

Sociology Semester - I
Module / Unit - Emergence, Scope and Methods
Lesson - 1 - Definition and Emergence of Sociology

Introduction:

Now I am going to discuss about the definitions of Sociology and the factors that contributed for the emergence of Sociology as a scientific discipline.

‘Sociology’ which had once been treated as social philosophy or the philosophy of history emerged as an independent social science in the 19th century. Auguste Comte, a French Social Scientist is traditionally considered to be the father of Sociology. Comte is accredited with the coining of the term Sociology in 1839. “Sociology” is composed of two words: socius, meaning companion or associate; and ‘logos’, meaning science or study. The etymological meaning of “Sociology” is thus the science of society.

Now let us know the objectives of this lesson. The main objectives are :

1. To introduce the students to the basic understanding of Sociology
2. To make the student to understand the factors that have contributed for the emergence of Sociology as a scientific discipline.

Definition of Sociology:

Sociology has been defined in a number of ways by different sociologists. No single definition has yet been accepted as completely satisfactory. In fact, there are as many definitions of Sociology as there are sociologists. Now let us discuss and observe the various types of definitions given by some prominent sociologists.

1. **Auguste Comte**, the founding father of Sociology, defines “Sociology as the science of social phenomena, subject to natural and invariable laws, the discovery of which is the object of investigation”.
2. **Kingsley Davis** says that “Sociology is a general science of society”.
3. **Harry M. Johnson** opines that “Sociology is the science that deals with social groups”.
4. **Emile Durkheim** defines “Sociology as the science of social institutions”.
5. **Franklin Henry Giddings** defines “Sociology as the science of social phenomena”.
6. **Ogburn and Nimloff** define “Sociology as the scientific study of social life”.
7. **Max Weber** defines “Sociology as the science which attempts the interpretative understanding of social action in order thereby to arrive at a casual explanation of its course and effects”.

8. **Kimball Young and Raymond W. Mack** define “Sociology as the scientific study of the social aspects of human life”.
9. **Alex Inkeles** says “Sociology is the study of systems of social action and of their inter-relations.”

A careful examination of various definitions given by the Sociologists, makes it evident that sociologists differ in their opinion about the definition of Sociology. Their divergent views about the definition of Sociology only reveal their distinct approaches to its study. However, the common idea underlying all the definitions is that Sociology is concerned with man, his social relations and his society. Apart from this it is also said that Sociology as a scientific discipline focuses its attention on the study of various aspects of society such as social relations, social disorganization, social problems, social stratification, social processes, social change, social institutions, social control, etc.

Therefore, Sociology is a science of society. In fact, Sociology began to emerge as an independent and separate discipline around the middle of the 19th Century. Sociology which is known as the science of society, is one of the youngest of the social sciences. It is one of the youngest sciences because only recently it came to be established as a distinct branch of knowledge with its own distinct set of concepts and its own methods of inquiry.

Though Sociology came to be established as a separate discipline in the 19th century due to the efforts of the French philosopher Auguste Comte, it is wrong to suppose that there existed no social thought before him. For thousands of years men have reflected upon societies in which they lived. In the writings of philosophers, thinkers and law-givers of various countries of various epochs we find ideas that are sociological. For instance, in the writings of Plato, Aristotle, Manu, Kautilya, Confucius, Cicero and others we find major attempts to deal methodically with the nature of society, law, religion, philosophy, etc. Plato’s *Republic*, Aristotle’s *Politics*, Kautilya’s *Arthashastra*, the Smriti of *Manu*, Confucius’ *Analects*, Cicero’s on *Justice* are some of the ancient sources of social thought.

Machiavelli’s the *Prince*, Thomas Hobbes’s *Leviathan*, Rousseau’s *Social Contract*, Montesquieu’s *The Spirit of Laws*, Adam Smith’s *Wealth of Nations* had made attempts to project a picture of an ideal society free from all shortcomings.

However, it was only in the 19th Century that systematic attempts were made by Auguste Comte, Herbert Spencer, Emile Durkheim, Max Weber and others to study society and to establish a science of society called “Sociology.”

Now let us discuss the factors which contributed for the emergence of Sociology as a scientific discipline.

1. Modernity and Social Change in Europe and Emergence of Sociology

Cultural Renaissance is said to have given birth to an important ideological paradigm in the human history, the ideology of Modernism and hence, led to the dawn of the Modernity in

Europe. The term Modernity is derived from the Latin word “*modernus*” which itself is derived from “*modo*” meaning just now or current. By this definition, Modernity is a relative term which denotes the new practices as compared to the old. But in sociological and historical sense, it denotes a specific period in which Europe saw significant cultural and intellectual upheaval which laid the foundation of the contemporary modern world. Modernity was not only about some new liberal ideas and practices, but was also about the existential experience of the conditions that they produce even today, and their ongoing impact on human culture, institutions and politics. Some scholars were so deeply influenced by this new ideology that they saw it as a panacea to the then existing social deformities.

Modernity became synonymous with a period which was marked by questioning of tradition, the prioritisation of individualism over the collectivity, freedom of ideas, equality in all spheres of life, promotion of scientific and technological progress, rationalisation of institutions and ideas and finally, a movement from feudalism (or agrarianism) towards capitalism and the market economy, industrialisation, urbanisation and secularisation. In the political sphere, it also saw the development of the modern concepts like that of the contemporary nation-state and its constituent institutions like representative democracy and liberal democracy.

In this period, the old beliefs were liberally questioned and rationality emerged as a new religion. Rousseau, Montesquieu, etc. talked of modern political ideas while Adam Smith, Ricardo and J S Mill talked of a new economic order. All these had a common thread which is rationality of human thoughts. Further, new order started to replace the old order and it created considerable social upheaval and disturbance in society. In this background emerged the earliest sociological thoughts in the minds of Hegel, Comte and Spencer. They were mainly western but with global consequences.

Other events that took place were both discrete and continuous. As industries started to replace home based production, new forms of economic relations emerged. Industrial working also significantly altered other social institutions like family, kinship and household. Another event was a discrete event in the form of French Revolution. This was a never before event in the history of political arena and it disrupted the old feudal order. French Revolution has given birth to new ideologies such as Individualism, Utilitarianism, Socialism, Democracy, Positivism and Humanitarianism. At the same time, it also attracted sharp counter-reactions from the conservative forces. As a result, the French society was shaken to its core and social scientists had a new task at the hand to explain the upheavals in the society. It was at this juncture that a need was felt to devise new means to understand the society. This was the spark which gave birth to the discipline of Sociology.

The emergence of Sociology as a distinctive discipline can be understood better if we look back historically at the bigger picture, which is linked with the dawn of Modernity and includes intellectual ideas, material context and political development within which, Sociology was born and later grew. They are broadly classified as:

1. Intellectual Ideas
2. Material and social developments

3. Political developments

Now let us discuss how these factors have contributed for the emergence of Sociology as a scientific discipline.

1. Intellectual Ideas

The Enlightenment, as a European intellectual movement, especially in the late 17th and 18th Centuries, led by Montesquieu and Rousseau, emphasised upon Reason and Individualism. It had a great influence on emergence of Sociology. In fact, the earliest form of sociological investigation, i.e. Positivist Sociology, had much to do with the enlightenment ideas of rationality and scientific investigation.

Darwin's idea about organic evolution was another dominant influence on early sociological thought and many of the early social thinkers started to believe that society too evolves in a similar fashion as the organisms do. They were also convinced that progress in knowledge of society on lines of natural sciences promised the solution to all social ills. For example, Auguste Comte, the French Scholar, considered to be the founder of Sociology, believed that Sociology would contribute to the welfare of humanity and it has to be approached as a scientific discipline. These ideas reached a very mature state in France which ultimately became the birth place of Sociology and Alexis de Tocqueville, Claude Saint-Simon, Auguste Comte, Spencer and Emile Durkheim became the face of French Sociology with their seminal formative work. Comte was the first to use the term Sociology and he believed that study of Sociology would be scientific. He developed his scientific view of the discipline in the form of Positivism, or Positive Philosophy. He developed '*social physics*' initially, and in 1839, he called it 'Sociology.'

2. Material and Social Developments

Material developments are understood in the form of arrival of Industrial Revolution and growth of capitalism. Industrial Revolution gave birth to factory system of production, led to emergence of middle class and dismantling of feudal estates. These developments not only had certain positive outcomes, but they also had negative fallout.

In the economic sphere, though there were cities earlier as well, the industrial cities gave birth to a completely new kind of urban world. Factory system replaced the home based production. The period was marked by the soot and grime of factories, by overcrowded slums of the new industrial working class, degradation of labour, bad sanitation, general squalor and new forms of poverty. Workers were forced to work in dehumanising conditions under the new factory system. New forms of crime including petty thefts also emerged.

In the social sphere, nuclear family emerged. It led to issues of increased incidence of domestic violence, breakups, etc. Middle class also emerged as a new structural class and led to new cleavages in society.

3. Political Developments

The biggest event that affected emergence of the discipline was the French Revolution which itself was influenced by the Enlightenment philosophy. Although a general context was present throughout Europe, but an immediate context for the rise of Sociology was present in France with its unique socio-political situation. The upheaval that French Revolution created served as the immediate context for emergence of the discipline. Prior to the Revolution, France was trapped in an archaic socio-economic condition and feudalism was a hallmark of this society. Society was divided into estates – three of them viz. 1. The nobility, 2. The clergy, 3. The commoner. It was a highly distorted system in which the first two estates ruled the roost at the expense of the commoner. It bred a lot of discontent and tension in the society and ultimately, the French Revolution provided the environment which led to replacement of old feudal system with a new one. Ideals of democracy, liberty and fraternity, given by the intellectuals like Montesquieu and Rousseau, became the new watch words. But they did not come easily and the old system resisted stiffly. As a result of these churning, a tussle between the old and the new ensued that created a condition of great uncertainty. The revolution was no disruptive that it affected all the sphere of life and a general sense of anarchy and insecurity became rampant. In this situation, the early social thinkers sought to find the answers to the questions posed by the French Revolution. Intellectuals like Saint Simon, Auguste Comte, Spencer and Durkheim provided the early ideas which laid the formal foundation of the discipline. They made a bid to understand the cause of these new events and their consequences for society. As discussed earlier, it was Comte who called the new set of thoughts as Sociology for the first time. Spencer followed the footsteps of Comte and gave the idea of social evolution similar to biological evolution. Efforts of Durkheim led to the establishment of Sociology as the first department in France and Europe. Thus, despite a general impetus being present in Europe, Sociology emerged as a distinct discipline in France in the backdrop of French Revolution.

On the basis of this discussion we can understand that Sociology came to be established as an independent and a separate social science in the middle of the 19th century. Various factors paved the way for its emergence. Ian Robertson in his book “Sociology” has mentioned of three factors that hastened the process of the establishment of Sociology as a separate science. They may be summarized like this:

i. Industrial Revolution and Industrialization:

Industrial Revolution that took place first in England during the 18th century brought about sweeping changes throughout Europe. Never before in history did social changes take place on such a massive scale. Sociology emerged in the context of the sweeping changes.

Factory system of production and the consequent mechanization and industrialization brought turmoils in society. New industries and technologies change the face of the social and physical environment. The simple rural life and small-scale home industries were replaced by complex urban life and mass production of goods. Industrialization changed the direction of civilization. It destroyed, or radically altered, the medieval customs, beliefs and ideals.

Industrialization led to urbanization. Peasants left rural areas and flocked to the towns, where they worked as industrial labourers under dangerous conditions. Cities grew at an unprecedented rate providing an anonymous environment for people. Social problems became rampant in the fast developing cities. Aristocracies and monarchies crumbled and fell. Religion began to lose its force as a source of moral authority. “For the first time in

history, rapid social change became the normal rather than an abnormal state of affairs, and people could no longer expect that their children would live much the same lives as they had done. The direction of social change was unclear, and the stability of the social order seemed threatened. An understanding of what was happening was urgently needed”.

ii. Inspiration from the Growth of Natural Sciences:

Nineteenth century was a period in which natural sciences had made much progress. The success attained by the natural scientists inspired and even tempted good number of social thinkers to emulate their example. If their methods could be successful in the physical world to understand physical or natural phenomena, could they not be applied successfully to the social world to understand social phenomena? As an answer to this question Comte, Spencer, Durkheim, Weber and others successfully demonstrated that these methods could be used to study the social world.

iii. Inspiration provided by the radically diverse societies and cultures of the colonial empires:

The colonial powers of Europe were exposed to different types of societies and cultures in the colonial empires. Their exposure to such diversities in societies and cultures provided an intellectual challenge for the social scientist of the day. Information about the widely contrasting social practices of these distant peoples raised fresh questions about society: why some societies were more advanced than others? What lessons could the European countries learn from comparisons of various societies? Why the rate of social change was not the same everywhere? The new science of society called “Sociology” had emerged as an independent science in an attempt to find convincing answers to these questions.

It is clear from this analysis Sociology was born out of the attempt to understand the transformations that seemed to threaten the stability of European society. Social thinkers like Comte, Spencer and others argued that there was an urgent need to establish a separate science of society. They believed that such a science would be of great help in understanding the nature and problems of society and to find out solutions for the same.

Development of Sociology in the 20th Century

In the second half of the 19th and in the beginning of the 20th Centuries a large number of sociologists and social thinkers contributed a great deal to the development of Sociology. Auguste Comte, Herbert Spencer, Emile Durkheim and Max Weber were considered as the founding fathers of Sociology. They have contributed for the development of Sociology as a scientific discipline through their empirical and theoretical studies. Karl Marx, Lester F. Ward, George Simmel, Alfred Vierkandt, Gabriel Tarde, Small, Giddings, C.H.Cooley, James Ward, L.T. Hobhouse, E.A. Westermarck, Pareto, E.B. Tylor, J.G. Frazer, B. Malinowski and others are some of them, who have contributed for the development of Sociology.

Sociology experienced a rapid development in the 20th Century, most notably in France, Germany, the United States and England. Recently famous sociologists like P.A. Sorokin, Talcott Parsons, R.K. Merton, R.M. Maclver, M. Ginsberg, Kingsley Davis, W.F. Ogburn, A.W. Green, Kimball Young, P.G. Murdock, E.A. Ross, Wilbert Moore, Karl Manheim,

M.N. Srinivas, G.S. Ghurye and a host of others have further enriched the subject by their social investigations and writings. Today, Sociology is firmly established as a scientific discipline. The developments of the 20th Century provided a great stimulus for the study of social sciences in general and Sociology in particular. All major Universities in the World, now offering Sociology at Undergraduate and Post-Graduate level. They have established full-fledged Department of Sociology, offering UG, PG and Ph.D. Courses in Sociology across the globe.

Sociology in India

Sociology was introduced to India as an academic discipline only after World War I. Since then, being closely allied with anthropology, it is forging ahead in India. The sociological movement has gained some momentum in Bombay with its mouthpiece “Sociological Bulletin.” Some prominent sociologists of our country like G.S. Ghurye, R.K. Mukherjee, D.P. Mukherjee, K.M. Kapadia, R.N. Saxena, Mrs. Iravati Karve, Benoy K. Sarkar, A. Aiyappan, D.N. Majumbar, M.N. Srinivas, M.S. Gore, S.C. Dube, P.N. Prabhu, A.R. Desai and others have contributed their mite to the enrichment of the discipline. India with its diverse cultural peculiarities provides wonderful opportunities for sociological researches and studies. Sociology is now taught in many universities and colleges as one of the major disciplines. It is becoming more and more popular in almost all the Universities in the country. Many Government Organisations, Research Institutions and Non-Governmental Organizations are providing employment opportunities for the students and research scholars who have pursued Sociology at Graduate and Post-Graduate level.

Summary :

Sociology as a scholarly discipline emerged primarily out of Enlightenment thought, as a positivist science of society. Infact, Sociology has emerged as a scientific discipline in response to the understanding and analysing the changes and problems that have emerged due to the impact of Industrial revolution and French Revolution. Basically it tries to provide the scientific knowledge in relation to the changing social institutions, social structure and various social issues persisting in Modern Industrial society. This scientific knowledge was very much useful to solve many problems in European society.

Sociology Semester - I **Module / Unit - Emergence, Scope and Methods** **Lesson – 2 Nature, Scope and Importance of Sociology - Part - A**

Introduction:

As part of this lecture I am going to discuss about the nature, scope and importance of Sociology. Sociology which is known as the science and society, is one of the youngest social science. It is one of the youngest sciences because only recently it came to be established as a distinct branch of knowledge with its own distinct set of concepts, theories and its own methods of inquiry. Sociology as an independent social science has been

established by the social scientists namely Auguste Comte, Herbert Spencer, Emile Durkheim, Max Weber and Karl Marx. These Sociologists have played a leading role in making sociology a science. Therefore, these social thinkers are often called as the “founding fathers of Sociology.”

The main objectives of this lesson are :

- (i) To discuss about the contribution of the founding fathers of Sociology for the development of sociology as an independent social science.
- (ii) To discuss about the nature and scope of Sociology.
- (iii) To understand the importance and uses of sociology in the contemporary social world.

Ideas of founding fathers:

Auguste Comte introduced the word ‘Sociology’ for the first time in his famous work “Positive Philosophy” in 1839. The term “Sociology” is derived from the Latin word ‘Socius,’ meaning companion or associate and the Greek word “Logos” meaning study or science. Thus, the etymological meaning of Sociology is the Science of Society. Comte devoted his main efforts to an inquiry into the nature of human knowledge and tried to classify all knowledge and to analyse the methods of achieving it. He concentrated his efforts to determine the nature of human society and the laws and principles underlying its growth and development. Comte proposed Sociology to be studied in two parts: (i) The social statics; (ii) The Social dynamics. The social statics deals with the major institutions of society such as family, marriage, kinship, economy, polity, religion and education. Sociology is conceived of as the study of inter-relations between such institutions. Whereas the social dynamics focuses on whole societies as the unit of analysis and reveals how they developed and changed through time. Comte was convinced that all societies moved through certain fixed stages of development and that progressed towards ever increasing perfection. Comte has developed positivist methodology or scientific methodology for the study and analysis of the societies.

According to Herbert Spencer the fields of Sociology are: the family, politics, religion, social control and industry or work. He also mentioned that sociological study of associations,

communities, division of labour, social differentiation and social stratification, the Sociology of knowledge and the study of arts and aesthetics.

According to Emile Durkheim the ultimate social reality is the group or collectivity, not the individual. Social life has to be analysed in terms of social facts. Social facts are nothing but collective ways of thinking, feeling and acting by the individuals. Durkheim also mentioned various fields of sociological inquiry such as General Sociology, Sociology of Religion, Sociology of Law and Morals, Sociology of Crime, Economic Sociology, Demography and Sociology of Aesthetics. His major works are: *The Division of Labour in Society*; *The Rules of Sociological Method*; *Suicide*; *The Elementary Forms of the Religious Life*.

Max Weber's approach is almost contrary to that of Durkheim. For Weber, the individual is the basic unit of Society. Weber devoted much of his efforts to expound a special method called the 'Verstehen,' which means the method of understanding for the study of social phenomena. He wrote much on the topics such as religion, various aspects of economic life, political parties, forms of political organization and authority, bureaucracy, etc. His major works are: *Economics and Society*, *The Protestant Ethics and the Spirit of Capitalism*, *the City*, *Bureaucracy*.

Karl Marx was one of the most important thinkers of the 19th Century. He wrote scientifically on subjects such as Philosophy, Political Science, Economics and History. He never called himself a Sociologist, but his works are very rich in sociological insights. Hence he is regarded as one of the most profound and original sociological thinkers. Marx believed that the task of the Social Scientist is not merely to describe the social world, but to change it. Marx used the conflict approach to the study of social phenomena. Marx believed in social conflict and the inevitability of revolution. The key to history, he believed is class conflict. The bitter struggle between the capitalists and labourers or between those who own the means of production and those who do not own it would result into proletarian revolution. Marx also believed that the historic struggle would end only with the overthrow of the ruling exploiters or capitalist class and the establishment of a free, harmonious, classless and egalitarian society. Marx placed too much emphasis on the economic base of society. Marx believed that the economic base of society influences the general character of all other aspects of culture and social structure such as law, religion, education, political system and government, etc.

Based on the different views of the founding fathers of Sociology, now let us discuss the nature, scope and importance of Sociology.

NATURE OF SOCIOLOGY

Sociology, as a branch of knowledge, has its own unique characteristics. It is different from other sciences in certain respects. An analysis of its internal logical characteristics helps one to understand what kind of science it is. The following are the main characteristics of sociology as estimated by Robert Bierstedt in his book “The Social Order”:

1. Sociology is an Independent Science

Sociology has now emerged into an independent science. It is not treated and studied as a branch of any other science like philosophy or political philosophy or history. As an independent science it has its own field of study, boundary and method.

2. Sociology is a Social Science and not a Physical Science

Sociology belongs to the family of Social Sciences and not to the family of Physical sciences. As a social science it concentrates its attention on man, his social behavior, social activities and social life. As a member of the family of social sciences it is intimately related to other social sciences like history, political science, economics, psychology, anthropology etc. The fact that sociology deals with the Social universe distinguishes it from astronomy, physics, chemistry, geology, mathematics and other physical sciences.

3. Sociology is a Categorical and not a Normative Discipline

Sociology “confines itself to statements about what is not, what should be or ought to be”. “As a science, sociology is necessarily silent about questions of value. It does not make any kind of value-judgments. Its approach is neither moral nor immoral but amoral. It is ethically neutral. It cannot decide the directions in which sociology ought to go. It makes no recommendations on matters of social policy or legislation or programme. But it does not mean that sociological knowledge is useless and serves no purpose. It only means that sociology as a discipline cannot deal with problems of good and evil, right and wrong, and moral or immoral.

4. Sociology is a Pure Science and not an Applied Science

A distinction is often made between pure sciences and applied sciences. The main aim of pure sciences is the acquisition of knowledge and it is not bothered whether the acquired knowledge is useful or can be put to use. On the other hand, the aim of applied science is to apply the acquired knowledge into life and to put it to use. Each pure science may have its own applied field. For example, physics is a pure science and engineering is its applied field. Similarly the pure sciences such as economics, political science, history, etc., have their applied fields like business, politics and journalism respectively. Sociology as a pure science has its applied field. such as administration, diplomacy, social work etc. Each pure science may have more than one application.

Sociology is a pure science, because the immediate aim of sociology is the acquisition of knowledge about human society, not the utilization of that knowledge. Sociologists never determine questions of public policy and do not recommend legislators what laws should be passed or replaced. But the knowledge acquired by a sociologist is of great help to the administrator, the legislator, the diplomat, the teacher, the Technocrats, the supervisor, the social worker and the citizen. But sociologists themselves do not apply the knowledge to life and use, as a matter of their duty and profession.

5. Sociology is relatively an Abstract Science and not a Concrete Science

This does not mean that sociology is an art and not a science. Nor does it mean, it is unnecessarily complicated and unduly difficult. It only means that sociology is not interested in concrete manifestations of human events. It is more concerned with the form of human events and their patterns. For example, sociology is not concerned with particular wars and revolutions but with war and revolution in general, as social phenomena, as types of social conflict. Similarly, sociology does not confine itself to the study of this society or that particular society or social organization, or marriage, or religion, or group and so on. It is in this simple sense that sociology is an abstract not a concrete science.

6. Sociology is a Generalizing and not a particularizing or Individualizing Science.

Sociology tries to find out the general laws or principles about human interaction and association, about the nature, form, content and structure of human groups and societies. It does not study each and every event that takes place in society. It is not possible also. It tries to make generalization on the basis of the study of some selected events.

7. Sociology is Both a Rational and an Empirical Science.

There are two broad ways of approach to scientific knowledge. One, known as empiricism, is the approach that emphasizes experience and the facts that result from observation and experimentation. The other, known as rationalism, which stresses on reason and the theories that result from logical inference.

The empiricist collects facts; the rationalist co-ordinates and arranges them. Theories and facts are required in the construction of knowledge. In sociological inquiry both are significant. A theory unsubstantiated by hard, solid facts is nothing more than an opinion. Facts, by themselves, in their isolated character, are meaningless and useless. As Immanuel Kant said, “theories without facts are empty and facts without theories are blind.” All modern sciences, therefore, avail themselves of both empirical and rational resources.

It is clear from the above that sociology is an independent, a social, a categorical, a pure, an abstract, a generalizing, both a rational and an empirical and a general social science.

Major Concerns of Sociology (Subject-Matter of Sociology):

Now let us discuss about the major concerns of Sociology or subject matter of Sociology. Ever since the beginning of sociology, sociologists have shown a great concern in man and in the dynamics of society. The emphasis has been oscillating between man and society. “Sometimes the emphasis was on man in society, at other times, it was on man in society. Sociology concentrated heavily on society and its major units and their dynamics. It has been striving to analyse the dynamics of society in terms of organized patterns of social relations. It may be said that sociology seeks to find explanations for three basic questions: How and why societies emerge? How and why societies persist? How and why societies Change?

The Major Concerns of Sociology can be explained in this way:

The major concern of sociology is sociological analysis. It means the sociologist seeks to provide an analysis of human society and culture with a sociological perspective. He evinces his interest in the evolution of society and tries to reconstruct the major stages in the evolutionary process. An attempt is also made “to analyse the factors and forces underlying historical transformations of society”. Due importance is given to the scientific method that is adopted in the sociological analysis.

Sociology has given sufficient attention to the study of primary units of social life. In this area, it is concerned with social acts and social relationships, individual personality, groups of all varieties, communities (Urban, rural and tribal) , associations, organizations and populations.

Sociology has been concerned with the development, structure and function of wide variety of basic social institutions such as the family and kinship, religion and property, economic, political, legal, educational and scientific, recreational and welfare, aesthetic and expressive institutions.

Sociology studies the fundamental social processes that play a vital role. The social processes such as co-operation and competition, accommodation and assimilation, social conflict including war and revolution; communication including opinion formation, expression and change; social differentiation and stratification, socialization and indoctrination, social control and deviance including crime, suicide, social integration and social change assume prominence in sociological studies.

Sociology has placed high premium on the method of research also. Contemporary sociology has tended to become more and more rational and empirical rather than philosophical and idealistic. Sociologists have sought the application of scientific method in social researches. Like a natural scientist, a sociologist senses a problem for investigation. He then tries to formulate it into a researchable proposition. After collecting the data he tries to establish connections between them. He finally arrives at meaningful concepts, propositions and generalizations.

Sociologists are concerned with the task of “formulating concepts, propositions and theories”. “Concepts are abstracted from concrete experience to represent a class of phenomena”. For example, terms such as social stratification, differentiation, conformity, deviance etc., represent concepts. A proposition “seeks to reflect a relationship between different categories of data or concepts”. For example “lower-class youths are more likely to commit crimes than middle-class youths”. This proposition is debatable. It may be proved to be false. To take another example, it could be said that “taking advantage of opportunities of higher education and occupational mobility leads to the weakening of the ties of kinship and territorial loyalties”. Though this proposition sounds debatable, it has been established after careful observations, inquiry and collection of relevant data. Theories go beyond concepts and propositions. “Theories represent systematically related propositions that explain social

phenomena”. Sociological theories are mostly rooted in factual than philosophical. The sociological perspective becomes more meaningful and fruitful when one tries to derive insight from concepts, propositions and theories.

Finally, in the present era of explosion of knowledge sociologists have ventured to make specializations also. Thus, today good numbers of specialized fields of inquiry are emerging out. Sociology of knowledge, sociology of history, sociology of literature, sociology of culture, sociology of religion, sociology of family etc., represent such specialized fields. The field of sociological inquiry is so vast that any student of sociology equipped with genius and rich sociological imagination can add new dimensions to the discipline of sociology as a whole.

Sociology Semester - I
Module / Unit - Emergence, Scope and Methods
Lesson – 3 - Nature, Scope and Importance of Sociology - Part - B

SCOPE OF SOCIOLOGY

Now let us discuss about the scope of Sociology

Every science has its own areas of study or fields of inquiry. It becomes difficult for anyone to study a science systematically unless its boundaries are demarcated and scope determined precisely.

However, there are two main schools of thought regarding the scope of sociology: (1) The specialistic or formalistic school and (2) the synthetic school.

1. The Specialistic or Formalistic School

This school of thought is led by the German sociologist George Simmel. The other main advocates of this school are Vierkandt, Max Weber, Small, Von Wiese and Tonnies.

Simmel and others are of opinion that sociology is a pure and an independent science. As a pure science it has a limited scope. Sociology should confine itself to the study of certain aspects of human relationship only. Further, it should study only the 'forms' of social relationships but not their contents. Social relationship such as competition, subordination, division of labour etc., are expressed in different fields of social life such as economic, political, religious, moral, artistic etc. Sociology should disentangle the forms of social relationships and study them in abstraction. Sociology as a specific social science describes, classifies and analyses the forms of social relationships.

Vierkandt says that sociology concerns itself with the ultimate form of mental or psychic relationship which links men to one another in society. He maintains that in dealing with culture, sociology should not concern itself with the actual contents of cultural evolution but it should confine itself to only the discovery of the fundamental forces of change and persistence. It should refrain itself from making a historical study of concrete societies.

Max Weber opines that the aim of sociology is to interpret or understand social behavior. But social behavior does not cover the whole field of human relations. He further says that sociology should make an analysis and classification of types of social relationships.

Small insisted that sociology has only a limited field. Von wiese and Tonnies expressed more or less the same opinion.

CRITICISM:

The views of the Formalistic school are widely criticized. Some critical remarks may be cited here:

1. The formalistic school has unreasonably narrowed the field of sociology. Sociology should study not only the general forms of social relationships but also their concrete contents.

2. The distinction between the forms of social relations and their contents is not workable. Social forms cannot be abstracted from the content at all, since social forms keep on changing when the contents change. Sorokin writes, “we may fill a glass with wine, water or sugar without changing its form, but I cannot conceive of a social institution whose form would not change when its members change”.
3. Sociology is not the only science that studies the forms of social relationships. Other sciences also do that. The study of international law, for example, includes social relations like conflict, war, opposition, agreement, contract etc. Political Science, Economics also study social relationships.
4. The establishment of pure sociology is impractical. No Sociologist has been able to develop a pure sociology so far. No science can be studied in complete isolation from the other sciences. In fact, today more emphasis is laid on inter-disciplinary approach.

2. The Synthetic School

The synthetic school of thought conceives of sociology as a synthesis of the social sciences. It wants to make sociology a general social science and not a pure or special social science. In fact, this school has made sociology synoptic or encyclopedic in character. Durkheim, Hob House, Ginsberg and Sorokin have been the chief exponents of this school.

The main argument of this school is that all parts of social life are intimately inter-related. Hence the study of one aspect is not sufficient to understand the entire phenomenon. Hence sociology should study social life as a whole. This opinion has contributed to the creation of a general and systematic sociology.

The Views of Emile Durkheim

Durkheim, one of the stalwarts of this school of thought, says that sociology has three main divisions or fields of inquiry. They are as follows: Social Morphology, Social Physiology and General Sociology.

- i. **Social Morphology:** Social morphology studies the territorial basis of the life of people and also the problems of population such as volume and density, local distribution etc.
- ii. **Social Physiology:** Social Physiology has different branches such as sociology of religion, of morals, of law, of economic life and of language etc.
- iii. **General Sociology:** General Sociology can be regarded as the philosophical part of sociology. It deals with the general character of the social facts. Its function is the formulation of general social laws.

The View of Morris Ginsberg

Ginsberg, another advocate of the synthetic school, says that the main task of sociology can be categorized into four branches: Social Morphology, Social Control, Social Processes and Social Pathology.

- i. **Social Morphology:** ‘Social Morphology’ deals with the quantity and quality of population. It studies the social structure, social groups and institutions.
- ii. **Social Control:** ‘Social Control’ studies-formal as well as informal-means of social control such as custom, tradition, morals, religion, convention, and also law, court, legislation etc. It deals with the regulating agencies of society.
- iii. **Social Processes:** ‘ Social processes’ tries to make a study of different modes of interaction such as cooperation, competition, conflict, accommodation, assimilation, isolation, integration, differentiation, development, arrest and decay.
- iv. **Social Pathology:** ‘Social Pathology’ studies social mal-adjustment and disturbances. It also includes studies on various social problems like poverty, beggary, unemployment, over-population, prostitution, crime etc.

The scope of sociology is, indeed, very vast. It studies all the social aspects of society such as social processes, social control, social change, social stratification, social system, social

groups, social pathology etc. Actually, it is neither possible nor essential to delimit the scope of sociology.

Importance and Uses of Sociology

Now let us discuss the importance, uses and advantages with the study of Sociology.

Of the various social sciences, sociology seems to be the youngest. It is gradually developing. Still it has made remarkable progress. Its uses are recognized widely today. In modern times, there is a growing realization of the importance of the scientific study of social phenomena and the means of promoting human welfare.

The study of sociology has a great value especially in modern complex society. Some of the uses of sociology are as follows:

- 1) Sociology studies society in a scientific way. Before the emergence of sociology, there was no systematic and scientific attempt to study human society with all its complexities. Sociology has made it possible to study society in a scientific manner. This scientific knowledge about human society is needed in order to achieve progress in various fields.
- 2) Sociology throws more light on the social nature of man. Sociology delves deep into the social nature of man. It tells us why man is a social animal, why he lives in groups, communities and societies. It examines the relationship between individual and society, the impact of society on man and other matters.
- 3) Sociology improves our understanding of society and increases the power of social action. The science of society assists an individual to understand himself, his capacities, talents and limitations. It enables him to adjust himself to the environment. Knowledge of society, social groups, social institutions, associations, their functions etc., helps us to lead an effective social life.
- 4) The study of sociology helps us to know not only our society and men but also their motives, aspirations, status, occupations, traditions, customs, institutions, culture etc. In a huge industrialized society our experience is comparatively limited. We can hardly have a comprehensive knowledge of our society and rarely have an idea

regarding other societies. But we must have some insight into an appreciation of the motives by which others live and the conditions under which they exist. Such an insight we derive from the study of sociology.

- 5) The Contribution of sociology is not less significant in enriching culture. Sociology has given training to us to have rational approach to questions concerning ourselves, our religion, customs, mores, institutions, values, ideologies, etc. The study of societies has made people to become more objective, rational, critical and dispassionate. The study of societies has made people to become more broad minded. It has impressed upon its students to overcome their prejudices, misconceptions, egoistic ambitions, and class and religious hatreds. It has made our life richer, fuller and meaningful.
- 6) Another aspect of the practical side of sociology is the study of social institutions and the relations of individuals of each one of them. The family, the school and education, the state and government, industry and work, religion and morality, marriage and family, law and legislation, property and government, etc. are some of the main institutions, through which our society functions. More than that, they condition our life in countless ways. Knowledge of sociology may help to strengthen them to serve man better.
- 7) Sociology is useful as a teaching subject too. Sociology is a profession in which technical competence brings its own rewards. Sociologists, especially those trained in research procedures, are in increasing demand in business, government, industry, city planning, social work, social welfare, advertising, communications, administration, and many other areas of community life. A few years ago, sociologists could only teach sociology in schools and colleges. But sociology has now become practical enough to be practiced outside of academic halls. Careers apart from teaching are now possible in sociology. The various areas of applied sociology are coming more and more into prominence in local, state, national and international levels.

- 8) The need for the study of sociology is greater especially in underdeveloped countries. Sociologists have now drawn the attention of economists regarding the social factors that have contributed to the economic backwardness of a few countries. Economists have now realized the importance of sociological knowledge in analyzing the economic affairs of a country.
- 9) The study of society is of paramount importance in solving social problems. The present world is beset with several social problems of great magnitude like poverty, beggary, unemployment, prostitution, over-population, family disorganization, community disorganization, racial problems, crime, juvenile delinquency, gambling, alcoholism, youth unrest, untouchability etc. A careful analysis of these problems is necessary in order to solve them. Sociology provides such an analysis.
- 10) Sociological knowledge is necessary for understanding and planning of society. Social planning has been made easier by sociology. Sociology is often considered a vehicle of social reform and social reorganization. It plays an important role in the reconstruction of society.
- 11) We have practical utility of sociological techniques. The techniques developed by the sociologists and other social scientists are adopted by others. Let us think the example of social survey. Developed and used mainly by sociologists and statisticians, it has become an essential tool of market research, socio-economic surveys, poll surveys, census studies, etc. In the same way, sociologists provide a great deal of information that is helpful in making decisions on social policy.
- 12) Study of society has helped several governments to promote the welfare of the marginalized sections of the society. Not only the civilized societies, but even the tribal societies are faced with several socio-economic and cultural problems. Studies conducted by sociologists and anthropologists regarding tribal societies and problems have helped many governments in undertaking various social welfare measures to promote the welfare of the tribal people. Efforts are now being made to treat the tribals on par with the rest of the civilized people.

- 13) Sociology has drawn our attention to the intrinsic worth and dignity of man. Sociology has been greatly responsible in changing our attitudes towards fellow human beings. It has helped people to become rational in outlook and broadminded in spirit. It has made people to become tolerant and patient towards others. It has minimized the mental distance and reduced the gap between different peoples and communities.
- 14) Sociology is of great practical help in the sense, it keeps us up-to-date on modern social situations and developments. Sociology makes us to become more alert towards the changes and developments that take place around us. As a result, we come to know about our changed roles and expectations and responsibilities.
- 15) Finally, as Prof. Giddings has pointed out “Sociology tells us how to become what we want to be”.

In conclusion, it can be said that the question of ‘value of sociology’ is not a question whether or not we should study a subject. But it is a simple question of how it is actually to be used. Sociology, in short, has both individual and social advantages.

Summary :

Sociology is a scientific study of social phenomena. Sociology is an independent, categorical, pure, abstract, rational and an empirical science. Sociology mainly focuses its attention on the Sociological analysis of human society and culture; the study of primary units of social life such as social relationships, social groups, communities and associations ;

the fundamental social processes such as socialization, cooperation, competition and conflict ; and methods of research. According to the sociologists the scope of sociology is very vast. It touches upon every aspect of society and social life. The study of sociology is immensely helpful to understand the society and social life in rational and scientific way and sociological knowledge would be helpful to enrich our culture and to resolve many problems that are persisting in the contemporary social world.

Sociology Semester - I
Module / Unit - Emergence, Scope and Methods
Lesson-4 - Relationship of Sociology with other Social Sciences

Introduction:

Sociology is one of a group of social sciences which also includes economics, anthropology, political science and history. Sociology as a social science attempts to study social life as a whole. But for the understanding of social life as a whole sociology requires the help of other social sciences which studies a particular aspect of society. Economics studies the economic aspects whereas political science studies political aspects. Hence it is obvious that other social sciences are closely related to sociology. Sociology is considered as the mother of all social sciences. Besides sociology synthesizes other social sciences. Hence, there exists a very close and intimate relationship between Sociology and other social sciences. The divisions among the various social sciences are not clear, and all share a certain range of common interests, concepts and methods. It is therefore very important to understand that the distinctions of the disciplines are to some extent arbitrary and should not be seen in a constraint fashion. To differentiate the social sciences would be to exaggerate the differences and gloss over the similarities. Furthermore, feminist theories have also shown the greater need of interdisciplinary approach. For instance, how would a political scientist or economist study gender roles and their implications for politics or the economy without sociology of the family or gender division of labour.

Objectives

- This chapter will help you to understand the relationship of sociology with social sciences like history, economics, political science, psychology, philosophy, anthropology, and Biology.
- It also helps to examine the differences between sociology and other social sciences

For our specific understanding of the relationship between sociology and other social sciences we have to discuss them individually, which are discussed below:

1. **Sociology and History:**

“Sociology without History is rootless, and History without Sociology is fruitless”

Historians almost as a rule study the past, and sociologists are more interested in the contemporary or recent past. Historians earlier were content to delineate the actual events, to establish how things actually happened while in sociology the focus was to seek to establish causal relationships. History studies concrete details while the sociologists are more likely to abstract from concrete reality, categorise and generalise. Historians today are equally involved in doing sociological methods and concepts in their analysis i.e. Social History. Accordingly, sociology has a close relationship with history. Because present society bears symbols of the past. The relationship between the two is so close and intimate that scholars like G. Von Bulow have refused to acknowledge sociology as a science distinct from history. Sociology is a study of systems of social action and their inter-relationships. It is a science of social groups and social institutions. History studies the important past events and incidents. It records men's past life and life of societies in a systematic and chronological order. It also tries to find out the causes of past events. It also studies the past political, social and economic events of the world. It not only studies the past but also establishes relations with the present and future. That is why it is said that “History is the microscope of the past, the horoscope of the present and telescope of the future.” However, both the sciences are closely inter-related and interdependent on each other. Both study the same human society. Their mutual dependence led G.H. Howard to remark that, “History is past Sociology and Sociology is present history.” Both take help from each other. At the same time, one depends on the other for its own comprehension. History helps and enriches Sociology. History is the storehouse of knowledge from which Sociology gained a lot. History provides materials sociologists use. History is a record of past social matters, social customs and

information about different stages of life and Sociology uses this information. Books written by historians like A. Toynbee are of great use for Sociologists. To know the impact of a particular past event sociology depends on history. Similarly, Sociology also provides help to history and enriches it. A historian greatly benefited from the research conducted by Sociologists. Historians now study caste, class and family by using sociological data. Sociology provides the background for the study of history. Now history is being studied from Sociological angle. Every historical event has a social cause or social background. To understand that historical event history needs the help from Sociology and Sociology helps history in this respect. Sociology provides facts on which historians rely on.

Thus, History and Sociology are mutually dependent on each other. History is now being studied from Sociological angle and Sociology also now studied from historical point of view. Historical sociology now became a new branch of Sociology which depends on history. Similarly, Sociological history is another specialized subject which is based on both the Sciences. In spite of those similarities the difference remains. History is primarily concerned with the past and essentially tries to account for change over time while the main focus of sociology continues to be to search for recruitment patterns and build generalisation.

Difference between Sociology and History

- Sociology is a science of society and is concerned with the present society. But history deals with the past events and studies the past society.
- Sociology is a modern or new subject whereas history is an older social science.
- Sociology is abstract whereas history is concrete in nature.
- The scope of Sociology is very wide whereas the scope of history is limited. Sociology includes history within its scope.
- Sociology is an analytical science whereas history is a descriptive science.
- Attitude of sociology and history differ from each other. Sociology studies a particular event as a social phenomenon whereas history studies a particular event in its entirety.
- Sociology is a general science whereas history is a special science.

However, it is becoming extensively clear that historiography and sociology cannot be radically separated. They deal with the subject matter viz. men living in societies sometimes from the same point of view and the trends indicate that the two shall continue to borrow from each other extensively.

2. Sociology and Economics:

The fact that society is influenced by economic factors while economic processes are largely determined by the social environments clearly proves that the relation between Sociology and Economics is very close, intimate and personal. There exists close relationship between these two because economic relationships bear a close relation to social activities and relationships. Social relationships are also affected by economic relationships. Economic activities to a great extent are social activities. It is concerned with the association of human beings. Sociology is the study of human interactions and inter-relations their conditions and consequences. But Economics deals with economic activities of man. It is a science of wealth and choice. According to Prof. Robbins, "Economics is a social science which studies human behaviour in relation to his unlimited ends and scarce means which have alternative uses." It is concerned with the activities of man such as production, consumption, distribution, and exchange. It also studies the structure and functions of different economic organizations like banks, markets etc. It is concerned with the material needs of man as well as his material welfare. However, there exists a great deal of inter-relationship between these two sciences. Both are interdependent and inter-related with each other. Because of this inter-relationship

Thomas opines that, “Economics is, in fact, but one branch of Sociology.” Similarly, Silverman opines Economics is regarded as offshoot of sociology which studies the general principles of all social relations.

For its own comprehension economics takes the help of sociology and depends on it. Economics is a part of Sociology hence without the help from sociology economics can't understand itself completely. Economics is concerned with material welfare of man which is common welfare. Economic welfare is a part of social welfare. For the solution of different economic problems such as inflation, poverty, unemployment etc. economists take the help of sociology and considers the social events of that particular time. At the same time society controls the economic activities of man. Economics is greatly benefited by the research conducted by Sociologists like Karl Marx, Max-Weber, and Vilfred Pareto. Some economists also consider economic change as an aspect of social change. Economic draws its generalization basing on the data provided by Sociology. Thus, economics cannot go far or develop without the help of Sociology. Similarly, Sociology also takes the help from economics. Economics greatly enriches sociological knowledge. An economic factor greatly influences each and every aspects of social life. Economics is a part of sociology hence without the help of economics we can't understand sociology properly. Knowledge and research in the field of economics greatly contributes to sociology. Each and every social problem has an economic cause. For the solution of social problems like dowry, suicide etc. Sociologists take the help from economics. Marx opines, “Economic relations constitute the foundation of Society.” Economic factors play a very important role in every aspect of our social life that is why Sociologists concerned with economic institutions. For this reason, Sociologists like Spencer, Weber, Durkheim and others have taken the help from economics in their analysis of social relationships. Thus, both sociology and economics are very closely related with each other. There are some problems which are being studied by both sociologists and economists. Economic changes results in social changes and vice versa.

However, in spite of the above closeness, inter-relationship and inter-dependence both the sciences have certain differences which are described below:

Differences between Sociology and Economics

- Sociology is a science of society and social relationships whereas economics is a science of wealth and choice.
- Sociology is a much younger science which has very recent origin whereas economics

is comparatively an older science.

- Sociology is an abstract science whereas economics is concrete in nature.
- Sociology is a general social science whereas economics is a special social science.
- The scope of sociology is very wide whereas the scope of economics is very limited.
- Sociology is concerned with the social activities of man whereas economics is concerned with the economic activities of man.
- Society is studied as a unit of study in Sociology whereas man is taken as a unit of study in economics.
- Both Sociology and economics differ from each other in respect of the methods and techniques they use for their study.

However, attempt have been made to link the two disciplines with each other by various thinkers like Marxist while explaining super structure consisting of various institutions in the context of economic substructure where economic behaviour of man is viewed as a key to understand social behaviour of man. It is also said by any of the sociologist that economics cannot be an entirely autonomous science and has its relation with other social sciences.

3. Sociology and Political Science.

As in the case of economics there is an increased interaction of methods and approaches between sociology and Politics. According to G.E.C. Catlin “Political Science and Sociology are two faces or aspects of the same figure.” Political Science is a science of state and Government. It studies power, political processes, political systems, types of government and international relations. It deals with social groups organised under the sovereign of the state It studies the political activities of man. It only studies the organised society. However, their inter-relationship and inter-dependence can be known from interdependence and mutual relationship. Sociology depends on political science. In the words of Morris Ginsberg, “Historically Sociology has its main roots in politics and philosophy of history.” Sociology greatly benefited by the books written by political scientists like Plato, Aristotle and Kautilya such as The Republic, The Politics and Arthasastra respectively. Each and every social problem has a political cause. Political Science is a part of sociology. Hence sociology depends on political science to comprehend itself. To understand different political events sociology takes the help from political science. Sociology to draw its conclusions depends on political science. Any change in the political system or nature of power structure brings changes in society. Hence Sociology takes the help of political science to understand the changes in society. Hence both are interdependent. Similarly, political science also depends

on Sociology. Political Science is a part of sociology. To understand the part, it is necessary to understand the whole. Almost all political problems have a social cause and for the solution of these political problems political science takes the help of sociology. State frames its rules, regulations, and laws on the basis of social customs, tradition, and values. Without Sociological background the study of political science will be incomplete. Political Scientists largely benefited by the researches and research methods of the Sociologist. Some consider political science as a branch of Sociology. State is considered as a social group hence is a subject of Sociology. Besides, there are some common topics which are being studied by both the subjects. These topics are War, Propaganda, authority, communal riots and law. With the help of both political science and sociology a new subject comes into existence which is known as political sociology. Some political events like war are also significant social events. Thus, both political science and sociology contribute to each other.

But inspite of their inter-relationship and inter-dependence both the sciences differ from each other in the following way.

Differences between Sociology and Political Science

- Sociology is a science of society and social relationship whereas political science is a science of state and government.
- The scope of sociology is very wide, but scope of political science is limited.
- Sociology is a general science, but political science is a special science.
- Sociology studied organized, unorganized and disorganized society whereas political science studies only politically organised society.
- Sociology studies the social activities of man whereas political science studies political activities of man.
- Sociology is a new or young science, but political science is an older science.
- Sociology studies man as a social animal whereas political science studies man as a political animal.
- Sociology studies both formal and informal relations whereas political science studies only formal relations.
- Sociology analyses both conscious and unconscious activities of man whereas political science analyses only conscious activities of man.
- Sociology deals with all forms of association whereas political science deals with only one form of association named state.

However, political institutions and social behaviour are closely linked with the economic system and social classes.

4. **Sociology and Psychology:**

Sociology is a science of social phenomena and social relationship. It is a science of social group and social institutions. It is a science of collective behaviour. It studies human behaviour in groups. But psychology is a science of mind or mental processes. It is a science of human behaviour. It analyses attitudes, emotions, perception, process of learning and values of individuals and process of personality formation in society. In the words of Thouless, "Psychology is the positive science of human experience and behaviour." But both the sciences are closely related to each other which can be known from the following. Sociology receives help from Psychology. Psychology is a part of sociology hence without the help from Psychology, Sociology can't understand itself fully and properly. There are many psychologists like Freud, MacDougal and others who have enrich Sociology in many respects. They opine that the whole social life could be reduced finally to psychological forces. Each and every social problems and social phenomenon must have a psychological basis for the solution of which sociology requires the help from psychology. A new branch of knowledge has developed with the combination of sociology and psychology which is known as social psychology. Similarly, psychology depends on Sociology to comprehend itself fully. Psychology also requires help from sociology in many cases. As human mind and personality is being influenced by social environment, culture, customs, and traditions hence psychology takes the help from Sociology to understand this. To understand human nature and behaviour properly psychology depends on sociology. There are many Psychological problems which must have a Social Cause. Psychology requires the help from Sociology to understand these social problems. A research in Sociology richly contributes to psychology. Contributions and theories of many Sociologists also are of great help to Psychologists. Thus, Sociology and Psychology are mutually dependent on each other. One cannot comprehend itself without the help from others. Besides there are some common area of study such as social disorganization, public opinion etc. which are being studied by both Sociologists and Psychologists. Social Psychology a branch of Psychology is developed with the combination of the two. In the words of Kretch and Crutchfield, "Social Psychology is the science of behaviour of the individuals in society." Social Psychology has to depend on Sociology to understand properly human nature and behaviour as it is Sociology which provides the

necessary material regarding the structure, organisation and culture of societies to which individuals belong. Social life cannot, therefore, be studied exclusively with the methods of the Psychologists. The fact of mutual dependence of Social Psychology and Sociology should not be interpreted to mean that one is either identical with or the branch of the other.

As a matter of fact there are important points of dissimilarities between these two related subjects

Differences between Sociology and Psychology

- Sociology is a science of society, but Psychology is a science of mind.
- Scope of Sociology is wide whereas scope of Psychology is limited.
- Society is the unit of study in sociology, but individual is the unit of study in case of Psychology.
- Sociology studies social processes whereas Psychology studies mental processes.
- Sociology studies and analyses human behaviour from Sociological angle whereas psychology studies and analyses human behavior from Psychological angles.

According to Bottom ore in almost every field of enquiry it can shown that psychology and sociology continue for the most part and two separate universes of study. However, some attempts have been made to bring them together in most of the valuable works of Gerth and Mills. According to them the study of social psychology is an interplay between individual character and social structure, and it can be approached either from the side of sociology or from the side of Psychology. They have even suggested the concept of role to bridge the gap between the two sciences. Social role represents a meeting point of the individual organism and the social structure and it is used as a central concept and social structure in the same terms

5. Sociology and Anthropology:

Anthropologists like A.L. Kroeber consider Sociology and Anthropology as twin sisters. The term Sociology has been derived from the Latin word “Socius” means society, companion or association and the Greek word “logos” means study or science. Hence Sociology is concerned with the association of human beings. It is a science that deals with social groups. Similarly, the term Anthropology is derived from two Greek words, “Anthropos” meaning

man and “logos” meaning study or science. It is a scientific study of man in all its dimensions, both biological and sociocultural. The branch of anthropology that studies the biological aspects of humankind is called Physical or Biological Anthropology, while the study of social and cultural aspects is known as Social Anthropology or Cultural Anthropology. The third branch of anthropology is study of languages in a comparative perspective. It is known as Linguistic Anthropology or Anthropological linguistics. The branch of anthropology that studies the pre-historic past of mankind, before writing began, is called Archaeological Anthropology or Pre-historic Archaeology. Of the four branches of anthropology, Sociology is the most closely related to Social Anthropology.

Sociology and Anthropology are mutually related to each other. Sociology studies society whereas anthropology studies man. But as man and society are mutually interrelated hence it is very difficult to distinguish two. Anthropology contributes to the growth of Sociology. Without the help of anthropology, the study of Sociology is incomplete. Anthropology provides knowledge about ancient societies. To have a comprehensive understanding of present society Sociology takes the help of anthropology. Contributions of many Anthropologists like Radcliff. Brown, Herbert Mead enriches sociological knowledges. The origin of family, marriage, religion etc. can be better understood through anthropological knowledge. The concepts like cultural area, cultural traits, and cultural lag etc. sociology accept from anthropology. Sociology accepts the anthropological conclusion that „racial superiority is not responsible for mental development. Thus, Sociology is greatly benefited by anthropological studies. Similarly, Sociology contributes richly towards the growth of anthropology. Anthropology accepts many concepts of Sociology. Research and contributions of many Sociologists like Emile Durkheim, Herbert Spencer is of great help to anthropology. Anthropologists greatly benefited by the Sociological researches. Ideas and conclusions of Sociology contributes to the research in anthropology. There exists a great deal of relationship between Sociology and Anthropology. Both study human society and both are concerned with all kinds of social groups like families, friends, tribes etc. Many of the ideas and concepts are used in both the discipline. Hence both are interrelated and interdependent.

But in spite of the inter-relationship both differ from each other.

Difference between Sociology and Anthropology

- Sociology is a science of society whereas anthropology is a science of man and his

behavior.

- The scope of Sociology is very wide whereas the scope of Anthropology is very limited. Because anthropology is a part of Sociology.
- Sociology studies society as a whole whereas anthropology studies man as a part of society.
- Sociology studies civilizations which are vast and dynamic on the other hand Anthropology studies cultures which are small and static.
- Sociology studies modern, civilized, and complex societies whereas Anthropology studies ancient and non-literate societies.
- Sociology is concerned with social planning whereas anthropology is not concerned with social planning.

On the basis of social planning sociology make suggestion for future but anthropology do not make any suggestion for future. In the words of Kluckhohn, “The Sociological attitude has tended towards the Practical and Present, the anthropological towards pure understanding of the past.”

Lastly, sociology is concerned with both social philosophy and social planning whereas anthropology is not concerned with social planning. It does not make any suggestions for the future.

6. SOCIOLOGY AND PHILOSOPHY

Modern philosophy and sociology came into existence during one time period to explain the social crisis of Europe in the 19th century. Sociology aimed, to begin with, to provide a social doctrine that would guide social policy. This aim has now been abandoned. Even then some links exist between sociology and philosophy.

First, there is a philosophy of sociology in the same sense as a philosophy of science: that is an examination of the methods, concepts and arguments used in sociology.

Secondly, there is a close relationship between sociology and moral & social philosophy. The subject-matter of sociology is human social behaviour as guided by values. Moral and social philosophy studies values and the sociologists study values and human valuation as facts. On occasions, the sociologist is made to distinguish between fact and value. It is only by some training that social philosophy becomes competent to distinguish between fact and value.

Thirdly, it can be said that the study of sociology leads to philosophical quest. Durkheim thought that sociology has to necessarily contribute to a renewal of philosophical questions. This made him indulge in some epistemological discussions, a branch of philosophy. Karl Mannheim argued that sociology of knowledge had implications for philosophy. Both of them thought that sociology can make a direct contribution to philosophy. But this is an incorrect approach. Philosophy is the basis of the sociology of knowledge not viceversa. It can also be said here that while sociology leads on to philosophical reflections, much of it also begins there. Sociological research will become trivial if it ignores the larger problems of social life which are coordinated in philosophical world views and social doctrines. The stimulating character of early Marxism in social research was to a great extent due to the fact the Marxism was not only a sociological theory but also philosophical base which was helpful for social research. In brief, although each social science, including philosophy has its own specific area of study, there is a growing collaboration and faster fertilisation among them .

7. Sociology and Geography:

Since ancient times it is understood that Geography has a great impact on human society, the influences of geographical conditions on human society are predominant. It is also found that there is a close relationship between physical conditions and social phenomena.

According to MacIver Geography environment consists of those conditions that nature provides for man. It includes the earth surface with all its physical features and natural resources, the distribution of land and water, mountain and plains, minerals, plants and animals, the climate and all the cosmic forces, gravitational, electric, radiational that play upon the earth and affect the life of man. There is a correspondence between physical conditions and modes of living e.g., inhabitants of tropical regions exhibit characteristic differences from those of temperate or of Arctic regions: the sea-farer is typically distinct from the inlanders.

The relationship between man's physical environment and his social life has led to a geographical school of Sociology. One of the pioneers of modern social geography was a Frenchman Le Play who in his important study of European workers had developed the thesis that locality determines work and thus has a great influence on the economic organisation of the family and this social institutions of the people. The Regional School of American Sociology under the leadership of Howard W. Odum and his colleagues has been seeking the interaction between man's physical environment and man's social life. The writers of this school have contributed tremendously to our knowledge of the role of geography in man's development. They have made us aware of the inter-play between climate and topography

and the various aspects of the physical environment on the one side and the political and economic, technological and cultural phenomena on the other. There is no need to lay much emphasis on geographical factors determining the social life in a particular region. It is not proved that similar environments should produce similar cultures. Different occupations are being followed by different people in the same regional setting.

The geographical environments alone never explain the rise of a civilization. The growth of civilization changes and minimises the direct influence of local geographical conditions. Many of the occupations of the modern man have no relation to the geographical environments.

Thus, as the social heritage grows the immediate geographical factors would assume a less determinant role in the interpretation of society. Man has assumed great control over natural factors so that the overall influence of geographical forces is no longer overpowering. The fact, however, remains that geography is a contributing, if not a determining, factor of human progress and, therefore, the relation between Sociology and Geography is intimate.

8. Sociology and Biology:

Sociology is the study of society including human evolution, their behaviour, and their development and so on. According to N. G. Muller, "Our ideas of what sort of progress is possible or desirable for man must depend in part at least upon our views of his nature, his manner of origination, the method by which changes have occurred and can occur in him and the relation which he bears with the rest of nature." It also studies genetics and sexual behaviour which can be considered as one of the most important branches of Biology. Biology is the science of man's biological development, his sexual, anatomical and personal peculiarities. It tells us how man's body and mind evolved, how his system reacts to the outside world and what part his physical constitution plays in the overall build up of his whole being. As, Biology is related with the biological development of living organisms, the biological development of human beings also come under this. Human behaviour is influenced or affected by heredity or gene which is studied in Biology. Sociology also studies human behaviour likewise one that major concerns of sociology is marriage that is based on Biology. Herbert Spencer explained his theory of the evolution of society on the principle of natural evolution. So, nature and society are very close to each other.

Differences between Sociology and Biology

- Sociology is the general science and biology is pure science.

- Sociology studies human as social beings were as biology studies human as biological beings.
- Sociology studies human society and its development in sociological prospective and biological studies human beings and other all living organisms as well as their living organisms as well as their development in biological prospective.
- Sociology analyses the social process of human beings and biology analyses the biological process of human beings and other living organisms.
- Sociology is a young science as it came into existence later which does not have even two hundred (200) years history and biology is an old science which has a long history

In spite of the differences, Sociology on its part inspires biology to search knowledge in new directions, for example, the need to limit the population has led to search for the means of birth control. However, biological principles should not be comprehensively applied to sociology. In this regard Ginsberg writes, “Biological factors are clearly of importance to the students of society since the unit of society is a living organism. Great confusion has, however, resulted from the too facile application of biological categories to social facts, and in particular, a tendency to overemphasize the purely racial factors in social evolution or change.”

Summing up

In this chapter we have tried to understand the relationship of sociology with other social sciences. Sociology, however, is an overarching social science, because sociologists are, for the most part, interested in the same things that other social scientists are interested in. they are, however, not as limited in their scope or focus as are the other social sciences.

KEY WORDS :Economic behaviour, Social behaviour, Social Psychology, Social Evolution,

Social Anthropology

SELF ASSESSMENT QUESTIONS

1. Define Social Psychology
2. What is Archaeological Anthropology
3. What is the relationship between sociology and history
4. What is Philosophy
5. What is the difference between sociology and economics

MODEL ANSWERS

1. Social Psychology is the science of behaviour of the individuals in society.
2. The branch of anthropology that studies the pre-historic past of mankind, before writing began, is called Archaeological Anthropology
3. History is past Sociology and Sociology is present history
4. Philosophy is the basis of the sociology of knowledge
5. Sociology is concerned with the social activities of man whereas economics is concerned with the economic activities of man.

MULTIPLE CHOICE QUESTIONS

1. _____ is concerned with the activities of man such as production, consumption, distribution, and exchange
a. Sociology b. Economics c. Philosophy d. Political Science
2. _____ is the positive science of human experience and behaviour
a. Psychology b. Sociology c. Economics d. History
3. _____ argued that sociology of knowledge had implications for philosophy
a. Karl Marx b. Karl Manheim c. Weber d. Durkheim
4. _____ Geography environment consists of those conditions that nature provides for man.
a. Max Weber b. Mac Iver c. Karl Marx c. Tony bee
5. _____ is the science of man's biological development, his sexual, anatomical and personal peculiarities.
a. Sociology b. Psychology c. Anthropology d. Biology

Key :- 1. b 2. a 3. b 4. b 5. d

GLOSSARY

History : History studies the important past events and incidents. It also records men past life and life of societies in a systematic and chronological order and tries find out the causes of past events. It also studies the past political, social and economic events of the world.

Political Science : Political Science is a science of state and Government. It studies power, political processes, political systems, types of government and international relations. It deals with social groups organised under the sovereign of the states and studies the political activities of man.

Psychology : Psychology is a science of mind or mental processes. It is a science of human behaviour. It analyses attitudes, emotions, perception, process of learning and values of individuals and process of personality formation in society.

Geography : Geography includes the earth surface with all its physical features and natural resources, the distribution of land and water, mountain and plains, minerals, plants and

animals, the climate and all the cosmic forces, gravitational, electric, radiational that play upon the earth and affect the life of man.

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Sociology Semester - I Module / Unit - Emergence, Scope and Methods Lesson 5 - Is Sociology a Science?

Introduction

The emergence of Sociology was the result of multiple diversified factors like French Revolution, Industrial Revolution, and period of Enlightenment etc. Since its emergence there has been constant debate whether Sociology is a science or not. Interestingly this debate led to different viewpoints. One school of thought believes that Sociology is a science because Sociology adopts and applies the scientific method. Founding fathers of Sociology August Comte, Emile Durkheim and others have contributed to this view. For instance Auguste Comte opines like other natural sciences, Sociology is also governed by some natural laws. The other school of thought opines Sociology is not a science. German Sociologist Max-weber does not accept sociology as a Science. It is important to understand that if Sociology is a science then to what extent it conforms to the notion of science

Objectives

After completion of this lesson you will be able to understand

- The meaning and features of Science
- Analyse whether Sociology is a Science or not

Meaning and characteristics of science

Science is a body of systematic knowledge. Science is the intellectual and practical activity encompassing the systematic study of the structure and behaviour of the physical and natural world through observation and experiment. Science is a branch of knowledge or study dealing with a body of facts or truths systematically arranged and showing the operation of general laws. Science is systematized knowledge derived from observation, study and

experimentation. Scientific knowledge can be tested, verified or proved. The important characteristics of Science are:

- Science is based on reason and evidences and adopts scientific method
- Science collects facts and links them together in their casual sequence to draw valid inferences.
- Science reflects features of objectivity, observation, accurate prediction, experimentation, accurate measurement, generalization and cause-effect relationships.
- Objectivity is the ability to accept facts as they are. Biases, beliefs, wishes, values, preferences, subjective considerations and prejudices have to be avoided.
- Scientific knowledge is based on verifiable evidence (concrete factual observations) so that other observers can observe, weigh or measure the same phenomena and check out observation for accuracy.
- Science is ethically neutral. It only seeks knowledge and how this has to be used, is determined by societal values.
- A scientific research adopts sequential procedure, an organised plan or design of research for collecting and analysis of facts about the problem under study. The research design includes formulation of hypothesis, collection of facts, analysis of facts (classification, coding and tabulation) and scientific generalisations and predication.
- Reliability, Validity, Predictability and accuracy are also significant features of science

Sociology is a Science

There are various factors which focus on scientific aspect of Sociology. Some of them are discussed below:

Sociology adopts scientific method

Sociology studies social events by adopting scientific method. Though it cannot do experiment with men in a laboratory still man's social behaviour is subject to scientific investigation like natural phenomenon. It employs scientific methods as scales of Sociometry schedule, case study, interview and questionnaire which is used to quantitatively measure

social phenomenon. Sociology adopts and applies the scientific method. Founding fathers of sociology— August Comte, Emile Durkheim, Karl Marx support this view.

Sociology traces cause-effect relationship and can make predictions

Sociology traces cause-effect relationship in studying any social phenomenon. On the basis of cause-effect relationship sociology can predict about future.

Sociology makes observation and measurement

Observation is possible in the field of sociology even if it does not possess a laboratory. Observation is also possible outside the laboratory. The whole social world is the laboratory of sociology. It has been asserted that ‘Newton did not invent their laws inside a laboratory.’ Sociology makes observation of social phenomenon. Sociology, like natural sciences also accurately measures social phenomena or relationships. By using statistical method, socio-metric scale, scales of measurement sociology effectively and accurately measures social relationships. Hence Sociology is a science.

Objectivity is possible in Sociology

Objectivity means being factual. The term objective has been applied to modes of enquiry and methods of data analysis. Objective, in this sense, assumes that some approaches are not dependent on the subjective consciousness of the researcher. Like natural sciences Sociology also makes objective study. Sociology can also make objective study of social phenomena. New techniques and methods are also introduced to make social phenomena more objective.

Sociology makes generalization

Generalization is a general statement or concept obtained by inference from specific cases. The notion that generalization drawn by social sciences is not universal is not

completely right. Like natural sciences Sociology can draw generalizations which are universally applicable.

Some of the thinkers who strongly proposed Sociology as Science are August Comte, Herbert Spencer and Emile Durkheim.

August Comte

August Comte (1798-1857), regarded as the first philosopher of science and Father of Sociology says that method to study about society must be scientific and not based on theological thought. He believes if the method is scientific, the sociological research and study becomes factual and based on reality. The structure of a society and its change can be studied through this method. He proposed the principle of Positivism which suggests that all knowledge comes from 'positive' information of observable experience. Scientific methods are the best way of achieving this. Positivism seeks empirical regularities, which are correlations between two variables. This allows laws to be defined and predictions made. Further Positivism asserts that the logic of inquiry is identical across all branches of science; the goal of inquiry is to explain, predict, and discover. Research should be observed empirically with human senses. Positivism also maintains that science is not the same as common sense, and it should be judged by logic and remain free of values.

Comte was primarily interested in establishing theories that he could test, with the main goal of improving our world. He wanted to uncover natural laws that could be applied to society. He believed that the natural sciences, like biology and physics, were a stepping stone in the development of social science. He believed that just as gravity is a truth in the physical world, similar universal laws could be discovered in relation to society. Comte, along with Emile Durkheim, wanted to create a distinct new field with its own group of scientific facts. He hoped that sociology would become the "queen science," one that was more important than the natural sciences that preceded it.

Positivism asserts that the logic of inquiry is identical across all branches of science; the goal of inquiry is to explain, predict, and discover; and research should be observed empirically

with human senses. Positivism also maintains that science is not the same as common sense, and it should be judged by logic and remain free of values.

Auguste Comte felt that an examination of the several established sciences showed not only that human thoughts in general have passed through the three stages (theological, metaphysical and scientific/positive stage), but also each subject has developed in the same way. That is, each subject has evolved from a general, simple level to a highly complex level. He put forth a hierarchical arrangement of the sciences in a way which coincided with

- The order of their historical emergence and development
- The order of dependence upon each other (each rests on the one which precedes it, and prepares the way for the one that follows it)
- Their decreasing degree of generality and the increasing degree of complexity of their subject matter, and
- The increasing degree of modifiability of the facts which they study Thus, the final arrangement of the sciences in terms of their emergence and complexity on this basis were Mathematics, Chemistry, Astronomy, Physics, Biology, Sociology, and finally Morals – by which Comte really meant a study of human beings as individuals (a study which followed sociology and was a mixture of psychology and ethics).

Sociology was the most complex science because it had to study the most complex matter, i.e. society. Sociology therefore also arose much later than the other sciences. The object of study of the other subjects was relatively simpler than sociology. Sociology thus emerged because human beings recognised a new set of objective facts concerning their society; such as social disorganization, development of slums, poverty, etc. which they could not explain, but which they needed to explain in order to deal effectively with them. When Auguste Comte spoke of Sociology as the ‘crowning edifice’ of the hierarchy of sciences, he had the general unifying nature of science in mind. He was not claiming any superior status for sociology. He only felt that with the growth of positive knowledge all sciences can be brought into relationship with each other. According to Auguste Comte, all sciences pass through the three stages, the theological, the metaphysical and finally, the positive stage. But the Early Sociology individual sciences do not move through these three stages

simultaneously. In fact, the higher a science stands in the hierarchy, the later it shifts from one stage to another. With the growth of positive knowledge he also advocated the use of positive methods for sociology ((Timasheff 1967: 23).)

Herbert Spencer (1820-1903)

The pioneer English sociologist Herbert Spencer believed that society was governed by laws in much the same way that the physical world was. He regarded philosophy as the synthesis of all sciences and the replacement of religion and saw the history of human societies as a development from military to industrial societies.

Spencer was an early advocate of the evolution of species, which he initially explained as the consequence of inheritance of acquired traits. After the publication of Charles Darwin's *Origin of Species* (1859) Spencer accepted Darwin's explanation of natural selection and coined the phrase "survival of the fittest." Spencer tried to apply the concept of evolution to society. He developed an analogy between animal organisms with human societies.

Though during his lifetime Herbert Spencer used to be considered as one of the founding fathers who 'shaped the emergence of Sociology as a distinctive scientific discipline'. According to him, the social process is unique and so sociology as a science must explain the present state of society by explaining the initial stages of evolution and applying to them the laws of evolution. Thus, the evolutionary doctrine is central to his thesis.

Auguste Comte and Herbert Spencer both succeeded in raising the status of sociology to that of a science of society.

Emile Durkheim (1858-1917)

Durkheim, French sociologist saw sociology as the study of social facts. According to him Sociologists should study social facts in as much the same way that chemists study chemical facts and biologists study biological facts. For Durkheim, the goal of Sociology was to

discover the laws that govern social behavior-just as Newton had discovered the laws that govern planetary behavior. Durkheim played an important part in bringing scientific approach to the study of society.

Durkheim considered social sciences to be distinct from natural sciences because social sciences dealt with human relationships. However the method used in the natural sciences could be used in the social sciences as well. He was concerned with examining the nature of Sociology as a social science distinct from Philosophy and Psychology. Philosophy is concerned with ideas and conceptions whereas science is concerned with objective realities.

In his book *Montesquieu and Rousseau*, published in 1892, Durkheim laid down the general conditions for the establishment of a social science (which also apply to Sociology). Some of them are:

i) Science is not coextensive with human knowledge or thought. Not every type of question the mind can formulate can be tested by science. It is possible for something to be the object of the philosopher or artist and not necessarily the stuff of science at all. Thus, science deals with a specified, area — or a subject matter of its own, not with total knowledge.

ii) Science must have a definite field to explore. Science is concerned with things and objective realities. For social science to exist it must have a definite subject matter. Philosophers, Durkheim points out things are laws, traditions, religion and so on. However the reality of these is mostly influenced by the manifestations of human will. Inquiry is thus concentrated on the internal will rather than upon external bodies of data. So it is important to look things as they appear in this world.

iii) Social science, which classifies the various human societies, describes the normal form of social life in each type of society, for the simple reason that it describes the type itself; whatever pertains to the type is normal and whatever is normal is healthy.

iv) The subject matter, of a science yields general principles or ‘laws’. If societies were not subject to regularities, no social science would be possible. Durkheim further points out that

since the principle that all the phenomena of the universe are closely interrelated has been found to be true in the other domains of nature, it is also valid for human societies, which are a part of nature. In putting forth the idea that there is a continuity of the natural and social worlds, Durkheim has been strongly influenced by Comte.

v) Although there is continuity between the natural and social worlds, the social is as distinctive and autonomous a sphere of subject matter as either the biological or the physical. Durkheim was very much against the view held by some scholars that everything in society should be reduced to human preference. Categories of human will and desire belong to psychology. If social science is really to exist, societies must be assumed to have a certain nature, which results from the nature and arrangement of the elements composing them.

vi) To differentiate the uniformities, types and laws of society we need a method. The methods of science applicable in the field of the natural sciences are valid within the social field.

Durkheim based his scientific vision of sociology on the fundamental principle, i.e., the objective reality of social facts. Social fact is that way of acting, thinking or feeling etc., which is more or less general in a given society. Durkheim treated social facts as things. Durkheim describes the method to study Sociology. His sociological method rests firmly on the experience of biology, which had emerged by then as a science of living beings.

While studying social facts as ‘things’ the following three rules have to be followed in order to be objective.

i) All preconceptions must be eradicated. Sociologists must separate themselves from the common place ideas that dominate the mind of the layperson and adopt an emotionally neutral attitude towards what they set out to investigate.

ii) Sociologists have to formulate the concepts precisely. At the outset of the research the sociologists are likely to have very little knowledge of the phenomenon in question. Therefore they must proceed by conceptualizing their subject matter in terms of those properties which are external enough to be observed.

iii) When sociologists undertake the investigation of some order of social facts they must consider them from an aspect that is independent of their individual manifestations. The objectivity of social facts depends on their being separated from individual facts, which express them. Social facts provide a common standard for members of the society.

Social facts exist in the form of legal rules, moral regulations, proverbs, social conventions, etc. It is these that sociologists must study to gain an understanding of social life.

The comparative method is the very framework of the science of society for Durkheim. According to Durkheim, “comparative sociology is not a particular branch of sociology; it is sociology itself, in-so-far as it ceases to be purely descriptive and aspires to account for fact” Since sociologists normally do not conduct laboratory-controlled experiments but study reported facts or go to the field and observe social facts, which have been spontaneously produced, they use the method of indirect experiment or the comparative method.

According to Auguste Comte and Durkheim, Sociology is a science because it adopts and applies the scientific method. Sociology makes use of scientific methods in the study of its subject matter. Sociology must be an independent science according to Durkheim. It must have a field of its own (social facts) and it must contain within itself its own principle of explanation (social facts must be explained sociologically, i.e., in terms of other social facts).

Sociology is Not a Science

The two virtues of natural laws are precision and generality of scope. The sociological laws lack these virtues.

- a) **Lack of Objectivity:** Sociology cannot be called a science because it cannot maintain complete objectivity with social phenomena. Sociologist as a human element has his or her own prejudice and bias. Thus absolute objectivity is difficult. Moreover, Sociology deals with social relationships which cannot be studied like physical objects. Hence complete objectivity is not possible in Sociology.

- b) **Lack of Experimentation:** Sociology deals with human relationships and interactions which cannot be put to laboratory test. We can't see or weigh human relationship because it is abstract in nature. Experimenting with abstract entities is not possible.

- c) **Lack of Prediction:** Sociology can't make accurate predictions like natural sciences. Sociology deals with social relationships and human behaviour which are peculiar and thus making exact predictions is not possible. The pace of human behaviour and social change cannot be exactly predicted.

- d) **Lack of accurate measurement:** There are definite standards of measurement in natural sciences to measure phenomenon like weight, temperature, pressure etc. Sociology can't make accurate measurement like natural sciences since the content of Sociology does not facilitate exact measurement. In Sociology exact measuring instruments or mechanisms is not available. Besides, Sociology deals with social relationships which are qualitative in nature. In the process of quantifying such indicators, the actual essence may be lost.

- e) **Lack of Generalization:** Sociology can't make generalisations like natural sciences which is universally applicable. Sociology deals with human behaviour, society and culture which vary spatially and temporally. Hence the conclusions drawn by Sociology can't be uniform or universally applicable. Social Phenomena is so complex and complicated and is governed by so many factors that it is very difficult to draw a conclusion which can be universally applicable.

Some of the Sociologists opined that Sociology is not a science.

Max Weber (1864-1920)

According to German Sociologist Max Weber, following the natural sciences model would leave sociological work incomplete. He thinks that human beings have important qualities that set them apart from the objects of the investigation of the natural sciences. Weber thus believes that Sociology must go beyond the natural science model and be an interpretative science. Weber interestingly defines Sociology in terms of interpretation of social action.

According to Weber, differences between the natural and social sciences are due to the intentions, interests and aims of the investigator and are not due to the subject matter of human action. Weber was concerned with the debate concerning science and history, and attempted to establish a foundation for sociology. While sociology must be concerned with empirical analysis of society and history, the method of sociology would have to be different from that of the natural sciences. Sociological analysis would have to examine social action within a context of social interaction, and would have to be interpretive, not viewing people as object just driven by impersonal forces. Max Weber believed that the purpose of political and social institutions is the development of autonomous, free personality. Weber believes that collectivity doesn't have any life to think, feel or perceive. The basic unit of a social structure is social action. The concern of sociology is to understand the meanings associated with the action of the actor than mechanically studying action and its consequence using the methods of natural science. Sociology being concerned with problem of understanding, Weber introduces Verstehen method in Sociology. Verstehen is a German term that means to understand, perceive, know, and comprehend the nature and significance of a phenomenon.

Anthony Giddens (1938-)

Giddens, British Sociologist thinks, studying human beings, however, is different from observing events in the physical world and sociology should not be seen directly like a natural science. Unlike natural scientists, sociologists have to interpret a social world which

is already interpreted by the actors that inhabit it. Sociology deals with a factually observable subject-matter, depends upon empirical research, and involves attempts to formulate theories and generalizations that will make sense of facts. But human beings are not the same as material objects in nature; studying our own behaviour is necessarily entirely different in some very important ways from studying natural phenomena. Giddens says that 'we cannot approach society, or 'social facts', as we do objects or events in the natural world, because societies only exist in so far as they are created and re-created in our own actions as human beings. Human activities are not determined by causes in the same way as natural events are. Thus the practical implications of sociology are not directly parallel to the technological uses of science, and cannot be.

Thomas Kuhn (1922-1996)

Kuhn, American Philosopher is known for his concept of paradigm. He mentions two kinds of sciences: normal and extraordinary sciences. He thinks, disciplines like sociology did not have a well-established set of theories or a proper methodology like the natural sciences so as to be called a normal science. As such, Kuhn argues that sociology is not a, mainstream science, because it hasn't found a unifying paradigm. A paradigm, in the context of theory and research, is a particular and accepted set of thoughts and assumptions about the way things are and the way research should be done. Sociologists do not share a set of assumptions about the world or about how to do research. There are functionalists and Marxists, there are positivists and interpretivists. He concludes then that sociology is a "young science" but that it could in the future blend around one paradigm and become a science. However, it is a concept of science that differs significantly from that of positivist sociologists.

Sociology – A Social Science

An objective science of society is not possible maintaining that sociology can never be free from ideology. An increasing number of sociologists argue that a value-free science of society is not possible. Robert Bierstedt in his book "The social order" (1963) clearly explains the nature of Sociology in the following way:

- Sociology is a social and not a natural science

- Sociology is a positive and not a normative science
- Sociology is a pure science and not an applied science
- Sociology is an abstract science and not a concrete science
- Sociology is a generalizing science and not a particularizing science
- Sociology is both a rational and an empirical science

Sociology is a science 'sui generis' i.e. which generates itself; that which exists by itself; that which does not depend upon some other being for its origin or existence. Durkheim considered society as sui generis. It is always present and has no point of origin. It cannot be an exact science like physics, chemistry etc. Sociology is a social science and not a natural science. It can claim to be called a science because it employs scientific method. In sociology nothing is assumed, and nothing is taken for granted. Research, enquiry and observation is fully drawn upon. There are sophisticated methods which have been developed and followed.

Conclusion

The debate whether Sociology is a science or not has benefitted sociology. According to Goode and Hatt, this debate has given rise to "a higher level of methodological sophistication and consequently greater precision in sociological research than were known before". Its scientific character has come all the more to be recognised. Early sociological studies considered the field of sociology to be similar to the natural sciences, like physics or biology. As a result, many researchers argued that the methodology used in the natural sciences was perfectly suited for use in the social sciences. The effect of employing the scientific method and stressing empiricism was the distinction of Sociology from theology, philosophy, and metaphysics. This also resulted in sociology being recognized as an empirical science.

In the attempt to study human behavior using scientific and empirical principles, sociologists always encounter dilemmas, as humans do not always operate predictably according to natural laws. Hence, even as Durkheim and Marx formulated law-like models of the transition from pre-industrial to industrial societies, Weber was interested in the seemingly "irrational" ideas and values, which, in his view, also contributed to the transition. Sociology as social science occupies a middle position between the evidence based natural sciences and the interpretive inclination of the humanities.

Summary

Since its emergence there has been constant debate whether Sociology is a science or not. Interestingly this debate led to different viewpoints. One school of thought believes that Sociology is a science because Sociology adopts and applies the scientific method. Founding fathers of Sociology August Comte, Herbert Spencer, Emile Durkheim and others have contributed to this view. For instance Auguste Comte opines like other natural sciences Sociology also is governed by some natural laws. The other school of thought opines Sociology is not a science. German Sociologist Max Weber does not accept sociology as a Science. It is important to understand that if sociology is a science then to what extent it conforms to the notion of science. Durkheim considered society as sui generis. It is always present and has no point of origin. It cannot be an exact science like physics, chemistry etc. Sociology is a social science and not a natural science. It can claim to be called a science because it employs scientific method.

Assignment

Prepare a collage on the theme of 'Is Sociology Science?' by incorporating various viewpoints of sociological thinkers

FAQs

1. Highlight the characteristics of science
2. Analyse the aspects on the basis of which Sociology can be called as science
3. Evaluate why Sociology cannot be called as science
4. Is Sociology a Science? Discuss

Model Answers

1. Science is a body of systematic knowledge. The important characteristics of science are
 - Science is based on reason and evidences.
 - Science collects facts and adopts scientific method.
 - Science reflects features of objectivity, observation, accurate prediction, experimentation, accurate measurement, generalization and cause-effect relationships.
 - Objectivity is the ability to accept facts as they are. Biases, beliefs, wishes, values, preferences, subjective considerations and prejudices have to be avoided.
 - Scientific knowledge is based on verifiable evidence (concrete factual observations) so that other observers can observe, weigh or measure the same phenomena and check out observation for accuracy.
 - Science is ethically neutral. It only seeks knowledge and how this has to be used, is determined by societal values.
 - A scientific research adopts sequential procedure, an organised plan or design of research for collecting and analysis of facts about the problem under study.
 - Reliability, Validity, Predictability and accuracy are also significant features of science
2. Sociology can be called as Science on the basis of following factors:
 - Sociology adopts scientific method
 - Sociology traces cause-effect relationship and can make predictions
 - Sociology makes accurate observation and measurement
 - Objectivity is possible in Sociology
 - Sociology makes generalization

Sociology studies social events by adopting scientific method. Though it cannot do experiment with men in a laboratory still man's social behaviour is subject to scientific investigation like natural phenomenon. It employs scientific methods as

scales of Sociometry schedule, case study, interview and questionnaire which is used to quantitatively measure social phenomenon. Sociology adopts and applies the scientific method. Founding fathers of sociology— August Comte, Emile Durkheim, Karl Marx support this view.

3. Sociology cannot be called as Science on the basis of following factors:

- Lack of Objectivity
- Lack of Experimentation
- Lack of Prediction
- Lack of accurate measurement
- Lack of Generalization

The two virtues of natural laws are precision and generality of scope. The sociological laws lack these virtues. However, one cannot deny the possibility of constructing general laws from the causal connections and empirical correlations which sociologists have established.

4. Sociology is a science 'sui generis' i.e. which generates itself; that which exists by itself; that which does not depend upon some other being for its origin or existence. Durkheim considered society as sui generis. It is always present and has no point of origin. It cannot be an exact science like physics, chemistry etc. Sociology is a social science and not a natural science. It can claim to being called a science because it employs scientific method. In sociology nothing is assumed, and nothing is taken for granted. Research, enquiry and observation is fully drawn upon. Over the time more sophisticated methods have come to be developed and followed.

Quiz

1. The concept of Positivism was given by
 - a. Herbert Spencer
 - b. August Comte
 - c. Durkheim
 - d. None of these
2. According to Comte Crowning Edifice of Hierarchy of Sciences is ____
 - a. Physics
 - b. Chemistry
 - c. Sociology
 - d. Economics
3. The concept of Social facts is given by
 - a. Herbert Spencer
 - b. August Comte
 - c. Durkheim
 - d. None of these
4. Verstehen is a _____ word
 - a. French
 - b. English

- c. Russian
 - d. German
5. The concept of Paradigm was given by
- a. Thomas Kuhn
 - b. Anthony Giddens
 - c. Max Weber
 - d. Stuart Mills

Key 1. (b) 2. (c) 3. (c) 4. (d) 5. (a)

Glossary

Social fact: It is that way of acting, thinking or feeling etc., which is more or less general in a given society.

Verstehen: It is a German term that means to understand, perceive, know, and comprehend the nature and significance of a phenomenon

Paradigm: It is a particular and accepted set of thoughts and assumptions about the way things are and the way research should be done.

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- <https://www.britannica.com/biography/Auguste-Comte>

Sociology Semester - I

Module / Unit - Emergence, Scope and Methods

Lesson 6 - Scientific Method

Introduction

Social Research is a method used by social scientists and researchers to understand about people, human behavior, societies and social problems to cater to various needs of the people. Social research is initiated by new challenges, emerging needs, social changes etc. Human behaviour is not uniform and predictable is more often than not, uncertain. All people do not behave in the same way in similar circumstance similarly; one individual may behave differently under similar circumstances.

Human society, behaviour and interaction are highly heterogeneous and unpredictable. Thus, collecting reliable scientific data is challenging. Nevertheless, scientific method can be used in social research by overcoming the difficulties. Broad predictions and generalizations can be arrived at. Personal prejudices of human behaviour in social settings can be minimized with the help of some standard technique developed for the purpose.

Objectives

After completion of this lesson you will be able to understand

- The meaning and features of scientific method
- Importance of scientific method in social research

Scientific Method

The word "science" is derived from the Latin word *scientia*, which is knowledge based on demonstrable and reproducible data, according to the Merriam-Webster Dictionary. Science aims for measurable results through testing and analysis. Science is based on fact, not opinion or preferences. The process of science is designed to challenge ideas through research.

When conducting research, scientists use the scientific method to collect measurable, empirical evidence in an experiment related to a hypothesis (often in the form of an if/then statement), the results aiming to support or contradict a theory.

The scientific method is a system that attempts to separate the bias of being an observer from the observation — letting 'reality' show itself in the simplest possible way. The primary steps of which are: systematic and repeatable observation, exact measurements, experiments, and the invention of and repeated (ideally, nearly endless) testing of theories.

It's a method of investigation based on what's termed empirical and measurable evidence. Empirical means what can be observed with the senses; and measurable meaning what can be repeatedly quantified in a standardized way.

The essential purpose of science is the creation of theories or ‘hypotheses’ that can consistently and reliably explain or reproduce observed phenomena. The scientific method is the method of creating these reliable and reproducible theories.

Scientific method refers to a standardized set of techniques for building scientific knowledge, such as how to make valid observations?, how to interpret results?, and how to generalize those results?. The scientific method allows researchers to independently and impartially test preexisting theories and prior findings, and subject them to open debate, modifications, or enhancements.

According to Karl Pearson, English Mathematician, scientific method is marked, “by three features, viz., firstly careful and accurate classification of facts and observation of their correlation and sequence; secondly discovery of Scientific Laws with the aid of creative imagination; and thirdly self-criticism.”

George Lundberg, American Sociologist defines scientific method as one consisting of systematic observation, classification, and interpretation of data. The main difference between day-to-day generalization and the scientific method lies in the degree of formality, rigorousness, verifiability and the general validity of the latter.

Sociologists make use of methods, such as experiments, surveys, field research, and textual analysis. A scientific process of research establishes parameters that help make sure results are objective and accurate. Scientific methods provide limitations and boundaries that focus a study and organize its results. This is the case for both positivist or quantitative methodologies and interpretive or qualitative methodologies. The scientific method involves developing and testing theories about the world based on empirical evidence. It is defined by its commitment to systematic observation of the empirical world and strives to be objective, critical, skeptical, and logical. It involves a series of prescribed steps that have been established over centuries of scholarship.

Characteristics of Scientific method:

Scientific method is based on

- Reliance on empirical evidence
- Use of concepts- logical constructs or abstractions created from sense impressions, percepts and experiences.
- Ethical neutrality – Research doesn't pass judgement.
- Generalizations refers to the process of drawing a general conclusion from specific observations
- Logical reasoning consists of Induction (studying several individual cases and drawing generalizations) and deduction (reasoning from general to particular)
- **Objectivity:** Any study is considered to be objective when it is based upon the observation of the factual events and not upon personal judgments. However achieving absolute objectivity is difficult in social sciences.
- **Reliability:** The degree to which scores of a test remain constant for the same unit of measurement over times. A scale is reliable when it will consistently produce the same results when applied to the same sample. Reliability can be measured in the following ways:
 - Test-Retest Method – Scale is applied to the same population and the results are compared
 - Multiple Form Method – Two forms of the scale are constructed to begin with and alternate forms are administered successively to the same sample
 - Split Half Method – It is the modification of the multiple form approach and the scale is divided randomly in to two halves.
- **Validity:** Any measuring instrument is valid when it measures most accurately the objects or individuals and their characteristics. The different types of validity are:
 - **Predictive Validity:** It means the extent to which study implies predictive power.
 - **Concurrent Validity:** Tests that help to distinguish the individual who differ in their present state is said to have concurrent validity. Tests which

distinguish individuals who would differ in the future is said to have predictive validity.

- **Content Validity:** It is the representativeness of the content. It involves judging the representativeness of the items i.e. how far they represent the content/ universe of the content of the property being measured.
- **Construct Validity:** It means determining which factors/ properties can explain the variation in the scores. In other words which factors are responsible and therefore should be used to explain the differences among the individuals and groups in their test scores. Many characteristics are abstract in nature and need to be defined operationally for measurement. These are called constructs. The researcher after locating the variables or factors attempt to trace out the nature, type and degree of relationship among different variables.
- **Verifiability:** The process of verification consists of repeated study of the same thing under similar conditions in order to check the accuracy of conclusion/ inferences drawn
- **Scrutinizable:** The procedures used and the inferences derived must withstand critical scrutiny (peer review) by other scientists.

The overall approach to research of any variety is what is generally termed as the scientific method". The conclusion which is arrived at by the scientific method has an objective validity. The objective nature of the scientific method is its greatest quality. However there are certain significant difficulties in the use of scientific methods. Some of these difficulties are -

- It is very difficult to classify human behaviour since it is complicated, subtle and varied.
- When human behaviour is studied and analysed by the other human beings, the personal and emotional features come into the picture and may distort the facts
- Different aspects of human behaviour are psychological in nature, and thus measurement becomes challenging.
- People behave differently under similar circumstances. Since human behaviour is not uniform and thus generalising and predicting becomes difficult.
- Further reliable scientific data cannot always be collected.

Few other difficulties identified in literature are:

- Problem of hurried research
- Problem of external pressures
- Emotional effects
- Nature and complexity of subject matter
- Lack of uniformity
- Problem of general knowledge
- Problem of self interest
- Social philosophy and its effects
- Ethnocentrism
- Prejudices and bias
- Customs

Steps in Scientific Method

- I. Ask research question
- II. Research existing sources
- III. Formulate a hypothesis
- IV. Design and conduct the study
- V. Draw Conclusions
- VI. Report Results

Sociologists can use the scientific method not only to collect but to interpret and analyze the data. Scientific method helps to maintain as much objectivity, focus, and consistency as possible in a particular study. With its systematic approach, the scientific method has proven useful in shaping sociological studies. The scientific method provides a systematic, organized series of steps that help ensure objectivity and consistency in exploring a social problem. They provide the means for accuracy, reliability, and validity. In the end, the scientific

method provides a shared basis for discussion and analysis. The following is brief discussion about steps in scientific method.

1. Formulating research question

The first step of the scientific method is to ask research questions, describe a problem, and identify the specific area of interest. The theme should be narrow enough to study within a local area and timeframe. The framing of these questions in better research terms is important. When forming these basic research questions, sociologists develop an operational definition; that is, they define the concept in terms of the physical or concrete steps it takes to objectively measure it. The concept is translated into an observable variable or factor a measure that has different values. The operational definition identifies an observable condition of the concept.

By operationalizing a variable of the concept, all researchers can collect data in a systematic or replicable manner. The operational definition must be valid in the sense that it is an appropriate and meaningful measure of the concept being studied. It must also be reliable, meaning that results will be close to uniform when tested on more than one person. For example, middle class as a term can be defined as a class between upper class and lower class. But when it comes to data collection there has to be a concrete definition in terms of income or occupation.

2. Research Existing Sources (Review of Literature)

The next step researchers undertake is to conduct background research through a literature review, which is a review of any existing similar or related studies. Referring books or online sources help in comprehending existing research about the topic of study. This step helps researchers gain a broad understanding of work previously conducted on the topic at hand and enables them to position their own research to build on prior knowledge. It allows them to sharpen the focus of their research question and avoid duplicating previous research. However citing existing sources is important. It is important to quote references properly.

However from the vast information it is important to determine what is relevant?. Referring and utilizing existing sources educates a researcher and helps refine and improve a study's design.

3. Formulation of Hypothesis

A hypothesis is an assumption about how two or more variables are related; it makes an assumption about the relationship between those variables. It is a guess based on theory, observations, patterns of experience, or the existing literature. The hypothesis is formulated in the form of a testable proposition. However, hypothesis is treated differently between the positivist and interpretive approaches. A hypothesis is derived from a theoretical proposition. On the basis of the hypothesis a prediction or generalization is logically deduced. In positivist sociology, the hypothesis *predicts* how one form of human behaviour influences another.

Successful prediction is determined by the adequacy of the hypothesis and thereby tests the theoretical proposition. Typically positivist approaches operationalize variables as quantitative data; that is, by translating a social phenomenon like class into a quantifiable or numerically measurable variable like income, occupation. Thus predictions can be formulated using statistical methods.

Variables are examined to see if there is a correlation between them. When a change in one variable coincides with a change in another variable there is a correlation. This does not necessarily indicate that changes in one variable *causes* a change in another variable, however, just that they are associated. A key distinction here is between independent and dependent variables. In research, independent variables are the *cause* of the change. The dependent variable is the effect, or thing that is changed. For example, in a basic study, the researcher would establish one factor/indicator as the independent variable and observe the influence it has on a dependent variable. How does fertilizer (the independent variable) affect agricultural productivity (the dependent variable)? How does working hours (the independent variable) affect the performance (the dependent variable)? How is social class (the dependent variable) affected by level of education (the independent variable)? To establish the cause of any phenomenon three criteria must be satisfied. They are:

- There must be a relationship or correlation between the independent and dependent variables.

- The independent variable must be prior to the dependent variable.
- There must be no other intervening variable responsible for the causal relationship.

At this point, a researcher's operational definitions help measure the variables. Identifying the independent and dependent variables is very important. Simply identifying two topics, or variables, are not enough: Their prospective relationship must be part of the hypothesis. Sociologists analyze general patterns in response to a study, but they are equally interested in exceptions to patterns.

While many sociologists rely on the positivist method in their research, others operate from an interpretive approach. While systematic, this approach does not follow the hypothesis-testing model that seeks to make generalizable predictions from quantitative variables. Instead, an *interpretive framework* seeks to understand social worlds from the point of view of participants, leading to in-depth knowledge. It focuses on the meanings that guide people's behaviour. Rather than relying on quantitative instruments like questionnaires or experiments, which can be artificial, the interpretive approach attempts to find ways to get closer to the informants' lived experience and perceptions. Interpretive research is generally more descriptive or narrative in its findings. It *can* begin from a deductive approach, by deriving a hypothesis from theory and then seeking to confirm it through methodologies like in-depth interviews.

However, it is ideally suited to an inductive approach in which the hypothesis emerges only after a substantial period of direct observation or interaction with subjects. This type of approach is exploratory in that the researcher also learns as he or she proceeds, sometimes adjusting the research methods or processes midway to respond to new insights and findings as they evolve. Once the preliminary work is done, it's time for the next research steps: designing and conducting a study, and drawing conclusions.

1. Design and Conduct Study

In sociological experiments to test a specific hypothesis and to collect data, there is need to control the environment/experiment. Controlling an experiment means controlling all of the variables so that only a single variable is studied. The independent variable is the one that's controlled and manipulated by the experimenter, whereas the dependent variable is not. As the independent variable is manipulated, the dependent variable is measured for variation.

Controlling an experiment means setting it up so it has a control group and an experimental group. The control group allows the experimenter to compare his test results against a baseline measurement so he can feel confident that those results are not due to chance.

2. Analyze Data and Draw a Conclusion

During an experiment, scientists collect both quantitative and qualitative data. The data helps to support or reject the hypothesis. The amount of analysis required to come to a satisfactory conclusion can vary tremendously. Sometimes, statistical tools like chi-square test have to be used to analyze data. The ultimate goal is to prove or disprove the hypothesis and, in doing so, answer the original question.

Report the Results

The results elaborate on what happened in the experiment. It includes detailing all observations and data made during the experiment. Most people find it easier to visualize the data by charting or graphing the information.

Importance of scientific method

The scientific method attempts to minimize the influence of bias or prejudice in the researcher. Bias results from personal and cultural beliefs. It implies that any human or researcher filters the information based on his or her own experience. Unfortunately, this filtering process can cause a scientist to prefer one outcome over another. In the scientific community, where results have to be reviewed and duplicated, bias must be avoided at all costs.

Scientific method provides an objective, standardized approach to conduct experiments and, in doing so, improves their results. By using a standardized approach in their investigations, social researchers feel confident that they will stick to the facts and limit the influence of personal, preconceived notions and prejudices. Scientific method facilitates in minimizing research errors.

Limitations

The scientific method is a powerful tool, but it does have its limitations. These limitations are based on the fact that a hypothesis must be testable and falsifiable (it is the capacity for some proposition, statement, theory or hypothesis to be proven wrong.) and that experiments and observations are reliable and valid. This places certain topics beyond the reach of the scientific method. Scientists are human and share the same weaknesses as all members of the human race. The scientific method fails to yield an accurate representation of the world, not because of the method, but because of those who are attempting to apply it. The method fails when scientists themselves, usually collectively, allow their own biases and personal preferences to influence the hypothesis-testing part of the process. Some other limitations are listed hear:

- Constrained by the extent of existing knowledge
- Design of experiment is limited to observation method and instrument
- Deliberately falsifying results - i.e. scientific fraud
- Data interpretation - research findings are limited by human ability to interpret the results. Wrong interpretations can lead to wrong conclusions
- It does not take in to account inconsistent processes
- Anthropomorphization – using observations obtained by sheer intuition or empathy
- Scientist is a part of what is studied
- The controlled environments and instruments that are used in scientific inquiry only can produce answers that are relevant to same controlled environments and instruments

Summary

The scientific method is a system that attempts to separate the bias of being an observer from the observation — letting ‘reality’ show itself in the simplest possible way. The primary steps of scientific method are: systematic and repeatable observation, exact measurements, experiments, and the invention of and repeated (ideally, nearly endless) testing of theories.

The important characteristics of scientific method include objectivity, reliability, validity, logical reasoning, reliance on empirical evidence, ethical neutrality and generalizations. There are certain significant difficulties in the use of scientific methods. The scientific method provides a systematic, organized series of steps that help ensure objectivity and consistency in exploring a social problem. They provide the means for accuracy, reliability, and validity. The important steps in scientific method are formulating research question, research existing sources (review of literature), formulation of Hypothesis, design and conduct of the study and finally analysis of data and drawing conclusions

Scientific method provides an objective, standardized approach to conduct research and, in doing so, improves their results. Scientific method facilitates in minimizing research errors. Indeed, the scientific method is a powerful tool, but it does have its limitations. These limitations are based on the fact that a hypothesis must be testable and falsifiable and that experiments and observations are reliable and valid.

Assignment

Design a research proposal based on the steps of scientific method

FAQs

1. Write about the meaning and characteristics of scientific method.
2. List the steps in scientific method
3. What are the limitations of scientific method?
4. Write about the significance of scientific method

Model Answers

1. Scientific method is a method of investigation based on what's termed empirical and measurable evidence. Empirical means what can be observed with the senses; and measurable meaning what can be repeatedly quantified in a standardized way. The important characteristics of scientific method are:
 - Reliance on empirical evidence
 - Use of concepts- logical constructs or abstractions created from sense impressions, percepts and experiences.
 - Ethical neutrality – Research doesn't pass judgement.
 - Generalizations refers to the process of drawing a general conclusion from specific observations
 - Logical reasoning consists of Induction (studying several individual cases and drawing generalizations) and deduction (reasoning from general to particular)

- **Objectivity:** Any study is considered to be objective when it is based upon the observation of the factual events and not upon personal judgments. However achieving absolute objectivity is difficult in social sciences.
- **Reliability:** The degree to which scores of a test remain constant for the same unit of measurement over times. A scale is reliable when it will consistently produce the same results when applied to the same sample. Reliability can be measured in the following ways:
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- **Verifiability:** The process of verification consists of repeated study of the same thing under similar conditions in order to check the accuracy of conclusion/ inferences drawn
- **Scrutinizable:** The procedures used and the inferences derived must withstand critical scrutiny (peer review) by other scientists.

2. The important steps in scientific method are

- Formulating research question
- Research Existing Sources (Review of literature)
- Formulation of Hypothesis
- Design and Conduct Study
- Analyze Data and Draw a Conclusion

3. The limitations of scientific method are:
- Hypothesis must be testable and falsifiable (it is the capacity for some proposition, statement, theory or hypothesis to be proven wrong.) and that experiments and observations are reliable and valid.
 - Constrained by the extent of existing knowledge
 - Design of experiment is limited to observation method and instrument
 - Deliberately falsifying results - i.e. scientific fraud
 - Data interpretation - research findings are limited by human ability to interpret the results. Wrong interpretations can lead to wrong conclusions
 - It does not take in to account inconsistent processes
 - Anthropomorphization – using observations obtained by sheer intuition or empathy
 - Scientist is a part of what is studied
 - The controlled environments and instruments that are used in scientific inquiry only can produce answers that are relevant to same controlled environments and instruments
4. Scientific method provides an objective, standardized approach to conduct research and experiments and thus improves their results. By using a standardized approach in their investigations, social researchers feel confident that they will stick to the facts and limit the influence of personal, preconceived notions and prejudices. Scientific method facilitates in minimizing research errors

Quiz

6. Defining the concept in terms of the physical or concrete steps objectively is
- a. Subjectivity
 - b. Operational Definition
 - c. Neutrality
 - d. None of these
7. Positivist methodologies are often referred to as
- a. Inductive methodologies
 - b. Interpretive methodologies
 - c. Hypothetico-deductive methodologies
 - d. None of these
8. Typically positivist approaches operationalize variables as ____ data
- a. Qualitative
 - b. Quantitative
 - c. Both a and b
 - d. None of these
9. The degree to which scores of a test remain constant for the same unit of measurement over times
- a. Reliability
 - b. Validity
 - c. Verifiability

- h. None of these
10. _____ is an assumption about how two or more variables are related
- e. Hypothesis
 - f. Correlation
 - g. Sampling
 - h. Reliability

Key 1. (b) 2. (c) 3. (b) 4. (a) 5. (a)

Glossary

Scientific method: It refers to a standardized set of techniques for building scientific knowledge, such as how to make valid observations, how to interpret results, and how to generalize those results.

Objectivity: Any study is considered to be objective when it is based upon the observation of the factual events and not upon personal judgments

Reliability: The degree to which scores of a test remain constant for the same unit of measurement over times. A scale is reliable when it will consistently produce the same results when applied to the same sample.

Validity: Any measuring instrument is valid when it measures most accurately the objects or individuals and their characteristics.

Hypothesis: It is an assumption about how two or more variables are related

Independent and Dependent Variable: In research, independent variables are the cause of the change. The dependent variable is the effect, or thing that is changed.

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