

B.A. (Hons.) Part-II

Sociology Paper - III

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Social Survey and Social Research — Concept and Difference between Social Survey & Research

The term social survey has two constituents. Sur or sor means "to see". Accordingly, the word survey means 'to look over'. But the term is used for the technique of investigation by direct observation of phenomena or collection of information through interviews, questionnaire etc. Thus observation is the main thing in survey.

Different sociologists have given different ideas about social survey.

According to Mrs.P.V.Young, in general we may observe that social surveys are concerned with —

- (i) the formulation of a constructive programme of social reform.
- (ii) immediate condition of a social pathological nature which has definite geographic limits and definite social implications and significance.
- (iii) these conditions can be measured and compared with situations which can be accepted as model.

According to Webster's College Dictionary, survey is "a critical inspection, often official, to provide exact information, after a study of an area with respect to a certain condition or its prevalence."

In the words of Mark Abrams, a social survey is a process by which quantitative facts are collected about social aspects of a community's composition and activities.

Abrams explains that social survey is an investigation of the structures and processes of a community within well-defined geographical boundaries.

E.W.Burgess has said that social survey in the scientific study of its conditions and needs has a purpose of presenting a constructive programme of social advance, a method of social introspection checked by statistical measurement and the comparative standards of the social expert.

E.W.Burgess has emphasized the constructive and progressive purpose of social survey. The social survey tells us about both the reactionary and progressive elements in society.

In the words of Shelly M.Harrison, the social survey is a co-operative undertaking which applies scientific method to the study and treatment of current related social problems and conditions having definite geographical limits and bearings with such a spreading of its facts, conclusions and recommendations as will make them as far as possible the common knowledge of the community and a force for intelligent coordinated action.

Thus we may say that social survey is the investigation of social problems and conditions, structures, processes etc. Social survey aims at the study of the conditions and factors of social retardation or backwardness. It aims at the removal of reactionary forces from society and thereby helps release social energies into progressive channels. After making social survey and knowing the causes of backwardness, plans are formulated to remove these conditions.

The chief characteristics of social survey are —

(1) it is confined to the study of immediate problems of society, for example, poverty, unemployment, delinquency, crime etc.

(2) its geographical scope is sufficiently limited and its field of study is geographically localised.

(3) the purpose of survey is to prepare constructive programme of social research or removal of immediate evils.

(4) the facts collected in a survey may form the basis of further social research on the matter. They may result in the formulation of new hypothesis requiring further elaboration but it is not always the object of a survey.

Harrison has emphasized the other necessary characteristics - co-operative effort and use of scientific methods. These, however, deal with the methodology and are equally applicable even to social research.

Aims of Social Survey

(1) Data collection regarding social aspect of a community —

The primary aim of social survey is the collection of facts about certain definite aspects of a community in order to obtain scientific and well-ordered information. For this purpose the social surveyor makes use of various techniques to gather information from a selected group of members of a community. The information data has both qualitative and quantitative aspects. The social survey is both descriptive and statistical.

(2) The study of various problems and the condition of working classes —

Social survey is mainly concerned with the problems of society and the socio-economic conditions of the working classes and other depressed and underprivileged groups in the society.

Social survey aims at the study of the conditions and factors of social retardation or backwardness. It aims at the removal of reactionary forces from society and thereby helps release of social energies into progressive channels. After making social survey and knowing the cause of backwardness, plans are formulated to remove these conditions. The social and economic level of working classes is much lower than that of other groups in society. All kinds of social problems

and disfunctions abound in working classes. The problems of disease, unemployment, unhygienic conditions of living, moral depravity etc. Thus most of the problems are inter-related. Unemployment and poverty, illiteracy and lack of hygiene seem to be inter-related. Social survey studies social problems and tries to examine relationships among them.

3. Practical and utilitarian viewpoint — The motivation of social survey is practical and utilitarian. The main purpose of social survey is social welfare. In social survey, facts relevant to problem in hand are collected and upon their basis remedial measures are recommended or suggested. As a result of surveys, government passes various laws to protect the underprivileged against exploitation. Many other measures are taken to help the depressed and down-trodden in a practical way. About the aim C.A. Moser has said, "The sociologist should look upon the survey as a way and a supremely useful one of exploring the fields of collecting data around as well as directly on the subject of study, so that the problem is brought into focus and points worth pursuing are suggested."

RESEARCH

Research means discovery or unveiling of some hidden fact or law. Social research, therefore, means discovering some facts concealed in a social phenomenon or some law governing it.

Social research deals with social phenomena. It studies behaviour of human beings as members of society and their feeling, responses, attitudes under different circumstances.

Social research is carried on both for discovering new facts and verification of old ones. The object of every science of course is the discovery of new facts, new relationships and new laws governing the phenomena. But constant verification of the old concepts is also needed, specially in case of dynamic sciences. There is need for verification in the field of social research; because there may be an improvement in the technique of research and it is necessary to test the old concepts by this improved technique and secondary because the phenomena under study might have undergone a change and it may be required to test the validity of old concepts in changed circumstances. In the field of Sociology, a lot of research is being carried on for both purposes and has resulted in the discovery of new facts as well as modification of old concepts.

Social research tries to establish causal connection between various human activities. The main purpose of social research, therefore, is to discover laws so that they may be used in the guided growth of human society.

A social scientist collects and records the significant facts and figures of social problems and on this basis he makes possible correct generalisations about them. The basic motivation of social research is to understand sooner or later but correctly the nature of social events and processes and though this is done without any motive of practical reform any uplift is not ruled out. But practical benefits acquiring from social research are never its direct aim.

According to P.V. Young, we may define social research as the systematic method of

discovering new facts or verifying old facts, their resources, inter-relationships, causal explanation and the natural law which govern them.

According to C.A.Moser, systematized investigation to gain new knowledge about social phenomena and problems is what we call research.

In the words of Bogardus, social research is the investigation of the underlying processes operative in the lives of persons who are in association.

Whitley has defined social research thus : Sociological research includes a study of human group relationships.

In the Encyclopaedia of Social Science, Donald and Mary Stephenson have explained the meaning of research in social science, research in the manipulation of things, concepts or symbols for the purpose of generalizing to extend, correct and verify knowledge whether that knowledge aids in the construction of a theory or in practice of an art. The mechanic or physician, therefore, is a research worker; only they attempt to generalize about all automobiles or all patients of a given class.

On the basis of above definitions the following are characteristics of social research :

1. Social research deals with social phenomena. It studies behaviour of human beings as members of society and their feeling, responses, attitudes under different circumstances.
2. Social research is carried on both for discovering new facts and verification of the old ones. In sociology a lot of research is being carried on for both purposes and has resulted in the discovery of new facts as well as modification of old concepts.
3. Social research tries to establish causal connection between various human activities. The main purpose of social research is to discover the laws so that they may be used in the guided growth of human society.

Thus we may say that social research has a very wide use and application and is used in many social sciences other than sociology. Research aims at pure and theoretical knowledge. The main purpose of social research is the collection, analysis, shifting and generalization of facts thereby attaining general principles underlying social factors. This helps in predicting and controlling further course of action. It has direct relation with human welfare.

Aims of Social Research

1. **Theoretical Aims** — Social research aims at knowledge of social facts. It studies man in relation with other men and therefore its subject matter comprises social facts. A social fact includes all biological, ecological, cultural and anthropological data relevant to explanation of man's behaviour in relation to society. The majority of social scientists are studying human behaviour in society with a view to gaining an understanding of it and the laws having bearing on it.

2. **Utilitarian Aims**—Social research helps us to reduce social conflicts and tensions, delinquent and deviant behaviour like dacoities, homicides, suicides, rape, sadistic acts etc. According to Mrs.P.V.Young, "The primary goal of research immediate and distant is to understand social life and thereby gain a greater measure of control over social behaviour."

It helps in understanding of social phenomena and therefore social research is primarily a theoretical discipline. It is a science of understanding society and not an art of controlling or influencing it.

Relationship between Social Survey and Social Research

In order to distinguish between survey and research we have to explain the relationship between the two.

1. Social survey and social research both study the related facts of social phenomena.
2. Both emphasize the aims of social phenomena, elimination of the problem of social phenomena. Both exercise control over the behaviour of individuals.
3. Both use scientific method and the tools of scientific method, questionnaire, interview schedule and observation method.

Social survey and social research differ from each other in their meaning, objective, nature, method and utility.

On the basis of scope we may bring out these differences between survey and research :

1. Social survey studies the activities, thoughts and beliefs of the members of a community.

On the other hand, social research is related to the study of general abstract and universal situations.

2. Social survey is related to human beings.
Social research is related to human race.
3. Social survey is related to immediate problems.
Social research is not related to immediate problems.
4. Social survey is related to limited area.
Social research is related to entire world.

There is also great difference in the methods of social research and social survey.

5. In social survey we do not formulate hypothesis about a social incident or object.
In the field of social research, the Researcher formulates hypothesis.
6. In social survey the surveyor proceeds on the basis of known and established facts.
In social research the researcher proceeds on the basis of fact perceived.
7. In social survey generalization is not made.
On the other hand, in the field of social research generalizations are made.

Utility point of view social research and social survey differ from each other.

8. In social survey the researcher makes the construction of a programme for social reform, social welfare and the solution of problems on the basis of collected facts.
But in the field of social research there is no direct relation with social reform, social welfare and solution of problems.
9. Social survey collects practical information about special problems.

On the other hand, research increases knowledge by adding more knowledge and attempts to discover laws.

Social Research and Social Survey differ from each other in their aims

10. Social survey utilises the knowledge obtained in useful work.
Social research is not related with utility.
11. Social survey does not aim at increasing knowledge.
The aim of research is to increase knowledge.
12. In social survey the researcher collects data related to the social aspect of the community.
In social research the researcher formulates laws on the basis of these data and verifies them.
13. Survey is related to the study of social problems.
Research is the discovery of new facts.
14. Survey is specially the study of labour class and its problems.
Research is meant only for the knowledge of social life and social activities.
15. Survey is related to utilitarian viewpoint.
Research is related to scientific viewpoint.

Thus there is a sharp difference between social survey and social research. Both have great importance in the field of social science. In case of social sciences where experimental method is not easily possible, survey method is the most efficient method for providing reliable data. Some of its techniques are really used in Sociology, Anthropology, Psychology and natural sciences. Social research is based on scientific method and the most reliable result is possible through research. Research gives more accurate and valid result.

Questions

1. What do you mean by Social Research and Survey and what are the differences between social survey and social research?
2. Define social survey and discuss the differences between social survey and social research.

Books Recommended

1. Dr. Bajpai—Social Research Method
2. Satyendra Tripathi—Samajik Anusandhan Bidhi
3. Gauri Shankar Mate—Samajik Anusandhan
4. P.V. Young—Scientific Social Survey and Research
5. Goode & Hatt—Methods of Social Research
6. George Lundberg—Social Research
7. D. Sinha—An Introduction to Research Methodology
8. Surendra Singh—Samajik Anusandhan
9. Wilkinson and Bhandarkar—Methodology and Technique of Social Research.

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STAGES OF SOCIAL RESEARCH

There are different steps of social research. To bring out the accurate and valid result social research uses different steps or passes through these phases or steps for scientific investigation of problem under study. These are the important different steps of social research :-

1. Formulation of hypothesis :

Social research formulates the hypothesis about the problem under study. On the basis of general idea regarding his facts the social researcher chooses by trial and error the important factors which would illuminate his problem.

He tries to discover the causal relation between these factors by an intelligent guess or deep insight. This penetrating insight or hunch, the tentative idea which becomes the basis for faithful investigation is known as working hypothesis. In every scientific research it is essential to form a tentative notion about causal relation between the given facts. According to G.A.Lemdborg—

"A hypothesis is a tentative generalization, the validity of which remains to be tested in its most elementary stages, the hypothesis may be any hunch, guess, imaginative idea or infection whatsoever which becomes the basis of action or investigation."

After the formulation of hypothesis deductive generalizations and verification are further steps. The verification of a hypothesis establishes its scientific status. Without framing a hypothesis no valid approach to the problem is possible. If we try to evaluate facts before having any hypothesis, we shall be groping in the dark. In concrete terms we can say that upon the shrewdness and sophistication of hypothesis depends the success or failure of any research work.

2. Observation, collection and recording of data

In social research we encounter two types of facts — written and field observation. In written category we include both published and unpublished source. In the field of observation researchers include people from various walks of life, scientific workers and leaders. Again the data of social research may be divided into Primary data and Secondary data. The Primary data are those facts which research workers personally collect through survey, Questionnaire schedule and interview. The secondary data are those facts which are already available to research worker and he does not have to collect them by the above-mentioned methods of primary data collection. These days both categories of data are used in modern social research. The chief source of primary data is personal field observation, personal field interview of knowledgeable individuals of a community, obtaining information through questionnaires and various schedules etc. The chief source of secondary data are reports of official and unofficial agencies. The main information obtained from these agencies is census data, incidence of diseases, percentage of literacy and religious division among

people etc.

All govt. bodies like municipalities, port trust, ministries etc. make facts under their purview public. Some of them are not published but can be seen by researchers on special permission. The various agencies under U.N.O. publish their annual reports. Besides the above-mentioned sources a good deal of important information is contained in the books of history etc.

3. Classification and organisation of facts

After collection and recording of data the next step is to classify and organise in terms of their basis (i) likeness and unlikeness (ii) group of similar facts which repeat themselves consistently (iii) recurring natural sequence of events.

The classification must be done very carefully and a trained person is required for this purpose.

4. Generalization

On the basis of collected and classified material certain conclusions are deductively derived. This is known as generalization.

5. Verification

The conclusion obtained through research when applied will conform themselves. For this purpose we derive a particular instance or instances deductively from general conclusion and see their veracity in actual matter of facts.

Prof. Schluter - has given a detailed explanation of the steps of social research. These are as follows —

1. Selecting the field of topic or subject for research
2. Surveying the field to apprehend the research problem
3. Developing a Bibliography
4. Formulating or defining the problem
5. Differentiating and outlining the elements in the problem
6. Classifying the elements in the problem according to their relation. (direct or indirect to the data or evidence)
7. Determining the data or evidence received on the basis of elements in the problem
8. Ascertaining the availability of the data or evidence required
9. Testing the solvability of the problem

10. Collecting the data or information.
11. Systematizing and arranging the preparatory to analysis
12. Analysis and interpreting the data and evidences
13. Arranging the data for presentation
14. Selecting and using citations, references
15. Developing a form and style of research exposition

Thus these are the major steps of social research and are found in every type of research. In other terms these are the parts of scientific method in social research because laboratory experimentation is not available to social research. The open society is the laboratory of social research.

Question

Discuss the stages of social research.

Books recommended

1. P.V.Young—Scientific Social Survey and Research
2. Goodes Hatt—Methods in Social Research
3. R.N.Sharma—Technique of Social Research
4. P.Sinha—An Introduction to Social Research & Survey
5. Black and Champion—Issues and Methods in Social Research

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SCIENTIFIC RESEARCH METHOD

It would be difficult to comprehend the nature and content of research without an appreciation of the method we designate as scientific. Research simply puts in an endeavour to discover intellectual and practical answers to the problems through the application of scientific methods to the knowable universe. Einstein and Infeld state the essence of science in the following words, "Science is the attempt of the human mind to find a connection between the world of ideas and world of phenomena. All the essential ideas in science were born in dramatic conflict between reality and our attempt at understanding the same. This does not mean, however, that science will always come out with an answer, let alone a definitive and correct answer. We need not look very far to realize that science has failed to unravel some of the persistent mysteries of human existence. Thompson observes. "The vulgar belief that science has explained everything is a hopeless misunderstanding. It is the only process of knowing the reality. There may well be other paths leading to truth, but still scientific procedures seem more likely to lead us there than any other method devised by man.

Dr. Sinha defines, "Science, as a systematised knowledge derived through observation experimentation or any other systematic method or procedure in order to determine the nature of the phenomena being studied or the cause behind being specific events."

L.L. Bernard says, "Science may be defined in term of six major processes that take place within it. These are testing, verification, definition, classification, organisation and orientation which include prediction and application."

Karl Pearson defines science as "The unity of all science consists only in its method, not in its material."

From above definitions it is clear that science is one sub-part of knowledge which is concerned with the empirical phenomena only i.e., the world or phenomena which can be observed or experimented.

ELEMENT OF SCIENCE

It would be evident that certain elements are essentially scientific by virtue of which any study is a science. These essential elements or characteristics of science are the following —

1. Scientific method — As has been stated before, a science is so called not because of this subject matter but because it employs the scientific method.
2. Factual — Science is the study of facts. Its subject matter is facts not ideals.
3. Universal — Scientific principles are universal. They hold true irrespective of the temporal spatial order.

4. Veridical — Scientific law is veridical. Its validity can be examined at any time. It may be tested any number of times. It will prove true in every case.

5. Discovery of cause-effect relationship — Science searches for the cause-effect relationship in its subject matter, and in this connection provides universal and valid laws.

6. Prediction — Science can make predictions on the basis of universal and valid laws relating to the cause-effect relationships in any subject. The foundation of science is based on a faith in causality. The scientist believes that what will happen can be predicted by basing this prediction upon what is for the law of cause-effect universal and inevitable.

SCIENTIFIC RESEARCH METHOD

Science has been popularly defined as an accumulation of systematic knowledge. The word 'systematic' and 'knowledge' are very important in this connection. Knowledge refers to the goal of science while 'systematic' refers to the method that is used in reaching that goal. In fact, the aim of any kind of study, whether scientific or otherwise, is to acquire knowledge to know the truth and reality behind a phenomenon. Thus it is 'systematic' which ultimately distinguishes science from other branches of knowledge. The 'systematic' has been used in different senses by various thinkers and this has caused a lot of confusion in deciding whether any particular branch of knowledge can be termed as science or not.

Science or scientific method has been defined differently by different scholars. Some definitions spell out the steps or procedures to be followed to make it scientific, while the others point out its characteristics. A few of these are given below to make evident the steps or procedures of it as well as its characteristics.

George A. Lundberg in his book 'Social Research' has specified its procedures and some of its essential characteristics. To him a scientific method consists of systematic observation classification and interpretation of data. 'And the main difference between our day to day generalization on the one hand and conclusions derived through the application of the scientific methods on the other lie in the degree of formality rigorousness, verifiability and general validity of the latter.'

L.L. Bernard states, "Science may be defined in terms of six major processes that are placed within it. These are testing, verification, definition, classification, organisation and orientation, which include prediction and application."

Karl Pearson says, "The scientific method is marked by the following features (a) careful and accurate classification of facts and observation of their correlation and sequence, (b) the discovery of scientific laws by aid of the creative imagination, (c) self-criticism and the final touch-stone of equal validity for all normally constituted minds.

From the above definitions and discussion we can make the following derivation about scientific method :

1. It is a system of producers which are similar to some extent and different in others in case of different sciences. However, it has some basic standardised steps or procedures which are observation, classification, interpretation and application.
2. It has some specific goals, which are development of theories or laws which provide explanations and predictions.
3. There are different techniques for different categories of science, viz, natural, formal social and so on. The techniques differ in relation to the phenomena to which they are suited and in terms of their exactness or other scientific characteristics.
4. There are certain essential criteria which must be fulfilled in order that any study can be called scientific.

Characteristics of the Scientific Research Method

From the above definition it is clear that a Scientific Method has two important bases — one that deals with method employed and the other with the result achieved. Of the two latter has been regarded as more important. To quote Wolfs, “Any mode of investigation by which science has been built up and is being developed is entitled to be called a scientific method.” There are three characteristics of science (i) critical discrimination (ii) generality and systematic and (iii) empirical verification. Any method of study by which the above objectives can be achieved may be termed as scientific method.

The chief characteristics of scientific research method may be summarised as below :

1. Verifiability :

The conclusions drawn through a scientific method are subject to verification at any time. Verifiability presupposes that the phenomenon must be capable of being observed and measured. According to Lundberg, “If the verification of deduction involves condition of observation which is impracticable or impossible of attainment the theory is metaphysical rather than scientific. Besides being capable of measurement, this will bring greater exactitude to our verification. To illustrate this point let us take the famous scientific law that all matters expand on being heated. Now in order to verify this statement we can ourselves heat a matter and see whether it has expanded. Again, the rate of expansion of all the matter is not the same. At a certain degree of heat the gas expands most and water less than that. Among metals the degree of expansion is different. Thus from the general theory that all matters expand on being heated we can proceed to find out the exact degree of expansion for each kind of matter. This is only possible when the expansion of matter can be measured.

Let us take another illustration. Suppose we arrive at the conclusion that illiteracy is the cause of criminality among the people. Now this statement would be regarded as scientific fact

according to Wolf, "is the determination and ability to get at naked fact and not to be influenced by mere appearances or by prevalent notions or by one's own wishes." The main criterion of objectivity is that all persons should arrive at the same conclusion about the phenomena. For example, when we say, coal is black, it is an objective statement because coal will appear black to all people. But if we say that coal is the most useful mineral, the statement may not be purely objective. Everyone may not agree to this proposition.

Objectivity is essential for verification. According to Lundberg "It permits repetition of observation under practically identical conditions. This facilitates the verification of observation by many observers." Objectivity is fundamental to all sciences as the very purpose of science is to arrive at it, but in actual practice it is not so. It is very difficult some times equal to impossibility, to have a detached view of a phenomenon in which the observer himself is involved. This is why objectivity is more difficult to be achieved in case of social science.

5. Reliability :

In simple language reliability means the degree of accuracy of measuring instrument. It refers to the degree to which scores of a test remain constant for the same unit of measurement over times. According to F.N. Kerlinger, "Reliability can be defined as the relative absence of errors of measurement in a measuring instrument."¹ It would be wrong to expect that a measuring instrument will be perfectly free from errors. Achieving absolute reliability of the measuring instruments is less possible in social or behavioural subjects like sociology, psychology or education. Here, therefore, the success of measurement depends upon the degree or extent to which errors can be eliminated. Important instruments of investigation in the areas of social or behavioural sciences are questionnaire, schedule interview, content analysis and case history. Their reliability depends upon the way they are constructed and used. The extent to which they are reliable, they are dependable also.

6. Validity :

Any measuring instrument is valid when it measures most accurately the objects or individuals and their characteristics. According to Selltitz and others in their book 'Research Methods in Social Relations, "Validity of a measuring instrument may be defined as the extent to which differences in scores on it reflect true differences among individuals, groups or situations in the characteristics which it seeks to measure, or true differences in the same individual, group or situation from one occasion to another, rather than constant or random errors."

A valid and reliable measuring instrument can be said to be one that is able to measure the characteristics both accurately and distinctly. That means the differences in scores on the measuring instruments should reveal true differences among the individuals, objects or units of measurement. The measuring instruments vary among themselves in the specificity or exactness of measurements. Among the different techniques of data collection used in sociology, observation become comparatively less reliable and valid than the questionnaire and interview methods.

1. F.F.Kerlinger : *Foundation of Behavioural Research*

7. Definiteness :

Scientific method implies the quality of definiteness. Any conclusion derived through this area always definite in nature. The scientist can test the correctness or accuracy of generalisations drawn by him when they are definite in nature. As for example, the conclusion "The degree of Political Consciousness and Participation increases with age and education", is definite in nature and therefore can be tested. But it would be difficult to test statements like 'Change in modes of production leads to change in the society.'

8. Control :

Another criterion of scientific method is control. This is perhaps the most important criterion in the sense that it is the degree of control which differentiates physical and natural sciences from the social sciences. Also that it determines fulfilment of other criteria.

Questions

1. What is scientific method ? Discuss the characteristics of scientific method.
2. What do you mean by scientific method ? Explain its characteristics.

Books Recommended

1. Goode, William J. and P.K. Hatt : Methods in Social Research
2. F.N. Kerlinger : Foundation of Behavioural Research
3. Mohsin : Research Methodology for Social Sciences
4. Lundberg : Social Research

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HYPOTHESIS : CONCEPT, CHARACTERISTICS, IMPORTANCE

Once the problem to be tackled is finally instituted the researcher advisedly proceeds to formulate tentative solutions or answers to it. These proposed solutions or explanations constitute the hypothesis which the researcher proceeds to test on the basis of facts already known or that can be made known. If such hypotheses are not formulated even implicitly, the researcher can not effectively go ahead with the investigation of his problem because in the absence of direction which hypotheses typically provide, the researcher would not know what facts to look for and what relation or order to search for among them. Thus hypothesis guides the researcher through a bewildering jungle of facts to see and select only those that are relevant to the problem or difficulty that he proposes to solve. Collection of facts merely for the sake of collecting them will yield no fruits. To be fruitful facts need to be collected so that they are for or against some point of view or proposition in the hypothesis.

Lundberg aptly remarks, 'The only difference between gathering data without a hypothesis and gathering them with one is that in the latter case, we deliberately recognise the limitations of our sense and attempt to reduce their fallibility by limiting our field of investigation so as to prevent greater concentration of attention on particular aspects which past experience leads us to believe are insignificant for our purpose.'

Simply stated, a hypothesis helps us see and appreciate (1) the kind of data that must be collected in order to answer the research question and (2) the way in which they should be organised most efficiently.

Webster's New International Dictionary of English Language 1956 defines the word 'hypothesis' as 'a proposition, condition or principle which is assumed, perhaps without belief in order to draw out its logical consequences and by this method to test its accord with facts which are known or may be determined.'

Cohen and Nagal highlight the value of hypothesis thus : "We can not take a single step forward in any inquiry unless we begin with a suggested explanation or solution of the difficulty which originated it. Such tentative explanations are suggested to us by something in the subject matter and by our previous knowledge. When they are formulated as propositions, they are called hypothesis.

Once the scientist knows what his problem is, he can make a guess as to the possible answers. According to Warkneister, "The gusses he makes are the hypothesis which either solve the problem or guide him in further investigation."

It is now clear that a hypothesis is a provisional formulation, a tentative solution of the problem facing the scientist. The scientist starts by assuming that the solution is time without, of course, personally believing in its truthfulness. On the basis of this assumption the scientist

anticipates that certain logical consequences will be observed on the plane of observable events or subjects. Whether these anticipations or expectations really materialise is the test of the hypothesis, its proof or disproof. If the hypothesis is proved, the problem of which it was a tentative solution is answered. If it is not proved alternative hypotheses or solutions would need to be formulated and tested. A hypothesis thus stands somewhere at the mid-point of research from where one can look back to the problem and also look forward to data. The hypothesis may be started in the form of a principle. That is the tentative explanation or solution to the question how ? or why ? may be presented in the form : "because the principle is that X varies with Y". If the inquiry establishes that an empirical reference of X varies with the empirical referent of Y in a concrete observable situation, then the answer is arrived at. Hypothesis, however, may take other forms, such as, intelligent guesses, conditions, propositions deduced from theories etc.

Cohen and Nagel's statement that we can not take a single step forward in any inquiry without a hypothesis may well be an accurate statement of the value of hypothesis in scientific investigation generally but it does not do justice to an important role of scientific research, which is the 'formulation of hypothesis.' Hypotheses are not given to us ready-made. This is so especially in social sciences where there has not yet evolved a highly developed theoretical system in many areas of its subject matter which can afford fruitful bases for hypothesis formulation. As a result in the social sciences at least, a considerable quantum of research endeavour is directed understandably toward 'making' hypotheses rather than testing them.

Let us recapitulate the role of hypothesis for research in the words of Chaddock who summarises it thus : (A hypothesis) in the scientific sense is -- an explanation held after careful canvas of known facts, in full knowledge of other explanations that have been offered and with a mind open to change of view if the facts disclosed by the inquiry warrant a different explanation. It is, therefore, held with the definite purpose of including in investigation all available and pertinent data either to prove or disprove the hypothesis -- gives point to the inquiry and if founded sufficient previous knowledge, guides the lines of investigation. Without it much useless data may be collected in the hope that nothing essential will be omitted or important data may be omitted which could have been easily included if the purpose of inquiry had been more clearly defined.

Characteristics of Hypothesis

The following are the characteristics of hypothesis :

(a) Hypothesis should have Empirical Referents :

A hypothesis should be empirically testable. It should be so stated that it is possible to deduce logically certain inferences from it which in turn can be tested by observation in the field. That is, the hypothesis should have empirical referents. The concepts embodied in the hypothesis must have empirical correspondence. For example, 'Bad parents beget bad children, is hardly a statement that can qualify as a usable hypothesis.

(b) Hypothesis should be closest to things observable :

Hypothesis should be closest to things observable, failing this, it would not be possible to test their accord with empirical facts. Cohen and Nagal rightly remark, "... hypothesis must be formulated in such a manner that deductions can be made from it and that consequently a decision can be reached as to whether it does or does not explain the facts considered.

(c) Hypothesis must be conceptually clean :

This point is implicit in the preceding criterion. The concepts utilized in the hypothesis should be clearly defined — not only formally but also if possible, operationally. An ambiguous hypothesis characterised by undefined or ill-defined concepts can not be tested since, understandably, there is no standard basis for knowing what observable fact would constitute its test. It is advisable that the concepts embodied in the hypothesis be defined in a manner commonly accepted and communicable. This would ensure continuity in researchers and as a result, cumulative growth of scientific knowledge.

(d) Hypothesis must be specific :

Often the researchers are tempted to express their hypothesis in such general terms and with so grandiose a scope that they are simply not amenable to test. This temptation is suicidal. The researchers, therefore, would do well to avoid concepts in their hypothesis for which suitable tangible indexes have not developed. A hypothesis should include a clear statement of indexes which are to be used. For example, the concept of social class needs to be explicated in terms of indexes such as income, occupation, education etc. Such specific formulations have the obvious advantage of assuming that the research is practicable and significant. It also helps increase the validity of the results because more specific the statement or prediction, smaller the probability that it will actually be borne out as a result of mere accident.

(e) Hypothesis should be related to available technique :

Advisedly, hypothesis should be related to a body of theory or some theoretical orientation. This requirement concerns the theoretic rationale of a hypothesis i.e. what will be the theoretical gains of testing the hypothesis ? If the hypothesis will help to qualify, support, correct or refute the theory, science can become communicative only through building on the existing body of fact and theory.

Importance of Hypothesis :

Hypothesis has a very important place in research although it occupies a very small space in the body of a thesis. It is almost impossible for a research worker not to have one or more hypothesis before proceeding with his work. If he is not capable of formulating a hypothesis about his problem, he may not be ready to undertake its investigation. The aimless collection of data is not likely to lead him anywhere. The importance of hypothesis can be more specially started as

under :

1. It provides direction to research. It defines what is relevant and what is irrelevant. Thus it prevents the review of irrelevant literature and the collection of useless or excess data. It not only prevents wastage in the collection data, but also ensures the collection of data necessary to answer the question passed in the statement of the problem.

2. It sensitizes the investigator to certain aspects of the situation which are relevant from the standpoint of the problem at hand. It spells the difference between precision and haphazardness, between fruitful and fruitless research.

3. It is a guide to the thinking process and the process of discovery. It is the investigator's eye — a sort of guiding light in the world of darkness.

4. It focuses research; without it research would be like a random and aimless wandering.

5. It prevents blind research, prevents indiscriminate gathering of data which may later turn out to be irrelevant.

6. It sensitizes the individual to facts and conditions that might otherwise overlooked.

7. It places clear and specific goals before us. These clear and specific goals provide the investigator with a basis for selecting samples and research procedures to meet these goals.

8. It serves the function of thinking together related facts and information and organising them into one comprehensible whole.

9. It enables the investigator to understand with greater clarity his problem and its ramifications, as well as the data which bear on it. It further enables a researcher to clarify the procedures and methods to be used in solving his problem and to rule out methods which are incapable of providing the necessary data.

10. It serves as a framework for drawing conclusion. It makes possible the interpretation of data in the light of tentative proposition or provisional guess. It provides the outline for stating conclusions in a meaningful way.

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Hypothesis : Sources and Type

Hypothesis may be developed from a variety of sources as given below :

1. The history of science provides an eloquent testimony to the fact that personal and idiosyncratic experience of the scientist contributes a great deal to the type and form of questions he may ask as also to the kinds of tentative answers to these questions that he can provide. Some scientists may perceive an interesting pattern in what may merely seem a jumble of facts to a common man. The history of science is full of instances of discoveries made just because the 'right' person happened to make the 'right' observation owing to his characteristic life history and exposure to the world of events. Personal life-histories are a factor in determining the kinds of perception and conception and this factor may in turn direct one person to certain hypothesis more quickly. An illustration of such an individual perspective in social sciences may be seen in the work of Thorstein Veblen whom Merton described as a sociologist with a keen eye for the unusual and paradoxical. A product of isolated Norwegian community, Veblen lived at a time when the capitalistic system was hardly subjected to any criticism. His own community background was replete with deprivational experiences attributed to the capitalist system and he being an outsider was able to look at the economic system more objectively or with an impassionate detachment. Veblen was thus excellently placed to attack the fundamental concepts and postulates of classical economics. He was an alien who could bring different experiences to bear upon the economic world. Consequently, he made penetrating analyses of society which have ever since profoundly influenced social sciences.
2. Analogies are often an offspring of valuable hypothesis. Students of sociology in course of their studies come across analogies wherein a society is compared to a biological organism, the natural law to social law, thermo-dynamics to social dynamics etc. Such analogies, notwithstanding the fact that analogies as a class suffer from serious limitations, do provide certain fruitful insights which formulated as hypothesis stimulate and guide inquiries. One of the recent orientations to hypothesis formulation is provided by cybernetics. The communication models now so well-entrenched in the social sciences speak volumes of the importance of analogies as sources of fruitful hypothesis. The hypothesis that similar human type of activities may be found occupying the same territory came from plant ecology. When the hypothesis was borne out by observations in society, the concept of segregation as it is called in plant ecology was accepted into sociology. It has now become an important idea in sociological theory. Such examples may be multiplied. In short, analogy may be very suggestive but care must be taken not to accept models from other disciplines without a careful scrutiny of the concepts in terms of their applicability to the new frame of reference in which they are proposed to be used.

3. Hypothesis may rest also on the findings of other studies. The researcher on the basis of the findings of other studies may hypothesize that similar relationship between specified variables will hold good in the present study too. This is a very common way of researchers who design their study with a view to replicating another study conducted in a different concrete context. The findings of such studies may be formulated as hypothesis for more structured studies which aim at testing the hypothesis.
4. A hypothesis may stem from a body of theory which, by way of logical deductions, may lead to the prediction that if certain conditions are present, certain results will follow. Theory is indeed an extremely fertile seed-bed of hypothesis. A theory represents what is known; logical deductions from this constitute the hypothesis which must be true if the theory is true. Dubin aptly remarks, "Hypothesis is the feature of the theoretical model closest to the 'things observable', that the theory is trying to model." Merton illustrates this function of theory with his customary felicity; Basing his deductions on Durkheim's theoretical orientation. Merton shows how hypothesis may be derived as the end product.
1. Social cohesion provides psychic support to group members subject to acute stress and anxieties.
2. Suicide rates are functions of unrelieved anxieties to which persons are subjected.
3. Catholics have greater social cohesion than Protestants.
4. Therefore, lower suicide rate should be expected among Catholics than Protestants.
5. It is also worthy of note that the value-orientation of the culture in which a science develops furnishes many of its basic hypotheses. That certain hypotheses and not others occupy the attention of a scientist in particular, societies or culture may well be attributed to the cultural emphasis. According to Goode & Halt, the American emphasis upon personal happiness has had considerable effect upon social science in that country. The phenomenon of personal happiness has been studied in great detail in every branch of social science. The problem of personal happiness has come to occupy a central place. Happiness is correlated with income, education, occupation, social class, and so on. It is clear, therefore, that the cultural emphasis upon happiness has been productive of a very wide range of hypothesis for the American social science. Folk-wisdom prevalent in the culture also serves as an important source of hypothesis.

Types of Hypothesis :

There are many kinds of hypothesis the social researcher has to work with. One type of hypothesis asserts that something is the case in a given instance; that a particular object, person or

situation has a particular characteristic. Another type of hypothesis deals with the frequency of occurrences or of association among variables. This type of hypothesis may state that X occurs Y proportion of time or that urbanism tends to be accompanied by mental disease or that something is greater or lesser than some other thing. Yet another type of hypothesis asserts that a particular characteristic is one of the factors which determine another characteristic, i.e. X is the producer of Y (product). Hypothesis of this type is known as causal hypothesis.

Hypothesis can be classified in a variety of ways. But classification of hypotheses on the basis of their levels of abstraction is regarded as especially fruitful. Goode and Halt have identified three differential levels of abstraction typified by hypothesis. We shall discuss them starting from the lowest level.

- (a) At the lowest level of abstraction are the hypotheses which state existence of certain empirical uniformities. Many types of such empirical uniformities are common in sociological research. For instance, it may be hypothesised with reference to India that in the cities men will get married between the age of 22 and 24 years. Or, the hypothesis of the type may state that certain behaviour patterns may be expected in a specified community. Thus, hypothesis of this type frequently seems to invite scientific verification of common-sense proportions.

It has often been said of such hypotheses that are not useful in as much as they merely state what everyone seems to know already. Such an objection may be overruled by pointing out what everyone knows is not often put in precise terms nor is it adequately integrated into the framework of science. Secondly, what everyone knows may well be mistaken. To put common sense ideas into precisely defined concepts and subject the proposition to test is an important task of science. This is particularly applicable to sociology which is at present in its early stages of development. Not only sociology but all sciences have found such common sense knowledge a fruitful item of study. It was common sense knowledge in the olden days that the sun revolved round the earth. But this and many other beliefs based on common sense have been exploded by patient, plodding, imperial checking of facts. The monumental work 'The American Soldier' of Stouffer and associates was criticised in certain quarters, for it was according to them a mere elaboration of the obvious. But to this study goes the credit of exploding some of the common-sense proportions and of shocking many a people who had never thought that what was so obvious a common sense could be totally wrong or mistaken.

- (b) At a relatively higher level of abstraction are hypotheses concerned with complex 'ideal types'. These hypotheses aim at testing whether logically derived relationships between empirical uniformities obtain. This level of hypothesising moves beyond the level of anticipating a simple empirical uniformity by visualizing a complex referent in society. Such hypotheses are indeed purposeful distortions of empirical exactness and owing to their remoteness from empirical reality, these constructs are termed 'ideal types.' The function of such hypotheses is to create tools and problems for further research in complex areas of investigation. Example of one such hypothesis may be cited. Analysis of minority groups brought to light

empirical uniformities in the behaviour of members of a wide variety of minorities. It was subsequently hypothesized that these uniformities pointed to an 'ideal type'. First called by H.A. Miller the 'apparition psychosis', this ideal typical construction was subsequently modified as the 'Marginal man' by E. Stonequist and associates. Empirical evidence marshalled later substantiated the hypothesis, and so the concept of marginality is to-day very much a part of sociological theory.

- (c) We now come to the class of hypothesis at the highest level of abstraction. This category of hypothesis is concerned with the relation of analytical variables. Such hypotheses are statements about how changes in one property (abstracted from a class of concrete objects) will effect another property e.g. a statement of relationship between education and social mobility or wealth and friability. It is easy to see that this level of hypothesising is not only more abstract compared to others; it is also the most sophisticated and flexible mode of formulation. This does not mean, however, that this type of hypothesis is 'superior' or 'better' than the other types. Each type of hypothesis has its own importance depending in turn upon the nature of investigation and the level of development the subject has achieved. The sophisticated hypothesis of analytical variables owe much of their existence to the building blocks contributed by the hypothesis at the lower order of abstraction.

Questions

1. What do you mean by hypothesis ? Discuss the sources of hypothesis.
2. What is the source of hypothesis ? Explain.
3. What is hypothesis ? Explain the types of hypothesis.
4. How many types of hypothesis are there ?

Books Recommended

1. C.A. Moser, Survey Methods in Social Investigation
2. Hundberg, G.A., Social Research
3. P.V. Young, Scientific Social Survey and Research
4. Mohsin, Research Methodology for Social Science

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RESEARCH DESIGN (Exploratory Research Design)

A research design specifies the hypothesis, the basic concepts, the population for investigation, the framework of inquiry, the statistical tools to be employed and the analysis to be conducted for testing the hypothesis.

Many social scientists have defined research design in their own manner. According to Jahoda & Selltitz, "A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy."¹

This definition stressed the fulfilment of research purpose within limited economy. However, the definition does not explain the structure of research design very clearly. Perhaps the definition given by F.N. Kerlinger is the most suitable definition in which he has specified the process and structure of research design. According to him, 'Research Design is the plan structure and strategy of investigation conceived so as to obtain answers to research questions and to control variable.'²

According to Kerlinger, research design is the plan structure and strategy of any investigation. It is necessary to define the term plan structure and strategy further to understand the structure and procedure of Research Design clearly. The term Plan means everything to be done by researcher in research procedure, i.e., formulation of working hypothesis and defining it operationally and collecting data to the final analysis of data etc. Thus it means the overall scheme or programme of research. The term 'structure' means the scheme of the specific research project which is used as a guiding model or a structure that regulates the operationalization of variables. When we draw diagrams that outline the variables and their relation and juxtaposition we build structural schemes for accomplishing operational research purposes. The term 'strategy' refers to the methods to be used to gather and analyse the data.

From the above definition it is clear that Research Design is a design of investigation; it is the plan of action, the strategy and the structure if the overall procedure by which the investigator intends to gain more knowledge of a specific aspect of the society.

Types of Research Design

Generally three types of designs are employed by the social scientists in social research. They are --

(a) Formulative or exploratory design

1. Claire Selltitz, Marie Jahoda, Horton Deutch & Stuart W. Cook "Research Methods in Social Relations," Holt Rinehart and Winston Inc. New York, 1959, p.50.
2. F.N. Kerlinger, "Foundations of Behavioural Research", Holt, Rinehart and Winston Inc. New York, 1964, p. 275.

- (b) Descriptive or diagnostic design
- (c) Experimental design

(a) *Exploratory or formulative design :*

Exploratory research design is applied when the research is not acquainted with the problem or the community he wants to study. Therefore, it aims to gain familiarity with a new phenomenon or community. It aims to achieve new insights into the problem or community in order either to formulate a more precise research problem or to formulate specific hypothesis and to locate the possible variables.

Exploratory studies also help in clarification of concepts in locating important variables, in establishing priorities for further research, in gathering information about practical possibilities for carrying out research in real-life setting, and in providing a census of problems regarded as urgent by people working in a given field of social relations. As for example, if we want to study the problem of inner relationship between different religious groups, we will have to enquire about detailed information related to the problem, the concept and the setting before developing any structured research design. This happens when there is scanty literature on the specific problem. Jahoda, Selltitz and others faced similar problems in the study of inter relationship between members of different social and religious groups in the United States of America.

For them it was essential to select such settings where the members of different social and religious grounds are in face to face relationship and reside possibly in neighbourhood housing colony, General Stores, Medical Stores etc. Since these scholars had little knowledge of the above-mentioned areas of interest they needed to make an exploratory study design firstly for six months. For gaining familiarity they interview housing experts, managers of house projects, and race relation officials of public housing agencies. Experience and insights of these specialists contributed significantly in gaining familiarity with the problems and in pursuing more systematic study of the same. On the basis of obtained knowledge they selected public housing areas or inter-racial housing project areas as integrated or segregated areas of race relationship. These types of exploratory studies also contributed them to identify other possible factors than occupancy pattern (viz. integrated inter-racial pattern and regretted bi-racial pattern) such as the neighbourhood where the projects were located, the social composition of the tenants, the attitude of the management staff, difference in religious education or political views etc. Only on the basis of above-mentioned information the researchers could develop a systematic study to determine how the difference in occupancy pattern might produce the observed differences in attitude towards Negroes. Similarly in study of Hindu-Muslim relations due to lack of any sufficient information researchers will have to make use of exploratory research design. This is because here the factors determining the religious group relations would be quite different from those mentioned in the above example because of different social conditions.

Exploratory research design is flexible to permit the consideration of many different aspects of a phenomenon. It is highly instructured. On other research designs we begin with specific hypothesis which we aim to test but in exploratory research design formulation of hypothesis comes at the end. In these circumstances exploratory research is necessary to obtain the information that will help in formulating relevant hypothesis for more accurate investigation.

Jahoda & others¹ have discussed the following methods for collecting information in exploratory research design :

- (i) A review of the related social science and other pertinent literature
- (ii) A survey of experienced practitioners, and
- (iii) An analysis of "insight-provoking" cases.

(a) *The Survey of the Literature :*

One of the simplest, shortcut and economic ways to obtain knowledge of or insight into the unfamiliar phenomena is to review and build upon the work already done by others. In an exploratory study the focus is on the discovery of hypotheses which may lead to further investigation. One can also collect explicit formulated hypothesis from similar studies and use them as a basis for development of further research guide line or for the development of hypothesis. As for example, concept development in the field of learning may provide insight into the process of attitudinal change or in the study of students' class performance.

(b) *The Experience Survey :*

The main objective of the experience survey is to obtain insight into the problem of relationship between variables and to get an accurate picture of current practices by interviewing the experienced person. Mere satisfied information is not sufficient for developing insight into the problem. For example, the nature and amount of change in tribal society can be assessed better by interviewing tribals welfare officers or tribals themselves than by going through the statistical figures.

Though in our day to day experiences we are in a position to observe the effects of alternative decisions and actions with respect to problem of human relations, very few of us ever remember it or have the skill to communicate it. Therefore, the investigator has to carefully select the responents for experience survey which represent the different type of experience. As for example, in a study of the relationship between work commitment and job satisfaction of industrial worker in a given organisation it is necessary to know about people's job satisfaction their work commitment and also the working conditions in the factory etc. Later on also in actual study design it would be better to collect information from persons of different levels. i.e manager, foreman, worker and so on to obtain a varied perspective.

(c) *Insight stimulating Experiences :*

When the area under investigation is unformulated and there are few or no experienced persons to provide necessary information for development of insight and hypothesis for specific research, then intensive study of a few selected examples would be highly fruitful. As for example, intensive anthropological studies of a few primitive cultures have thrown light on the

1. M.Jahoda, M.Devtsch and S.W.Cook, 'Research Methods in Social Relations,' The Pregden Press, New York,1958, p.34.

understanding of not only similar other tribes out also on the understanding of modern people. Necessity of such examples in the formulation of the problem and hypotheses depends upon the intensity of the study of the individuals.

Thus, the utility of exploratory research design can be realized from the fact that often a study of a few instances may produce a wealth of new insights and new ideas whereas a huge collection of facts may not.

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Lesson 7

DESCRIPTIVE RESEARCH DESIGN

Descriptive Research Design provides description of an individual, a community, a society, an event or of any other unit under investigation. This description involves minimum bias and maximum reliability. Descriptive research design is different from the exploratory research design, because descriptive research design tests specific but non-casual hypothesis.

Types of Descriptive Research Design :

In attempting to classify the various types of descriptive studies one again confronts the problem of generally accepted terminology. Depending upon its structure, description may be of two types --

- (i) Qualitative description and
- (ii) Quantitative description

(i) Qualitative Description :

Different studies related to culture, patterns or processes of social and cultural change and of their elements, like customs, norms and values of social structure and organisation or of patterns of human behaviour lead to qualitative descriptions of general nature. Earlier scientists related to these areas dealt with societies as a whole. Therefore, these descriptions were too general in nature. Best example of qualitative description is Mead's study of child rearing practices in different cultures. Lynd's study of 'Middle Town' or Whyte's study of 'Street Corner Society' are outstanding examples of the use of qualitative description research design developed

and used by social scientists. Besides the use of participant observation method the sociologists have made use of other methods also like, formal or informal interviews, reading diaries or other secondary sources of data and so on.

(ii) Quantitative Description :

Quantitative description of any research can be achieved through the use of questionnaire method, structure interview schedule or through any other structured method. Such descriptions have covered different areas of human life and can be organised under different categories, for example, description of characteristics of individuals, groups, or communities, describing facilities, description of habits and studies describing attitudes of the people, etc.

Descriptive studies not only provide picture about variation or distribution of characteristics in the population, it also helps in describing how different variables are associates. As for example, study of women's modernization and attitude towards change in social values of any society may reveal that their level of modernity and attitude towards changes in social values varies with their level of education, religious and rural urban background. Such studies help in the development of theories.

Importance of Description Research Design :

Descriptive approaches of research have been widely used in most of the behavioural sciences. These days there is a greater demand of making our studies as accurate as possible like those in natural sciences. Studies in natural sciences are highly structured as they are carried on under controlled conditions through experimentation. Therefore, there is a greater emphasis on other behavioural sciences.

Even then descriptive studies would continue to occupy an important place as a part of survey research work, specially if and when development programme would be based upon assessment of people's opinion and attitude.

Besides the above facts descriptive research design has great importance because of its use in both the preliminary and final stages of an experimental study. It provides deceptive but concrete and factual information about the characteristics of any phenomenon or event and the situation under which it takes place.

Finally, the descriptive studies are also very useful, because they apply to a very broad class of problems.

Advantages and Disadvantages of the Descriptive Research Design

Advantages :

(i) One can think of isolating the effect of one or two variables upon a dependent variable. To isolate such effect, it is necessary to test them under the controlled conditions of a laboratory. However, it is not possible to bring many social events or units from a 'real life' situation to the

laboratory for controlled study, for example, locating cause behind social movement. Nor is it possible to file the findings from the laboratory and apply them directly in the research field. In such cases effects of different variables may be marked out through statistical measurement of data achieved through descriptive studies.

(ii) The different research designs are appropriate to the study of problem of a different nature. Therefore, there are specific types of problems which can be studied only through the descriptive research design.

(iii) A large number of development programmes are related to a large population. Before such programmes are implemented we may need information about the characteristics, nature or problems of the people. We may also need to know about people's reaction towards these programmes. Such attitude in a study would reflect the possible type of reaction of the people towards the policies. This would help the government to find out suitable methods of implementing the policies, like family planning. These can be easily achieved through descriptive studies.

Disadvantages :

Defects in the results of descriptive studies happen due to the structure of the research design itself and secondly because of available fault involved at the stage of its construction and application.

(i) The first demerit is in its structure, i.e. it appears to be simple on the surface. People, therefore, tend to apply it without any precautions. In such cases the descriptive studies remain mainly tools of gathering information and not of doing research.

(ii) People tend to collect only these evidences that support the ideas of the investigators for their hypothesis leads to over generalization.

(iii) It does not provide much information about the effects of the variables because in it one can not manipulate the variables to get their effects isolated. Hence, no real evidence of cause and effect relationship is provided. It provided information or description of the conditions under which an event takes place but do not provide evidence for inferring causation.

(iv) Defects may also occur due to respondent's or investigator's bias. Descriptive studies require the co-operation of respondents over whom the investigator has no direct control. Even when they co-operate, there are chances of mis-information and forgetting.

Thus it is obvious from the above-mentioned facts that the technique of data collection in descriptive research design are more specific. One can make more accurate predictions on the basis of descriptive studies which is not possible in exploratory research design.

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EXPERIMENTAL RESEARCH DESIGN

Experimental Research Design is different from the previous two research designs i.e. the 'Exploratory Research Design' and the 'Descriptive Research Design' in its objective, structure and procedure.

By experiment we refer to that portion of research in which variables are manipulated and their effects upon other variables are observed. According to F.N.Kerlinger, "An experimental design, then, is one in which the investigator has direct control over at least one independent variable and manipulates at least one independent variable."

Thus experiment is the procedure for obtaining knowledge by collection of new or fresh observation under controlled conditions. When a scientist fails to find out through simple observation the possible factors operating in a given problem, he resorts to experiments. Thus the difference between a simple experiment and the second one is that in the latter observation is done under controlled situations. The fundamental rule of the experimental method is to vary only one condition at a time and study its effects on the dependent variable.

Experimental research design has been emphasized even by early sociologists like Comte, Durkheim and Maxweber as an important method of scientific inquiry and for establishing caused relationship among different variables.

Types of Experiment

In comparison to other research designs the experimental research design provides both greater certainty and greater efficiency by making the simultaneous gathering of various lines of evidences possible. How this is done will be clear from the discussion of the following types of experiments :

1. After-only Experiment

This type of experimental research design consists of one experimental group and one control group. Individuals are selected before the introduction of the assumed cause of the experimental variable. It is assumed that the two groups are equal. The experimental variable is introduced to the experimental group in a specific manner for a specified period or time. Then the two groups are measured with respect to the dependent variable and are compared to find out whether exposure to the assumed causal variable has created any difference in the dependent variable. For example, after teaching through lecture and class participation method the grounds are measured to see if it has created any difference in the class performance of the student.

Limitations

The greatest weakness of this research design is that it overlooks possibility of the effect of the inter action between experimental variable and the other variables. Its second defect is that it is difficult here to determine whether the effect was created by the introduced cause or that the experimental group had other experiences also. It is also very difficult to have two groups which are exactly similar to each other and without protest we do not know whether the two groups were really similar at the beginning of research or not.

2. The Before-After Experiment

This experimental design is at different times based upon the study of one group or of several groups. Use of several groups are also made to measure maturation effect. Maturation or developmental changes may determine or influence the subject. Besides the specific environmental events even the processes occurring from within the organism make the subjects, their characteristics, their performance or behaviour different at the end of the experiment that they were at the beginning. Such changes in the individual are due to maturation effect.

It is basically different from the after-only experimental research design, because it includes pretest before the introduction of the experimental variable. In this design selection and allotment of individuals to different groups is done by making the two groups equal, which is confirmed by pre-test. The pre-test has the following utilities -

1. It helps to establish the initial comparability of groups.
2. When the measure of pre-test is compared with that of the post-test the difference is easily located and causal relationship is identified.

Given below are the two sub-types of this research design :

[a] The Before-After Experiment with a single group

This type of research design is used when due to any reason, formation of two groups is not possible. The steps taken for this design are selection of the sample pre-test, exposure to experimental variable and post-test. Scholars like Barker, Dembo and Lewin [1941] used this type of research design without a control group and with only one experimental group to study the effects of frustration on young children's play.

[b] The Before-After study with control group

This design is modification of the previous research design. The main characteristic of this research design is that there is an additional group for comparison. Thus it fulfils the need of

scientific validity discussed by Campbell. In this research it is assumed that since both the groups are given pre-test, they are initially similar and are also likely to be influenced equally by the other factors. This second part of the assumption is not sound because other factors might not effect both the groups equally.

Thus this research-design plays an important role in the field of social research.

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Lesson 9

Sampling Method

In social survey and social research the sampling method has got an important place. Before research work the investigator has to decide what technique or method should be selected for data collection. He may take the entire population as a subject of data collection, or a particular group can also be selected as representative of entire population. When the entire population is taken into account, it is called census method. And when a small group of the entire population is considered as a representative of the whole, it is called sampling method. It is a workable and time-saving method through which an investigator completes his study in a short span of time with reliable data. Now-a-days it is a very popular method mostly applied in social survey and research.

The definition of Sample is given by many scholars in various ways and some of them are being presented here :

- (i) According to W.J.Goode and P.K.Hatt, 'A sample as the name implies is the smaller representation of a larger what.'
- (ii) According to P.V.Young, "A statical sample is a miniature picture or cross-section of the entire group or aggregate from which the sample is taken."
- (iii) According to F.N.Kerlinger "Sampling is taking any portion of a population or universe as representative of that population or universe."
- (iv) According to Frankyates, "The term sample should be reserved for a set of unit or a portion of aggregate and material which has been selected in the belief that it will be representative of the whole aggregate."
- (v) According to Bogardus, 'Sampling is the selection of certain percentage of a group

item according to a pre-determined plan.

Viewing the definitions given above we come to the conclusion that sampling methods select only a percentage of the entire population. The percentage which is known as group or sample has a representative character. Since it has got a representative character the result we get from it is the same as the result of the entire population or universe.

In social survey and social research sampling method has acquired a place of great importance. It has become much popular as time and energy of the investigator is saved and reliable result is achieved through sampling. The study of representative units is possible and the study of a large area is also done.

Since the selected representative units are studied through this method, it is easier to scrutinise the available information. It helps in studying the selected items intensively by avoiding the study of the entire universe.

In this way we observe that it is a very useful method having the advantage of easy and quick collection of information because of its selective nature and attainment of sufficient result in a short time.

Importance of Sampling

In social survey and research sampling method has now-a-days got a place of great importance. This method is becoming quite popular in all the important studies because of difficulties in contacting people and ascertaining the view all of them. Since census method is difficult, the sampling method is adopted for convenience and getting the reliable result. Its importance lies because of the following factors.

- (i) Study of representative units : Here only representative units are selected without concentrating attention on the entire subject matter and the result acquired by this method is considered dependable and reliable. Due to this method a lot of time, energy and resource is saved.
- (ii) Study of large area : Through this method it is possible to study a large area. If we select the whole area for study, it will be difficult to achieve the result in shorter time. But through the sampling method it is easy to cover a larger area and achieve maximum results.
- (iii) Scrutiny of available information : In this method scrutiny of the available information is possible since area of study is limited, while in other methods it is not possible to test the accuracy and validity of the result due to covering a large area and a large number of subjects involved.
- (iv) Intensive study of selected items : In this method, whole attention is paid to the representative selected units. By studying the entire universe intensive study can not be made but through this method it is possible to make an intensive study of the

selected items.

- (v) Facilities in collecting the information : It is a easy to collect information through this method because of the selective nature of the study. By adopting this method the researchers do not have to move in the whole of the universe, but have to confine themselves to the selected items and as such this method has the advantage of easy and quick collection of information.
- (vi) Attainment of sufficient result : In this method, although the researcher confines himself to the study of the selective representative units, the results are the same as that of the interior universe. As such, in this method, it is possible to attain, large number of results in a short span of time.

Thus we see that sampling method has got great importance in the field of social survey and social research because of its advantages over other methods. A researcher finds economy of time and resources by making selective study of a representative unit. He also finds a detailed study, accuracy of results and administrative convenience as well.

Books suggested

- (i) Scientific Social Survey and Research
by P.V. Young
- (ii) Social Survey and Research
by Goode and Hatt
- (iii) Social Survey and Research
by Vajpayee

Questions

- (i) Define sampling and describe its usefulness in social research.
- (ii) Discuss the importance of Sampling in Social Research.

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Types of Sampling

In research work various methods are utilised for selecting and drawing the samples. Given below are some important methods grouped together for the convenience of study :

1. **Random Sampling-** In this method all the units are given equal importance. Every unit has the possibility of being included in the sampling. It is defined by Pertain in the following words, "Random Sampling is the form applied when the method of selection assures that each individual or element in universe has an equal chance of being choosen".

Random Sampling is done with the help of certain methods given below :

- (A) **Lottery method :** In this method, a lottery is drawn by writing the number or the names of the units and putting them in a container. They are thoroughly mixed and certain numbers are picked up from the container and taken up for sampling.
- (B) **Tippett's numbers methods -** This method was evaluated by L.C. Tippet who constructed a list of 10,400 four-digit numbers written at random on every page and from those number samples were drawn at random. For example, if 50 persons are to be selected out of 500, then we can open any page of Tippett's numbers and select the first fifty that are below 500 and take them up for study. The results drawn on the basis of this technique of random sampling are found quite reliable.
- (C) **Selection from sequential list —** In this method names are arranged serially according to a particular order alphabetically, geographically and so on. Then out of the list any number may be taken up. Beginning of selection may be made from anywhere. For example, if we want to select 10 persons we can start right from the 10th and select 10, 20, 30, 40 and so on.
- (D) **Grid System -** This method is generally used for selecting the sample of an area and for this a map of entire area is drawn. After that a screen with squares is placed upon the map and some of the squares are selected at random. The screen is placed upon the map and the area following within the selected squares are taken for samples.

Thus we see that Random sampling is the basic form of all scientific sampling. In this method the investigator can keep himself away from prejudices, bias and other elements of subjectivity. Being a simple technique it also saves investigator from mental exercise. It is more representative because each unit has equal chance of being selected.

- 2 **Stratified Sampling** -- In this method, the universe on the entire population is divided into a number of groups or strata. The method deals with strata and is thus called stratified sampling. Once the whole universe is divided into various groups, certain number of items are taken from each group at random. In selecting the units at random out of different strata, we select them with a definite purpose or with a deliberate intention. Although the selection is done with a purpose, it is done at random.

In this method the researcher has much control over the selection of samples. Though this method one can achieve the representative character easily. In stratified sampling method replacement of an inaccessible case by an accessible case study is possible. Thus the replacement of units is possible here.

- 3 **Purposive Sampling** -- In this method of sampling the researcher purposely selects certain units for study. In this type of method it is the selection which is uppermost and nothing is left to chance. Adolph has defined it in the following words, "Purposive selection denotes the method of selecting a number of groups of units in such a way that selected groups together yield as quickly as possible the same average of population as the totality with respect of those characteristics which are already a matter of statistical knowledge."

Viewing the definitions given above we can say that this method of sampling has got a representative character. Because in it every attempt is made to make the selection as representative as possible. The sample selected through this method possesses all the characteristics and qualities of the universe. When we select a sample through this method we consider that different variables should be in the same proportion in the sample as well as in the universe. For example, certain young and old persons are to be selected in the samples; the proportion of the young, old, rich, poor etc, should be the same as it is found in the universe. In purposive sampling there is specific purpose or objective. It keeps investigator free from prejudice and bias. The selector selects only those samples that are relevant and representative of the entire population or universe. And for this purpose the investigator has to have the full knowledge about the nature of the universe and other statistical measurement about it.

4. **Repetitive Sampling Method** -- In this method the sampling is done more than once to evaluate the characteristics and qualities of the universe or population in an efficient manner. In the case of the sampling method we generally have a description about it in advance in order to fulfil the certain stages of the sampling. But it is quite possible that in universe we may select one sample at one stage and then analyse it and the results achieved may be used in the selection of another sample from the same universe. Since the sampling is done more than once it is known a repetitive sampling.

5. **Quota Sampling** — In this method out of several strata we select more than one for study. In fact this is a special form of stratified sampling. Once the strata have been divided into various units we decide the number that is to be selected from each stratum. This decided number is known as quota. Here the investigator has got freedom to select the unit or sample according to his will. For example, if the investigator has to select 200 students for study he is free to decide which of the students from which school or college shall be selected. He may also decide the number of students from one school.

6. **Multi-stage Sampling** — Here the selection of the sample is made in different stages. This method is applied generally when the universe has a very large area. If 500 students are to be selected as sample from the districts of the state the selection shall be done in stages adopting the following procedure.

- (a) First of all the whole universe is divided into smaller areas. While doing so it is kept in mind that each area or region should be equal in size and similar in characteristics.
- (b) In the division of the whole universe into convenient homogeneous units, certain primary sample areas may be selected from each region through random sampling method. Then from each primary sample area certain samples may be selected and in the first stage one unit is selected from each group of units through random sampling method.

The procedure followed in this method has got the element of both random sampling and stratified sampling method. Its result can be representative in nature because this method combines the advantages of both the types of sampling method.

7. **Convenience Sampling method** — In this method a sample is selected according to the convenience of the investigator. In this method no scientific planning is done for the sample. The investigator has full freedom to select a particular unit. Particularly it is used when the universe is not clearly defined and the area of study is not known and the investigator is not very clear about the sampling unit. To know the 100% reaction of a problem in a town the researcher may select 100 names from a Telephone Directory and contact them.

8. **Self-selected Sampling Method** — In this method the selection of samples is done by the samples or representative units themselves. This thing generally happens in the studies when the sampling area is not fixed. For example, if a study is to be conducted about the public opinion regarding a particular radio programme, the concerned agency may announce that those who want to give their opinion should give their names to a particular investigator. After getting the names the investigator

may select the requisite number and may conduct his study. These types of studies are known as self-selected sample studies or sampling method.

Questions

1. What are the different types of sampling method ? Discuss.
2. What do you mean by Simple Random Sampling ? Discuss its merits and demerits.
3. What is Stratified Random Sampling Method ? Discuss its types.

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Lesson No 11

Size and Reliability of the Sampling

For a proper study of the problem it is necessary to have proper sampling done at correct time. It means that the sampling should be of proper size. If the sample is either too small or too big, the study would be difficult and the result untenable.

There are some facts and various factor of study which should be taken into account before fixing the size of the sample. What should be the size of sample, is a question which is to be answered. In this connection Pertain has laid down that, 'An optimum sample in survey in one which fulfills the requirements of efficiency representativeness, reliability and flexibility. The sample should be small enough to avoid, unnecessary expenses and large enough to avoid intolerable sampling.

The size of the sample is determined by various factors. These factors relate to the stud, the nature of the universe and the type of sample required. Normally the following factors decide the size of the sample:

- I. **Nature of the study:** The size of the sample is very much determined by the nature of the study. In case of intensive study. Large number of samples shall not be useful. It is always the smaller number that is convenient. Apart from saving time and resources it enables the investigator to carry on the Study in an intensive manner. In short the nature of the study determines many things about the sample.
- II. **Nature of the universe:** The size and the selection of the sample is also governed

by the nature of the universe. If the sample is homogenous, even than the small sized samples may yield dependable and the required results. In hetrogenous universe. Where the Units differ from one another the samples may not be usefil except the large-sized samples.

- III. **Nature of the classes:** In the study, the investigator determines and proposes the number of classes to be formed. If the number of classes proposed is large, the size sample shall be large. So every class should be of proper size and it should suit the requirements of the study. In case the number of classes proposed is small, even small-sized samples can fulfil the purpose.

- IV. **Practical considerations and accuracy:** There are some practical considerations and accuracy which play a vital role in determining the size of the samples. Every study is guided by certain practical considerations, such as time, resources, accessibility to data etc. These factors determine the size of the sample.

Generally it is believed that a large-sized sample is more representative and produces accurate results but not the small-sized. However, this would very much depend upon the technique of sampling. If the technique is scientific, even small-sized samples can produce dependable and accurate results. All this goes to prove that the standards of accuracy determine the size of the sample. It has to be large enough in order to have representativeness and yield accurate results.

- V. **Questionnaire and schedule and nature of cases to be contacted:** The size of the sample is also governed by the size of the questionnaire. In case the questionnaire is small and the questions to be asked pertain to certain limited factors, even small-sized samples can serve the purpose. If the schedule is large in size so that from administrative point of view the investigator feels that the questions are complicated, the schedule should be made smaller to avoid unnecessary trouble.

The nature of the cases to be contacted also determines the size of the sample. If the subjects or the cases to be contacted are not likely to give correct answers, it is always advisable to have a bigger sample so that the revision may not make the study lopsided and may not fail the statistical analysis. Similarly, if the cases are scattered and not available at one place, the investigator shall have to keep his samples small so that he can contact them easily.

- VI. **Types and nature of sampling :** The sampling method also determines the size of the samples. When we select it through random sampling methods, the samples have to be large so that these may be applied successfully. On the other hand, if the solution is done through stratified sampling method the reliability can be achieved even with the help of the small-sized samples.

Apart from the factors enumerated above the size of the sample is very much governed by the nature of the study and experience and the common sense of the

investigator. While using the instructions and guidelines, he has to employ his common sense also and depend upon his own experience and the experience of his predecessors.

Reliability of the Sampling

We have already seen that the sampling method is an attempt at finding out the characteristics of the universe on the basis of small groups of samples. To arrive at accurate and dependable results the sample should be reliable and free from bias. The size of the sample, its relevance and suitability to the problem, its representative character, its use for the study etc, are the factors that determine its reliability. Its reliability may be tested on the following grounds:

- (i) Size of the sample : It is already known that size of the sample very much determines its representativeness and utility for study. The investigator must test the adequacy of the size for scientific and convenient study of the problem.
- (ii) By testing the representativeness of the samples: It means that the sample selected should be representative and possess the characteristics of other units.
- (iii) By drawing a parallel sampling : Apart from the sample that has been drawn, another sample may be drawn from the same universe and put to test. Thus the reliability of the sample primarily selected may be tested. In this connection it has to be kept in mind that no two samples, howsoever accurately drawn, shall be exactly alike because of the complexity of the social phenomenon which is the subject matter of social research.
- (iv) By testing the homogeneity of the samples: The samples should be homogenous in order to be used in study. It means that they should possess all the characteristics that are present in the universe. Then only the samples shall be reliable and dependable.
- (v) Through comparison of the measurement of the sample with those of the universe: Sometimes different measurements about the universe are also known. For knowledge about the ratio of the education amongst different sex of the group which are under study and he may be studying the ratio or distribution of age.

In order to test the reliability of the samples, he may apply his knowledge about the education ratio and thereby test the reliability of the sample.

- (vi) Through unbiased selection: The sample should be selected through a method which is free from bias and prejudices. For this the investigator has to take certain precautions.

- (vii) By taking a sub-sample from a main sample: This is a method of sampling within sampling. In order to test the reliability of the sample, a sub-sample is drawn from the main sample and it is studied intensively and then findings of this are compared with the findings of the main sample. This helps the investigator in detecting any error that might have crept in due to faulty collection of data or facts and not in testing the representativeness of the samples.

Thus these are the different stages through which the reliability of the sampling can be tested.

Books recommended

- (i) Social Survey and Research by Goode & Hatt.
- (ii) Social Survey, Research and Statistics by K.Singh
- (iii) Social Survey and Research by Vajpayee
- (iv) Social Research by R.N.Mukherjee

Questions

- (i) How would you determine the size of a sample ? What are the methods for testing the reliability of a sample ?
- (ii) What do you understand by reliability of sampling? How are the size and reliability of sample determined ?

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Lesson 12

Sources of Data — Primary Sources

It is widely known that facts do not lie around in plain view awaiting an explorer. They are often lying deep in the mud of time, place and social relations. Unravelling them is a slow process and is always possible only through trials and errors. Therefore, a researcher has to tap sources of information. They must be true, observable, inferential or seen in historical documents.

A researcher must, therefore, first of all examine his source of information. This has to be done very carefully. If the source is not reliable, the entire effort of the researcher would be in vain.

Fundamentally, we have three sources of knowledge. A case study of an individual or a group is based on irrefutable facts which have to be discovered. They cannot be changed or manipulated at will.

1. The first source is direct communication or conversation — between the researcher and the individual or the group. Conversation involves questions and answers in a direct manner, but this is the simplest way to record the behavioural reactions of the respondent. It is like seeing and hearing the respondent's life pattern and way of thinking.

2. The second means to gather knowledge is to observe the individual's day to day way of life. Observed facts are quite strong and reliable testimonies which must be recorded and arranged scientifically.

3. The third source comprises historical records, documents, dispatches, official communication : about the individual or the group.

These three sources are evidently the secret means of knowledge.

Evidently, the sources may vary in revealing the amount of facts we like to know about our case. Therefore, we may, divide the sources in two sub-groups, viz Primary and Secondary.

(a) Primary source — The original sources are Primary sources. "Primary sources provide data gathered at first hand, that is to say, they are original sets of data produced by people who collect them." (Peter H.Mann, *Methods of Sociological Enquiry*, p.56). Data from primary sources may be gathered by participant observation, personal interview, conference, correspondence, questionnaire and other devices." (*Scientific Social Surveys and Research* by P.V.Young, p.136). This author further clarifies the statement thus, "These sources are generally divided into primary sources, which provide data gathered at first hand, the responsibility for their compilation and promulgation remaining under the same authority that originally gathered them, and secondary sources, which provide data that have been transcribed or compiled from original sources, and which the promulgating authority is different from that which controlled the collection of the data at first hand." (Ibid) For example, let us take the pre-poll (general elections) calculation of number of people, caste-wise, sex-wise, income-wise, religion or sect-wise. This is known as preparing the causes report which is based on direct meeting with the people. This is the Primary source. Ten years later, when we have to refer to the classification of the people in 1919, we then look into the 1991 census report and the information is said to be based on secondary source because the compiler is not the reporter or the researcher. We may call them Direct Sources and Indirect sources in the words of P.V.Young. A direct contact with the case under study, persons or institutions, single or in groups offer direct information and are therefore, primary, When we

report these pieces of information at a later date which have been compiled and recorded by others, they become indirect or secondary sources of information. Telephone talks, newspapers, television, radio information are Indirect Primary sources.

We now go into the important data of the Primary source methods, i.e. Observation, Interview Schedule and Questionnaire systems.

1. Observation method — This method implies that the person engaged in the case study must personally observe the events, situations, persons or institutions or things, customs and rites and behaviours. The researcher should look at them personally in a microscopic manner. Such a method is known as "social microscopic method." But it has to be kept in mind that the field of observation should be small and limited and the lights should be trained only on the objects we like to discover. Also, this must be done dispassionately, in a completely detached manner so that the researcher's personal prejudice does not blur his vision.

The scholars of social analysis divide the process of observation under three heads, viz. (a) Participant observation. (b) Quasi-Participant Observation, and (c) Non-Participant observation.

By Participant observation is meant the researchers's personal observation of a person or a group or an event. He must participate in the dance of events and receive the thrill or the gloom of the event. In this way, he becomes so close to his case study that all differences cease to exist between them and naturally his perception of the events is unchallengeable.

Quasi-Participant observation means that the researcher is not wholly involved in the game of events. He observes off and on important occasions which are quite enlightening and revealing about the characteristics or pattern of life of the case. We may observe a tribal dance and its joyful impulses without joining the tribe in the dance.

Non-Participant observation is rather simple. It implies relative information about a case through report, and other agents who have witnessed or watched the football or hockey match who played how and what are the fine points of the game which can be gathered from others who observed the field game. They are non-participant observers.

1. Interview:- This refers to direct conversation between the enquirer and his case. We talk with the persons or the group or the representatives of the institutions and elicit replies directly from him. The enquirer may take the help of an interpreter who is called an Interview Guide if there is any difficulty of language or certain customs. The interviewer may seek to ask some questions with loving persuasion in order to get satisfactory replies as in the case of women or people maintaining secrecy.

3. Schedule:- Schedule is a set of questions prepared beforehand. The enquirer or his field assistant takes the set of questions and draws answers from his respondents. This is a sufficiently reliable scheme and has the extra benefit of observing the case closely. The results obtained are trustworthy.

4. **Questionnaire:-** Questionnaire is the name of a list of planned questions that have to be asked in the case under study. It is a valid source of information which is very much in vogue. But this is an indirect source of information. The enquirer does not have a direct communication with his respondents. Instead he may leave the questionnaire with them and later collect the answers, or he may appoint anybody else to collect the replies. This system is applied when the area of needed information is vast, or when groups of people are involved in the inquiry. In such a case the list of questions may be despatched to the respondents by some men or by post. But this scheme of collection of information has a drawback also. Such questions may be sent to literate and educated persons only who can read them, follow them and reply to themselves. This method has one benefit alone. It saves time and money and the reply is a recorded statement of the individual or the group which is our study case.

5. **Radio and Television :-** These electronic news media are considered direct sources of information. Programmes broadcast on the national network comprising speeches by eminent men or women, information released, notices issued on TV & Radio are valuable pieces of direct information, government figures and statistics, say of income and expenditure, crop yields or shortfalls, national budget, are easily disseminated to the people on national programmes which are authentic and meant for people's information. In developed countries, important pieces of information are collected through discussions or question-answer sessions on TV & Radio.

6. **Telephones** — Information is also collected through telephones. This is also a direct method because it involves straight talking.

News dispatches are made abroad by telephones as in the last Iraq-multinational war of 1991. Our journalist correspondents and TV/Radio newsmen sent out news dispatches from the front line. Such news may, however, be not completely true or genuine. These have to be screened and sifted through news from cross agencies.

1. **Merits of Primary sources** — Primary sources are flexible and adjustable to situations. Questions can be reset and rearranged. If the desired information is not coming the process of investigation can be altered. The whole situation is well under the control of the inquirer.

2. This process is quite useful for a wide field of study. The method of enquiry can be adjusted according to need.

3. Data collected through the methods of primary source are accurate and reliable. Since the researcher is himself on the spot, he can control fact-finding inquiry and shape it according to his will and necessity. His presence counts much as a golden link between the inquirer and the case. Wrong information, if any, can be detected and rejected without delay. The whole observation is done by the inquirer and he makes a mental note of his observation or a written record of all he sees and hears.

4. Even confidential information can be gathered by personally observing the case, which is not possible otherwise. Participant observation or quasi-participant observation makes the inquirer a part of the whole scene and therefore his observations are beyond any doubt.

5. Primary source investigations save time, money and energy. They combine observation and conversation which make a direct chain between the inquirer and his case of study.

Demerits of Primary sources

The following are the demerits of Primary sources :

1. Bias or personal inclination — The inquirer sometimes carries pre-conceived notions about his case at the back of his mind which colour all his observations. In such a case the reports collected on sight may be free of personal bias. It always happens in the case of inquirers having strong opinions about a person or an institution. As such the result may not be truthful or reliable.

2. Manipulation — It is another defect of Primary sources. Haste in completing a work, necessity of submitting an apparently convincing report colour the vision of the inquirers and lead to manipulation.

3. Quite often the inquirer drops hints to respondents if the former is in a hurry. These hints or suggestions are accepted by the respondents and the whole report gets within the framework of suggestions. Consequently, these reports may be convincing but not genuine. They may be just counterfeit coins which look like genuine coins but are not so.

4. Primary sources are concerned with living persons or objects — If we want to collect facts about past events or old or dead institutions, our observation shall lead to nothing. The scheme of primary source is very well related to the present but not to the past historical matters that lie buried in the dust of time.

5. Only expert observers, well-trained, educated and patient or industrious in work can undertake primary source investigations. Half-literate persons or unwilling associates or assistants can not finalise such work as is required under primary source information collection.

6. Primary source investigation is time-consuming and a patient work. This sets limitation on the energies & capabilities of the investigator.

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Sources of Data — Secondary Sources

In the previous lesson we have discussed the primary sources of data collection. Whether it is a questionnaire mailed to the respondent and filled up by him or a schedule filled by field workers or even the facts recorded by the interviewer in a narrative, there is one thing common in all these cases and it is the fact that we have to rely on the information supplied by the respondent. There is yet another source of the collection of data which is called secondary source or documentary source. In secondary source of data collection the researcher makes use of any document or record, published or unpublished to extract necessary information.

A document is anything in writing that contains matter of sociological importance. In case of social research it has been used in the widest connotation and includes such written evidence as life history, diaries, letters, official and unofficial records, proceedings etc. A document may be published or unpublished.

Secondary Sources can be classified into two groups :

A. Personal documents

B. Public records.

(A) Personal documents

Personal documents include all such written material as is written by an individual or narrate his views upon personal relationship or social phenomena. It is not necessary that at the time of writing, the writer must have the research viewpoint before him. On the other hand, the reverse is generally the case. Most of these documents are written from the personal point of view, but the very fact that the writer has no idea of their being used for social research makes them more genuine and true portrayal of feelings and viewpoints.

Following are the main forms of personal documents :

1. Life history- Life history is really the narration of the social and personal events of the life of the writer with a free and frank description of his feelings regarding those events. Naturally it not only helps to get an insight into the facts that have remained concealed from public view but also makes it possible to understand the view-point of the writer.

Life histories are more interesting than ordinary historical accounts as they do not contain the dry narration of facts. The feelings and view-points of the writer pass like a thread in the garland throughout the narration and the personal touch provides life to the events. They are also socially important as they contain some innermost secrets hitherto unknown to the people.

Life histories as source of data for social research are not free from defects. Usually the writer paints an exaggerated picture of his personality and achievements. When the writer has even the slightest idea of publishing it in future he will fail to give a true picture of his feelings.

2. Diaries - Many people keep diaries in which they record the daily events of their lives and their feelings and reactions relating to those events. Some of the diaries are also published later on. Diaries are the most important source of knowing the life history of a person, if they have been written continuously over a long period. These are more reliable than life histories.

Diaries, as sources of social data, suffer from the following defects -

- (a) They exaggerate the conflicts and the dramatic phase of life and leave gaps of several months of calm and happy life.
- (b) The events are generally not narrated in their total expanse over time.
- (c) The description is not elaborate. The diary is often written for self-information and many events may contain just the hint which can be followed only by the writer.
- (d) Sometimes the diary is intended to be published and this creates a bias in the narration.
- (e) Diaries are stopped after being written for sometime. It is, therefore, not possible to get a continuous account of the events.

3. Letters- Letters also provide useful and reliable materials on many social problems. They throw light upon more intimate aspects of an event, and clarify the stand taken by a person regarding it. They are helpful in giving an idea of the attitudes of a person and the trend of his mind. The validity of letters are beyond all doubt and they should be accepted as prima-facie proofs of the attitude of the writer.

The letters have the following limitations as source of social data :

1. Their availability is always very difficult.
2. They do not contain the description of the event but only the views of the writer. It is thus difficult to understand them without the proper context.
3. They lack continuity and sequence.
4. The reliability of letters depends upon the mutual relationship between the writer and the addressee. If they lack nearness and intimacy, the letters will not reveal the true feelings of the writer. Diaries in this respect may be thought to be more reliable.

4. Memoirs - Some people write memoirs of their travels, important events of their lives and other significant phenomena that they come across. These memoirs provide useful materials in the study of many social phenomena. Memoirs are different from diaries in the sense that they describe only some events and are more elaborate than the diary. Memoirs of travellers have provided us with useful information regarding the language, social customs, religious faith, culture and many other social aspects of the people and lands visited.

Memoirs have a limited use in social research. The information contains a lot of subjectivity and is loaded with the personal viewpoint of the writer. The representativeness of the phenomena described is also not free from doubt. There has been a general tendency to narrate the phenomena that is sensational and catching rather than the one that is socially significant.

Importance of personal documents - Personal documents play an important part in social research. They express the innermost feelings of the heart of the writer and at times, these documents throw light on such aspects of life as would have been difficult to know through observation or interview. Most of these documents are not meant for publication and this prevents the writer from indulging in false and exaggerated statements. These documents have been used freely by both sociologists and psychologists.

Limitations of personal documents - The personal documents have the following limitations :

1. Difficulty in availability - The greatest problem in case of personal documents is their non-availability. Very few people write diaries and memoirs. Even when they are kept, it is very doubtful if they will be handed over intact to the researcher. Even after the death of the writer, they are kept as sacred possessions by the members of his family and not parted with for the purpose of research.

2. Reliability of data - Many writers have doubted the truth and reliability of data contained in the personal documents. Unreliability in the data may be caused by various factors. The intention of the writer may be propagandist, and he may write deliberately what may please others or elevate his personality in their eyes. This is specially true of letters when the relationship between the writer and addressee is not very intimate and cordial. The literary dishonesty of the writer at times prevents him from telling facts plainly. There is then a tendency to idealize things. The personal bias of the writer at times is the greatest cause of distortion.

3. Validity of inferences - How far the data supplied by personal documents can be regarded as adequate for valid generalizations is a point that deserves a close consideration. It is said that personal documents do not provide a representative sample; on the other hand, they represent cases that are abnormal. They are not only unrepresentative but they also lack continuity, and it is never safe to generalize from a few stray cases.

(B) Public Documents

(B) Public documents - Besides the personal documents which pertain to the life of the individual, there are public records of dealings with matters of public interest. These records can be divided into two classes.

(1) Unpublished records that are contained in the official files or manuscript of survey reports and which are not available to everyone, and

(2) Published records that are available to public.

1. Unpublished records- These records are in the form of information contained in the files, letters, documents, memoranda or proceedings of the meetings and conferences. Madge has called them the "most satisfactory type of documents" the most reliable among them in any order, command or instruction that is issued. The second in order of reliability is the verbatim record of proceedings, gramophone or tape record being all the more reliable evidence. This is true of only unedited records. The edited records may be biased and they may contain not what the speaker said but what he meant to say. We always hear people say that they have been misquoted by the representatives of newspapers. Other official records may be thought to be equally reliable unless they are meant for inspection by others in which case there is some possibility of window dressing.

2. Published Data - These include published reports of surveys, and other data released by government and non-government agencies. The very fact that they are meant for publication may create some window dressing of the content and conclusion. The data by the government is thought to be more reliable than the one released by a private agency. In fact, the accuracy and reliability of data would depend to a great extent upon the resourcefulness and unbiased character of the collecting authority, and in both these respects government data is bound to be more reliable.

A good deal of information regarding social problems is now collected and released for publication by the government in every country. We have now continuous data on many aspects of social life like demographic conditions, health, pattern of expenditure, crime situation, welfare work and the like. We need not undertake the laborious and time-consuming work of undertaking large surveys.

Limitations of published data -

Following are the main limitations of published data :

1. Reliability of data - We have mentioned earlier a number of factors that can hamper the accuracy of data and make them unreliable. It may be that the data might have been deliberately twisted because the researcher had a stake in a particular result, or because he had not been equipped with a proper knowledge of methodological tools and committed errors of methodology.

Unless we have means to ascertain the accuracy of his data, we shall be leaping in the dark if we just use them blindly. Even the most precise analysis would be useless if the basic data was not correct.

2. Suitability of data - Even if the data is accurate it may not be suitable for the purpose of the present study. There may be a difference in the definition of units, degree of accuracy and the type of sample. The data may be old and out of date. It may belong to the universe with which we are not totally concerned. The data may be partial, discontinuous or not homogenous and thus become unsuitable for the purpose of research.

3. Lack of direct contact - Direct contact with the people whom we are going to study is necessary in all kinds of social research. Human beings are not after all lifeless statistical data. They are something more than that. A research worker experimenting in his study room with the help of data in the statistical abstract would never be able to appreciate the real life situations. It is, therefore, necessary that social research must come in contact with the real life situations even when the data are otherwise accurate and comprehensive.

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Lesson 14

Meaning & Construction of Schedule and Questionnaire

The two most important tools generally used in social surveys are schedule and questionnaire. Really speaking, the two forms are similar in nature and there is a very slight difference between the two so far as construction is concerned.

The schedule is the form containing some questions or blank tables which are to be filled in by the workers after getting information from the informants. The schedule may thus contain two types of questions; firstly, those that are in the form of direct questions and secondly those that are in the form of a table.

Construction of a schedule :

While framing the schedule, the first step is to split up the problem under study into various aspects. The determination of these aspects will depend upon a clear understanding of the problem under study.

The second step is to decide "what information is necessary for a valid generalization each aspect. "For this purpose, each aspect has again to be broken up into a number of sub-parts. These sub-parts should be quite exhaustive to give a full and complete picture of the aspects under study.

The third step is the framing of actual questions. This part deals with the form and working of the questions. Care should be taken to see that the questions convey the exact sense, are easily followed by the respondents and that they will be willing to supply information without any hesitation, bias or distortion of facts.

The fourth step is to decide the general layout of the schedule and arrange the questions. When the questions have been given a definite form, the other problem is to arrange them in a proper sequence. The layout or physical design of the schedule is very important. If it is well planned or attractive to look at, replies may be coming forth without hesitation.

The last step is testing the validity of the schedule. After the schedule has been prepared, it has to be tested on a sample population to find out any discrepancies. Thus the schedule should first of all be prepared on a trial basis and any discrepancies in the information being sought the wording of the questions, their sequence etc. should be amended in the light of the experience thus gained.

(A) General form and layout of the schedule - The schedule must be attractive to look at. Attractiveness depends upon the general form and layout of the schedule. The following factors must be taken into account for a really perfect layout.

1. The paper to be used in the schedule should not be too rough or thin. A nice paper is not only decent to look at but also makes writing upon it smoother and easier.

2. **Size of Schedule** - Generally speaking, a small size is preferable because it is handy. The size of the schedule depends upon the number of questions in it or the size of the tables that are to be filled.

3. **Margin** - A margin of 3/4" on one side and nearly 1/5" or 1/6" on the other side should be left out.

4. **Spacing** - Line spacing is also necessary. The lines should not be very closely printed so as to give a jumbled up look.

5. **Printing** - The schedule may be printed or may be cyclostyled. If it is printed, different types should be used for headings, sub-headings and questions.

6. **Use of pictures** - Sometimes pictures are also used along with the questions to make them more attractive.

(B) Contents of the Schedule - The whole schedule may be divided into three parts according to the nature of contents -

- (1) Introductory part
- (2) Main schedule
- (3) Instructions to the interviewer or observer

1. Introductory part - This part contains the introductory information about the schedule, investigation and the respondents :

- (a) Name and heading of the survey, giving the name of the conducting authority.
- (b) Case number.
- (c) General information about the interview e.g. name, address, age, sex etc.
- (d) Place of interview.
- (e) Date and time of interview.

2. Main schedule - It is the most vital part and has to be prepared with great care. The schedule consists of questions as well as blank tables where information to be supplied by the interviewee has to be filled.

3. Instructions to interviews - The schedule generally contains exhaustive instructions for the interviewers. Written instructions are very useful specially when the field worker is staying apart and the schedules have to be sent to him by post. The instructions to the field workers should be very clear-cut and exhaustive.

(C) Types of Questions - The different kinds of questions that are asked in a schedule or questionnaire can be classified into the following types :

1. Open-ended questions - These questions generally relate to two opinions sought about any particular problem or suggestions invited about it. Naturally, answers to these questions are long and varied.

2. Structured questions - When the answer to a question has been preconceived and classified into possible groups it is known as a structured question. Generally, the answer to these questions may be from a number of some specific words. Thus the possible replies to the structured questions are already known and they are grouped into various classes. The tabulation of a structured question is thus very easy.

3. Dichotomous questions - When reply to a question is given in the form of one or two

alternatives, the question is called dichotomous. Generally, one of the answers is positive and the other negative and the two, when combined, form the whole range of answers.

4. Multiple choice questions -- In these questions, the reply is not confined to two alternatives only, but may be one among a number of possible replies. They are also known as cafeteria questions.

5. Leading questions -- When the reply to a question is suggested in a particular direction, it is known as a leading question. It is not necessary that the reply to such a question may always be 'yes' but the undecided cases are generally drawn towards it thus creating a bias in the reply. Leading questions should be avoided as far as possible.

6. Ambiguous questions -- When the language of the question is such that it may be interpreted in more than one way, it is called an ambiguous question. Ambiguity in a schedule is the greatest defect.

7. Ranking item questions -- These questions are given to record the preferences of the respondents. Like Multiple choice questions they also contain a number of alternatives. The only difference between the two is that whereas in the case of multiple choice questions only one of the given answers is to be selected, in the case of Ranking item questions the order of preference is to be given for all.

(D) Nature of questions to be given -- No hard and fast rules can be given for the nature of the questions to be asked. It all depends upon the individual nature of study, the type of respondents, the quality of field workers and other means of verifying the information. The questions should be few, short, clearly worded, simple and easy to reply.

(E) Questions to be avoided -- Following types of questions should be avoided as far as possible :

1. Too long questions - The questions should not be so long that it may be difficult for the respondent to follow them easily. If a long question has to be given it should be divided into parts.

2. Complex questions & personal questions - Questions of complex nature should not also be given. Questions regarding the personal life of a respondent should be avoided unless they form the chief subject matter of inquiry.

3. Questions causing suspicion - Questions regarding income, character etc. generally cause suspicion in the minds of the people. Such questions should be avoided.

4. Embarrassing questions - Such questions as may put the respondent in an embarrassing

position should also be avoided. Such questions as "Are you satisfied with your present job ? If not, why ?" are of the same nature.

5. Leading questions — Suggestive types of questions should also be avoided as they result in biased replies.

(F) Language — A great precaution is necessary in wording the questions. Proper wording and proper language are absolutely essential. The words should be simple, clear and unambiguous.

(G) Sequence of questions — The proper sequence of questions is also necessary for a correct reply.

1. Simple and uncontroversial questions should be put first — The general rule is to proceed from the simple to the complex questions.

2. Interest catching questions may also be given in the beginning — They may arouse the interest of the respondent and the interview may have a smooth sailing.

3. Questions seeking the advice of the informants may be given earlier.

4. Subjectmatter sequence should also be maintained — All questions regarding one topic should be grouped one at place.

5. The change from one topic to another should be very smooth — There should be no sudden jumping from one topic to another.

(G) Pilot studies and protests — Pilot studies and protests are necessary measures for framing a perfect schedule. Pilot study is the preliminary study of the universe in question to get an early idea about it. It gives an idea of the different variables involved, the nature of the problem, the possible difficulties in interviewing, the kind of response likely to be available etc. It is on the basis of this information that the actual schedule on questionnaire is formed.

(H) Organization of interview through schedules — After the schedule has been prepared, it may be utilized for observation or for interview. The following steps are generally taken in organizing interview through schedules.

1. Selection of interviewees — After the schedule has been prepared, the first thing to be done is to select the person from whom the information is to be collected. This depends upon whether the census or sampling method has to be used.

2. Selection and training of field workers — If the number of persons to be contacted is very small, the investigator may himself conduct the work of interviewing but generally the number is large and the help of the field workers has to be taken. A field worker should have qualities like honesty, tactfulness, patience, smartness, interest in research etc.

3. Method of carrying on interview — This is the most important part of the investigation. The questions to be dealt in this part are — how to approach a respondent to get response, how to get correct replies and lastly, how to end the interview.

4. Getting a correct reply — If the interviewer finds that the respondent has not followed the questions, he may read it out again with proper emphasis or even explain it to him. If he feels that the respondent is trying to hide some fact or exaggerate it, he must put supplementary questions and try to verify.

5. Checking the schedules returned by the field workers — When the field workers have returned the Schedules, it is better to apply a test, checking to find that they have been properly filled.

6. Editing the schedules — After the schedules have been received and rechecked, they have to be edited. Editing involves the following process -

- (A) Checking the schedules
- (B) Checking the entries
- (C) Re-writing dirty and badly written schedules
- (D) Coding.

After the schedules have been edited, they are ready for tabulation and analysis. After analysis the reports and results are ready for publication.

Making and construction of Questionnaire —

We have already discussed the method of interview. There is yet another method similar to it in many respects, known as the questionnaire. Firstly, the questionnaire is drafted and then this is sent by mail to the respondents. They fill up the questionnaire and return it to the investigator. Tabulation and analysis are made from the information thus secured on the same basis as in the case of schedule method.

Framing a questionnaire — The form of questionnaire is similar to the interview schedule as both of them serve the same purpose, but the questionnaire has certain characteristics of its own because of the manner in which information is sought. Following are the special points to be considered in respect of the questionnaire.

1. Size of questionnaire — The size of the questionnaire has to be smaller than the schedule. If the questionnaire is too lengthy the response is likely to be poor. Post-card questionnaires are considered to be the best in this regard.

2. Appearance — A much greater attention is required regarding the appearance of the questionnaire. A decent paper and printing, attractive layout, grand letterhead create a good impression upon the informant.

3. Clarity — The third important point that requires special attention in the questionnaire is the problem of clarity. In case of schedule, the field worker is personally present to give the right interpretation to the questions and terms given in it. In the case of the questionnaire, this facility is absent. A great care has, therefore, to be taken in drafting the questionnaire, the construction of questions and the language to be used.

4. Sequence of questions — The sequence of questions is also of a greater importance in the case of the questionnaire than in the case of the schedule. The questions should be in the proper sequence making the whole study very clear, lucid and interesting to the respondent.

5. Catching interest — The greatest quality of a questionnaire is its interest catching capacity. If it catches the interest of the respondent, it is sure to be carefully filled up and properly despatched.

Testing of the questionnaire — While every care should be taken in drafting the questionnaire regarding the type of questions, their wordings, layout etc, some errors may still remain. In order to avoid such errors, the questionnaire has to be tested before it is finally despatched to the respondents. Following are the main points to be considered in this regard :

1. The questionnaire to be tested should, in every respect, be similar to the final questionnaire that would be sent to the respondent.

2. The sample of the people among whom the questionnaire is to be tested should be perfectly representative of the actual sample that has to be selected.

3. The questionnaire would be considered to be defective if a large number of them are not returned, or they are poorly filled in. If there is a large number of 'don't know' replies, or the replies are against the known information or different replies have been given by similar class of people, then also the questionnaire will be regarded as defective.

4. If significant changes have to be made in the questionnaire as a result of such a test, the questionnaire has to be tested again and again.

Other things to be considered in the construction of the questionnaire are the same as those in the schedule.

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Difference between Questionnaire and Schedule

Among the different tools employed by social researchers to collect data, those of the schedule and the questionnaire are definitely very valuable. In recent times, the use of the questionnaire is gaining importance both for its simplicity and its economy. Modern transport and other media of communication have made it easy to collect facts about even far-flung cases through the system of the questionnaire. When social researchers have a wide universe or when their respondents are educated persons, it is fruitful to employ the system of eliciting answers or information through well-prepared questions. The system of interviews and observations have their merit of thoroughness, but not the advantage of economy of time, money and energy. But if we prepare questions that are deep and inquiring in their content, then we can use the modern communication system and collect data or facts in no time that shall be enlightening, economic and efficient. Distance and diversity of cases mar the usefulness of the interview and the observation methods, but not of the questionnaire system. The present age of technology and communications reduces the hazards of distance and diversity and ensures the quickness of the completeness of the information desired.

The questionnaire means a set of questions connected with a problem. The social researcher sends the set of questions to respondents of cases by postal mail. The respondents return these filled in questionnaires to the sender again by mail or courier service. This is known as the Mailed Question.

It can safely be distributed and redistributed among people. Market surveys, poll opinions, social and economic collection of data are achieved through the use of the questionnaire tool in modern times.

Meaning and Definition of the Questionnaire

The questionnaire has been defined and described by different thinkers in different ways, but the salient ingredients remain the same.

J.D.Pope in his famous book 'Research Methods and Procedure in Agriculture & Economics' writes, "A questionnaire may be defined as set of questions to be answered by the informant without the personal aid of an investigator or enumerator."

According to the eminent social theorist Bogardus, "A questionnaire is a list of questions sent to a number of persons for them to answer."

Goode & Hatt in their famous book 'Methods in Social Research' defines the questionnaire as under, "In general, the word questionnaire refers to a device for securing answers to questions by using a form which the respondents fill in by themselves."

Wilson Gee says about the questionnaire tool : "It constitutes a convenient method of

obtaining a limited amount of information from a large number of persons or from a small selected group which is widely scattered.”(Social Science Research Methods).

The eminent sociologist Hsin Pao Yang is very much of the same view as Wilson Gee.

Summing up, we can say that a set of relevant questions requesting for adequate replies sent by mail or by courier is the main constituent of the questionnaire tool whose benefit is drawn by the researcher towards finding facts about a person, an institution or anything under study.

Characteristics of a questionnaire

A questionnaire has the following characteristics :

1. It is a set of questions about the case under inquiry.
2. The list of questions is sent to the respondents by mail or if it concerns local affairs, it may be sent by courier.
3. The respondent himself offers the replies or fills the answer columns. He does not seek assistance from others.
4. The list of questions is sent to educated men or women alone. The surveyor is not in front of him to help him. As such the respondent is himself or herself the informant.
5. The questionnaire is a primary source of information which may be called an indirect source.
6. This instrument is validly used when the universe is vast and the informants are widely scattered. Simple language is more appreciated than highly technical or complicated language in setting questions or eliciting answers.
7. The respondent after filling in the questionnaire returns the document to the sender by post, or if it is a local case, he may take the help of the courier or messenger.
8. The list of questions may be sent to numerous respondents at a time who may return the documents simultaneously. Such despatch-and-return helps quick collection and editing of facts.
9. Many private and confidential information can be passed through the questionnaire replies because there is no question of hesitation in the absence of the inquirer.

Schedule — The collection of reliable and rational data about a case through survey and observation is the fundamental issue before a social researcher. The schedule is an important and effective tool for the collection of facts about a case. Although there is much similarity between the questionnaire and the schedule, the latter has its own speciality. Schedules involve observation and direct interview, yet these maintain sufficient control over them. Schedules have a set of written questions which the interviewer asks and notes the replies of the respondents. It is not sent to respondents by mail. Quite often, the shortcomings of the questionnaire are not met and removed with the help of the schedule. The schedule method combines in itself the advantages of

observation, interview and the questionnaire and is, in fact, a synthesis of all the three tools of collecting information. We collect information related to persons, individual beliefs, social norms, customs, conventions, thoughts, individual and collective behaviour, habits, and even the census of people through the method of schedule. Such pieces of information have uniformity and their qualitative and quantitative aspects can be easily examined for veracity. This is the reason why the schedule method is frequently in use today. But one thing is essential : each interviewer must ask the same set of questions and must record the respondents views honestly and quite literally.

Meaning and definition of the schedule — The schedule is a form containing questions and response both of which have to be filled in by the interviewer who collects the answers from the respondents and observes each fact personally. Different scholars have defined the schedule in their own way. The eminent sociologist, Bogardus defines the method as “a formal method of securing facts that are in the objective form and are easily discernible..... the schedule is filled out by the investigator himself.”

Goode & Hatt are close to Bogardus when they say “Schedule is the name usually applied to a set of questions which are asked and filled in by an interviewer in a face-to-face situation with another person.” The renowned scholar M.H. Gopal offers his views about the schedule thus : “In a sense, it is a detailed, classified, planned and seriated list of items on which information is required.” And finally we hear Mc Cormic: “ The schedule is nothing more than a list of the questions which it seems necessary to answer in order to test the hypothesis or hypotheses.”

The above-mentioned definitions of the schedule are common on the points that the schedule is a set of questions about a fixed subject of study which is organized and classified and which the interviewer himself fills in as he gets the respondent's opinions.

Characteristics of a Schedule

Let us make the above propositions clearer by enumerating the characteristics of a schedule.

1. Schedules are intimately related to the subject of study, and questions are set under main heads and sub-heads which are scientifically and logically classified and organized.
2. Schedules are printed like forms wherein questions are placed in a serial order.
3. It is filled by the interviewer directly when face-to-face with the respondents.
4. The interviewer himself fills the forms, not the respondent.
5. It is a synthesis of observation, interview and questionnaire.
6. Schedules are responded to by both the educated and the uneducated people.

7. Questions in Schedules are prepared beforehand and the answers are filled accordingly. There can be no change in the set of questions.

8. Events come under observation on the spot while filling in schedules.

9. The interviewer is himself well within the control and limits of the schedule.

10. Schedules are brought into use when the universe of study is small. It can only rarely be used over a vast area.

Comparison between the Schedule & the Questionnaire

Both schedule and questionnaire aim at the same thing — collection of data. Both are equally important instruments in the hand of a social researcher. Due to their similarities in approach and attainment of objectives, the schedule and the questionnaire are often confused with each other. They are very often considered similar, if not the same. M.H.Gopal finds no difference between these two tools. Even schedules have questions related to the subject under study just like the questionnaire. The only difference is that a person himself puts questions to respondents and elicits answers on the spot whereas the list of questions mailed to different places for replies becomes known as questionnaire. The following are the similarities between schedules and questionnaires —

1. Both contain sets of questions relating to the subject study.

2. Both bring out primary information and are primary sources for the same.

3. In matters of construction, their language and content are quite similar.

4. Their format, colour, design, paper-size are similar.

5. Questions included in the schedules and the questionnaires are prepared with equal care and scrutiny.

6. The objectives of both the tools are similar in their qualitative and quantitative approach.

Yet, in spite of so many resemblances there are basic differences between schedules and questionnaires.

1. Schedules are used personally by researchers who interview the cases and collect data through the question-answer system.

2. Schedule is a system of direct conversation and observation.
 3. The tool of schedules is issued when universe is small and limited whereas questionnaires are used when the universe is spread out and the cases are numerous.
 4. The interviewer personally writes the answers in the schedules as spoken by the respondents.
 5. Schedules offer deeper and more intensive answers whereas an aspect may escape our attention while collecting the data.
 6. Schedules are prepared by researchers whereas questionnaires are filled in by respondents in the absence of the researcher.
 7. Schedules are used both for literate and illiterate respondents. Questionnaires can be used only by the educated people as respondents.
 8. The tool of schedules involves a greater number of people, that is, both educated and uneducated and the answers are more representative of the respondents. The tool of the questionnaire can be used only by the educated set of people, and that too indirectly by mail where the researcher is absent.
- Technical terms and units pose a problem in the context of the questionnaire. Footnotes and explanatory notes are added to reduce these difficulties in a questionnaire. But because the interviewer is personally conducting his research inquiries, such problems do not arise in the case of the schedule. This is an advantage of the tool of schedules over that of the questionnaires.
10. Adversely, however, schedules involve expense of more time, labour and money than the method of the questionnaires since the researcher has personally to visit spots, cases and gather information from people to come out with the desired news and views.
 11. When the tool of the schedule is used to gather information, there is every possibility of intrusion of the researcher's views into the respondent's opinions since both may enter a dialogue and try to impress upon each other. Such a possibility does not arise in the case of the questionnaire method.
 12. In the Schedule method, the rate of replies may be hundred per cent for obvious reasons. The researcher may apply all sorts of inducements and politeness to get cent-percent answers. But this is not possible in the case of the questionnaire tool, because there is no interviewer on the spot. As such the receipt of reply may not go beyond 50 per cent.

13. The tool of schedule has a scope of direct observation of the place, the man or the institution. Such a benefit of direct observation is not possible when the questionnaire method is brought into use.

To conclude, we may say that we should not speak of the advantages or disadvantages of one method as against the other. Both are equally important and useful and they do not superimpose themselves on each other. Their usefulness is judged according to the "universe" of study, the nature and behaviour of the respondents, and one's own preference on view of expense of time, labour and money. In India, specially, where the rate of literacy is quite low and where there is a diversity of culture, morals and manners, the use of the schedule method is definitely preferable. Scholars describe both the methods as quite handy and advantageous. Ramsay has considered schedules to be more useful in sex studies. Finger has spoken of equal advantages, while using the schedule and the questionnaire methods for investigating the attitude of college students towards sex. Ellis, however, has found the questionnaire method more useful while studying the sex attitudes of college students.

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Lesson 16

Interview — Meaning & its Process

Various devices are used by the social scientist in the collection of primary data — Schedule, questionnaire, participant observation, interview, case study and so on. Although these are not mutually exchangeable and are independent of one another, interview is the most important and all-pervasive tool. It is the implement par excellence of the field worker, particularly in an underdeveloped country, both because of the type of problems tackled and the environment from which data are to be collected.

P.V. Young defines interview as "The interview may be regarded as a systematic method by which a person enters more or less imaginatively into the inner life of a comparative stranger."

In intimate face to face contacts of primary social groups there is little that is highly personal. In such groups there is little need for formal interviewing. In modern secondary society, few people share a common lot. The individual finds it possible to hide behind a protective wall of anonymity. It is the task of the interviewer to penetrate behind this protective mesh and arrive at an understanding of underlying attitudes and values which shape life-destinies.

In the words of Goode & Hatt, "..... Interviewing is fundamentally a process of social

interaction."

Its primary purpose may be research, but this is for the investigator. For the respondent, its meaning may be different. In social interaction, some of the individuals seem to understand the likes and dislikes of the rest better than others do. They can predict more accurately what others will say, and respond more precisely to their intended meaning. They know when one feels offended and what lies behind the casual comments of another. This means some have better insight into or intuition in respect of what may be called 'subliminal cues' (those cues which are not recognized consciously, which are below the threshold of perception are called subliminal cues). The process of social interaction in the interview is complicated by the fact that the interview also has insight.

Major steps of Interview process — If interview is to be conducted on proper lines so that valid results may be obtained, certain preparations must be made before the actual interview begins. These preparations are of the following nature:

1. Understanding the problems — As soon as the interview begins, the interviewer is most likely to be faced with a volley of questions from the respondents regarding the interview. In order to be able to reply to the various questions likely to be asked, the researcher must have a thorough knowledge of the nature of the problem under study, its various aspects, importance of the study, and its effects upon various classes and situations. A thorough study of the problem and all the relevant data on the matter must, therefore, be made by the researcher before the actual interview is held.

2. Interview guide — The second step in the preparation of interview is the construction of interview guide. Interview guide is a brief written document giving an outline of the different aspects to be studied. It gives a general plan for the interview of various topics that are to be discussed, some important questions that must be asked, the general technique to be adopted as well as any precaution to be specially taken.

3. Selection of cases — After the general outline of the study has been planned and the interview guide prepared, the next problem is to select the cases to be interviewed. This may be done through any one of the various sampling methods.

4. Use of panel — Supplying valid information to the interviewers is as technical as conducting the interview itself. Thus, not only the interviewer, but also the interviewee should be trained in the work of interview. To avoid this difficulty a permanent panel of interviewee is formed.

5. Information about interviewees — It is convenient for the sake of interview to get some preliminary information about the interviewees, his general habits, sociability etc. It is also better to know his timings so that he may be contacted at a suitable time.

6. Prior Appointment — It is always useful that a prior appointment is taken from the interviewee regarding the time and place of interview. The interviewee feels a sense of satisfaction that the researcher has valued his time and so he cooperates with the interviewer very well.

7. Establishing Contact — The first step in the interview naturally is to establish contact with the interviewee. As soon as the respondent appears at the door, the interviewer has to greet him and introduce himself. At this time he should produce the letter of authority, which must be on the printed form of the research institution and contain general outline, importance and purpose of study.

When the respondent has read the letter of introduction, he may sometimes be asked to come again saying that he is very busy. At such time the interviewer must try to know whether the respondent is actually busy or simply avoiding him. He may explain more about the problem and try to remove any doubts. Anyhow he must fix up a time for the next visit and should be absolutely punctual in visiting the place.

8. Starting an interview — Once preliminaries have been completed and the respondent has agreed to grant an interview, the actual interview starts. The beginning is of great importance as it has its effect upon the entire interview. A beginning may be made from the general discussion of the problem. In order to warm up the interviewer should let the interviewee do most of the talking while he should himself listen to it attentively guiding and directing the respondent about the subject matter whenever necessary. The beginning should always be of a general nature. Personal inquires or controversial problems must be carefully avoided.

9. Securing Rapport — According to Goode & Hatt, "A state of rapport exists between the interviewer and the respondent when the latter has accepted the research goal of the interview and actively seeks to help him in obtaining necessary information." In the beginning of the interview every interviewee proceeds very cautiously giving only formal information, but if the researcher is tactful and expert in interview technique, he will soon create the friendly atmosphere and gain the confidence of the respondent. Researcher's own common sense, skill and personality can produce this state and secure a well-balanced rapport.

10. Recall — At times during the course of interview the respondent is so full of emotional feelings that he drifts away from the main interview. Then when that narration has come to an end he generally lapses into silence. At such a time the researcher should pause for some time, waiting eagerly for him to continue again. When he has not started for some time he must refresh his memory by pointing out what he had been saying last.

11. Probe questions — Sometimes when the interviewee unknowingly or deliberately side-tracks some important aspects of the problem, the researcher has to be very cautious to catch these slips. When the respondent has paused after finishing that part, the interviewer must draw his attention again to that fact telling him, "you had been just telling me about..... would you tell me more about it ? It is really so very interesting."

12. Encouragement — The respondent has to be encouraged from time to time during the course of interview to narrate his feelings. The respondent gets encouragement when the researcher seeks his advice and notes it down, saying that it is really a very valuable one. The attention of the interviewer, his appreciation and active participation in the discussion encourage the respondent to say more. If he understands that the researcher has followed his point in the right sense, he is generally encouraged to say more about it. That is why the interviewer should not be a mere passive listener but an active participant in the discussion.

13. Guiding the interview — Guiding an interview is a delicate task. If the respondent is stopped from telling what he considers to be the most important item and which he is most eager to relate, he is very likely to feel offended and thus lose his rapport. The interviewer has, therefore, to drift the course very skillfully. He must be patient enough to hear even the most irrelevant talk if he wants to have relevant portions from him. He must look to the liking and taste of the respondent rather than to his own. The only care that he has to take is that no important point should be left out of discussion.

14. Recording — When the interview is a narrative type, it is a problem to record it. In fact recording should be reduced to the minimum. Recording during the course of interview should be avoided as far as possible. But under reliance should also not be placed on one's own memory. The interviewers should therefore get down the point, particularly any figures if they are given in the course of statement. The knowledge of shorthand is useful in this respect. If he does not know shorthand he should develop a scheme of abbreviations and record the important points in abbreviated form.

15. Closing the interview — No interview should end abruptly. After the respondent has narrated everything he wanted to the tempo of his narration generally slows down. The interviewer should closely watch such a situation and bring a natural end to the discussion.

It is generally useful to review the important points discussed before closing the interview. The interviewer may repeat the more important items and thus bring a natural close to the interview.

16. Report — When the interviewer has come home after interview he should immediately settle to write down what he has discussed. The writing of a report should never be postponed at any cost because various narratives, models and expressions are vividly clear in the mind of the interviewer at this time and if sufficient time is allowed to pass, he may forget a considerable part of it. The report should also be as vivid and graphic as possible, so that it may be able to create the same intensity of feeling at some later date. The interviewer's power of writing and his command over the language are of great help in this respect.

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Types of Interview

Interviews may be classified in various ways —

- A. According to their function — (1) Diagnostic (2) Treatment (3) Research Interview.
- B. According to number of persons participating — (1) Group interview & (2) Individual interview.
- C. According to length of contact — (1) Short contact or (2) Prolonged contact interviews or so on.

Here we are presenting certain types of interviews based chiefly on the respective roles assumed by the interviewer and interviewee since our attention is primarily focused on the interview as a socio-psychological process of interview.

1. The Non-directive uncontrolled or unguided interview
2. The structured interview
3. The focused interview or life history type
4. Informal interview

1. The Non-directive interview — This type of interview is also called uncontrolled or unguided and more recently as unstructured. No direct or predetermined questions are used in this type of interview. These types are commonly used for a more intrusive study of perception, attitudes, motivation etc. than a standardized interview.

This type of interview is inherently more flexible and of course it requires more skill on the part of the interviewer than do the standardized types.

The flexibility of the unstructured or partially structured interview, if properly used, helps to bring out the effective and valueladen aspects of the subject's responses and to determine the personal significance of his attitudes. This type of interview achieves its purpose to the extent that the subject's responses are spontaneous rather than forced, highly specific and concrete rather than diffuse and general, self-revealing and personal rather than superficial. In this type, the initiative is even more completely in the hands of the respondent. This type of interview has been widely used in psycho-therapy treatment and has proved helpful in a wide range.

In non-directive interviewing, however, the interviewer's functions is simply to encourage

the respondent to talk about a given topic with a minimum of direct guidance. He encourages the respondent to talk fully and freely by being alert to the feeling expressed in the statements of the respondent and by warm, but non-committal recognition of the subject's feelings.

But these processes do not signify that this type of interview does not have any limitation. The freedom which the interviewer is permitted is at once both the major advantage and major disadvantage of interviews of this type. This method can be used only when the units are limited. The interviewer must be more skilled and alert. This type is more useful in checking the working hypothesis but there is always a tendency to be more subjective. The flexibility frequently results in a lack of comparability of one interview with another. Moreover, their analysis is more difficult and time-consuming than that of standardized interview.

But in spite of these difficulties this is very useful in social research and particularly more useful when the interviewer wants to judge to what extent people are aware of the problem posed and in what way they themselves look at the issues.

2. Structured Interview-It is also known as controlled, guided or directed interview. In this type of interview a complete schedule is used. The interviewer is asked to get the answer to those questions only. He does not add anything from his own side. The language too is not changed. He can only interpret or amplify the statement wherever necessary.

3. Focused Interview-Merlon and his associates have used extensively in their studies (of the social and psychological effects of mass communication-radio, print and film) a specialized type of interview which they designate as the "focused interview". This they believe is less subject to some of the limitations often present in the more general or diffuse types of interviews. They say that the focused interview is differentiated from other types of interviews by the following characteristics :

(1) It takes place with persons known to have been involved in a particular concrete situation (these persons have seen a particular film, heard a particular speech or have participated in an observed social situation).

(2) It refers to situations which have been analysed prior to the interview.

(3) It proceeds on the basis of an interview guide which outlines the major areas of inquiry and the hypothesis which locates pertinence of data to be secured in the interview.

(4) It is focused on the subjective experiences — attitudes and emotional responses regarding the particular concrete situation under study. (1946 American Journal of Sociology. The focused interview).

In the focused interview, as described by Merlon, Tiske and Kendal (1956) the main function of the interview is to focus attention upon a given experience and its effects. He knows in advance what topics, or what aspects of a question he wishes to cover. Although the respondent is free to express completely his own line of thought, the direction of the interview is clearly in the

hands of the interviewer. He wants definite types of information, and part of his task is to confine the respondent to these issues.

The focused interview is based on the assumption that through it, it is possible to secure precise details of personal reactions, specific emotions and mental associations provoked by a certain stimulus. It has been used effectively in the development of hypotheses. It also aims to test hypotheses, for example, that the intense fears, tensions and complexes built by specific propaganda affect the reaction patterns of persons and cause them to develop private logic. This type of interview is also useful in studies which attempt to ascertain new and unanticipated responses to known situations which may aid in clarifying the total response pattern.

4. The repeated interview — This type of interview is particularly useful in attempts to trace the specific developments of a social or psychological process, that is, the progressive actions, factors or attitude which determine a given behaviour pattern or social situation. Paul Lazarepeld and his associates made extensive analysis of the repeated interview technique in their study of how the voter makes up his mind in a presidential campaign. These interviews secured the progressive reactions of the voter which chart the specific development of influential factors entering into the choice of a president.

The repeated interview technique is expensive in time, energy and money but it offers the advantage of studying the progressive actions and events as they actually occur or studying attitudes in the process of formulation.

The data secured through focused as well as through repeated interviews lend themselves to quantitative interpretations since they are consistent and they aim at realistic details which can be differentiated, tabulated and ultimately measured.

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Lesson 18

SCALING TECHNIQUE

(Thurstone and Likert Scale)

Scale is a device by which we measure things. Various kinds of such Scales are used for measuring the physical phenomena e.g., heat is measured by Thermometer in degrees, height is measured by a pole in inches or feet etc. There are not only different scales to measure different

things, there are things that are scalable or measurable and those that are not measurable. In social phenomena particularly there are two kinds of facts known as attributes and variables respectively. Variables are those that can be measured directly or for which standard scales have already been provided. For example, the number of males and females in a particular area, the height or weight of a person, the area of income of a man and the area of any place can be directly measured and are known as variable. Besides there are other facts that can not be directly measured. These consist of complex factors like social status, standard of living, personality etc. or abstract things like attitude or opinion of a person.

In social phenomena most of the facts are qualitative in nature, and are not subject to direct measurement. The question now arises as to what is after all the need for providing a quantitative measurement. The quantitative description affords objective measurement, and the exact magnitude of the problem can be known. It is helpful in further analysis, is essentially mathematical and requires the problem to be expressed in numbers. Various kinds of statistical measures can be used only when the data can be expressed quantitatively. This is why most of the sciences, though essentially qualitative in nature in the earlier stages gradually tend to become quantitative. Thus, it is needful for sociology to make them capable enough to measure the abstract social phenomena accurately. So, in the context of social research, scaling is the technique by which qualitative and abstract social facts and phenomena can be measured quantitatively. Goode & Hatt have advocated the same thing: "the problem which scaling techniques are applied is that of ordering a series of items along some sort of continuos. In other words, they are methods of turning a series of qualitative facts (referred to as attributes) into a quantitative series (referred to as variable)".¹

Finally it can be said that the different measuring instruments differ in specificity or exactness with which they attempt to localize the position of any individual in respect of characteristics being measured. The scales can be divided into the following main types :

- (i) Thurstone's Scale
- (ii) Likert Scale
- (iii) Bogardous Scale.

I. THURSTONE'S SCALE

Differential Scales of measurement are associated with the name of L.L. Thurstone's scale. Thurstone attempted to devise a method that would represent the attitudes of a group on a specified issue in the form of frequency distribution. The Scale consists of a number of items whose position on the scale has been determined by some kind of ranking or rating operation performed by judges. This Scale was used by Thurstone and his associates in between 1929 and 1931 for measuring people's attitude towards the church. The following procedures are used for the construction of Thurstone's methods of Scale :

1. First of all a large number of suitable brief statements related to the attitude or object

1. Goode, W.J. & Hatt, P.K.— "Methods in Social Research", McGraw Hill Book Company, Inc., New York, 1952, p.232.

under study are constructed on the basis of available literature and assistance from experienced persons in research. By editing such materials a list of 100 to 150 statements is prepared. These statements have all kinds of opinion from most favourable to most antagonistic. Such list includes neutral statements also. The following criteria are taken into consideration in selecting the statements :

- (i) As far as possible the opinion should reflect the present attitude of the subject rather than his attitude in the past.
- (ii) Double barrelled questions should be avoided as far as possible. For example, I believe in the ideals of church but I am tired of denominationalism.
- (iii) The statements should be brief enough so that they do not fatigue the respondents.
- (iv) The statements should be such that their acceptance or rejection indicate something about the respondent's attitude towards the issue in question.
- (v) Statements should be relevant, i.e., in accordance with the attitude being measured.

2. Then a final list of about 100 statements is prepared and they are given code numbers and cyclostyled in such a way that they could be cut out in form of separate slips, each bearing one question. Several bundles of 100 chits have been prepared. Then a group of judges, usually hundred or more in number, is requested to arrange the statements in eleven categories from the most favourable attitude to the most disfavourable ones. In other words, a judge has to decide whether a statement indicates an extreme favourable, neutral, extreme unfavourable attitude or an intermediate position. The different scale positions have to be at equal distance. When an item is found to have been assigned with equal frequency to the all eleven categories or to several categories, then it is to be rejected.

3. The next step consists of assigning a scale score to each item which is computed as the median scale position for that item given by the group of judges.

4. After this a final selection of approximately twenty items is made from the remaining items so that the item spreads more or less evenly along the scale from one extreme to another.

Once the scale is ready for use it is administered on the respondents whose attitude is to be measured.

(II) LIKERT SCALE

A summated scale consists of a number of statements with response categories usually indicating degree of agreement or disagreement. The statements represent either positive or negative views on a certain issue, but not neutral or equivocal positions. The rationale is that a respondent who feels strongly about the issue will respond more extremely to such statements than

will someone who feels less strongly about it. When responses to these items are matched with score values and added up for each respondent, the resulting score value constitutes the measured response value on the variable for that respondent. The respondents can be differentiated in terms of the submitted value scores they register over the statements.

The best known summated scale in social research is probably the type initially proposed by Likert to measure respondent's attitudes towards certain issues. The type of attitude scale is generally known as Likert technique or 'internal consistency scale'. The method is general enough to apply to a wide range of variables. For example, Likert studied people's attitude towards specific problems like imperialism, internationalism and towards negroes by the help of this scale. This method is similar to Thurstone scale in many respects except in determination of Scale values. This method eliminates the need for judges in sorting out the statements and is therefore, less cumbersome. The importance of each item in the scale is fully emphasized.

The original Likert Scale involved a number of statements, each with five response categories such as strongly approve, approve, undecided disapprove, and strongly disapprove. For example, the following statements and response categories might be used to measure attitude towards legalized abortion.

1. Abortion should be performed for any woman requesting such a service.
----- 1. Strongly agree
----- 2. Agree
----- 3. No opinion
----- 4. Disagree
----- 5. Strongly disagree
2. An unborn child has as many human rights as nobody else, so abortion should not be performed under any circumstances.
----- 1. Strongly agree
----- 2. Agree
----- 3. No opinion
----- 4. Disagree
----- 5. Strongly disagree
3. To achieve true equality, women must have the right to decide when they desire children. Therefore, abortion services should be provided for them.
----- 1. Strongly agree
----- 2. Agree
----- 3. No opinion
----- 4. Disagree
----- 5. Strongly disagree

4. A woman who does not desire children should take precautions (birth control) rather than rely on abortion.

- 1. Strongly agree
- 2. Agree
- 3. No. opinion
- 4. Disagree
- 5. Strongly disagree

Thus, there are two statements favouring legalized abortion and two against it. It is desirable for a summated scale to contain positive and negative statements in equal numbers and presented at random. To compute response scores, the researcher first transforms the scores for either the positive or the negative statements. For example, in the scale shown above, the scores for responses 1, 2, 3, 4 and 5 to statements 1 and 3 can be transformed into 5, 4, 3, 2 and 1 respectively. Then all the statements yield higher scores for more favourable attitude towards abortion. When the response values are submitted for each respondent, those respondents with more favourable attitudes will receive higher scores. The research could equally well transform the response scores for statements 2 and 4, so that the less favourable a respondent's attitude toward legalized abortion, the higher his score.

Generally about twenty statements are presented to the respondents. The researcher then examines each statement individually to determine whether it consistently elicits high response scores from those respondents who receive high total scores and low response scores from those who receive low scores. The statements which show such consistency with the total scores of the respondents are retained. Those which register mixed response patterns are considered inadequate to distinguish high scores from low scores and are eliminated. The remaining statements constitute the final scale statements. The total scale score for each respondent is recomputed based on the selected statements.

In brief the use of a Likert Scale involves the following procedure :

1. Initial construction and selection of positive and negative statements about an issue with five response categories for each statement.
2. Collection of responses to these statements from a group of respondents.
3. Computation of total scores for the respondents across all statements.
4. Examination of the consistency of the response pattern for each statement relative to the total scores received.

5. Elimination of inconsistent statements.
6. Completion of the final set of statements, and
7. Recomputation of total scores for the respondents based on this final set.

Thus, after the completion of the scale one can use it to measure people's attitudes toward any specific problem.

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Lesson 19

BOGARDOUS SOCIAL DISTANCE SCALE

This scale was developed by Emory S. Bogardous to measure and compare attitudes of persons towards peoples of different nationalities. This method has been applied to measure racial distance, regional distance, sex distance, parent-child distance, educational distance, and so on. This scale may be used to determine the extent of the trend towards conflicts or towards co-operation between groups.

The scale is made up of several statements that show different types of relationships one can have with persons from any other social, caste, occupational or national group.

To construct this scale first several statements were constructed. It was supposed to exhibit the different degrees or types of relationship which show the degree of closeness between two persons or groups.

Then one hundred persons were selected as judges who identified the seven attributes indicating a gradually increasing distance, but of these seven categories one relationship, most typical and representative of the whole group was chosen one from each lot. This following seven relationships in serial order towards increasing social distance were selected. A specimen of seven

categories with names and races as used by Bogardous is given below —

Category	English	Swedish	Poles	Koreans
1. Would marry				
2. Would have as my personal chums in the club				
3. Would live beside them as neighbours in the same street				
4. Would work with them in an office				
5. Would allow them as citizens of my country				
6. Would allow them as visitors only to my country				
7. Would exclude them from my country				

The scale is then applied on a selected group of persons, the sample, who are asked to rank the given social groups with respect to the degree of social distance on seven attributes starting with "acceptance to close kinship by marriage" and concluding with "would exclude from my country". Thus the respondents express their willingness to accept only on extremely remote relationship or no relationship at all. The individual's attitude to the nationality is then measured by the closeness of tolerated relationship. In practice, in applying this scale it has been found that there are relatively few reversals i.e., cases in which a nationality is accepted by an individual for a closer relationship and rejected by him for a remote relationship, for example, accepting Indians as close kinship by marriage but rejecting them as neighbors on the same street in the U.S.A.

Bogardous has applied the scale on Americans giving the following instructions :

1. Remember to give your first feeling in each case.
2. Give your reaction to each race as a group. Do not give your reaction to the best or the worst members that you have known, but think of the picture or stereotype that you have of the whole race.
3. Put a cross after each race in as many of the seven rows as as your feelings dictate. Thus

if a person thought he could have the first five types of relationships with an Englishman he would put a thick mark in five rows excluding the sixth and the seventh.

The scale was tried with 1725 Americans. The total of each category and for each race was taken. It was latter on converted into percentage. The total response 1725 was taken as equal to 100 and on that basis the percentage of actual response was calculated. Following was the consolidated list of percentage for each group.

Percentage of response in different categories							
Minorities	1	2	3	4	5	6	7
English	93.7	96.7	97.3	95.4	95.9	1.7	0.00
Swedish	45.3	62.1	75.6	78.0	86.3	5.4	1.00
Poles	11.0	11.6	28.3	44.3	58.3	19.7	4.7
Koreans	11	6.8	13.0	21.4	23.7	47.1	19.1

Thus, the response of American people for Englishmen is placed highest and also shows the greatest steep fall after item no.5. It is thus clear that Englishmen are most popular and the distance is not great. The response for Koreans is placed lowest and also forms a less steep fall, thus indicating that social distance is sufficiently great and there is a strong feeling of aversion in the minds of people for them.

The percentages of response can also be represented on a graph paper.

The measurement of social distance from the response can be made mathematically also. For this purpose weights are generally allotted to various response categories. These weights are commonly given in order of the categories beginning with 1. Thus if only 5 valid categories in the above example are chosen the weights assigned to each one would be 1, 2, 3, 4 and 5. The procedure generally adopted for social distance measurement is given below —

(i) Place the weights and percentage response for each categories in rows.

(ii) Multiply the response percentage with its weights.

(iii) Add up the product and this will be the measurement of social distance.

The following table shows weighted social distance calculated from the above illustrations —

category	weight	English		Swedish		Poles		Korenas	
		% of response	wt x %	% of response	wt x %	% of response	wt x %	% of response	wt x %
1	1	93.7	93.7	45.3	45.3	11.0	11.0	1.1	1.1
2	2	96.7	193.4	62.1	124.2	11.6	23.2	10.8	21.6
3	3	97.3	291.9	75.6	226.8	28.3	84.9	11.8	35.4
4	4	95.4	381.6	78.0	312.0	44.3	177.2	20.1	80.4
5	5	95.9	479.5	86.3	431.5	58.3	291.5	27.5	137.5
-	Total	-	1440.1	-	1139.8	-	587.8	-	276.0

Thus the above illustrations also indicate that Englishmen are most popular and nearer to American people followed by Swedish while Poles & Koreans are best nearer. These values may further be simplified on the basis of the proportion and can be shown along one single scale.

Criticism :

The social distance sale of Bogardous may be criticised on the following points:

The scale assumes and equal distance between one category and the other, but it has not yet been proved to be so. As it is evident from the findings of Bogardous study that Poles are twice as acceptable as Poles, but it is hardly so. At best it only shows their relative ranks in order of preference.

The reliability of the scale can be tested only by test and re-test method which is a sufficiently crude and labourious technique.

The responses are not necessarily correct indicators of the attitude of respondents. In this respect it has been assumed the first feeling which comes to our mind on thinking of racial group is more representative. But in the thinking of the typical member of the racial group, the response is not immediate and the thought process is involved. When deliberate thinking is involved, the response may be affected by other considerations also.

This scale has been most widely used. Some sociologists feel that it does not extend for enough in a negative direction. Bogardous scale does not involve judgments of the general

negatively or positively of an object by the individuals. All it does on the manifest level is to elicit expression of the degree of feeling of social distance from the object.

The best aspect of Bogardous scale is that it is easy to administer and score.

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Lesson 20

Case Study Method — Concept, Process & Technique

Social scientists, in their study of human behaviour, strive to obtain a fundamentally real and enlightened record of personal experiences which would reveal in concrete detail a man's inner strivings, tensions, motivations that drive him to action, the barriers that frustrate him or challenge him, the forces that direct him to adopt a certain pattern of behaviour and to live according to a certain scheme and philosophy of life. Only some of man's experiences can be learned by observing him in action. To understand his behaviour fully and intimately, he must supply a detailed and penetrating account of what he does and has done, what he expects to do and says ought to do. A fairly exhaustive study of a person or group is called a life or case history.

P.V. Young defines case study thus: "Case study is a method of exploring and analysing the life of social unit, i.e. a person, a family, an institution, cultural group or even entire community."

Analysing Young's definition we can say that social scientists study many culture groups, small social groups (a family, political party, a gang, a leadership group). They also study large groups as social units (sects, national and racial groups). Social institutions like courts, hospitals churches, industrial organizations, governmental divisions have also been studied comprehensively as social units.

Goode & Hatt define case study method thus,—"Case study is a way of organising social data so as to preserve the unitary character of the social object being studied Expresses somewhat differently. It is an approach which views any social unit as a whole."

To conclude, we can say that case data may be gathered exhaustively of an entire life cycle of a social unit or a definite section of it. Whether a section or the whole of a life is studied, the aim is to ascertain the natural history, that is, an account of the generic development of a person or group, or whatever constitutes the social unit within its cultural setting. Because of its aid in studying behaviour in specific precise detail, Burgess termed the case study method, the social microscope.

Processes and techniques of case study method — Study of an individual is a well-planned and rationally organised case study. It focuses as a unit and endeavours together subtle, deeper and comprehensive knowledge of the unit under consideration. Case study of a unit or an individual passes through the under-mentioned stages and processes.

First of all, a statement of the problem has to be constructed. Actually what is meant in the first step is to collect a detailed and penetrating account of all the aspects of the case under study. This must be vivid, objective and “fundamentally real and enlightened” explanation of the problem we propose to study. We must, therefore, collect past incidents and present conditions of case under our observation. What we propose to bring out in the case study is already our hypothesis, a vision fired in researcher’s mind. The description of the problem and its comprehensive exposition are the first steps of the ladder. The study of the first step requires observation of the following matter.

1. Selection of cases or social units — Social scientists attempt an in-depth study of an individual’s or a social unit’s (which may comprise sects, racial groups or social institutions) characteristics. This study of human characteristics of a unit may fall under any of the three types, viz--

- (a) Common
- (b) Special and
- (c) Extraordinary

2. We then pass on to the determination of types and number of units for our case study. This is essential progression — A unit’s behaviour-pattern may be studied by observing him in action. As such, the social unit may be a person, a family, a clan or sect, or a whole community. We have to determine whether we intend to examine a person or a small unit or several persons or several units of common behaviour pattern.

3. After having collected our case for study, we have to fix up our scope of analysis. The special features of our problem under study are the real objects of analysis. This also requires an observation of the natural history, that is an account of the generic development of a person or a group, or whatever constitutes the social unit in a particular study, revealing the factors that moulded the life of the unit within its cultural setting. We also study the effects that our social units leave on their surroundings or other social units.

4. The study of natural history or the generic development of a social unit naturally leads to the study of the course of events that have influenced the making of the social unit. Changes taking place in the social unit have to be noticed and recorded. Future expectations too are determined by observing course of events.

5. The course of events are determined by some external or internal factors which may be called catalysts. They propel other events to take place or cause some events to happen. They have to be studied under two heads :-

(i) **Main Factors** — They are called main factors which cause an event to happen. Suppose an individual becomes a criminal or even a tribe may become a criminal. The causative factor may be friend's instigations or abject poverty.

(ii) Events are caused by associative forces also. They help a phenomenon or an event to take place. A man or a tribe becomes criminal. Associative factors are Police excesses on an individual or a clan, parents or guardian's intransigence, mental tension, social ex-communication or people's indifference.

6. The last step in case-study is Analysis and conclusion. The researcher has to analyse and sort out each information about the case and then organise them as a mass of information, and finally draw irrevocable conclusion therefrom. We, therefore, generalise facts about an individual or a group. We also gather the various causes of events in an individual's life — this may be called cause-effect relationship study. Now we can classify knowledge about our case, we can discover the indicators, and arrange each information like a catalogue of events. We can, in the conclusion, diagnose problems and also prescribe remedies. While concluding such case studies, the researcher should look into future possibilities of further studies, obstacles on the way, and the ways and means to conquer them.

Sources of case data

Following are the main sources of case data utilised in case study techniques :-

1. Personal documents — Most of the people keep diaries, write their autobiographies or memories. These personal documents contain the description of the remarkable events of the life of the narrator as well as his reactions towards them. They may also contain the description of even those events in which he has played his part only as a witness or a distant spectator. According to Allport, they are self-revealing records which intentionally or unintentionally yield direct information regarding the structure, dynamics and functioning of the author's mental life. Such personal documents, although sufficiently subjective in nature, are nevertheless highly important for social research. Diaries are mostly written for self-satisfaction and the writer is not likely to distort facts deliberately. Such documents may be written for general purpose and later on used by the researcher, or they may be specially kept for the purpose of research. The former type is generally more reliable, although it may fail to give full facts.

Personal documents are very helpful in studying the personality of the of the writer and his reactions to different circumstances of life. As the writer is an identical part of the groups, they may represent not only the reactions of the person but of any typical member of the group.

2. Life history — Life history is the study of various events of respondent's life together with attempt to find their social significance. It is in this way that life history differs from the pure historical narrative of facts. While pure narrative aims at narrating facts only, life history aims at revealing the meaning and significance of these events in the context of motivating factors of

social life. It is thus a combination of facts and inferences. Life history data is generally gathered through prolonged interviews with the respondent's use of any written material available about this life and the analysis of the facts so collected in order to draw valid generalization from them.

Case studies thus generally take two forms, the use of written material about the respondent and the collection of data through interviews. Beside this, various other methods may be adopted to gather correct information. The entire range of informant's life from childhood to old age is thoroughly inquired and tested and every aspect of life is taken into consideration.

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Lesson 21

Case Study Method — Characteristics, Merits & Demerits

We have already discussed the concept and process of case study method in Lesson 20. So, we can easily find out the main characteristics of this method. Following are the main characteristics of case study method.

1. In this method a wide variety of units may be selected for purposes of study and the size of the units may be selected for the purposes of study and the size of the unit may be fairly large to cover an entire nation or a community. In spite of the varying sizes of the unit of study, the fundamental point is that each unit is taken as a whole. For example, when we take a nation or a community we have to take it as unit in itself and not a collection of individuals.

2. Case study aims at deep and detailed study of the unit. We can quote here Good & Hatt, it is an approach which vies any social unit as a whole. We have to make a study of the unit in its entirety. This is where the case study differs fundamentally from the statistical method. The basis of case study is that life of the individual or family is indivisible whole and we can not arrive at the real truth behind any behaviour unless we have studied the life as a whole in all its aspects of course. The totality of study is not without its limit. Thus the unit is taken as a representative of a group and only those aspects of his life are studied that are relevant to the problem under study.

3. Case study covers a sufficiently wide cycle of time. According to Goode & Hatt, "The period of time may be short or long. To concern is with recording the relevant characteristics as they appear in interaction, not merely recording them at two separate instants in time for before and after comparison."

4. The fourth major characteristic is regarding the number of units and mode of their selection. As the study is more detailed and extends over a wider expanse of time, the number of

units has to be small. The number may vary from a single unit to a few dozen or even a few hundred. They are not selected according to some scientific technique of sampling although an attempt is made to select as representative units as possible.

5. The case study method is mainly qualitative in character. The researcher has to rely more upon his own power of observation and sense of logic than facts themselves. Case study method is quantitative too because in this method life history, personal documents are used too, and that is used for the purpose of quantitative in nature.

Merits of case study method

Following are the main merits of case study method :

1. Case Study helps in formulating valid hypothesis. When various cases are thoroughly studied and carefully analysed the research can arrive at various generalizations which may be developed into useful hypothesis. In fact, study of relevant literature and case study are the only two potent sources of hypothesis.

2. Case study is useful in framing questionnaire, schedule or other forms. If a questionnaire is drafted after thorough case study, we can know the peculiarities of the group as well as individual units, the type of response likely to be available, pet likings and aversions of the people.

3. Case study is helpful in stratification of the sample. By studying the individual units thoroughly we can put them in definite classes or types. Thus it is helpful in perfect stratification of the sample.

4. It is possible to locate deviant cases. Deviant cases are those units that behave against the proposed hypothesis. A general tendency is to ignore them, but for scientific analysis they are very important.

5. Where the problem under study forms a process rather than one incident e.g. courtship process, clique formation etc, case study is the suitable method. The case data is essential for valid study of such problem.

6. Case study enlarges the range of personal experience of the researcher. In statistical methods generally a narrow range of topic is selected, and the researcher's knowledge is limited to the particular aspect only. In case study the whole range of subject's life is studied and the range of knowledge is naturally enlarged. The researcher gets an intimate knowledge of many other aspects.

7. Case study helps to find the significance of the recorded data within the life of the

Case Study Method -- Characteristics, Merits and Demerits

classes of individuals. The researcher comes into contact with different classes of people, a thief, a pick-pocket and the like. He watches their lives and hears their experiences. Thus he is able to gain the experience of even such life as he is never expected to lead.

Thus we find that case data has its importance in social research. Techniques have now been developed to make it more perfect and remove the chances of bias. But case study method has got some demerits too.

Demerits of case study method

Case study method has often been criticised on the basis of following limitations :

1. The first difficulty, the one that is the basis of all other, is the over-confidence that the researcher develops in his mind. In case study method the researcher studies each unit in its complete dimension. The researcher, therefore, begins to feel as if he knows everything about the unit and needs no further enlightenment about it. It is thus clear that case study with all its defects and short-comings, develops a false sense of confidence which is highly detrimental to any scientific outlook.
2. Generalizations are drawn from too few cases. Thus, what the researcher thinks to be the common trait of human nature may be personal peculiarity of the subject and therefore, applicable to particular persons under particular circumstances.
3. The method is quite loose and unsystematic. No controls are exercised upon the informant or the researcher. The data collected in this way is generally incapable of verification and the generalizations drawn from it are also not very accurate.
4. There is enough scope for errors due to inaccurate observation and faulty inference, selection of a case that is not typical of the group errors in reporting, failures of memory, unconscious omission or repression of unpleasant facts, a tendency to dramatise facts, and describe what is more imaginary than real, under such conditions the data collected and inferences drawn are at times far from being valid.
5. The researcher develops a tendency towards ad hoc theorising. In place of finding some scientific explanations to a particular phenomena. he tries to find some common sense explanations for it. He is so overconfident due to his intimate knowledge of the unit that he begins to presume that even his common sense intuitive explanations are more scientific. Such explanations, being incapable of verification, are hardly reliable.
6. The time and money needed for case study is much greater than in other methods. Even if 100 cases are studied under this method, it may very well take nearly two years. It may not only

entail large financial expenditure, there is also the problem of most of the cases getting astray.

7. Read Bain has given the following drawbacks of life history documents used in case study method —

- (a) It does not provide impersonal, universal, non-ethical, non-practical, repetitive aspects of phenomena.
- (b) The subject may write what he thinks and what the investigator wants. The greater the rapport, the more subjective the whole process is.
- (c) The subject is more likely to be self-justificatory than factual.
- (d) The literary touch results in romantic over - and under-statements, convenient forgetting, and inclusion of many things that never happened.
- (e) Case situations are seldom comparable. The subject tells his own story in his own words.

In spite of everything said against it, case study will remain the most fundamental method of study of social phenomena.

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