

**Research Methods and Analysis**

**P-I T-3**

# **Sociology**

**Civil Services (Main) Examination**

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**Quantitative and qualitative methods**  
**(including Field: Issues and Context)**

Dear Candidate, before proceeding with our discussion on quantitative and qualitative research methods, I would like you to recall our discussion on 'Major theoretical strands of research methodology'. There I had mentioned that broadly we can identify two major traditions in sociological theory. They are the positivist and anti-positivist traditions. I had also discussed the various sociological perspectives that fall under each category. Most importantly, I had also cautioned you that how we conceive of society cannot be separated from the question of how we should proceed in our study of it. In other words, what methodology a researcher would adopt in carrying out his research would largely be determined by the perspective or orientation that he has towards social reality. In our discussion, I had made it clear that the emphasis on the objective measurement of human social behaviour forces the positivist scholars to rely more on the quantitative methods while conducting research. While on the other hand, anti-positivist scholars who emphasise on the interpretative understanding of the social behaviour rely more on qualitative methods.

However, whatsoever be the perspective and methodology of the researcher, ultimately he has to carry out his research in the field. The topic 'field' has not been explicitly mentioned in the syllabus but the theme based approach suggests that any discussion on research methodology would be futile without understanding field and issues associated with it. So let's first understand what 'field' implies in a sociological enquiry and what are the problems or challenges associated with the field-work.

In the context of sociological research, the term 'field' refers to the members of a social group which is the prime object of study for a social scientist. In its early phase, Malinowski and Radcliffe-Brown laid the foundations of intensive fieldwork among anthropologists in Britain. However, in Indian context, it was M.N. Srinivas who strongly advocated for the 'field-view' of Indian society in place of the 'book-view'. Book-view of Indian society was largely championed by the Indologists like B.K. Sarkar, G.S. Ghurye, Radhakamal Mukerjee, Irawati Karve. Indologists claimed that Indian society could be understood only through the concepts, theories and frameworks of Indian civilization. They believed that an examination of the classical texts, manuscripts, archaeological artefacts, etc. should be the starting point for the study of the present.

Srinivas was critical of the 'book-view' of Indian society. He argued that the book-view gave a distorted picture of society by dwelling on the ideals of the past

from which the present reality departed considerably. The book-view of Indian society presented an idealized picture of its institutions – marriage, family, kinship, caste and religion – dwelling more on what they were supposed to be than how they actually worked. For example, the book-view had represented caste in terms of the invariant and immutable scheme of the four *varnas*. Field studies shifted attention away from the four-fold scheme of *varnas* to the operative units of the system which were the innumerable *jatis*. They also drew attention to the ambiguities of caste ranking and the very distinctive process of caste mobility. Thus, the field-view revealed the gap everywhere between ideal and the actual. By bringing to attention ambiguities, contradictions and conflicts, it paved the way for a better understanding of the dynamics of social change. Thus, the idea of an unchanging and immutable society began to give way, and the field-view changed not only the perception of India's present, but to some extent also the perception of its past.

However, like every other method, field-work too is marked by its own set of challenges and problems in conducting a genuine sociological research. Firstly and foremostly, the researcher faces the problem of the choice of the 'field' to carry out his field-work as no typical field exists in reality. As stated earlier, unlike natural sciences, sociology cannot study any particular social phenomena in a laboratory by the experimental method due to certain moral and ethical reasons. As a result, social research takes place in the open, where, unlike a scientific experiment, it is extremely difficult to control the extraneous variables. Hence, it becomes increasingly challenging for the social scientist to establish a cause-effect relationship between the variables stated under hypothesis. After having identified the field for his research, the researcher faces the challenge of entry into the field. This implies that unless the researcher is able to establish a good rapport with the natives, he would find it hard to carry out his research. Thus, in order to seek the cooperation of the native population for his data collection, the researcher must gain their acceptability. In this, the social background of the researcher also plays an important role.

Further, since the researcher can only carry out a limited study of any given social phenomenon, the problem of holism looms large. Since holistic study appears impractical in study of complex societies, the researcher should keep in mind that the segment he is studying is the part of a larger and complex whole and should look for interrelationships. Researcher may also face problem in the formulation of hypothesis and might have to reformulate or modify his hypothesis because hypotheses cannot be formulated in the vacuum, without the knowledge of the field. Further, the issues of objectivity and ethical-neutrality also need to be addressed. The researcher should be aware of his biases and prejudices and try to make certain that they do not influence his collection and interpretation of data. Though some of these challenges are endemic to any social science enquiry, yet they can be dealt with a cautious and informed approach on the part of the researcher. Since the field-

work basically involves dealing with people, the researcher must be empathetic and flexible in his approach and employ the services of well-trained field workers.

In the ultimate analysis, it may be argued that in any field research, the sociologist is an integral part of the research process. The data so collected has no existence independent of him. His data are 'constructions, not reflections of facts or relationships alone. In the process of knowing, external facts are sensorily perceived and transformed into conceptual knowledge. Thus, the sociologist as a researcher in an active factor in the creation of knowledge and not just a mere passive recipient. The importance of his perception makes a sociologist as integral a part of the research process as the data he observes.

Dear Candidates, I had mentioned in our earlier discussion on reflexivity that a long question on reflexivity may be asked in reference to its contribution in reconstituting the 'field' and the practices of fieldwork in social anthropological research. Let us try to understand it.

As you now know that reflexivity offers an alternate perspective to study social reality. Reflexivity in social anthropological research implies that the ideas about 'field' and 'practices' of field-work are constantly examined and reformed in the light of new developments, thus continuously altering their character. Reflexivity challenges the conventional notions of anthropological research with regard to field and practices of field-work. Early social anthropological research was largely concerned with the study of small scale societies in their natural state or surroundings. Hence the term 'field' came to denote a distinct social group which was to be studied in its unique socio-cultural and geographical setting. Early anthropological research was largely based on the dichotomy of subject and object. In other words, it was based on the separation of the social scientist (subject) from those 'others' whom he observes (object). It was based on the assumption that over involvement of the social scientist with his object of study (social group) may contaminate the research findings. The idea about 'otherness' remained remarkably central to the fieldwork practices of Malinowski, A.R. Radcliffe-Brown, etc.

Amory shows how these ideas about 'otherness' and taking for granted of a white subject have shaped the field of African studies in the United States. She shows that African American scholars were discouraged from working in Africa, on the grounds that they were "too close" and would not manage to be "objective", while white scholars were judged to have the appropriate distance from the black "other". This helps to explain that why the contemporary field of African studies contains remarkably few black American scholars. Kath Weston too in her study of gay and lesbian communities in United States arrived at a similar conclusion. She argued that her position as a native ethnographer itself blurs the subject-object

distinction on which ethnography is conventionally founded. She calls native ethnographer as a 'virtual anthropologist'.

Akhil Gupta and James Ferguson also question the conventional notion of field and argue that in the light of new developments there is a need for reconstruction of field and field-work practices. They argue that processes such as decolonization and globalization, accompanied by processes of diffusion and acculturation, have challenged the traditional definition of field and the very idea of a clearly demarcated space of 'otherness'. They argue that the conventional notion about the 'field' in terms of a homogenous social group with its unique culture and geographical surroundings has come to be questioned in the wake of globalization. Social groups are no longer tightly territorialized or spatially bounded. Further, the process of diffusion and acculturation, have significantly altered the homogenous character of social groups and today cultural heterogeneity is more common.

Gupta and Ferguson further question the 'field-home dichotomy' in social anthropological research. They question the traditional notion of field which rested on the idea that different cultures exist in discrete and separate places. They argued that the 'location' of the field should not merely be seen in geographical sense alone. They advocated retheorizing of fieldwork from spatial sites to social and political locations in terms of unequal power relations. For example, subaltern approach in sociology has significantly contributed towards a better understanding of various socio-economic and political processes in India, which were until now largely studied from an elitist perspective. Gupta and Ferguson argue that with decolonization, there is proliferation of domestic research led by the natives. As a result, today, the very idea of 'otherness', which was central to the early anthropological fieldwork, is subjected to review. Hence, there is a need to modify the practices of fieldwork accordingly.

Further, Gupta and Ferguson also question the fundamental premise of early anthropological field-work practices that only professionally trained observers could be trusted to collect ethnographic data. As Paul Radin in his study found that his untrained native research assistants proved to be better than the academically and professionally qualified observers in terms of gathering valuable data. This is because, as Radin argues that such professionals are socially separated from those whom they study by their very training. The training of the professional observers erects an undesirable barrier between themselves and the persons to be interrogated. It may lead to a difficulty in establishing direct and immediate contact and building rapport with their sources of information. While on the other hand, the native research assistants or local intellectuals are better positioned at least for certain sorts of data collection.

Thus, reflexivity has significantly contributed in reconstruction of the ideas about field and field-work practices in social anthropology. Such a rethinking of the idea of the 'field' coupled with an explicit attentiveness to 'location' might open the way for a different kind of anthropological knowledge and a different kind of anthropological subject.

Let us now discuss now discuss some of the fundamental characteristics of quantitative as well as qualitative research methods.

As you know that sociology first developed in Europe in the nineteenth century when industrialization resulted in massive social changes. Accompanying these social changes were intellectual changes during which science started to enjoy a higher reputation than ever before. Science appeared to be capable of producing objective knowledge that could be used to solve human problems and increase human productive capacity in an unprecedented way. It was not surprising therefore, that many early sociologists chose to turn to science for a methodology on which to base their subject. However, not all sociologists have agreed that it is appropriate to adopt the methodology of the natural sciences. For these sociologists, studying human behaviour is fundamentally different from studying the natural world. Unlike the subject matter of, for example, chemistry or physics, people possess consciousness, which means that sociology requires a different type of methodology from science. Thus on the basis of the above discussion, two broad traditions within sociology could be identified.

1. Those who advocated the use of scientific and usually quantitative methods.  
(Positivists)
2. Those who supported the use of more humanistic and qualitative methods.  
(Anti-Positivists)

Though in recent years, some sociologists have questioned the need for such a rigid division between quantitative and qualitative methodology, and have advocated combining the two approaches.

### **Quantitative Research Methods:**

Quantitative research in sociology is largely associated with the 'positivist tradition'. Early sociologists belonging to the positivist tradition such as Comte, Spencer, Durkheim, etc. believed that the methods and procedures of natural sciences could be adopted in sociology as well. Quantitative research is associated with a number of techniques of data collection such as survey, questionnaire, structured interview and secondary sources of data, etc. Some of the features of quantitative research in sociology are discussed below:

1. **Social facts:** As a positivist, Comte believed that the scientific study of society should be confined to collecting information about phenomena that can be objectively observed and classified. Comte argued that sociologists should not be concerned with the internal meanings, motives, feelings and emotions of individuals. Since these mental states exist only in the person's consciousness, they cannot be observed and so they cannot be measured in any objective way. Similarly, Durkheim also argued that social facts should be treated as *'things'*. This means that the belief systems, customs and institutions of society – the facts of the social world – should be considered as things in the same way as the objects and events of the natural world.
2. **Statistical data:** The second aspect of quantitative approach as advocated by positivists is the use of statistical data. Positivists believed it was possible to classify the social world in an objective way. Using these classifications it was then possible to count sets of observable social facts and so produce statistics. For example, Durkheim collected data on social facts such as the suicide-rate and membership of different religions.
3. **Correlation:** The third aspect of positivist methodology entails looking for correlations between different social facts. In his study of suicide, Durkheim found an apparent correlation between a particular religion, Protestantism, and a high suicide rate.
4. **Causation:** The fourth aspect of positivist methodology involves a search for causal connections. The quantitative research is highly preoccupied with establishing the causal relationship between variables. If there is a strong correlation between two or more types of social phenomena, then a positivist sociologist might suspect that one of these phenomena was causing the other to take place. For example, Durkheim in his study of suicide had explained that low solidarity among the Protestants was the causal factor for high suicide rate amongst them.
5. **Generalization and Replicability:** The quantitative researcher is invariably concerned to establish that his result of a particular investigation can be generalized to the larger population. Positivists like Comte and Durkheim,

believed that just as natural sciences could arrive at universal laws with regard to matter, similarly, laws of human behaviour can also be discovered in social sciences. They believed that laws of human behaviour can be discovered by the collection of objective facts about the social world, by the careful analysis of these facts and by repeated checking of the findings in a series of contexts (replication).

Positivism is based upon an understanding of science that sees science as using a mainly inductive methodology. An inductive methodology starts by collecting the data. The data are then analysed, and out of this analysis theories are developed. Once the theory has been developed it can then be tested against other sets of data to see if it is confirmed or not. If it is repeatedly confirmed (replicated), then positivists like Comte, Durkheim, etc. assume that they have discovered a law of human behaviour.

### **Qualitative Research Methods:**

A significant number of sociologists choose not to use the more scientific approaches to the study of human behaviour. They prefer to sacrifice a certain precision of measurement and objectivity in order to get closer to their subjects, to examine the social world through the perspective of the people they are investigating. These sociologists sometimes refer to quantitative researchers as those who “measure everything and understand nothing.” Qualitative research fundamentally refers to that approach to the study of the social world which seeks to describe and analyse the culture and behaviour of humans and their groups from the point of view of those being studied. As we have discussed earlier that quantitative data are data in a numerical form: for example, official statistics on crime, suicide and divorce rates. By comparison, qualitative data are usually presented in words. These may be a description of a group of people living in poverty, providing a full and in-depth account of their way of life, or a transcript of an interview in which people describe and explain their attitude towards and experience of religion. Compared to quantitative data, qualitative data are usually seen as richer, more vital, as having greater depth and as more likely to present a true picture of a way of life, of people's experiences, attitudes and beliefs. Participant observation, unstructured interview, focus group discussion, life-history or case study method are some of the major methods or techniques of data collection in qualitative research. The main intellectual undercurrents which tend to be viewed as providing qualitative research with their distinct methodology are phenomenology, symbolic interactionism, *verstehen*, ethnomethodology, etc. Some of the features of qualitative research in sociology are discussed below:

1. **Empathetic description of social reality:** The most fundamental characteristic of qualitative research is its express commitment to viewing events, actions, norms, values, etc. from the perspective of the people who are being studied.
2. **Contextualism:** Qualitative research exhibits a preference for contextualism in its commitment to understanding events, behaviour, etc. in their respective context. It is almost inseparable from another theme in qualitative research, namely 'holism' which entails an undertaking to examine social entities – schools, tribes, firms, slums, delinquent groups, communities, or whatever – as wholes to be explicated and understood in their entirety.
3. **Emphasis on processual dimension:** Qualitative research views social life in processual, rather than static terms. The emphasis on process can be seen as a response to the qualitative researcher's concern to reflect the reality of everyday life which, they tend to argue, takes the form of streams of interconnecting events. The general image that qualitative research conveys about the social order is one of interconnection and change.
4. **Flexibility:** Qualitative researchers tend to favour a research strategy which is relatively open and unstructured. Such strategy allows them access to unexpectedly important topics which may not have been visible to them had they foreclosed the domain of study by a structured, and hence potentially rigid strategy.

Some sociologists, in recent years, have questioned the need for such a rigid division between quantitative and qualitative methodology and have advocated combining the two approaches. Alan Bryman has suggested a number of ways in which a plurality of methods – a practice known as *triangulation* – can be useful.

1. Quantitative and qualitative data can be used to check on the accuracy of the conclusions reached on the basis of each.
2. Qualitative research can be used to produce hypotheses which can then be checked using quantitative methods.
3. The two approaches can be used together so that a more complete picture of the social group being studied is produced.

4. Qualitative research may be used to illuminate why certain variables are statistically correlated. For example, Durkheim concluded in his study on suicide that the rate of suicide varies from religion to religion because of their varying degree of solidarity.

Bryman believes that both quantitative and qualitative research have their own advantages. Neither can produce totally valid and completely reliable data, but both can provide useful insights into social life. He argues that each has its own place and they can be most usefully combined. Generally, quantitative data tends to produce rather static pictures, but it can allow researchers to examine and discover overall patterns and structures in society as a whole. Qualitative data is less useful for discovering overall patterns and structures, but it does allow a richer and deeper understanding of the process of change in social life.

**Techniques of data collection**  
**(including Sampling, Reliability and Validity)**

Dear Candidate, in the previous section, we had discussed some of the fundamental characteristics of quantitative (positivist) and qualitative (anti-positivist) research methodologies. However, in practice, the distinctions between positivist and anti-positivist research methodologies are not as clear cut as the previous sections have implied. They have been placed at opposite ends of the spectrum for purposes of emphasis and illustration. A large body of sociological research falls somewhere between the two extremes. In the same way, the methods of data collection discussed in the following sections cannot be neatly categorized as aspects of positivist or anti-positivist methodologies. However, certain methods are regarded as more appropriate by supporters of one or other of these perspectives.

Let us now discuss some of the important techniques employed by the social scientists for collecting data from the field. The need for adequate and reliable data is ever increasing for taking policy decisions in different fields of human activity. There are two ways in which the required information may be obtained:

1. Complete enumeration survey (also known as the census method).
2. Sampling technique.

Under complete enumeration survey method, data are collected for each and every unit (person, household, field, shop, factory etc., as the case may be) belonging to the population or universe which is the complete set of items which are of interest in any particular situation. The advantage of this type of survey will be that no unit is left out and hence greater accuracy may be ensured. However, the effort, money and time required for carrying out complete enumeration will generally be extremely large and in many cases cost may be so prohibitive that the very idea of collecting information may be dropped. Hence in modern times very little use is made of complete enumeration survey. How to collect the data then? It is through the adoption of *sampling technique* that a large mass of data pertaining to different aspects of human activity are collected these days.

**Sampling:**

In the sampling technique instead of every unit of the universe only a part of the universe is studied and the conclusions are drawn on that basis for the entire universe. A sample is not studied for its own sake. The basic objective of the sample study is to draw inference about the entire population which it claims to represent.

In other words, sampling is only a tool which helps to know the characteristics of the universe or population by examining only a small part of it.

There are basically two types of sampling: **probability sampling** and **non-probability sampling**. *Probability sampling* is one in which every unit of the population has an equal probability of being selected for the sample. It offers a high degree of representativeness. However, this method is expensive, time-consuming and relatively complicated since it requires a large sample size and the units selected are usually widely scattered. *Non-probability sampling* makes no claim for representativeness, as every unit does not get the chance of being selected. It is the researcher who decides which sample units should be chosen.

Probability sampling today remains the primary method for selecting large, representative samples for social science and business researches. Some of the important sampling designs or methods under this category are simple random sampling, stratified random sampling, systematic (or interval) sampling, cluster sampling, and multi-stage sampling.

i. Simple Random Sampling:

Random sampling refers to the sampling technique in which each and every item of the population is given an equal chance of being included in the sample. The selection is thus free from personal bias because the investigator does not exercise his discretion or preference in the choice of items. Since selection of items in the sample depends entirely on chance this method is also known as the method of chance selection. Some people believe that randomness of selection can be achieved by unsystematic and haphazard procedures. But this is quite wrong. However, the point to be emphasized is that unless precaution is taken to avoid bias and a conscious effort is made to ensure the operation of chance factors, the resulting sample shall not be a random sample. Random sampling is sometimes referred to as 'representative sampling'. If the sample is chosen at random and if the size of the sample is sufficiently large, it will represent all groups in the universe. A random sample is also known as a 'probability sample' because every item of the universe has an equal opportunity of being selected in the sample. To ensure randomness of selection one may adopt any of the following methods:

- a) Lottery Method: This is a very popular method of taking a random sample. Under this method, all items of the universe are numbered on separate slips of paper of identical size and shape. These slips are then folded and mixed up in a container or drum. A blindfold selection is then made of the number of slips required to constitute the desired sample size. The selection of items thus depends entirely on chance.

- b) Table of Random Numbers: The lottery method discussed above becomes quite cumbersome to use as the size of population increases. An alternative method of random selection is that of using the table of random numbers. Three such tables are available, namely (i) Tippett's table of random numbers, (ii) Fisher and Yate's numbers, and (iii) Kendall and Babington Smith numbers.

The merits of random sampling lies in the fact that since the selection of items in the sample depends entirely on chance there is no possibility of personal bias affecting the results. Further, as the size of the sample increases, it becomes increasingly representative of the population. However, the use of random sampling necessitates a completely catalogued universe from which to draw the sample. But it is often difficult for the investigator to have up-to-date lists of all the items of the population to be sampled. This restricts the use of random sampling method.

ii. Stratified Random Sampling:

In this sampling method, the population is divided into various stratas or classes and a sample is drawn from each stratum at random. For example, if we are interested in studying the consumption pattern of the people of Delhi, the city of Delhi may be divided into various parts or zones and from each part a sample may be taken at random. However, the selection of cases from each stratum must be done with great care and in accordance with a carefully designed plan as otherwise random selection from the various strata may not be accomplished.

Stratified sampling may be either *proportional* or *disproportional*. In proportional stratified sampling, the cases are drawn from each stratum in the same proportion as they occur in the universe. For example, if we divide the city of Delhi into four zones A, B, C, and D with 40%, 30%, 20% and 10% of the total population respectively and if the sample size is one thousand then we should draw 400, 300, 200 and 100 cases respectively from zones A, B, C and D, *i.e.*, sample is proportional to the size in the universe. In disproportional stratified sampling, an equal number of cases is taken from each stratum, regardless of how the stratum is represented in the universe. Thus, in the above example, an equal number of items from each zone may be drawn, that is, 250. This approach is obviously inferior to the proportional stratified sampling.

The most important merit of the stratified random sampling is that it is more representative. Since the population is first divided into various stratas and then a sample is drawn from each stratum, there is little possibility of any essential group of the population being completely excluded. A more representative sample is thus secured. Stratified sampling is frequently regarded as the most efficient system of sampling. However, utmost care must be exercised in dividing the population into

various stratas. Each stratum must contain, as far as possible, homogenous items as otherwise the results may not be reliable. However, this is a very difficult task and may involve considerable time and expense.

iii. Systematic or Interval Sampling:

This method is popularly used in those cases where a complete list of the population from which sample is to be drawn is available. It involves obtaining a sample of items by drawing every  $n^{\text{th}}$  item from a predetermined list of items. In simple words, it involves randomly selecting the first respondent and then every  $n^{\text{th}}$  person after that; 'n' is the sampling interval. For example, if a complete list of 1000 students of a college is available and if we want to draw a sample of 200 this means we must take every fifth item (*i.e.*,  $n = 5$ ). The first item between one and five shall be selected at random. Suppose it comes out to be three. Now we shall go on adding five and obtain numbers of the desired sample. Thus, the second item would be the 8<sup>th</sup> student, the third, 13<sup>th</sup> student and so on.

Systematic sampling differs from simple random sampling in that in the latter, the selections are independent of each other; in the former the selection of sample units is dependent on the selection of a previous one. The systematic sampling is more convenient to adopt than the random sampling or the stratified sampling method. The time and work involved in sampling by this method are relatively smaller. It is a rapid method and eliminates several steps otherwise taken in probability sampling. However, critics of this method argue that it ignore all persons between two  $n^{\text{th}}$  numbers with the result that the possibility of over representation and under representation of several groups is greater.

iv. Cluster Sampling:

This sampling implies dividing population into clusters and drawing random sample either from all clusters or selected clusters. This method is used when (a) cluster criteria are significant for the study, and (b) economic considerations are significant. In cluster sampling, initial clusters are called *primary* sampling units; clusters within the primary clusters are called *secondary* sampling units; and clusters within the secondary clusters are called *multi-stage* clusters. When clusters are geographic units, it is called *area sampling*. For example, dividing one city into various wards, each ward into areas, each area into neighbourhoods and each neighbourhood into lanes. We can take an example of a hospital. The issue is to ascertain the problems faced by doctors, patients and visitors in different units and to introduce some reformative programmes. Administratively, it will not be viable to call all doctors from all units nor a large number of patients admitted in different units like cardiology, neurology, orthopaedic, gynaecology, and so on. Treating each unit as a cluster, randomly selected doctors and patients – say two doctors and three

patients or about 50 people all together – from all units may be invited for discussions. Arriving at a consensus for immediate reforms needed, a plan can be chalked out for seeking grant from the government.

The advantages of cluster sampling are that it is much easier to apply this sampling design when large populations are studied or when large geographical area is studied. Further, the cost involved in this method is much less than in other methods of sampling. The disadvantages of this sampling method are that each cluster may not be of equal size and hence the comparison so done would not be on equal basis. The chances of sampling error are greater as there could be homogeneity in one cluster but heterogeneity in other.

v. Multi-Stage Sampling:

As the name implies this method refers to a sampling procedure which is carried out in several stages, but only the last sample of subjects is studied. Suppose, it is decided to take a sample of 5,000 households from the State of Uttar Pradesh. At the first stage, the State may be divided into number of districts and a few districts selected at random. At the second stage, each district may be sub-divided into a number of villages and a sample of villages may be taken at random. At the third stage, a number of households may be selected from each of the villages selected at the second stage. In this way, at each stage the sample size becomes smaller and smaller. The merit of multi-stage sampling is that it introduces flexibility in the sampling method which is lacking in the other methods. It enables existing divisions and sub-divisions of the population to be used as units at various stages, and permits the field work so be concentrated and yet large area to be covered. Another important advantage in this sampling design is that is more representative. Further, in all cases, complete listing of population is not necessary. This saves cost. However, a multi-stage sample is in general less accurate than a sample containing the same number of final stage units which have been selected by some suitable single stages process.

Let's now discuss about the non-probability sampling. In many research situations, particularly those where there is no list of persons to be studied (e.g., widows, alcoholics, migrant workers, etc.) probability sampling is difficult and inappropriate to use. In such research, non-probability sampling is the most appropriate one. Non-probability sampling procedures do not employ the rules of probability theory, do not claim representativeness, and are usually used for qualitative exploratory analysis. Some of the important sampling designs under this category are convenience sampling, purposive or judgement sampling, quota sampling, snowball sampling and volunteer sampling.

i. Convenience Sampling:

This is also known as an 'accidental' or 'haphazard' sampling. In this sampling, the researcher studies all those persons who are most conveniently available or who accidentally come in his contact during a certain period of time in the research. For example, the researcher engaged in the study of university students might visit the university canteen, library, some departments, play-grounds, verandahs and interview certain number of students. Another example is of election study. During election times, media personnel often present man-on-the-street interviews that are presumed to reflect public opinion. In such sampling, representativeness is not significant. The most obvious advantages of convenience sample is that it is quick and economical. But it may be a very biased sample. The possible sources of bias could be: (i) the respondents may have a vested interest to serve in cooperating with the interviewer, and (ii) the respondents may be those who are vocal and/or want to brag. Convenience samples are best utilised for exploratory research when additional research will subsequently be conducted with a probability sample.

ii. Purposive Sampling:

Purposive sampling is also known as judgement sampling. In this, the choice of sample items depends exclusively on the discretion of the investigator. In other words, the investigator exercises his judgement in the choice and includes those items in the sample which he thinks are most typical of the universe with regard to the characteristics under investigation. For example, if a sample of ten students is to be selected from a class of sixty for analysing the spending habits of students, the investigator would select 10 students who, in his opinion, are representative of the class. This method, though simple, is not scientific because there is a big possibility of the results being affected by the personal prejudice or bias of the investigator. Thus judgement sampling involves the risk that the investigator may establish foregone conclusions by including those items in the sample which conform to his preconceived notions. For example, if an investigator holds the view that the wages of workers in a certain establishment are very low, and if he adopts the judgment sampling method, he may include only those workers in the sample whose wages are low and thereby establish his point of view which may be far from the truth. Since an element of subjectiveness is possible, this method cannot be recommended for general use. (Please remember this argument. You would need it as one of the criticisms against Karl Marx.) However, because of simplicity and easy adaptability this method is quite often used by businessmen in the solution of everyday problems. Indeed, if applied with skill and care, the judgement method can be of great help to businessmen. At least, it helps deriving somewhat better solutions to the problems than could be obtained without it.

iii. Quota Sampling:

Quota sampling is a type of judgement sampling. In a quota sample, quotas are set up according to given criteria but, within the quotas, the selection of sample items depends on personal judgement. For example, in a radio listening survey, the interviewers may be told to interview 500 people living in a certain area and that out of every 100 persons interviewed 60 are to be housewives, 25 farmers, and 15 children. Within these quotas the interviewer is to free to select the people to be interviewed. The cost per person interviewed may be relatively small for a quota sample but there are numerous opportunities for bias which may invalidate results. Because of the risk of personal prejudice and bias entering the process of selection, the quota sampling is rarely used in practical work.

iv. Snowball Sampling:

In this technique, the researcher begins the research with the few respondents who are known and available to him. Subsequently, these respondents give other names who meet the criteria of research, who in turn give more new names. This process is continued until 'adequate' number of persons are interviewed or until no more respondents are discovered. For instance, in studying wife battering, the researcher may first interview those cases whom he knows, who may later on give additional names, and who in turn may give still new names. This method is employed when the target population is unknown or when it is difficult to approach the respondents in any other way. Reduced sample sizes and costs are a clear advantage of snowball sampling. Bias enters because a person known to someone (also in the sample) has a higher probability of being similar to the first person. If there are major differences between those who are widely known by others and those who are not, there may be serious problems with snowball sampling.

v. Volunteer Sampling:

This is the technique in which the respondent himself volunteers to give information he holds. The success of the research is dependent on the 'rich' information given by the respondents. However, there is a possibility that the informants may not truly represent the population, i.e., they may not have the aggregate characteristics of the population. Further, the personal leanings of the researcher of being prejudiced against certain types of persons, say, untouchables or religious minorities, may also affect the validity of the findings.

On a review of the pros and cons of the various methods of sampling, it is clear that stratified sampling and systematic sampling methods based on random principle are more reliable, and hence these methods are more widely used than others.

Let's now briefly discuss the merits of the sampling procedure in general. The sampling technique has the following merits over the complete enumeration survey:

1. Less time: Since sampling is a study of a part of the population, considerable time and labour are saved when a sample survey is carried out. Time is saved not only in collecting data but also in processing it. For these reasons a sample often provides more timely data in practice than a census.
2. Less cost: Sampling also edges out other techniques of data collection in terms of the cost involved. This is a great advantage particularly in an underdeveloped economy where much of the information would be difficult to collect by the census method for lack of adequate resources.
3. More reliable results: Although the sampling technique involves certain inaccuracies owing to sampling errors, the result obtained is generally more reliable than that obtained from a complete count. This is because more effective precautions can be taken in a sample survey to ensure that the information is accurate and complete. Moreover, it is possible to avail of the services of experts and to impart thorough training to the investigators in a sample survey which further reduces the possibility of errors. Follow-up work can also be undertaken much more effectively in the sampling method.
4. More detailed information: Since the sampling technique saves time and money, it is possible to collect more detailed information in a sample survey. For example, if the population consists of 1,000 persons in a survey of the consumption pattern of the people, the two alternative techniques available are as follows:

(a) We may collect the necessary data from each one of the 1,000 people through a questionnaire containing, say, 10 questions (census method),

Or

(b) We may take a sample of 100 persons (i.e. 10% of population and prepare a questionnaire containing as many as 100 questions. The expenses

involved in the latter case almost be the same as in the former but it will enable nine times more information to be obtained.

However, despite the various advantages of sampling, it is not altogether free from limitations. Some of the difficulties involved in sampling are stated below:

1. A sample survey must be carefully planned and executed otherwise the results obtained may be inaccurate and misleading.
2. Sampling generally requires the services of experts for the proper planning and execution of the survey. In the absence of qualified and experienced persons, the information obtained from sample surveys cannot be relied upon.
3. If the information is required for each and every unit in the domain of study, sample method cannot be adopted.

Dear Candidate, it would be useful here to discuss the various types of errors that often are committed while collecting the data. Though it is less likely that a question would be asked on this but given the unpredictability of UPSC, I would suggest you to just glance through it.

To appreciate the need for sample surveys, it is necessary to understand clearly the role of *sampling* and *non-sampling errors* in complete enumeration and sample surveys. The errors arising due to drawing inferences about the population on the basis of few observations (sample) is termed as *sampling errors*. Clearly, the sampling error, in this sense is non-existent in a complete enumeration survey, since the whole population is surveyed. However, the errors mainly arising at the stages of ascertainment and processing of data which are termed *non-sampling errors* are common both in complete enumeration and sample surveys.

### Sampling Errors:

Even if utmost care has been taken in selecting a sample, the results derived from the sample may not be representative of the population from which it is drawn, because samples are seldom, if ever, perfect miniatures of the population. This gives rise to sampling errors. Sampling errors are thus due to the fact that samples are used and to the particular method used in selecting the items from the population. Sampling errors are of two types – biased and unbiased. Biased errors are those which arise from any kind of bias in selection, estimation, etc. Bias may arise either due to a faulty process of selection or faulty method of analysis. Unbiased errors, on the other hand, arise due to chance differences between the members of population included in the sample and those not included. The simplest and the only certain way

of avoiding bias in the selection process is for the sample to be drawn either entirely at random or at random, subject to restrictions, which, while improving the accuracy, are of such a nature that they do not introduce bias in the results.

### Non-sampling Errors:

When a complete enumeration of units in the universe is made one would expect that it would give rise to data free from errors. However, in practice it is not so. For example, it is difficult to completely avoid errors of observation or ascertainment. So also in the processing of data tabulation errors may be committed affecting the final results. Errors arising in this manner are termed non-sampling errors, as they are due to factors other than the inductive process of inferring about the population from a sample. Thus, the data obtained in a census by complete enumeration, although free from sampling errors, would still be subject to non-sampling errors, whereas the results of a sample survey would be subject to sampling errors as well as non-sampling errors.

Non-sampling errors can occur at every stage of planning and execution of the census or survey. Such errors can arise due to a number of causes such as defective methods of data collection and tabulation, faulty definitions, incomplete coverage of the population or sample, etc. More specifically, non-sampling errors may arise from one or more of the following factors:

1. Data specification being inadequate and inconsistent with respect to the objectives of the census or sample survey.
2. Inappropriate statistical unit.
3. Inaccurate or inappropriate methods of interviews, observation or measurement with inadequate or ambiguous schedules, definitions or instructions.
4. Lack of trained and experienced investigators.
5. Lack of adequate inspection and supervision of primary staff.
6. Errors due to non-response, *i.e.*, incomplete coverage in respect of units.
7. Errors in data processing operations such as coding, punching, verification, tabulation, etc.
8. Errors committed during presentation and printing of tabulated results.

These sources are not exhaustive, but are given to indicate some of the possible sources of error. In some situations the non-sampling errors may be large and deserve greater attention than the sampling error. While, in general, sampling error decreases with increase in sample size, non-sampling error tends to increase with the sample size. In the case of complete enumeration, non-sampling error and

in the case of sample surveys both sampling and non-sampling errors require to be controlled and reduced to a level at which their presence does not vitiate the use of final results.

### **Survey:**

The most common type of empirical, or quantitative, research in sociology is the survey, which consists of systematically questioning people about their opinions, attitudes, or behaviour. Questionnaires and structured interviews are the usual methods employed to gather data for a research design known as the 'social survey'.

Social surveys may be roughly divided into two categories, 'descriptive' and 'analytical'. A descriptive survey, as its name suggests, is concerned with description rather than explanation. It aims to provide an accurate measurement of the distribution of certain characteristics in a given population. For example, a survey may be conducted in a city or town to measure the extent of poverty in the given population. Here the researcher and his team would be interested in collecting the data on average per capita income of the working class stratum or population below poverty line, etc. In other words, they aim to measure the extent of poverty in a given population rather than to explain the causes of poverty. Analytic surveys, on the other hand, are concerned with explanation. They are designed to test hypotheses about the relationships between a number of factors or variables. Thus an analytic survey may seek to discover possible relationships between social class and religious behaviour, ethnicity and mental health, family size and educational attainment or age and voting behaviour. Analytic surveys are not simply concerned with discovering relationship but also with explaining them.

Analytic surveys are usually designed to test the effects of a number of variables or factors on some other variable. The researcher often begins with a hypothesis which postulates a relationship between variables and the direction of cause and effect. For example, he may suggest that social class differences in some way cause or determine variations in mental health. There may be other factors affecting mental health, however, and these must also be considered if the influence of social class is to be accurately assessed. For example, variables such as age, ethnicity and gender may account for some variation in mental health. As a result researchers usually gather data on a range of factors which might influence the variable in question. The method used to analyse relationships between variables is known as 'multivariate' or 'variable analysis'. With the aid of various statistical techniques, the analyst attempts to measure the effects of a number of variables upon another. This method was pioneered in sociology by Durkheim in his study of suicide. Official statistics revealed significant variations in suicide rate between

European societies. Durkheim's research indicated that predominantly Protestant societies had a higher rate of suicide than societies in which Catholicism was the majority faith. But before a causal relationship could be claimed between religion and suicide rates, it was necessary to eliminate other possibilities. For example, could variations in suicide rates be the result of differences in national cultures? To test this possibility, Durkheim held the variable of national culture constant by examining differences in suicide rates between Catholics and Protestants within the same society. The relationship still held. Within the same society Protestants had higher suicide rates than Catholics.

Durkheim then went a step further and examined the possibility that regional differences rather than religion might account for variations in suicide rates. He found, for example, that Bavaria had the lowest suicide rate of all the states in Germany and it also had the highest proportion of Catholics. Yet might the suicide rate be due to the peculiarities of Bavaria as a region rather than its predominantly Catholic population? To test this possibility Durkheim compared the suicide rates and the religious composition of the various provinces within Bavaria. He found that the higher the proportion of Protestants in each province, the higher the suicide rate. Again the relationship between religion and rates of suicide was confirmed. By eliminating variables such as national culture and region, Durkheim was able to strengthen the relationship between religion and suicide rates and provide increasing support for his claim that the relationship is a causal one.

A social survey involves the collection of standardized information from a sample selected as being representative of a particular group or population. The group from which the sample is drawn may be the population as whole, a particular class, ethnic, gender or age group, or individuals with certain characteristics in common such as married or divorced persons, manual workers or professionals. The group selected for study will, of course, depend on what the researcher wishes to investigate. Standardized information is obtained by asking the same set of questions to all members of the sample.

Let's briefly discuss some of the major steps normally involved in survey research.

Firstly, before a survey is begun, the issues to be explored must be clearly defined. At the same time, the target population to be interviewed is selected. The target population might be identified on the basis of the characteristics that the researcher is interested in examining. It could either be a particular gender or age group, or any specific socio-economic section of the society, etc. This first step is crucial, for if the population is not correctly specified, the results of the survey may be meaningless. For example, if the aim of the research is to predict the results of an

election, it is very important that the population chosen consist only of those persons who will actually vote in that election.

Secondly, if the population is large, time and cost will almost always make it impractical to interview the entire population. So, the second step in surveying is to pick an appropriate sample of the population to interview. A sample is a limited number of selected cases drawn from a large group. Careful procedures have been established for selecting samples. The better the sampling procedure, the more closely the sample will resemble the entire population and the more accurate will be the generalizations or predictions. In other words, if generalizations are to be made from the findings of a social survey, it is essential that the sample is representative. This is often accomplished by means of a 'random sample'. We have already discussed the various types of sampling techniques and their merits and limitations. Once the researcher is satisfied that he has obtained a representative sample, he can begin the survey proper and feel some justification in generalizing from its findings.

Once the sample is selected, the third step in survey research is to interview or administer the questionnaire to the selected people and to collect the data. At this point a major consideration is the precision of the questions. Do the questions really pinpoint the issue concerned? Are they phrased in such a way that they will be interpreted correctly and similarly by each person interviewed *i.e.*, the respondents. In addition to being precise and unambiguous in meaning, a survey question must also be neutrally stated.

Please note that for the most accurate results, the entire sample must be interviewed, particularly if the sample is small. If some people refuse to answer or are unavailable for interviewing, the sample is no longer representative and, consequently, the accuracy of the data may be reduced. Non-response is frequently a serious problem when questionnaires are sent by mail, for refusals to respond to mailed questionnaires tend to be high. Replies often come only from those who have some interest in the particular issue, thus introducing a bias into the survey findings. To assure maximum response, most major attitude surveys and public opinion polls are conducted through personal interviews. These interviews range from the highly structured to be highly unstructured. A structured interview consists of a set of questions and answers are always stated in the same way and in the same sequence. The answers are thus easily compiled and generalized. Most public opinion polls use structured interviews. For other research purposes, where more extensive information about individual attitudes or behaviour is desired, the unstructured interview has many advantages. An unstructured interview may consist of open ended questions (How do you feel about the inter-caste marriages or caste-based reservations?) or even just a list of topics to be discussed. It is possible for the interviewer to introduce bias into the survey. He may, for example, use expressions

or make comments that encourage the respondent to answer in a certain way. In an unstructured interview he may influence the answers by the way he phrases the questions. It is important that interviewers be suited to their task and that they be well trained in the techniques of interviewing.

The final step in survey research is the tabulation, analysis, and interpretation of the data. In all but the smallest surveys, this step normally involves the use of computers.

There are several possible sources of error in survey results. Sampling error is the degree to which the selected sample misrepresents the population as a whole. Other major sources of error arise from problems in observation and measurement, processing the data, and analyzing the findings. A basic problem, with all surveys is that what people say may not always agree with how they act. People sometimes conceal their attitude purposely. An individual prejudiced against lower castes in India, for example, may act in a discriminatory fashion toward them, but because he knows that this prejudice is socially disapproved of, he will not admit it to an interviewer. Research that is well designed and carried out can help to overcome these difficulties, but the sociologist must be constantly aware that attitudes expressed in interviews are not always perfect expressions of underlying values, and that actions do not always reflect stated attitudes.

The success of any survey is, however, ultimately dependent on the quality of its data. At the end of the day a social survey stands or falls on the validity of its data.

### **Case Study:**

Case study method is an ideal methodology when a holistic, in-depth investigation is needed. Frederic Le Play is reputed to have introduced the *case study* method into social science. He used it as a handmaiden to statistics in his studies of family budgets. Herbert Spencer was one of the first sociologists to use case materials in his ethnographic studies.

Case study is an intensive study of a case which may be an individual, an institution, a system, a community, an organisation, an event, or even the entire culture. Robert K. Yin has defined case study as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used”. It is, thus, a kind of research design which usually involves the qualitative method of selecting the sources of data. It presents

the holistic account that offers insights into the case under study. Please note that while a case study can either be quantitative or qualitative, or even both, but most case studies lie within the realm of qualitative methodology. It is the preferred strategy when “how, who, why and what” questions are being asked or when the focus is on a contemporary phenomenon within a real-life context.

Case studies have been used in varied social investigations, particularly, in sociological studies, and are designed to bring out the details from the viewpoint of the participants by using multiple sources of data. It is, therefore, an approach to explore and analyze the life of social unit, be it a person, a family, an institution, a culture group or even an entire community. Its aim is to determine the factors that account for the complex behaviour patterns of the unit and the relationships of the unit to its surroundings. Case-data may be gathered, exhaustively, on the entire life cycle or on a definite section of the cycle of a unit but always with a view to ascertain the natural history of social unit and its relationship to the social factors and forces involved in its environment. In other words, through case study, researchers attempt to see the variety of factors within a social unit as an integrated whole. When attention is focussed on the development of the case, it is called ‘case history’. For example, how a particular boy became a juvenile delinquent because of lack of parental control, impact of peers, lack of attention by teachers, and money earned through cheap means, and then became an adolescent thief and a sex criminal and ultimately a professional pickpocket is tracing criminality through case history method.

Data, for case studies, can be collected by primary as well as secondary sources. Two main sources of primary data collection are interviews and observation. Interviews may be structured or unstructured. Most commonly, it is the unstructured interview which is used by the investigators. The observation method used could either be participant or non-participant. While the secondary data can be collected through a variety of sources like reports, records, newspapers, magazines, books, files, diaries, etc.

Sjoberg has identified some essential characteristics of case study method which are as follows:

- The case study ‘strives towards a holistic understanding of cultural systems of action’. Cultural systems of action refer to sets of inter-related activities engaged in by the actors in a social situation.
- Case study research is not sampling research. However, selection of the items or sources must be done so as to maximize what can be learned, in the limited period of time available for the study.

- Because they are intensive in nature, case studies tend to be selective, focusing on one or two issues that are fundamental to understanding the system being examined.
- ‘Case studies are multi-perspectival analyses.’ This means that the researcher considers not just the voice and perspective of the actors but also of the relevant groups of actors and the interaction between them.

According to Black and Champion, some of the advantages of case study design are:

- Case study makes holistic and in-depth study of the phenomenon possible.
- It offers flexibility with respect to using methods for collecting data, e.g., questionnaire, interview, observation, etc.
- It could be used for studying any specific dimension of the topic in detail.
- It can be conducted in practically any kind of social setting.
- Case studies are relatively inexpensive.

However, practically, the case study method is very time consuming and very demanding of the researcher. The possibility of becoming involved emotionally is much greater than in survey research, thus, making detached and objective observation difficult and sometimes, impossible. Another problem in the use of case study method is that, since, only one example of a social situation or group is being studied the results may not be representative of all groups or situations in the category. In other words, the particular mental hospital ward, slum, or suburb may not be typical of all mental hospital wards, slums or suburbs. Critics of the case study method believe that the study of a small number of cases can offer no grounds for establishing reliability or generality of findings. Some dismiss case study research as useful only as an exploratory tool. Yet, researchers continue to use the case study research method with success in carefully planned and crafted studies of real life situations, issues and problems.

Please note that in comparison to survey, case study method is more intensive while survey research is more extensive in nature. In other words, surveys are usually conducted on a fairly large scale as contrasted with case studies which tend to be more intensive but on a smaller scale. Case study is done in terms of limited space and broader time, whereas survey is done in terms of limited time with broader space. Case study is inward looking while survey method is outward looking.

## Interviews:

Interviews are one of the most widely used methods of gathering data in sociology. They consist of the researcher asking the interviewee or respondent a series of questions. Interviews can be classified as '*structured*' or '*unstructured*' though many fall somewhere between these two extremes. In a structured interview, the wording of the questions and the order in which they are asked remains the same in every case. The result is a fairly formal question and answer session. Unstructured interviews are more like an informal conversation. The interviewer usually has particular topics in mind to cover but few if any preset questions. He has the freedom to phrase questions as he likes, ask the respondent to develop his answers and probe responses which might be unclear and ambiguous. This freedom is often extended to the respondent who may be allowed to direct the interview into areas which interest him.

Data from structured interviews are generally regarded as more reliable. Since the order and wording of questions are the same for all respondents, it is more likely that they will be responding to the same stimuli. Thus different answers to the same set of questions will indicate real differences between the respondents. Different answers will not therefore simply reflect differences in the way questions are phrased. Thus the more structured or standardized an interview, the more easily its results can be tested by researchers investigating other groups. By comparison data from unstructured interviews are seen as less reliable. Questions are phrased in a variety of ways and the relationship between interviewer and respondent is likely to be more intimate. It is unclear to what degree answers are influenced by these factors. Differences between respondents may simply reflect differences in the nature of the interviews. It is therefore more difficult to replicate an unstructured interview but the greater flexibility of unstructured interviews may strengthen the validity of the data. They provide more opportunity to discover what the respondent 'really means'. Ambiguities in questions and answers can be clarified and the interviewers can probe for shades of meaning. In general, structured interviews are regarded as appropriate for obtaining answers to questions of 'fact' such as the age, sex and job of the respondent. Unstructured interviews are seen as more appropriate for eliciting attitudes and opinions. Interview data are often taken as indications of respondents' attitudes and behaviour in everyday life although what a person says in an interview may have little to do with his normal routines. Even if the respondent does his best to provide honest answers, he may be unaware of the taken-for-granted assumptions which he employs in everyday life.

Various studies have suggested, though, that interviews pose serious problems of reliability and validity. This is partly due to the fact that interviews are interaction situations. Thus the results of an interview will depend in part on the way the

participants define the situation, their perceptions of each other and so on. Most studies have been concerned about the effects of interviewers on respondents. The significance of what has come to be known as '*interviewer bias*' can be seen from research conducted by J. Allan Williams Jr. He suggests that the greater the status differences between interviewer and respondent, the less likely the respondent will be to express his true feelings. To test this proposition, Williams organized a series of interviews with 840 Blacks in North Carolina during the early 1960s. All the interviewers were female, thirteen were Black and nine White. Important differences were revealed between the results obtained by Black and White interviewers. For example, a significantly higher proportion of those interviewed by Black said they approved of civil rights demonstrations and school desegregation. In addition more respondents refused to give any answers to these questions when faced with a White interviewer. Williams argues that Blacks often tended to give the answers they felt that White interviewers wanted to hear. He sees this as due to the nature of the power structure in the American South at the time of the research. Williams's findings suggest that when status differences are wide, as is often the case with middle-class sociologists interviewing members of the lower working class, interview data should be regarded with caution.

Interviewers, like everybody else, have values, attitudes and expectations. However much the interviewer tries to disguise his views they may well be communicated to the respondent. This is particularly likely in the more informal situation of the unstructured interview. As a result the interviewer may 'lead' the respondent whose answer will then reflect something of the interviewer's attitudes and expectations. This can be seen from a study conducted by Stuart A. Rice in 1914. Two thousand destitute men were asked, among other things, to explain their situation. There was a strong tendency for those interviewed by a supporter of prohibition to blame their demise on alcohol but those interviewed by a committed socialist were much more likely to explain their plight in terms of the industrial situation. To counter this problem, interviewers are often advised to be 'non-directive', to refrain from offering opinions, to avoid expressions of approval and disapproval. It is suggested they establish 'rapport' with their respondents, that is a warm, friendly relationship which implies sympathy and understanding, while at the same time guard against communicating their own attitudes and expectations.

However, despite these limitations, interviews do have certain advantages. They are less costly and time consuming and can cover much larger samples. Interviews can fill in the picture by providing data on the respondent's past and his activities in a range of contexts. Further, the response rate of the interview method is high, particularly when compared to mailed questionnaires. Most importantly, the validity of the information can be checked. Since the respondent's confidence can be sought through personal rapport, in-depth probing is possible. Interviewer can

explain difficult terms and remove confusion and misunderstandings. Interviewer gets opportunity to observe the non-verbal behaviour of the respondent and hence enables him to record the responses in the right perspective.

### **Questionnaires:**

A questionnaire consists of a list of preset questions to which respondents are asked to supply answers. Questionnaire poses a structured and standardized set of questions, either to one person or to a small population, or most commonly to respondents in a sample survey. Structure here refers to questions appearing in a consistent, predetermined sequence and form. Researcher who use questionnaires regard them as a comparatively cheap, fast and efficient method for obtaining large amounts of quantifiable data on relatively large numbers of people.

Questionnaires may either be distributed by mail or by hand, through arrangements such as the 'drop-off', where a fieldworker leaves the questionnaire for respondents to complete by themselves, with provision either for mailing the complete form back to the research office, or for a return call by the fieldworker to collect the questionnaire. A questionnaire administered in a face-to-face interview, or over the telephone (growing in popularity among researchers) is generally termed a 'schedule'. In deciding upon one of these methods, researcher balances the cost, probable response rate and the nature of the questions to be posed.

Please note that the set of structured questions in which answers are recorded by the interviewer himself is called *interview schedule* or simply the *schedule*. It is distinguished from the questionnaire in the sense that in the later (questionnaire) the answers are filled in by the respondent himself or herself. Though the questionnaire is used when the respondents are educated, schedule can be used both for the illiterate and the educated respondents. The questionnaire is especially useful when the respondents are scattered in a large geographical area but the schedule is used when the respondents are located in a small area so that they can be personally contacted. The wording of the questions in the questionnaire has to be simple. Since the interviewer is not present to explain the meaning and importance of the question to the respondent. In the schedule, the investigator gets the opportunity to explain whatever the respondent needs to know.

Questionnaires could broadly be classified into three types, *standardized questionnaire*, *open-ended questionnaire* and *close-ended questionnaire*. Standardized questionnaires are those in which there are definite, concrete and pre-ordained questions with additional questions limited to those necessary to clarify inadequate answers or to elicit more detailed responses. The questions are presented

with exactly the same wording and in the same order to all the respondents. The reason for standardized questions is to ensure that all the respondents are replying to the same set of questions. Here the respondents or the researcher mark certain categories of reply to the questions asked for instance, 'yes/no/don't know' or 'very likely/likely/unlikely/very unlikely'. Standardized questionnaires have the advantage that responses are easy to compare and tabulate, since only a small number of categories are involved. On the other hand, because the standardized questions do not allow for subtleties of opinion or verbal expressions, the information they yield is likely to be restricted in scope.

Open-ended questions allow the respondent to compose his own answer rather than choosing between a number of given answers. For example, 'What's your view on the reservation policy in India?' Open-ended questionnaires are designed to permit a free response from the subject rather than one limited to certain alternatives. This may provide more valid data since he can say what he means in his own words. However, this kind of response may be difficult to classify and quantify. Answers must be carefully interpreted before the researcher is able to arrive at certain conclusion.

Close-ended or fixed-choice questions, on the other hand require the respondent to make a choice between a number of given answers. For example, 'Do you agree with the reservation policy in India?' The answer choices given are, 'yes', 'no', 'partly'. From the point of view of the interpretation of questionnaires the closed question is preferable. The results are unambiguous and comparable. With an open question, the heterogeneous answers must first be ordered into classes (codified) before they can be interpreted. Constructing classes in this way is sometimes very laborious and a challenging task. From the point of view of the reliability of interview-data also the closed question is preferable. This is because that the response to an open-ended question is subjected to the perception and linguistic ability of the respondent and under certain circumstances this can produce serious distortions.

Please note that questionnaires may be administered in a number of ways. Often they are given to individuals by interviewers, in which case they take the form of structured interviews. This method was used by Goldthorpe and Lockwood in the affluent worker study and by Young and Willmott in their survey of family life in London conducted in 1970.

Although the content of questionnaires is governed by the purpose of the study, many problems of communication may still arise on all surveys regardless of content. Much careful attention and experimentation are needed to produce effectively worded questions. The language should be concise and directed toward

producing uniformity of understanding among the respondents. Great care is therefore needed in the design of a questionnaire. Sometimes the main survey is preceded by a 'pilot study' which involves giving the questionnaire to a group similar to the population to be surveyed. This helps to clear up any ambiguity in the wording of questions and to ensure their relevance to future respondents. Ideally the questions should mean the same thing to all respondents. As earlier discussed, this is extremely difficult to ensure, particularly if respondents are drawn from different social classes and ethnic groups. In addition, the researcher must be aware of the meaning respondents give to the question. He cannot simply assume that they will share his interpretation.

More importantly, questions must not only elicit stable or reliable answers but they must also provide the kind of information, which the researcher wants. More often, the problem of truth is a much more complex one. A good questionnaire will contain some 'check questions' on crucial issues, variously placed within the document, designed to parallel or confirm each other. Sometimes, these will explore other facets of the same behaviour. Usually, the cross-check question is a kind of *specification*. That is, a general question is checked by specific reference.

Questionnaires provide data which can be easily quantified. They are largely designed for this purpose. Those who adopt a positivist approach insist that this kind of measurement is essential if sociology is to progress. They argue that only when the social world is expressed in numerical terms can precise relationships be established between its parts. Only when data are quantified by means of reliable measuring instruments can the results of different studies be directly compared. Without quantification sociology will remain on the level of impressionistic guesswork and unsupported insight. It will therefore be impossible to replicate studies, establish causal relationships and support generalizations. The questionnaire is one of the main tools of measurement in positivist sociology.

Please note that in the construction of a questionnaire concepts are operationalized. This means they are put into a form which can be measured. Sociologists classify the social world in terms of a variety of concepts. For example, social class, power, family, religion, alienation and anomie are concepts used to identify and categorize social relationships, beliefs, attitudes and experiences which are seen to have certain characteristics in common. In order to transpose these rather vague concepts into measuring instruments, a number of steps are taken. Firstly, an operational definition is established. This involves breaking the concept down into various 'components' or 'dimensions' in order to specify exactly what is to be measured. Thus when Robert Blauner attempted to operationalize the concept of alienation, he divided it into four components – powerlessness, meaninglessness, isolation and self-estrangement. Once the concept has been operationally defined in

terms of a number of components, the next step involves the selection of 'indicators' for each component. Thus an indicator of Blauner's component of powerlessness might be an absence of opportunities for workers to make decisions about the organization of work tasks. Finally, indicators of each dimension are put into the form of a series of questions, which will provide quantifiable data for measuring each dimension.

However, whether such procedures succeed in producing valid measurements of human behaviour is open to question. Those who adopt phenomenological perspectives often reject the entire procedure of operational definitions, selecting indicators, constructing questionnaires and quantifying the results. They argue that rather than providing a valid picture of the social world, such operations merely serve to distort it. Since the social world is constructed by its members, the job of the sociologist is to investigate members' constructs. Positivist research procedures merely impose sociological constructs, categories and logic on that world.

There is little doubt that questionnaires are rather inexpensive and for that reason quite attractive. This is not merely a question of saving money but also of saving administrative time and talent, e.g. by using the mail system instead of a costly *ad hoc* staff of interviewers. One special advantage lies in the simultaneity of access. If it is important to reach all respondents at the same time, this is probably easier by means of questionnaires than interviews.

Sociology is Simple  
Sociology is Scoring  
provided that you  
Study Sociology Systematically

## Observation:

Observation is a method that employs vision as its main means of data collection. It implies the use of eyes rather than of ears and the voice. It is accurate watching and noting of phenomena as they occur with regard to the cause and effect or mutual relations. It is watching other persons' behaviour as it actually happens without controlling it. For example, observing the life of street-children or a religious ceremony in any community.

Lindzey Gardner has defined observation as "selection, provocation, recording and encoding of that set of behaviours and settings concerning organisms '*in situ*' (naturalistic settings) which are consistent with empirical aims". In this definition, *selection* means that there is a focus in observation and also editing before, during and after the observations are made. *Provocation* means that though observers do not destroy natural settings but they can make subtle changes in natural settings which increase clarity. *Recording* means that observed incidents/events are recorded for subsequent analysis. *Encoding* involves simplification of records.

According to Black and Champion, the major purpose of observation is to capture human conduct as it actually happens. In other methods, we get a static comprehension of people's activity. In actual situation, they sometimes modify their views, sometimes contradict themselves, and sometimes are so swayed by the situation that they react differently altogether. They further argue that observation can be used as a tool of collecting information in situations where methods other than observation cannot prove to be useful, e.g., voter's behaviour during election time or worker's behaviour during strike.

A significant number of sociologists choose not to use the more scientific approaches to the study of human behaviour. They prefer to sacrifice a certain precision of measurement and objectivity in order to get closer to their subjects, to examine the social world through the perspective of the people they are investigating. These sociologists sometimes refer to quantitative researchers as those who "measure everything and understand nothing."

By far the most important of the so-called qualitative methodologies is **participant observation**, in which the researcher participates in the daily life of the population under study, observing things that happen, listening to conversations, informally questioning people. This may be done covertly, as when a sociologist becomes a prison inmate in order to study the effectiveness of rehabilitation programs. It may also be done openly, by joining a group in the formal role of observer.

In simple words, participant observation is a method in which the investigator becomes a part of the situation he is studying. He involves himself in the setting and group life of the research subjects. He shares the activities of the community observing what is going on around him, supplementing this by conversations and interview. One of the pioneering uses of participant observation by sociologists in a modern setting is recorded in William Foote Whyte's *Street Corner Society: The Social Structure of an Italian Slum*.

*Street Corner Society* by William Foote Whyte is a study of an Italian American streetcorner gang in a low-income district of south Boston. Whyte spent three and a half years living in the area as a participant observer. Whyte studied lower class "slum" street-corner groups by joining and talking informally with the members. He gained access to the first group through a social worker, became friendly with the group's leader, was introduced to other groups, and finally was accepted as "one of them" although he did not have to "play their game all the way." By "hanging out" on the street corner for a period of time, Whyte gained much valuable information about the group's goals and structure and the motivations of its members.

Supporters of participant observation have argued that, compared to other research techniques, it is least likely to lead to the sociologist imposing his reality on the social world he seeks to understand. It therefore provides the best means of obtaining a valid picture of social reality. With a structured interview – a predetermined set of questions which the interviewee is requested to answer – or a questionnaire – a set of printed questions to which the respondent is asked to provide written answer – the sociologist has already decided what is important. With preset questions he imposes his framework and priorities on those he wishes to study. By assuming the questions are relevant to his respondents he has already made many assumptions about their social world. Although the participant observer begins his work with some preconceived ideas, for example he will usually have studied the existing literature on the topic he is to investigate, he at least has the opportunity to directly observe the social world.

However, the success of participant observation depends initially upon the acceptance of the observer by the group he wishes to study. Once accepted, the participant observer must gain the trust of those he observes to be successful. Further, there are also the challenges of objectivity and value-neutrality. Since the observer participates in the events, sometimes he becomes so involved that he loses objectivity in observation. He may start interpreting events subjectively. Further, his presence may sensitise the subjects that they do not act in a natural way. In other words, his presence will to some degree influence the actions of those he observes. In this way he may modify or change the social world he wishes to investigate.

Those who argue that research methods in sociology should be drawn from the natural sciences (positivists) are often highly critical of participant observation. In particular they argue that the data obtained from participant observation lack 'reliability'. In the natural sciences data are seen to be reliable, if other researchers using the same methods of investigation on the same material produce the same results. By replicating an experiment it is possible to check for errors in observation and measurement. Once reliable data have been obtained, generalizations can then be made about the behaviour observed. No sociologist would claim that the social sciences can attain the standards of reliability employed in the natural sciences. Many would argue, however, that sociological data can attain a certain standard of reliability. They criticize participant observation for its failure to approach this standard. The data obtained by participant observation are seen to be unreliable because, as a method, its procedures are not made explicit, its observations are unsystematic and its results are rarely quantified. Thus there is no way of replicating a study and checking the reliability of its findings. Since participant observation relies heavily on the sensitivity, interpretive skills and personality of the observer, precise replication of studies using this method are difficult if not impossible. As a result it is not possible to generalize from such studies. Their value is seen to lie in providing useful insights which can then be tested on larger samples using more rigorous and systematic methods.

The above criticisms derive mainly from those who adopt a strongly positivist approach. Others would argue that what the findings of participant observation lack in reliability, they often more than make up for in validity. By coming face to face with social reality, the participant observer at least has the opportunity to make valid observations. Many would argue that the systematic questionnaire surveys favoured by many positivists have little or no chance of tapping the real social world.

Please note that in non-participant observation, the observer remains detached and does not participate or intervene in the activities of those who are being observed. He merely observes their behaviour. Sometimes, this places the persons being observed in an awkward position and their conduct becomes unnatural. But some say that though initially the observer's behaviour may affect the behaviour of the observed but after a little while, less and less attention is paid to his presence. This type of observation is more useful as a tool of data collection because the observer can choose the situations to be observed and can record the data freely. This is because the observer is not required to participate actively in the social processes at work in the social field he is observing. Since, he is not himself immediately affected by the demands of the situation, he can concentrate his whole attention more easily on systematic observation of the situation and what is happening in it.

## **Content Analysis:**

Bernard Berelson defined content analysis as “a research technique for the objective, systematic, and quantitative description of manifest content of communications.” Content analysis is a research tool focused on the actual content and internal features of media. It is used to determine the presence of certain words, concepts, themes, phrases, characters, or sentences within texts or sets of texts and to quantify this presence in an objective manner.

Content analysis or textual analysis is a methodology in the social sciences for studying the content of communication. Earl Babbie defines it as “the study of recorded human communications, such as books, websites, paintings, and laws.” Harold Lasswell formulated the core questions of content analysis: “Who says what, to whom, why, to what extent and with what effect?” Ole Holsti offers a broad definition of content analysis as “any technique for making inferences by objectively and systematically identifying specified characteristics of messages.”

In simple words, content analysis is a research tool used to determine the presence of certain words or concepts within texts or sets of texts. Researchers quantify and analyze the presence, meanings and relationships of such words and concepts, then make inferences about the messages within the texts, the writer(s), the audience, and even the culture and time of which these are a part. Texts can be defined broadly as books, book chapters, essays, interviews, discussions, newspaper headlines and articles, historical documents, speeches, conversations, advertising, theatre, informal conversation, or really any occurrence of communicative language. To conduct a content analysis on any such text, the text is coded, or broken down, into manageable categories on a variety of levels – word, word sense, phrase, sentence, or theme – and then examined using one of content analysis’ basic methods: conceptual analysis or relational analysis. Conceptual analysis can be thought of as establishing the existence and frequency of concepts in a text. Relational analysis builds on conceptual analysis by examining the relationships among concepts in a text.

Content analysis is a product of the electronic age. Though content analysis was regularly performed in the 1940s, it became a more credible and frequently used research method since the mid-1950s, as researchers started to focus on concepts rather than simply words, and on semantic relationships rather than just presence. While both traditions still continue today, content analysis now is also utilized to explore mental models, and their linguistic, affective, cognitive, social, cultural and historical significance. Due to the fact that it can be applied to examine any piece of writing or occurrence of recorded communication, content analysis is used in large number of fields, ranging from marketing and media studies, to literature and

rhetoric, ethnography and cultural studies, gender and age issues, sociology and political science, psychology and cognitive science, as well as other fields of inquiry.

For example, in a research project on gender issues, the content of the text books (particularly the stories) was analysed and it was found that how gender relations prevailing in our society manifested themselves as well as got reinforced by the gender roles described in the various stories. The girl child often was depicted as an obedient child, helping the mother in the household chores. On the other hand, the boy was often portrayed as school going, naughty, and aiming high in life. Similarly, the content analysis of the local newspapers in rural hinterland could throw light on the prevailing caste relations and the nature of the caste conflict.

Bernard Berelson has identified the various uses of content analysis. Some of them are listed below:

- Reveal international differences in communication content
- Detect the existence of propaganda
- Identify the intentions, focus or communication trends of an individual, group or institution
- Describe attitudinal and behavioural responses to communications
- Determine psychological or emotional state of persons or groups

Content analysis offers several advantages to researchers who consider using it. In particular, content analysis:

- is an unobtrusive means of analyzing interactions. One of the significant advantages of content analysis is that it is an *unobtrusive* method, *i.e.*, it has no effect on the subject being studied. In other methods (like interview, observation, experiment, etc.), the researcher is directly involved with persons. Content analysis eliminates the source of 'response bias' that threatens research whenever the respondents are directly questioned or observed.
- looks directly at communication via texts or transcripts, and hence gets at the central aspect of social interaction
- can allow for both quantitative and qualitative operations

- can provide valuable historical/cultural insights over time through analysis of texts
- makes possible a variety of cross cultural studies that would likely be unfeasible using other methods.
- provides insight into complex models of human thought and language use

Content analysis suffers from several disadvantages, both theoretical and procedural. In particular, content analysis:

- Since content analysis is a heavily planned method, it lacks the spontaneity often required in the field research
- can be extremely time consuming
- is subject to increased error, particularly when relational analysis is used to attain a higher level of interpretation
- is often devoid of theoretical base, or attempts too liberally to draw meaningful inferences about the relationships and impacts implied in a study
- often disregards the context that produced the text, as well as the state of things after the text is produced
- Some required documents may not be available to the researcher which may affect the conclusions.
- It is susceptible to coder's bias.

Dear Candidate, now just to clarify some of your queries that might have arised after reading this note on content analysis, I would like to throw some light on the debates with regard to the use of content analysis. This is not very important from the examination point of view and it will also not be possible for you to incorporate all such details in a short note given the time and word limit.

One of the leading debates among the users of content analysis is whether analysis should be quantitative or qualitative. Berelson, for example, suggests that content analysis is “objective, systematic, and quantitative.” Similarly, Silverman dismisses content analysis from his discussion of qualitative data analysis “because it is a quantitative method.” Selltiz et al. however, state that concerns over quantification in content analysis tend to emphasize “the procedures of analysis,”

rather than the “character of the data available.” Selltitz et al. suggest also that heavy quantitative content analysis results in a somewhat arbitrary limitation in the field by excluding all accounts of communication that are not in the form of numbers as well as those that may lose meaning if reduced to a numeric form (definitions, symbols, detailed explanations, photographs, and so forth). Other proponents of the content analysis, notably Smith, suggest that some blend of both quantitative and qualitative analysis should be used. Smith explains that he has taken this position “because qualitative analysis deals with the forms and antecedent-consequent patterns of form, while quantitative analysis deals with duration and frequency of form.” Abrahamson suggests that “content analysis can be fruitfully employed to examine virtually any type of communication.” As a consequence, content analysis may focus on either quantitative or qualitative aspects of communication messages.

Another controversy concerning the use of content analysis is whether the analysis should be limited to *manifest content* (those elements that are physically present and countable) or extended to more *latent content*. In the latter case, the analysis is extended to an interpretive reading of the symbolism underlying the physical data. For example, an entire speech may be assessed for how radical it was, or a novel could be considered in terms of how violent the entire text was. Stated in different words, manifest content is comparable to the *surface structure* present in the message, and latent content is the *deep structural* meaning conveyed by the message. Holsti has tried to resolve this debate: “It is true that only the manifest attributes of text may be coded, but this limitation is already implied by the requirement of objectivity. Inferences about latent meanings of messages are therefore permitted but....they require corroboration by independent evidence.” One reasonable interpretation of this passage, and a similar statement made by Berelson, suggests that although there are some dangers in directly inferring from latent symbolism, it is nonetheless possible to use it. To accomplish this sort of “deciphering” of latent symbolic meaning, researchers must first incorporate independent corroborative techniques (for example, agreement between independent coders concerning latent content or some noncontent analytic source). Finally, and especially when latent symbolism may be discussed, researchers should offer detailed excerpts from relevant statements (messages) that serve to document the researchers’ interpretations.

### **Focus Group:**

Focus group is a qualitative research method of data collection in social sciences. Over the past decade, focus groups and group interviews have emerged as popular techniques for gathering qualitative data, both among sociologists and across a wide range of academic and applied research areas.

David L. Morgan has defined focus groups as 'a research technique that collects data through group interaction on a topic determined by the researcher'. This definition has three essential components. First, it clearly states that focus groups are a research method devoted to data collection. Second, it locates the interaction in a group discussion as the source of the data. Third, it acknowledges the researcher's active role in creating the group discussion for data collection purposes.

Thus, on the basis of this definition, focus groups should be distinguished from groups whose primary purpose is something other than research, for example, therapy, education, decision-making, etc. Further, it is useful to distinguish focus groups from procedures that utilize multiple participants but do not allow interactive discussions, such as nominal groups and Delphi groups. Finally, focus groups should be distinguished from methods that collect data from naturally occurring group discussions where no one acts as an interviewer. However, there is a difference of opinion among scholars on the issue whether focus groups should be distinguished from other types of group interviews. On one hand are the scholars who use an inclusive approach and treat most forms of group interviews as variants of focus groups. On the other hand, there are scholars who use an exclusive approach and treat focus group as a distinct technique which should not be confused with other types of group interviews. In this regard, Frey and Fontana argue that group interviews can be distinguished from focus groups on the basis of three features.

- Firstly, group interviews are conducted in informal settings;
- Secondly, group interviews use non-directive interviewing, and
- Thirdly, group interviews use unstructured question formats.

Similarly, Stewart and Shamdasani associate focus groups with more or less directive interviewing styles and structured question formats.

However, applied demographers such as John Knodel, who have held focus group interviews throughout the world, concluded that focus groups can be adapted to a wide variety of settings and culture practices. Hence, in actual practice, it would be quite difficult to apply the above mentioned classification as the methodology of

focus groups or group interviews is largely dependent on the purpose of a particular project as well as the socio-cultural context.

Today focus groups, like other qualitative methods, are being used across a wide variety of research areas including education, public health, marketing research, etc. In recent years, two specific areas where the applied use of focus groups has had a major and continuing link to sociology are family planning and HIV/AIDS. Studies conducted in these areas suggest that the use of focus groups facilitated better understanding of knowledge, attitudes, and practices with regard to contraception in the Third World countries. Further, an important aspect of focus group method is that it facilitates participatory research. Various studies have suggested that use of focus group method in HIV/AIDS research has not only facilitated a better understanding of the problems being faced by at-risk groups but it also serves to “give a voice” to such marginalized groups.

### **Uses of Focus Groups in combination with other methods:**

Focus groups can be used as both either independently or in combination with other methods such as individual interviews, surveys, etc.

#### **Focus Groups and Individual Interviews:**

Focus groups and individual interviews, both are qualitative techniques of data collection. But while focus groups and group interviews provide greater breadth to the research, individual interviews on the other hand provide greater depth. Various researchers have often used in-depth individual interviews as a follow up to focus group studies in order to ascertain the degree of consistency or discrepancy in the responses of the participants.

#### **Focus Groups and Surveys:**

Morgan has described four ways of combining quantitative and qualitative methods using survey and focus groups as example. The four ways of combining the methods are based on, ‘which method received the primary attention and whether the secondary method served as a preliminary or follow-up study’?

**First combination:** *Survey as the primary method and focus group for preliminary study.*

The first combination contains studies in which surveys are the primary method and focus groups serve in a preliminary capacity. Survey researchers typically use this design to develop the context of their questionnaires. Because

surveys are inherently limited by the questions they ask, it is increasingly common to use focus groups to provide data on how the respondents themselves talk about the topics of the survey.

For example, in order to carry out a survey on the factors that influence the voting behaviour of people in rural areas, a preliminary focus group study may be undertaken to list various important factors and issues that people take into account when voting such as caste, religion, socio-economic status of the contestants, etc. The data thus collected from this preliminary focus group study may be used to design the questionnaire for the survey study.

**Second combination:** *Focus groups as the primary method and survey for preliminary study.*

In the second combination, focus groups are the primary method while surveys provide preliminary inputs. Studies following this research design make use of the data obtained from survey in selecting samples for focus groups to carry out a detailed analysis.

For example, a preliminary survey study may be carried out to know about the opinion of students regarding implementation of semester system. After determining the general opinion of the students either for or against the semester system, a more intense and detailed focus group study may be carried out to find out the reasons that students give for their respective opinion.

**Third combination:** *Survey as the primary method and focus group as a follow up.*

The third combination uses survey as the primary method and focus group as a follow up study. This type of research design is increasingly being used for interpreting the survey results and in determining the degree to which the results of both methods are in conformity or at variance with each other. For example, if a survey study finds out that people in rural areas give high priority to caste factor during voting, it may be cross-checked by a follow-up focus group study.

**Fourth combination:** *Focus group as the primary method and survey as a follow up.*

The fourth combination uses focus group as the primary method and survey as a follow up. For example, if a focus group study suggests caste factor as the most important factor determining the voting behaviour of people rural India, it may be cross checked by a follow up survey.

### **Survey Vs Focus Group:**

Survey offers more breadth to research both in terms of coverage of area as well as coverage of issues. Focus Group offers more depth to research by means of in-depth and detailed investigation over a topic.

### **Strength and Weakness of Focus Groups:**

Morgan and Krueger argue that compared to other methods the real strength of focus groups is not simply in exploring what people have to say, but in providing insights into the sources of complex behaviors and motivations. They view this advantage of focus groups as a direct outcome of the interaction in focus groups. What makes the discussion in focus groups more than the sum of separate individual interviews is the fact that the participants both query each other and explain themselves to each other. Morgan & Krueger argue that such interaction offers valuable data on the extent of consensus and diversity among the participants. This ability to observe the extent and nature of interviewees' agreement and disagreement is a unique strength of focus groups.

The weaknesses of focus groups, like their strengths, are linked to the process of producing focused interactions, raising issues about both the role of the moderator in generating the data and the impact of the group itself on the data. Agar and MacDonald, and Saferstein from their respective studies have concluded that the behaviour of the moderator has consequences for the nature of group interviews.

Sussman et al. in their study administered questionnaires before and after focus group discussion to find out if the focus group discussion changed the participants' attitudes. They found that the attitudes became more extreme after the group discussion. In other words, after the focus group discussion, there was a polarization effect on the attitudes of the participants. Thus it could be concluded that 'group effect' also influences the response of participants in a focus group.

Further, critics argue that only a limited range of topics can be researched effectively in groups. It is argued that some sensitive issues may be unacceptable for discussion among some categories of research participants. However, this assumption is being questioned in the light of widespread use of group interviews to study various sensitive issues like sexual behaviour, etc.

Dear Candidate, many of the debates about the merits of particular research methods focus on questions of 'reliability' and 'validity'. In the natural sciences, data are seen to be 'reliable' if other researchers using the same methods of investigation on the same material produce the same results. By replicating an

experiment it is possible to check for errors in observation and measurement. Once reliable data have been obtained, generalizations can then be made about the behaviour observed. No sociologist would claim that the social sciences can attain the standards of reliability employed in the natural sciences. Many would argue, however, that sociological data can attain a certain standard of reliability. Generally speaking, quantitative methods are seen to provide greater reliability. They usually produce standardized data in a statistical form: the research can be repeated and the results checked. Qualitative methods are often criticized for failing to meet the same standards of reliability. Such methods may be seen as unreliable because the procedures used to collect data can be unsystematic, the results are rarely quantified, and there is no way of replicating a qualitative study and checking the reliability of its findings.

Further, data are considered 'valid' if they provide a true picture of what is being studied. A valid statement gives a true measurement or description of what it claims to measure or describe. It is an accurate reflection of social reality. Data can be reliable without being valid. Studies can be replicated and produce the same results but those results may not be a valid measure of what the researcher intends to measure. For instance, statistics on church attendance may be reliable but they do not necessarily give a true picture of religious commitment.

Supporters of qualitative methods often argue that quantitative methods lack validity. Statistical research methods may be easy to replicate but they may not provide a true picture of social reality. They are seen to lack the depth to describe accurately the meanings and motives that form the basis of social action. They use categories imposed on the social world by sociologists, categories that may have little meaning or relevance to other members of society. To many interpretive sociologists, only qualitative methods can overcome these problems and provide a valid picture of social reality.

Researchers are sometimes attracted to quantitative methods because of their practicality. Quantitative methods are generally less time-consuming and require less personal commitment. It is usually possible to study larger and more representative samples which can provide an overall picture of society. Qualitative research often has to be confined to the study of small numbers because of practical limitations. It is more suited to providing an in-depth insight into a smaller sample of people.

## Variables (Concepts) and Hypothesis

Dear Candidate, in our discussion on 'scientific method', we have learned that a social scientist starts his research by defining precisely what it is he wants to know. This he does by formulating a clear and verifiable hypothesis. Let us now discuss hypothesis and its relevance in sociological enquiry in detail.

According to Theodorson and Theodorson, a **hypothesis** is a tentative statement asserting a relationship between certain facts. Bailey has also said that a hypothesis is a proposition stated in a testable form which predicts a particular relationship between two or more variables. Since statements in hypothesis have to be put to empirical investigation, the definition of hypothesis excludes all such statements which are merely opinions or value judgements, for example, '*All politicians are corrupt*'. In other words, a hypothesis carries clear implications for testing the stated relationship, that is, it contains variables that are measurable and also specifies how they are related. A statement that lacks variables or that does not explain how the variables are related to each other is no hypothesis in scientific sense. **Variables** are measurable phenomena whose values can change. In social sciences, variables may be understood as the social characteristics that can be converted into measurable forms and analyzed. This point will be more clear in our subsequent discussion on operationalisation of concepts.

In social sciences, the social scientists tend to study and explore the various aspects of social reality and interrelationship among them. Since social reality is infinite, social scientists make sense of this infinite social reality through logical abstractions. These logical abstractions or mental constructs are nothing but the 'concepts'. Hence, when a social scientist is carrying out a research to test his hypothesis, he is actually exploring the relationship between the two concepts. Thus, in general, variables in social sciences are nothing but the concepts which are the part of the research. However, in particular, variables are described as the specific characteristics or attributes of the more general concepts. As you will learn soon that in order to carry out a research, the variables or the concepts used in hypothesis should be clearly defined and operationalised. This point will be discussed in detail with examples in our subsequent discussion on operationalisation of concepts. Further, the terms 'independent variable', 'dependent variable' and 'extraneous variable' used commonly in research have already been discussed in our earlier discussion on the 'scientific method.'

A few examples of hypothesis are cited below:

- Suicide rates vary inversely with social integration.
- Urbanisation leads to proliferation of nuclear families.

- Literacy rate is directly related to average marital age.
- Children from broken homes more likely tend to be delinquents.

Hypothesis formulation is of fundamental importance in any research. A hypothesis looks forward. It provides direction to research. Without it, research is unfocussed and may be reduced to a random empirical wandering. Results of such an unguided research would be of little use. The hypothesis is the necessary link between theory and the investigation which leads to the discovery of additions to knowledge.

Goode and Hatt argue that the theory and hypothesis are very closely interrelated. Hypotheses are the deduced propositions from the existing theory. These hypotheses, when tested, by means of empirical investigations, are either proved or disproved. Hence, in turn, hypothesis testing leads to either revalidation or reformulation of the theory.

Let us now discuss a few essential characteristics of a good hypothesis. The most fundamental of them all is that a hypothesis must be conceptually clear. This means that the variables or the concepts used in hypothesis should be clearly defined and operationalised. **Operationalisation of concepts** refers to the process of defining concepts in terms of those attributes which could be empirically observed during research. In other words, operationalisation refers to the process of converting concepts in their empirical measurements. For example, the concept of anomie, in general terms, is defined as a 'state of normlessness' in society. Now, anomie could be observed in social, economic and political systems of a given society. For instance, the concept of anomie in social sphere may be operationalised by identifying the quantifiable attributes such as incidence of suicide, crime, honour killings, etc. on which empirical data can be collected. Similarly, in political sphere, the concept of anomie may be operationalised when it is explained in terms of the attributes like stability of the government, corruption in the government, people's perception about the government, etc. In economic sphere, the concept of anomie may be operationalised when it is defined in terms of attributes like economic inequality, poverty, unemployment, etc.

Secondly, the variables or the concepts used in hypothesis should be commonly accepted and communicable. In simpler words, it implies that there should be uniformity in the definition and meaning of the concepts used in hypothesis. Once the concepts have been clearly defined and operationalised by

means of their empirical referents, a hypothesis must also specify the relationship between the variables. A hypothesis that does not explain how the concepts are related to each other is no hypothesis in scientific sense. For example, suicide rates *vary inversely* with social integration.

Another important characteristic of a good hypothesis is that it should be related to the available techniques of data collection and interpretation. In other words, a hypothesis must be so formulated keeping in mind the availability as well as applicability of the techniques of data collection in the respective field (socio-geographical area identified to carry out the research). Further, a good hypothesis must be related to a body of theory. As stated earlier that one of the key feature of any scientific discipline is its cumulative nature. Likewise, sociological theories are built upon one another, extending and refining the older ones and producing the new ones. This would be possible only if the hypotheses are related to a body of theory.

Dear Candidate, so far we have discussed the meaning of hypothesis, its relevance in sociological enquiry and some characteristics of a good hypothesis. We have discussed that a hypothesis is a tentative statement asserting a relationship between two or more concepts or variables. What do you understand by concept? What is the relevance of concepts in sociology? What are the problems associated in defining the concepts in sociology? Let us now try to understand and answer these questions. Though this topic has not been explicitly mentioned in the syllabus but it is a very important dimension of hypothesis formulation and theory building.

Concepts are the logical abstractions or mental constructs created from sense impressions, percepts or experiences. Concept formation is an essential step in the process of sociological reasoning. Concepts are the tools with which we think, criticise, argue, explain and analyse. We build up our knowledge of the social world not simply by looking at it but through developing and refining concepts which will help us make sense of it. Concepts, in that sense, are the building blocks of human knowledge. Concepts help in comprehending the reality that a science is engaged in studying. Concepts act as mediums of short-cut communication among those associated with the enquiry (social scientists).

Concepts and hypotheses are the core of social research. For any social research to be fruitful, it is important that the concepts or variables mentioned in the hypothesis are operationalised. As discussed earlier, operationalisation of concepts refers to the process of defining concepts in terms of those attributes which could be empirically observed during research. In other words, operationalisation refers to the

process of converting concepts in their empirical measurements. For example, the concept of alienation is generally explained in terms of powerlessness, meaninglessness, normlessness, social isolation and self-estrangement. Now, in a given workplace, powerlessness could be empirically measured in terms of the indicators such as participation in the administration, degree of control over decision-making process, grievance redressal mechanism, etc.

Let us now discuss the various problems in defining concepts in sociology.

Social reality is dynamic in character and so are the concepts in sociology. Sociology being a relatively young discipline relies more and more on empirical research for verification and validation of the existing theories and concepts. Hence new findings lead to modification of the established concepts and theories. In other words, it leads to re-conceptualization or re-specification of a concept. For example, earlier the personality differences between men and women were explained in biological terms. However later day research by anthropologists like Margaret Mead who in her study “Sex and temperament in three primitive tribes” studied three tribes namely Arapesh, Mundugumor and Tchambuli (in the western Pacific) and concluded that personality patterns were culturally determined rather than biologically. In brief, her comparative study revealed a full range of contrasting gender roles. Among the Arapesh, both men and women were peaceful in temperament and neither men nor women made war. Among the Mundugumor, the opposite was true: both men and women were warlike in temperament. Among the Tchambuli, gender role reversal was found. While the men ‘primped’ and spent their time decorating themselves, the women worked and were the practical ones. Similarly, you can also discuss here that how the concepts of class, caste (jati), etc. have undergone changes with new findings put forward by later day researches.

Secondly, sociology as a discipline is rapidly attaining maturity with the contributions of several established and highly reputed schools like British school, American school, French school and German school, etc. But the contributions from diverse school of thoughts give rise to the problem of ensuring uniformity in the definition and meaning of the concepts. Concepts develop from a shared experience. Since each school of sociological thought puts forward its own set of concepts and defines the concept in the context of its unique social setting, it gives rise to the problem of communication. For example, the concepts of *Gemeinschaft* and *Gesellschaft*, which were coined by the German sociologist Ferdinand Tonnies, have no English equivalent. The terms *Community* and *Association* which are English translations of these words, do not convey the particular sociological meaning of these two German words.

Thirdly, due to the very subject matter of sociology, the terms used to denote scientific concepts may also have meanings in other frames of reference. For instance, the term 'bureaucracy' which implies a particular type of social structure may either be seen as a rationally designed authority structure or as an administrative institution characterised by red-tapism, corruption and official disregard for the public interest.

Another problem associated with defining the concepts in social sciences is that the same term may refer to different phenomena. For example, the term 'function' in one sense may be used to denote the contributions which a given practice or belief makes toward the continued existence of society. However, the term function may also be used to denote the causal relationship between two variables. For example, in determining that to what extent one variable (proliferation of nuclear families) is the function of another variable (industrialisation).

Further, in social sciences, different terms or concepts may be used to refer to the same or similar phenomena. For example, the terms like formal-informal, organic-mechanistic, primary-secondary, community-association, etc. overlap to a great degree in their meaning. Another problem with regard to concepts in social sciences is that a given concept may have no immediate empirical referent. For example, the concepts like social system, social structure, etc. have no immediate empirical referents or quantifiable attributes. At best they can be studied by observing the patterns of relations among the members of a given society.

Thus, a social scientist must define the concepts as precisely as possible and operationalise the concepts in order to conduct a meaningful and result-oriented research.

**Sociology is Simple**  
**Sociology is Scoring**  
provided that you  
**Study Sociology Systematically**

### Other Important Topics

Dear Candidate, I would also like to discuss a few other topics which though not mentioned in the syllabus but are integral components of the topic 'Research Methods and Analysis' and hence very important. These topics are comparative method and historical method.

#### **Comparative Method:**

Comparative method refers to the study of different types of groups and societies in order to determine analytically the factors that lead to similarities and differences in specified patterns of behaviour.

Comparative method is an integral component of the positivist tradition in sociology. The founding fathers of sociology like Auguste Comte, Herbert Spencer and Emile Durkheim laid great emphasis on the use of 'comparative method' in any sociological enquiry. In the 19<sup>th</sup> century, when sociology as a discipline was still in its infancy stage, the principle attraction of the comparative method lay in the belief that it could be used for discovering scientific laws about human society and culture. The strong advocates of the comparative method believed in the possibility of a natural science of society that would establish regularities of coexistence and succession among the forms of social life by means of systematic comparisons. Unlike natural sciences, sociology cannot make proper use of experimental method in the study of any particular social phenomena in a laboratory due to certain moral and ethical reasons. But a sociologist can surely experiment in the laboratory of the world by employing the comparative method.

Not only was the early use of the comparative method tied to the idea of a natural science of society, it was, more specifically, tied to the theory of evolution. A large part of nineteenth-century anthropology was concerned with the origins of phenomena and the reconstruction of the stages through which they had evolved from simplest to their most complex forms. The classification and comparison of the forms of social life became an indispensable part of this process of reconstruction.

The central place assigned to comparison was signalled by Durkheim when he wrote: 'Comparative sociology is not a special branch of sociology; it is sociology itself'. Durkheim regarded the comparative method as the counterpart in the social sciences of the experimental method pursued in natural sciences. He recognized that social fact could only be observed, not artificially produced under experimental conditions. Therefore, Durkheim favoured a comparative-historical approach because sociologists could not carry out experiments and had to rely on the method

of indirect experiment, that is, the comparison of similar cases in a systematic way. In this regard it is important to note that Durkheim, following J.S. Mill's *System of Logic*, refers appreciatively to the 'method of concomitant variations' as the procedure of the comparative method. He calls it 'instrument par excellence of sociological research'. Please note that concomitant variation simply refers to the method of establishing statistical correlation between two variables. For example, Durkheim in his study of suicide found that Germany, a Protestant-dominated country, reported high suicide rate whereas Spain, a Catholic-dominated country reported low suicide rate. Hence, he arrived at a conclusion that the rate of suicide is correlated with the religious faith in a society.

However, in this regard, S.F. Nadel in his work '*The Foundations of Social Anthropology*' argues that the notion of concomitant variations do not mean the same thing in J.S. Mill's *System of Logic* and in Durkheim's sociological treatise. Nadel argues that while for Mill, concomitant variations imply quantitative correlation, but Durkheim makes as well as advocates the use of comparative method with concomitant variations to arrive at qualitative correlations. For instance, after having arrived at a statistical correlation between the suicide rate and a particular religion, he further explores what makes people of a particular religious faith more or less prone to suicide. The answer he arrived was solidarity. The lower degree of solidarity or social integration among the Protestants prone them to greater suicidal tendencies while higher solidarity among the Catholics, affirmed by the age old institution of Church, resulted in relatively fewer suicides. Hence, Durkheim concluded that '*the rate of suicide is inversely proportional to the degree of solidarity*'.

A.R. Radcliffe-Brown (1881-1955), in Britain, was another strong advocate of the comparative method. Radcliffe-Brown borrowed a great deal from Durkheim, including the idea that societies were governed by laws that could be discovered by the application of the proper method. That method was the comparative method based on observation, description and comparison of societies as they actually existed. He often used the term 'comparative sociology' as a synonym for social anthropology. He argued that in comparative sociology or social anthropology, the purpose of comparison is to explore the varieties of forms of social life as a basis for the theoretical study of human social phenomena.

In his essay, '*The Comparative Method in Social Anthropology*', Radcliffe-Brown further extended the argument of Durkheim to explain why a particular totem is chosen by a society or group as its totem. In a comparative analysis of various tribes of Australia and north-west America, he found various instances whereby a tribe was divided into two exogamous moieties and each moiety represented by particular natural specie as its totem. For example, in case of Australian aborigines in New South Wales, the two moieties were represented by eaglehawk and crow. On

the basis of his comparative study, he concluded that the selection of a particular set of natural species as the totem by the two exogamous moieties of a tribe is also associated with their inter-group social relations. He found it common that natural species were placed in pairs of opposites, with certain degree of resemblances as well as differences. He interpreted the resemblances and differences of animal species in terms of social relationships of friendship and antagonism in human society.

Thus on the basis of his comparative study he arrived at a higher order generalization that relationships of mutual alliance and antagonism are universal to human society. However, the manner in which these relationships of alliance and opposition get reflected may vary from society to society. For example, in his comparative study of the institution of marriage, he found that the expression of relationships of alliance and opposition may take the form of joking and avoidance relationship. In joking relationship, members of opposite divisions are permitted or expected to indulge in teasing each other, in verbal abuse or in exchange of insults. Joking relationships serve to protect the delicate relationships between persons who are bound together in one set of ties and yet separated by other ties. For example, the members of different lineages are socially separated from each other, but, if they marry each other, they are also allied. Joking, thus, is one way of defusing the tensions of certain delicate relationships. Another response is avoidance or extreme respect. It prevents conflict that might arise through divergence of interest. In many societies, a man is required to avoid any close social contact with the mother of his wife, etc.

However, Andre Beteille in his essay '*Some Observations on the Comparative Method*' argues that the great wave of enthusiasm for the comparative method belongs to the past, and today there are probably more sceptics than enthusiasts. Among the sceptics, Franz Boas, Goldenweiser and Evans-Pritchard are some of the important names. For example, Franz Boas objected to the sweeping generalizations made through the use of comparative method, and recommended studies on a more limited geographical scale. He clearly stated his preference for 'historical method' over and above the comparative method. Similarly, Evans-Pritchard recommended intensive comparative investigation in a limited area rather than going for universal generalisations. Similarly, scholars belonging to the phenomenological tradition argue that the application of this method is not as simple as it may appear because social units have different meanings in different societies. For instance, the institution of marriage among Hindus is regarded as an indissoluble and sacred bond between husband and wife. But, Muslim marriage, on the other hand, is not a religious sacrament but a secular bond. It is a social or civil contract, which can be terminated.

However, despite these criticisms and limitations of comparative method, its significance in sociology cannot be undermined. For example, Durkheim and Weber, in their respective works have clearly highlighted the importance of comparative method as a scientific for sociological enquiry for a comprehensive understanding of social reality.

### **Historical method:**

As discussed earlier, inquiries in social sciences could be classified in two categories, the nomothetic and the ideographic. According to this classification, the ideographic sciences are those which study unique and unrepeatable events, while the nomothetic sciences attempt to make generalizations. We can, thus, call sociology as a nomothetic science and history as an ideographic science. Historians try to increase our accurate knowledge of unique phenomena of the past, whereas sociologists try to seek information about certain uniformities in social behaviour under specific conditions. This, in principle, is the difference between the two modes of inquiry. However, the data of history are also widely used now by sociologists. On the other hand, historians have also started using data generated by sociologists for their own writings.

Historical method is one of the important methods to analyse the process of social change that occurred in past. It involves the study of origins, development and transformation of social institutions over a period of time. The historical method in sociology has taken two principal forms. The first is that of early sociologists, initially influenced by the philosophy of history and later by biological theory of evolution. It concentrates upon the origin, development and transformation of social institutions, societies and civilizations. It is concerned with the whole span of human history with all the major institutions of society, as in the works of Comte, Spencer, Hobhouse, etc. It was also employed by Karl Marx in conjunction with dialectical materialism in understanding the human societies. Marx talked of dialectical materialism to explain change as a historical phenomenon. According to Marx, the history of all the hitherto societies is the history of class struggle. He classified the evolution of human society in terms the following stages, viz. primitive communism, ancient society, feudal society, capitalist society and communism.

Yet another form of historical method is characteristic of the works of Max Weber. This is exemplified, especially, in his studies of the origins of capitalism, the development of modern bureaucracy, and the economic influence of the world religions. The main methodological features of these studies are that particular historical changes of social structures and types of society are investigated; and are compared in certain respects with changes in other societies. In this manner, both

causal explanation and historical interpretations find a place in the social explanation. A very convincing illustration of this approach of Weber is to be found in his treatment of the growth of capitalism in Europe, as he brings out in his book, *The Protestant Ethic and the Spirit of Capitalism*.

P.V. Young, in her book *Scientific Social Surveys and Research*, describes sources of historical data highlighting both the adequacy and limitations of historical data. The social scientists generally confine themselves to three major sources of historical information, (i) Documents and various historical sources to which historians themselves have access, (ii) materials of cultural history and of analytical history, (iii) personal sources of authentic observers and witnesses. When, how and under what circumstances these sources are to be used depends upon the discretion of the researcher's interest, the scope of the study and the availability of the sources. Historical data have some limitations, which arise mainly because historians cannot describe all the happenings in time and space available at the time of writing history. Personal biases and private interpretations, often, enter unconsciously, even when, honest attempts are made to select and interpret pertinent facts.

**UPSC: Previous Years' Questions  
Paper I**

**3. Research Methods and Analysis:**

- Q. Explain the probability sampling strategies with examples. (2019/10)
- Q. Bring out the significance of Ethnography in social research. (2019/20)
- Q. Distinguish between quantitative and qualitative techniques of data collection with suitable examples from Indian society. (2018/10)
- Q. Explain with examples, the explanatory and exploratory designs of social research. (2018/10)
- Q. Illustrate with example the significance of variables in sociological research. (2017/10)
- Q. Examine epistemological foundations of qualitative methods of social research. (2017/10)
- Q. How can one resolve the issue of reliability and validity in the context of sociological research on inequality? (2017/10)
- Q. "Participant observation is the most effective tool for collecting facts." Comment. (2016/20)
- Q. "Hypothesis is a statement of the relationship between two or more variables". Elucidate by giving example of poverty and illiteracy. (2016/10)
- Q. Analyse the importance of qualitative method in social research. (2016/10)
- Q. Why is random sampling said to have more reliability and validity in research? (2015/20)
- Q. What are variables? Discuss their role in experimental research. (2015/10)
- Q. Discuss the relevance of historical method in the study of society. (2015/10)
- Q. Which research technique would be most suitable for the study of consumer behaviour and its social correlates? Explain. (2014/20)
- Q. In what way biographies could be used to study social life? (2014/10)
- Q. Analyse the limitations of quantitative methods in social research. (2013/20)
- Q. Write short note: Comparative Method (2012/12)
- Q. Differentiate between the Qualitative and Quantitative methods in Research (2012/20)
- Q. Write short note: Reliability and Validity (in about 150 words) (2011/12)

----- **Aditya Mongra @ Professor's Classes** -----

- Q. What is subjective method in social research? Examine Focus Group Discussion (FGD) as a technique for data collection, with suitable examples. (2011/30)
- Q. Write short note: Content Analysis (2010/15)
- Q. Write short note: Nomothetic and Idiographic Methods (2010/15)
- Q. Distinguish between probability and non-probability sampling methods. How many types of sampling designs are there? (2009/30)
- Q. Write short note: Importance and sources of hypotheses in social research (2008/20)
- Q. What is the importance of sampling in sociological studies? Distinguish between simple random sampling and stratified random sampling. (2008/60)
- Q. Utility of Reliability and Validity in Social Research (2003/20)
- Q. What are the uses of Bogardus' social distance scale and of Likert scale? (2002/60)
- Q. Write short note: Limitations of questionnaire as a technique of data collection (1999/20)
- Q. Write short note: Reliability of a sample (1998/20)
- Q. Write short note: Participant observation (1990/20)
- Q. Write short note: Measurement of Attitudes (1989/20)
- Q. Write short note: Experimental design (1988/20)
- Q. Write short note: Techniques of Data collection (1987/20)
- Q. Write short note: Techniques employed in measuring attitudes (1986/20)
- Q. Write short note: Interview as a method of social research (1985/20)