studying the relationship between demographic and socio-economic processes.

This is precisely what revealed the principal content of the transition that began in the 1950s from a focus mainly on formal demography to the study of the relationship between demographic and socio-economic factors in social development. Criticism of reducing all demographic science to formal demography was also typical of the second World Population Conference 1965, held in Belgrade. One of the participants of this conference said that demography was something more than simply the theory of formal techniques utilised to determine the processes of population development.

This transition laid foundations for the new modern period of western demography during which its representatives considerably revised the subject of the study, and a number of other questions connected with studying population. In this respect it is necessary to once again refer to the collective work edited by Philip M. Hauser and Otis Dudley Duncan entitled The Study of Population which is wellknown in western demography.

The main theoretical conclusions regarding demography as a science drawn the contributors of that publication were summed up by Hauser and Duncan, in their own words, "Demography is the study of the size, territorial distribution, and composition of population, changes therein, and the components of such changes, which may be identified as natality, mortality, migration, and social mobility." According to this definition

the study of demography encompasses demographic processes, migration and also social mobility. In an attempt to ensure the study of social, economic and other factors of demographic development within the framework of demography. Hauser and Duncan introduced along with the concept of "demographic analysis", another concept that of "Population Studies." The term "demographic analysis" refers to the study of the components of population development whereas the population studies deals not only with population variables but also the correlation between population development and other variables, such as: social, economic, political, biological, genetic, geographical and others. They concluded that demography may be conceived in a narrow sense as synonymous with demographic analysis or in a broad sense as encompassing both 'demographic analysis' and population studies.

A noteworthy thing is that the Educational and Scientific Demographic Division of the United Nations has promoted population studies of developing countries. In 1956 the Demographic Training and Research Centre, now known as the International Institute for Population Studies was established in Bombay under the joint sponsorship of the government of India and the United Nations. Since the establishment of the Demographic Training and Research Centre, five regional centres established by the United Nations were: Centro Latinoamericano de Demografia in Santiago in 1958, the Cairo Demographic Centre in 1962, the Regional Institute of Population Studies in Accra, Ghana, Institut de formation et de recherche demographiques in Yaounde, Cameroon, the United Nations Interregional Demographic Centre, Bucharest, Romania. The Economic and Social Commission for Asia and the Pacific (ESCAP), Bangkok is a branch of the United Nations and is actively promoting regional population studies.

The United Nations gave technical assistance within the framework of World Population Censuses of 1960, 1970, and 1980 in many developing countries, and helped in the unification of census programmes for a number of countries. The United Nations expanded its activities all over the world in the 1960s due to the programmes and projects geared to regulate demographic processes, train demographers for developing countries, collect data and conduct research in a number of countries at the request of the governments. The research and coordination activities of the United Nations at that time were concentrated mainly analysing the social and economic consequences of demographic processes in developing countries.

The third World Population Conference held in Bucharest in 1974, played an important role in developing and strengthening that approach. In contrast to the first and second conferences, which were held at the level of experts, the third conference was at the government level. Another important feature of the Bucharest conference was that developing countries were well represented for the first time. The conference adopted the World Population Plan of Action. It became an effective programme of measures of this field. The year 1974 was observed as the United Nations World Population Year, during the year several population activities were undertaken and assistance was extended to many countries to undertake similar activities.

The results of demographic development in the decade after the World Population Plan of Action were reviewed at the fourth World Population

Conference held in Mexico City in 1984. This conference passed recommendations for the further implementation of the World Population Plan of Action. The conference added a new section to the plan called "Peace, Security and Population."

Other bodies of United Nations, such as: World Health Organisation (WHO), the United Nations Economic, Social and Cultural Organisation (UNESCO), the Food and Agricultural Organisation (FAO), the United Nations Fund for Population Activities (UNFPA), also continue to maintain their interest in the problems of population. Besides these organisations other non-government organisations also take interest in the population problems of developing countries.

CONCLUSION

The history of demography cannot separate from the entire process of the development of scientific knowledge about population. Knowledge about population was appeared in the 17th century. For a decade, demography was regarded as a part of statistics. Though this science is related with various other sciences. For certain objectives the evolution of demography was also complex, although it continually advanced, which ultimately ensured its confirmation as an independent discipline in the social sciences.

The origin of demography in the 19th century and development in 20th century was preceded by a lengthy period when knowledge about population was being accumulated. This knowledge was not simply the rudiments of the study of any one aspect of population, but also it was a complex and multi-faceted process, the most important element having been an awareness of the role and place of population studies in social development. This awareness then was shaped by socio-economic factors that continue to influence the development of demography today.

SELECTED REFERENCES

1. Bhende, Asha A. and Tara Kanitkar (1985): Principles of Population Studies (Bombay: Himalayan Publishing House), Third edition.
2. Bogue, D.J. (1969); Principles of Demography (New York: John Willey and Sons Inc.), 13th edition.
3. Hans Raj (1981): Fundamentals of Demography (Delhi: Surjeet Publications), Second Edition.
4. Shelestov, Dmitry (1987): Demography in the Mirror of History (Moscow: Progress Publishers).
5. Social Service National Coordination Council (2044 B.S.): Upakar, Vol. 7, No. 1.
6. Valentey, D.I. (ed.) (1980): An Outline Theory of Population (Moscow: Progress Publishers), Translated Edition.

BOOK REVIEWS

Chambers, Robert (1983): Rural Development: Putting the Last First, (U.K.: Longman Scientific and Technical, Longman Group U.K. Limited), pp. vii + 246.

This is a challenging book for all concerned with rural development, as planners, academicians, students or researchers, staffs of the government departments, non-governmental organizations and aid organizations.

As two-third of the world population is poor; the characteristics of both people and society are being presented by different authors differently. The countries typified by poverty are classified under the groups less developed countries, underdeveloped countries, developing countries or the Third World. As the economies of the poor countries are disintegrated or distorted, the dividing line between the rich and poor is arbitrary. No objective criterion seems to have been developed. But the book under reference can be termed as Treaties which contains eight chapters viz; rural poverty unperceived, two cultures of outsiders, whose knowledge ?, integrated rural poverty, seeing what to do ?, the new professionalism: putting the last first, and practical action.

The focus of the book is deliberately limited to rural poverty and to the third world. The author concludes that there is appalling urban poverty in the Third World, and there is rural poverty in the richer worlds. But rural poverty in the Third World deserves special attention because it is less visible.

The main theme of the book is found in the Seventh Chapter under the heading the new professionalism: putting the last first. The author clearly holds the view that outsiders concerned with rural poverty (academic researchers, aid agency personnel, bankers, businessmen, consultants, doctors, engineers, journalists, lawyers, politicians, priests, school teachers, staff of training institutes and other professionals) under perceive rural poverty. They are usually attracted to and mostly trapped in urban 'cores' which generate and communicate their own sort of knowledge while peripheries (rural) are isolated and neglected. The direct rural experience of most urban based outsiders is limited to the brief and hurried visits from urban centers. This is so because they basically rely on problems of paperworks and often labour under the notorious difficulties and distortions of having to rely on interpreters and misleading responses from those whom they meet.

The author agrees with C.T. Kurien in defining poverty and states it as the socio-economic phenomenon whereby the resources available to a society are used to satisfy the wants of the few while many do not have even their basic needs met (p. 36). The outsiders perception (academic and practical) share the top-down, centre-outwards biases of knowledge. To understand rural poverty better, outsiders have to see things from the other end which the author terms the third culture.

Regarding research on rural poverty, the author is not in favour of questionnaire survey method. Looking for cost-effectiveness in research,

he somewhere emphasizes social anthropology approach along with survey questionnaire. The author holds the view that due to inappropriate method of study of rural poverty, the ignorance of rural people is created by the ignorance of outsiders (researchers ?).

The root causes of rural poverty in the Third World, as the author perceives, are the physical weaknesses of the households, isolation (lack of education, remoteness etc.), vulnerability and finally powerlessness.

In a nutshell, what can be concluded about the book is that rural poverty is misperceived by outsiders, those who are not themselves rural and poor. Outsiders rarely appreciate the knowledge of rural people or the hidden nature of rural poverty. He argues for a new professionalism with fundamental reversals in learning and behaviour of outsiders and proposes a totally different action for tackling rural poverty.

The whole book is based on practical and research experience (two cultures ?) of the author in rural development in countries of Africa and Asia. Good examples are cited especially from Kenya, Botswana, Sri Lanka, India, Bangladesh and Nepal. Finally, the author suggests that for the poor to lose less and gain more requires reversals: spatial reversals in places where professionals live and work, and in decentralization of resources and discretion; reversals in professional values and preferences, from a 'first' to a 'last' list. New professionals should put the last first and should start with bottom-up analysis and they have to be explorers and multi-disciplinarians. If this is so, it questions the rationale of employing expatriate experts who belong to a completely different culture.

The book contains perceptions of the author about rural poverty. He has presented things as he observed. He has not presented even a single case study of any programme which seek to reach and help poor. His ideas are well documented but are not new to reader from the Third World or a professional of the Third World. Had the author presented mechanisms which could help the planners to make reach the benefits of the development programmes to the poor, the book would have been rated differently. The simple fact is that this is not a stereo-type presentation of the situation as other writers have done. Arguing for new professionalism (putting the last first) he seems too socialistic to reverse the existing order. The author should be congratulated for documenting the experience of the few professionals who come from rural areas, whose voice of course was not heard so far. It is an essential book which should be read by all concerned with rural development.

Central Department of Economics
Tribhuvan University
Kirtipur

Khem K. Dahal