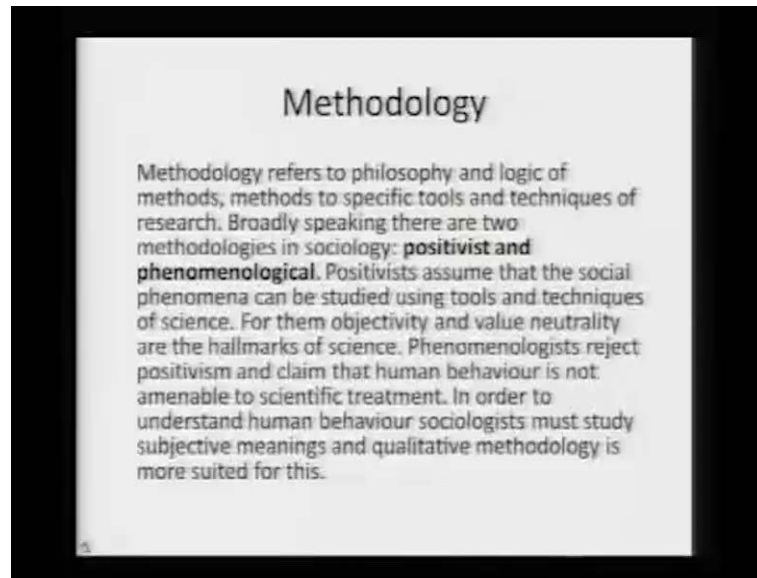


**Population and Society**  
**Prof. A. K. Sharma**  
**Department of Humanities and Social Sciences**  
**Indian Institute of Technology, Kanpur**

**Module No # 01**  
**Lecture No # 07**  
**Methodology**

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Friends, today we are going to start a new module and this is about methodology. In this lecture, we will be talking about, what is methodology? What are various methods, tools and techniques of data collection? That sociologists in general and population sociologists in particular employ to study social phenomena. Right in the beginning, it is important to make a distinction between methodology and methods. Not many students at least at this level are familiar with this difference. The term methodology refers to philosophy and logic of methods. While the term methods is used for specific tools and techniques of research.

Broadly speaking, there are two methodologies in sociology and they are called positivist and phenomenological. Actually, when sociology developed as a science by founder fathers like Comte, it is started with the assumption that though the subject matter is

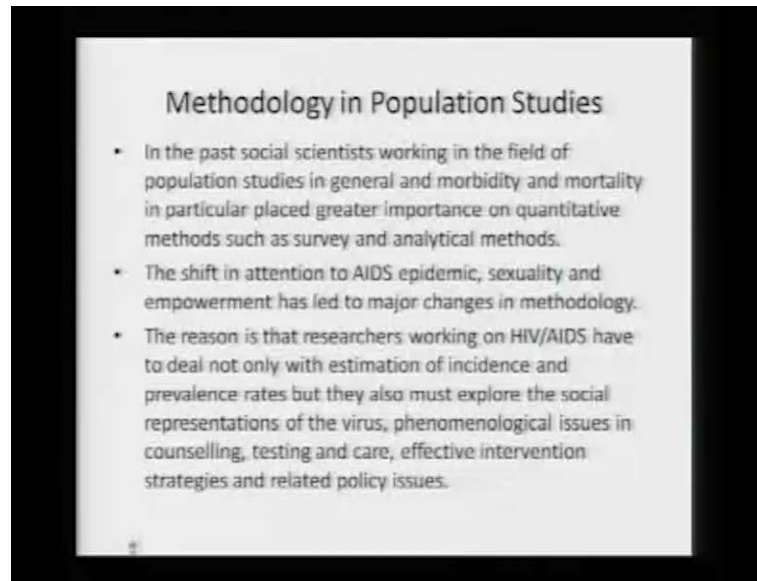
different, but sociology is as much a science, other natural science. Which means that, the subject matter is different, but the tools and techniques of science, mathematics, experimental sciences, logic etcetera can be applied to study social phenomena. And this kind of philosophy, in philosophical terms was called positivist. Comte was known as the initiator of positivist philosophy and then Emile Durkheim and many other sociologists follow.

Much of American sociology today can be called positivist. If you open an article in American journal of sociology or American sociological review, there is a very high chance that the article is based on statistical data and sophisticated statistical techniques have been applied to analyze those data. Positivists assume that the social phenomena can be studied using tools and techniques of science. For them, objectivity and value neutrality are the hallmarks of science so, if sociology has to become science it must use objectivity and value neutrality.

Phenomenologists on the other hand reject positivism and claim that human behavior is not amenable to scientific treatment. In order to understand human behavior sociologists must study subjective meanings and qualitative methodology is most suited for this. This was the view of Max Weber that if you want to understand social actions, it has to be understood in a subjective meanings that the actors are attached to their actions. So, some actions may be done with different subjective meanings and with the same subjective meanings people can do different types of acts.

What is utmost important therefore, is to understand the connection between act and subjective meanings. So, today in this lecture, we will look into various aspects of positivism and phenomenology and the specific methods that sociologist and population scientists have used in studying the various processes, trends and connections between population variables and social variables.

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Specific right in the beginning I must say that specifically in the field of population studies, social scientists working in different fields of fertility, mortality, morbidity. In the beginning place greater importance on quantitative methods, such as survey and analytical methods. I remember when I was student of IPS much of demographic research was devoted to estimation of rates and ratios from incomplete data or unreliable data or from whatever little information on some demographic aspect available from different sources. No wonder the first generations of population scientists were mathematicians and statisticians some were economists.

And well major reason was that not much was known about the demographic trends. And the present days sources of demographic data such as national family health survey or sample registration scheme also did not exist. So, whatever little information on population was available from censuses, that has to be analyzed using analytical methods for estimation of growth rates, birth rates, death rates. Also analytical methods were required to identify errors in census data and correct them. But gradually now the major shift in attention to issues like AIDS HIV AIDS you know that HIV AIDS has become an important epidemic worldwide and our country is not an exception to this.

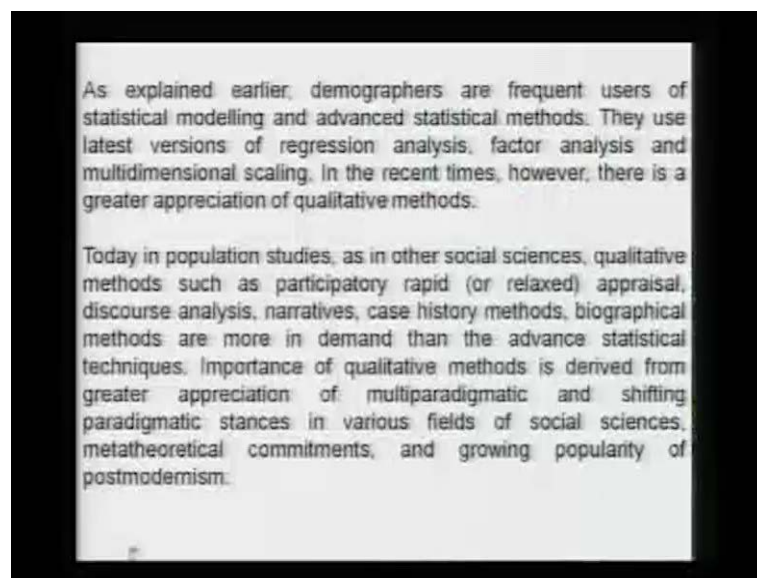
Of course we are not so, high in prevalence rate as some of the African countries; you know in some African countries the HIV prevalence rate among people in the working ages or reproductive ages is as high as 20 percent they have a very deadly situation.

Now, we are very much far behind, but nature of HIV as such that if it is not fought timely then India may also have severe consequences of that. And now in this study of HIV it is not merely rates we have to understand behavior. Meaning, we have to understand social representations of health and illness, we have to understand representation of masculinity or risk behavior.

Why do people indulge in risk behavior? So, there is a shift in attention to HIV AIDS epidemic, sexuality and empowerment which has lead to major changes in methodology. The reason is that researchers working on HIV AIDS have to deal not only with as I said estimation of incidence and prevalence rate, but they also must explore the social representations of the virus. Phenomenological issues in counseling, how to encourage people to go for counseling for pretesting counseling or testing for post counseling and effective intervention strategies and related policy issues?

We do not know, what is the content of knowledge when people know about HIV AIDS? You know our understanding of HIV AIDS is different and understanding of ordinary people at grass roots level is different. Sometimes they cannot distinguish between HIV and AIDS, sometimes they think that HIV is a deadly infectious disease, sometimes there is very strong stigma associated with that. So, we have to understand peoples representations peoples understanding in understanding peoples understanding of something we require qualitative methods.

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Now, as explained earlier demographers are frequent users of statistical modeling and advanced statistical methods. They use latest versions of regression analysis somewhere I was reading that there was a time when a common sociologist for whom you can use the term positivist use chi square or t test or multiple regression analysis. Today most common positivist sociologist would be using logistic regression, bivariate logistic or multivariate logitics or ratios. Then sociologists are also using factor analysis multi dimensional scaling factor, analysis for reduction of data and multidimensional scaling which is in a way is the reverse of factor analysis.

In factor analysis we come from patterns to groups and or factors and herein multidimensional scaling we go back from factors to possible representations of different dimensions. In the recent times however, there is a greater appreciation of qualitative methods also for the reasons I just mention. Today in population studies as in other social sciences qualitative methods such as participatory rapid or relaxed appraisal, discourse analysis, narrative these are terms of various types of qualitative methods. Case history methods, biographical methods are more in demand than the advanced statistical techniques.

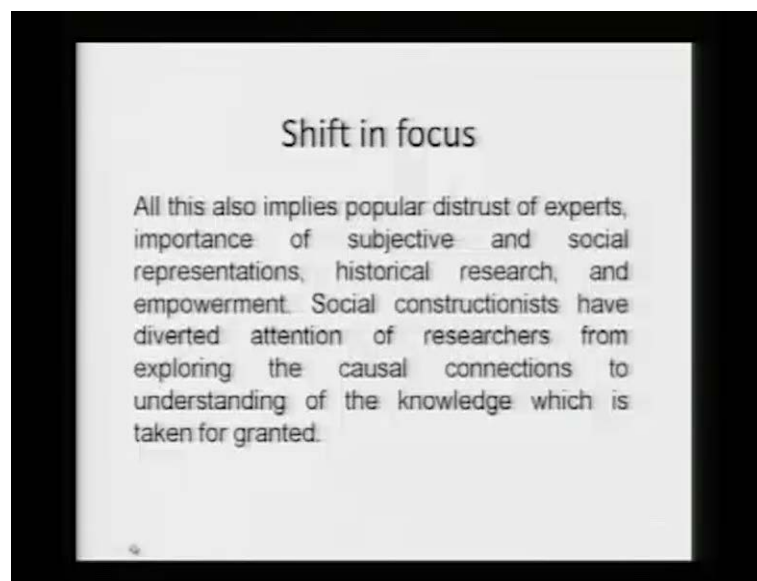
One reason may be that human not required sound understanding of statistical methods, if you have packages like SPS or SES or there are mathematical packages. Then you can analyze your data statistically without knowing mathematics of this statistics. What you require? Is just interpretation of the findings. So, those without any understandings of simple algebra have also become statistical analyst it has become simple. Though, I would say that if you are using statistical methods then it is desirable to go deeper into the assumptions and limitations of the statistical methods. That you are using and mere reporting of findings of SPS is not enough. Violates of assumptions of statistical techniques can lead to abuse of statistical methods.

Importance of qualitative methods it derived from greater appreciation of multi paradigmatic and shifting paradigmatic stances in various fields of social sciences. Mathematical commitments, Meta theoretical commitments and growing popularity of post modernism. Mathematical commitment is required for quantitative sociology it is meta theoretical commitment. Here I mean that as I discussed in the first few lectures that knowledge of sociologists and population scientists is very much paradigmatic. It

matters a lot in analyzing social phenomena whether you follow a functionalists approach or a Marxist approach or micro or phenomenological approach.

In Marxist approach also there are so, many approaches. So, that is the meaning of paradigmatic approach if you are a post modern sociologist then you follow an entirely different approach in place of giving importance to universal knowledge paradigm, you can give more importance to advocacy of vulnerable groups. So, when the theory has become paradigmatic and it is well accepted that yes there are only versions of reality. There is not 1 essential universal reality, which may be called grand narrative then your perspective matters a lot in unearthing of so, called reality which can be of some used to some people. Growing popularity of post modernism has particularly drawn peoples attention to paradigmatic theories.

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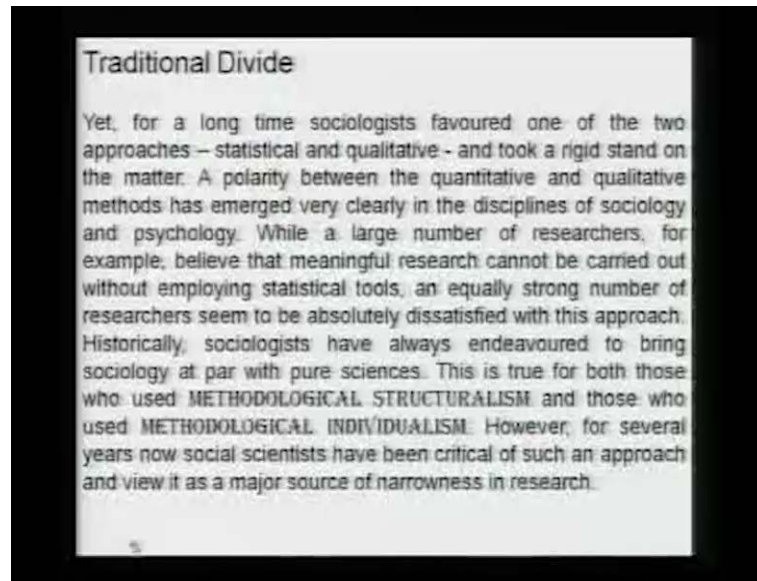
So, there is a shift in focus all this also implies, a popular distrust of experts that experts knowledge is not the only form of knowledge or the real knowledge or more privileged knowledge or better knowledge. There is also importance of subjective and social representations. What do people think, what do groups families communities think and empowerment, what kind of knowledge is required to empower people? So, that they can attain their goals values wishes despite resistance from societies social structures other groups of society and social representation.

Social constructionist have diverted attention of researchers from exploring the causal connections to understanding of the knowledge which is taken for granted. This means that understanding the knowledge which is taken for granted like recently I was doing a survey on research on health problems in post menopause in women. According to biomedical perspective this is the time when women are suffering from certain biological deficiencies. And therefore, they using say parsonian framework of sick role they need to consult experts and go for certain types of medications. So, that these deficiencies can be taken care of or the bad consequences of these biological deficiencies do not affect their quality of life.

Constructionists have shown that this is not always the case in all women actually construct their problems or their women construct their images of post menopausal situation. And in many cases in many cultures or many women in reality post menopausal condition is the condition of liberations not a disease, they do not see this as a disease while doctors want to promote HRT for dealing with post menopausal complications.

But there are ethical issues, there issues connected with, how do women themselves see before problems before during and after menopause? And they welcome menopause there no medication is required and of course. There are always side effects of medications and ultimately it is not the doctor, but patients or subjects or people who in consultation which doctor have to decide or must decide what course of action to follow.

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The traditional there is a traditional divide in methodology for a long time sociologists favor one of the two approaches statistical and qualitative and took a rigid stand on the matter. I remember when I joined IIT as a lecturer at that time in sociology, this was a very live debate whether you are a positivist or you are a quantitative sociologist or you are a qualitative sociologist. A polarity between the quantitative and qualitative methods has emerged very clearly in the disciplines of sociology no other discipline. In physics, in chemistry or in biology they do not start with a chapter on methodology. But in sociology it is still in common text books you begin with some basic concepts and concepts in methodology.

So, there is still a great divide in sociologist and psychologist also, sometimes between those who follow quantitative methods and those who follow qualitative methods? While a large number of researchers for example, believe that meaningful research cannot be carried out without employing statistical tool. An equally strong number of researchers seemed to be absolutely dissatisfied with this approach means this statistical approach. Historically sociologists have always endeavored to bring sociology at par with social sciences at least certain categories of sociologies like comet Durkheim to some extent you can even say that Karl Marx by the positivists, reductionists.

Who wanted to understand social phenomena in a scientific perspective? This is too for both those who use methodological structuralism and those who use methodological

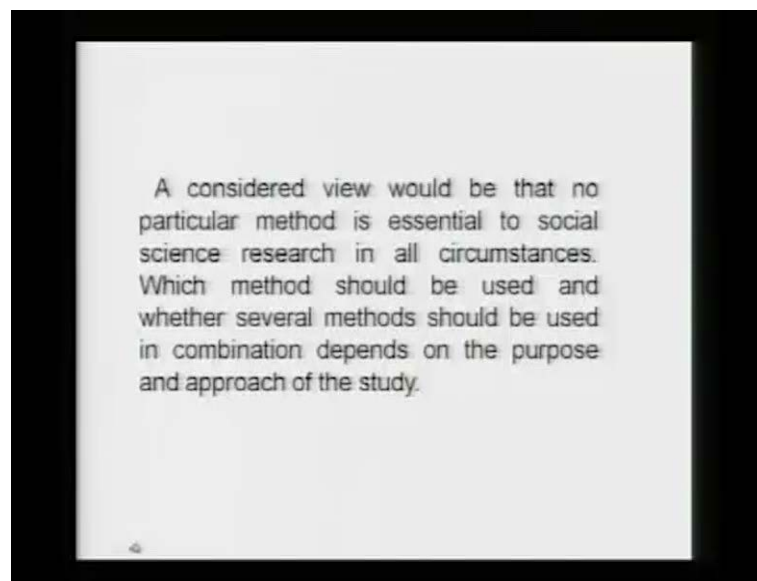


individualism these terms need some explanation. The term methodological structuralism means that society or social reality is an emergent reality of its own kind. And when you need to explain a social phenomenon? It must be related to structure of society. While methodological individualism would like to see social reality from the perspective of individuals, they will give more importance to individuals. Most of the time the moment I utter the word sociology it is assumed it can safely assume that I am a structuralist.

If I do not give importance to social structures then I am not a sociologist. It applies to sociologists of science it applies to sociology of populations, it applies to sociology of families, sociology of religion, in all sociologies an attempt is made to explain things in terms of structures of society. Structures of society are taken to be reality of its own time, while in methodological individualism it is assumed that in all social reality is product of decisions exercised by isolated and rational utilitarian individuals.

So, that that distinctions you must make in distinguishing between different types of methodologies. However, for several years now social scientists have been critical of such an approach and view it as a major source of narrowness in research I mean this distinction this divide people are trying to question this divide.

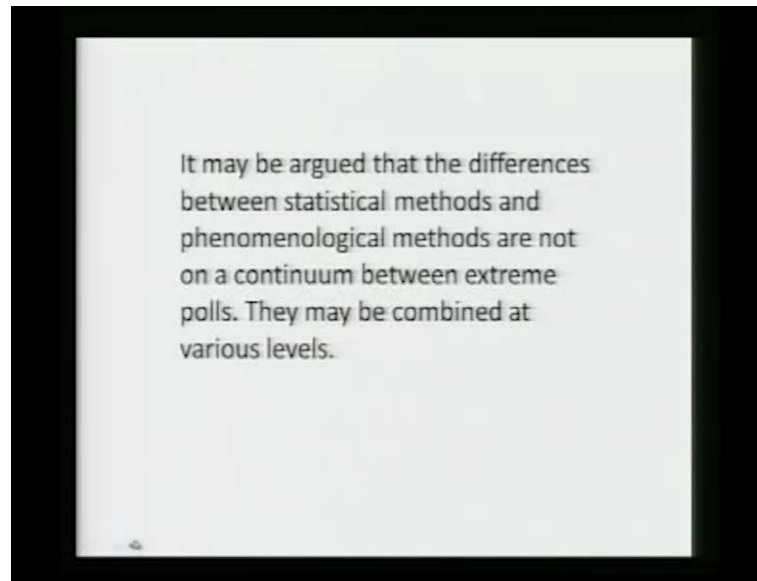
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It considered view would now be that no particular method is essential to social science research in all circumstances. You cannot take the position that for understanding all

kinds of social issues or understandings all kinds of demographic problems. 1 particular approach or 1 particular methodology be it positivist or be it qualitative or phenomenological. Will suffice, which methods should be used? And whether several methods should be used in combination? Depends on the purpose and approach of the study.

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It may be argued that the differences between statistical methods and phenomenological methods are not on a continuum between extreme poles they may be combined at various levels. These days many people are talking of mixing methods, combining methods, mixing methods. Long back Deingen in his the studies of organizational psychology made a term very popular and that was triangulation. Triangulation was a term drawn from civil engineering, which meant that in ships when you see things distant items from different vantage points, and then you try to learn from combining all those all the images all that you have seen that is triangulation.

So, likewise Deingen said that social sciences also in place of (( )) whether quantitative methods are better (( )) are better, what we need is a combination of method. He went to the extent that even theoretical conflicts in social sciences are quite of a futile. So, he argued in favor of combining theories, methodologies, and techniques. I mean long back I read an article on poverty in which it was argued that triangulation of theories can help us understand the issues connected to poverty better. Earlier people are either trying to

study poverty in positivist frame or in functional framework or in the conflict framework, Marx's framework. And genes argued that there are some aspects of poverty which are better explained in modified functional framework of R.K Martin.

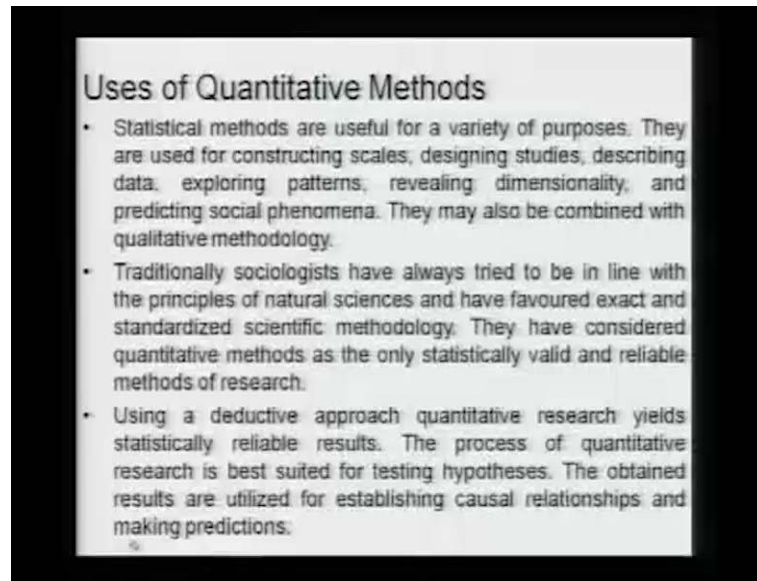
And Marxist theory of poverty is anyway very common. So, in that article I was mentioning that in some article I found an argument in favor of combining methods the author said that it is better to look at different aspects of poverty in a different framework. May be some aspects of poverty are better explained in the functional framework while other aspects of poverty are better explained in Marxist framework. So, in place of insisting too much on frameworks he was empirically or theoretically examined different aspects of poverty and thus use a mixture of different theories.

Similarly, somebody can use a mixture of quantitative and qualitative methodologies or methods. In most of the empirical researches that I have done or I am still doing I do not expect us to combine both quantitative methods of surveys as well as some qualitative methods of narratives, observations, case studies or interviews of key respondents. Similarly, even in within the statistical methods you can combine say different tests t tests, chi square, f you need not depend only on 1 test. As a matter of facts if you apply different tests 1 of the 2 things will happen. All the tests will reach the same findings or all your tests t, f, chi square, z this or that will yield significant results or insignificant results that time it raises your confidence in your findings.

And if you find that application of different techniques results in different findings then this can raise a very new a fresh questions. Why there are differences when you apply different techniques of statistical analysis? Same thing in qualitative studies. If you find that your findings based on observations, based on narratives, based on case studies based on focus group discussions or based on participation observations are not same. And it leads to a new questions, why is it, what is so, typical about your pattern, your data that you get different findings, when different methods are used? So, it is always useful to combine methods and in most of the empirical researches combined methods.

And in most of the empirical researches in the field of health family welfare reproductive health or HIV or sexuality these days population scientists or population researchers are combining both the method of survey and the method of observations or other qualitative methods.

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More on use of quantitative methods, the statistical methods are useful for a variety of purposes. So, having said that each methodology or each method has its own place in research. Now, let me specifically talk about quantitative methods, what do quantitative methods achieve? Statistical methods are useful for a variety of purposes, they are used for constructing scales you cannot do any research having proper measurements or constructing scales. How can you study stigma? Stigma against HIV/AIDS, if you do not have a reliable and valid scale to measure stigma against HIV.

Designing a study, you require quantitative methods for designing studies to decide about research designs, to decide about samples, sample size, nature of sample and also for describing data. You describe data through applications of techniques like mean, variance, skewness, kurtosis or higher order moments or cumulates and revealing dimensionality of data and predicting social phenomena. For prediction of social phenomena, you cannot predict social phenomena. Specially, the quantities without applying quantitative methods. If you want to know, what is going to be the populations in India in 2050? How can you answer this question? Using only qualitative methods.

They may also be combined with qualitative methodology it is a different issue. So, somebody can combine the two methods and say that our quantitative methods reveal that the population of India in 2050 is likely to be this. But our qualitative studies show that India at that time will be less integrated or more integrated or there likely to be more

social conflict or more chaos or more normalness or less. Traditionally sociologists have always tried to be in line to be with the principles of natural science. And have favored exact and standardized scientific methodology they have considered quantitative methods as the only statistically valid and reliable methods of research.

Using a deductive approach quantitative research yields statistically reliable results. The process of quantitative research is best suited for testing hypotheses in some books you will find that it is written that if the purpose is to generate hypothesis then go for qualitative method or in explanatory studies go for qualitative methods. But if your research has matured that level that you can generate some hypotheses, which you need to test or falsified corroborate on the basis of empirical data then you have to go for quantitative method. The obtained results are utilized for establishing causal relationships and making predictions.

Quantitative methodology involves the following types of methodologies descriptive or survey research correlation and causal research and experimental research. Descriptive research means describing a situation. So, through survey you can through survey you can describe the situation like if you conduct a youth survey then you can generate a lot of data on age composition, sex composition, marital status composition, religion, usual socio demographic variables and you can also learn about the knowledge. Knowledge about family planning methods, knowledge about HIV AIDS, knowledge about condoms for protection, for protection against risk of HIV.

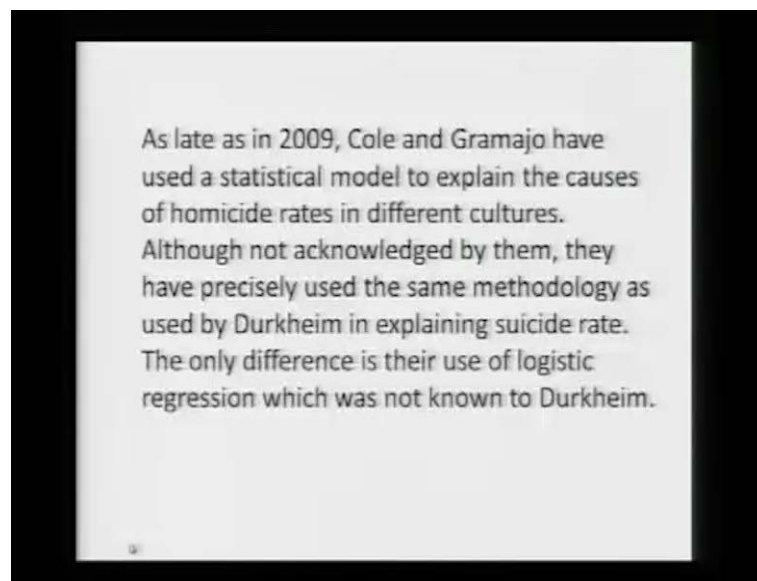
You can know a lot about say usage of various types of substances or drugs, you can know about inverse situations they engage in this behavior the purpose is to describe. In co relational and causal research the purpose is to establish a causal connection by applying correlation approach. This may be simple correlation, this may be canonical correlation between groups of variables or this may be a path analysis or cluster analysis or some other more sophisticated approach to regression or sometime you go for experimental research. The purpose of experimental research is to test whether an intervention show the results or not.

So, sometimes before launching an intervention you want to know, what has been the situation before intervention? And what has happened to something after your interventions is made? There is a significant improvement in the situation then you

attribute to that experiment. Or sometimes you are interested in comparing 2 different types of situations, 1 in which an experiment exists another in which experiments does not exists. So, like recently we did I study in which the purpose was to test whether certain intervenes on the part of health planners to deal with the problem of post part of hemorrhage is working or not.

So, we have to select 2 areas, 1 may be called control areas where intervenes does not exist and another area where intervenes are made. And we will compare the situation if the 2 areas are similar identical with respect to others socio economic conditions or all those variables which might influence maternal mortality ratio or p p h. Then any difference between the 2 control areas and experimental areas must be attributed to intervene. So, quantitative methods are of these types, descriptive or survey co relational and causal co relational and causal analyses are also done on the basis of survey data. And there is experimental research which he designed separately in the form of some control experimental or before and after type of research design.

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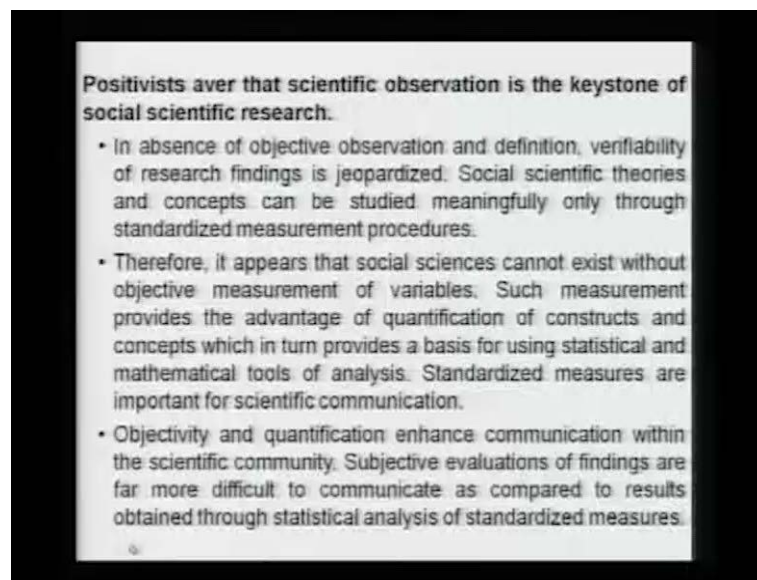
As late as in 2009 Cole and Gramajo have used a statistical model to explain the causes of homicide rates in different cultures. It is interesting so, far whenever we discussed of something about quantitative methods in sociology we referred back to 1 study of Emile Durkheim and that was suicide. In that study Durkheim computed suicide rate and compared it across different groups and communities and compared it say between rural

and urban areas, married unmarried persons. And they studied what happens to suicide rates as economically society progresses or regresses all this referred to suicidal stance.

But in 2009 Cole and Gramjo conducted study of homicide rates and they wanted to explain what actually causes homicides is it education or whether education promoting education will increase homicide rates or reduced homicide rates. Whether status of women will promote homicide rates or reduce homicide rates. And while Emile Durkheim use simple logic of multivariate regression, but simple comparative methods for comparing suicides rates across cultures, social groups and time periods.

Gramajo Cole and Gramjo used a multivariate regression models to study causes of homicide rates. Some of his ideas are very interesting and I would say that you must refer to this article which was published in population and development review in 2009. And although not acknowledged by them we have precisely used the same methodology as used by Durkheim in explaining suicide rates the only difference is their use of logistic regression which was of cours, not known to Durkheim.

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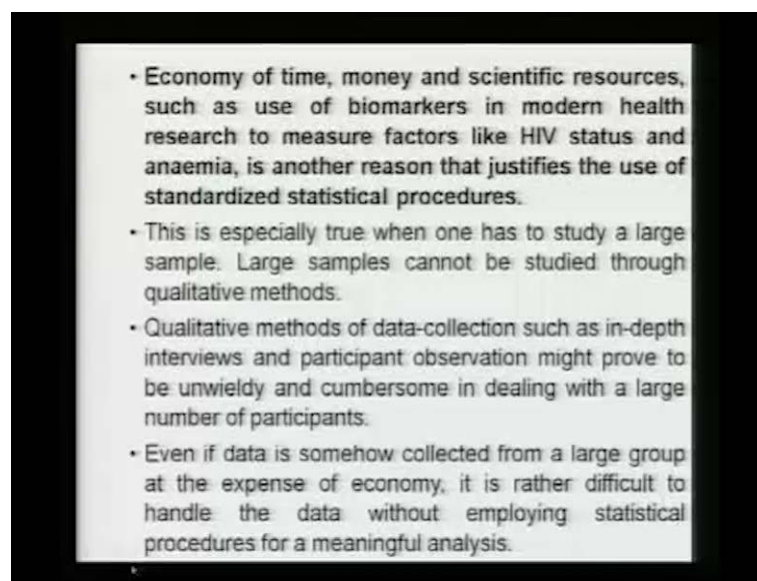
Positivists aver that scientific observation is the keystone of social scientific research. In absence of objective observation and definition verifiability of research findings is jeopardized. Social scientific theories and concepts can be studied meaningfully only through standardized measurement procedures. You may say that some society more corrupt than other society and your statement or research will carry no way if you are not

able to develop a standardize method or procedure or scale or measure to define corruption. Objective observation and definition of social reality are very important.

Therefore, it appeared that social sciences cannot exist without objective measurements of variables. Such measurements provide advantage of quantifications of contrasts and concepts which in turn provide a basis for using statistical and mathematical tools of analysis. Imagine if in physics things like time, mass, velocity and distance were not measured. So, objectively and precisely what would be the stage of development of physics. So, physics cannot develop science cannot develop unless you have scientific measure objective value neutral objective universal precise measurements of time velocity.

So, same thing can be said about society the and somebody can say that the main reason why we do not have such an advanced science of society as we have science of nature or science of particles or what we call natural sciences that is because sociologists have not been able to download standardize measures for scientific communication. So, objectivity and quantification enhance communication within the scientific community. Subjective evaluations of findings are far more difficult to communicate as compared to results obtained through statistical analysis or standardized measures.

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Economy of time money and scientific resources such as use of biomarkers in modern health research to measure factors like HIV status. First time in n f h s three you are able

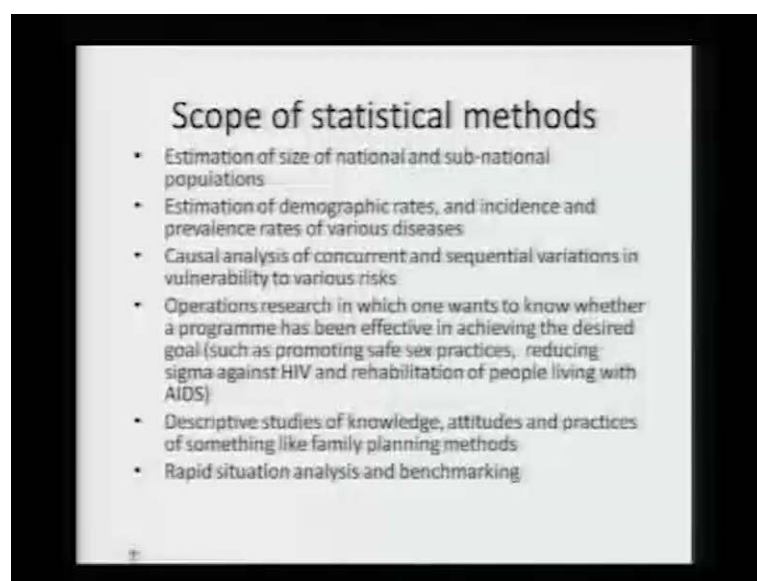


to use biomarkers in which random samples of bloods were taken to estimate prevalence of HIV and anaemia. Anaemia was also measured that is another reason that justified the use of standardized statistical procedures, how can we examine prevalence of HIV or anaemia by using qualitative methods alone. This is especially true when one has to study large samples. Large samples cannot be studied through qualitative methods.

Qualitative methods or method of field work, or while most suited to studies of illiterate or small tribal or village community. Qualitative methods of data collections such as in depth interviews and participant observation might prove to be unwieldy and cumbersome in dealing with a large number of participants. Today when surveys are done and sometimes the size of sample your survey means 50,000, 1 lakh, 3 lakh they have been surveyed in which a number of countries of the world several developed, several developing countries have participated and the sample size can be as high as 1 lakh or 3 lakh or 10 lakh. So, there qualitative methods cannot work.

Even if data was somehow collected from a large group at the expense of economy it is rather difficult to handle the data without employing statistical procedures for a meaningful analysis. Even those who are using qualitative methods or using computer packages, for sort of content analysis and statistical analysis of the narratives or diaries field notes.

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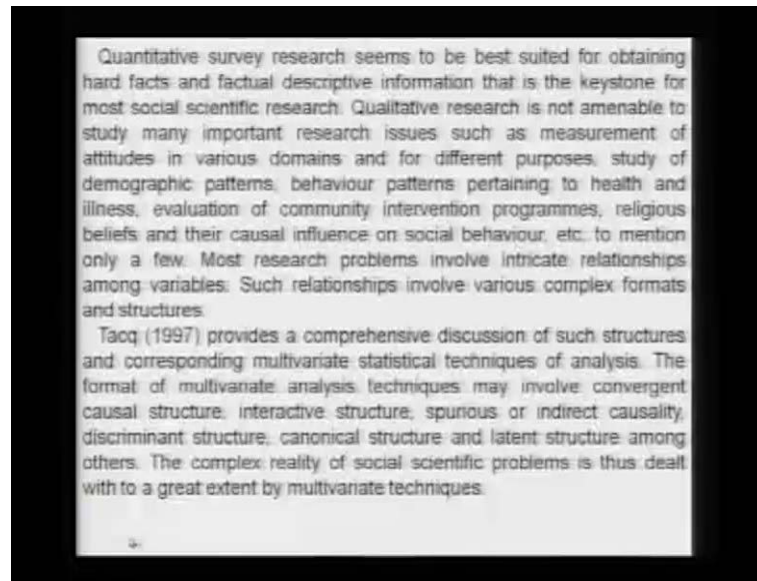


Scope of the statistical methods, estimation of size of national and sub national population. This is obvious that in population studies 1 of the first variable that we want to study the estimation of size and statistical methods only can help in that. Then estimation of demographic rates and incidence and prevalence rates of various diseases. Morbidity, in studies of morbidity occupational morbidity, hazards then casual analysis of concurrent and sequential variations in vulnerability to various types of risks.

Causal analysis means what factors explains or what factors are the significance causes of something. The other day I was giving the example of sex determination tests, the sex decision to go for sex determination may depend on a large number of factors. But it may depend on caste, class, family, size or nuclear joint family, traditional modern rural, urban or peri urban areas, distance proximity to p s e health facility so, many factors. All factors are not equally important by using statistical methods and know which factors are the major causes of something of our dependent variables.

Operational research in which one this is another area of applications of quantitative methods. Operations research in, results such as promoting safe sex practices, reducing stigma against HIV and rehabilitation of people living with AIDS. And in descriptive studies of knowledge attitudes and practices of something like family planning starting in seventies what we call K A P or K A P survey. They were the biggest users of statistical methods knowledge attitude and practices K A P, K A P of family planning method. Then rapid situation analysis and benchmarking for establishing some estimates policies and programmers can be implemented it requires statistical data.

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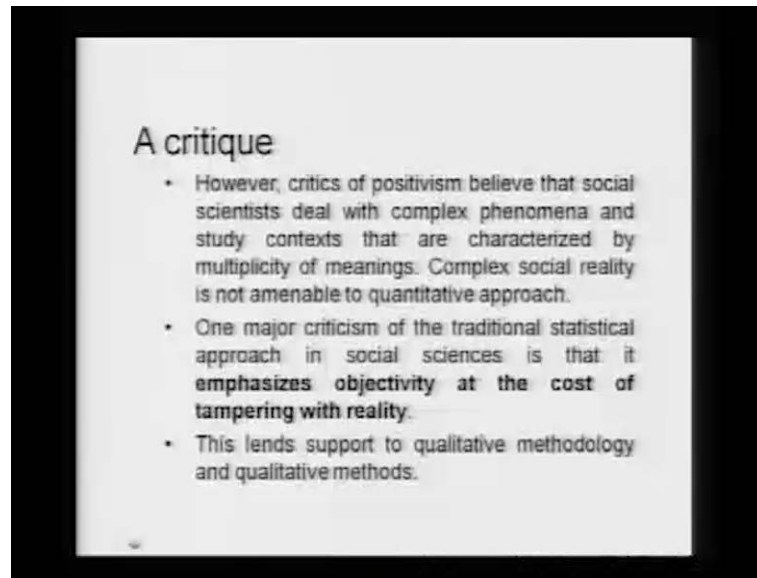
Quantitative survey research seems to be best suited for obtaining hard facts factual descriptive information that is the key stone for most social scientific research. Qualitative research is not amenable to study many important research issues such as measurement of attitudes in various domains and for different purposes. Study of demographic patterns behavior patterns pertaining to health and illness evaluation of community interventions and programmers religious beliefs and their causal influence on social behavior etcetera to mention only a few.

Most research problems involve intricate relationships direct, indirect, joint then sometimes there are moderator variables, sometimes there are mediating variables, proximate determinacy, such relation has handling such relationships involves various complex formats and structures. Accordingly simple regression model path, analytical model path, analytical model factor, canonical cluster and so, on. That provides a comprehensive discussion of such structures and corresponding multivariate statistical techniques of analysis. The format of multivariate analysis techniques may involve convergent causal structure, interactive structure spurious or indirect causality sometimes empirical results can be spurious misleading or indirect, discriminate structure.

When purpose is to distinguish between multivariate structures, canonical structures and latent structure among others complex reality of social scientific problems is thus dealt with to a great extent by multivariate techniques. I do not want to terrifying you by using

these sophisticated terms and that is not the purpose of the course also. I just want to say that quantitative methods or statistical methods are important when the purpose is to explain complex phenomena.

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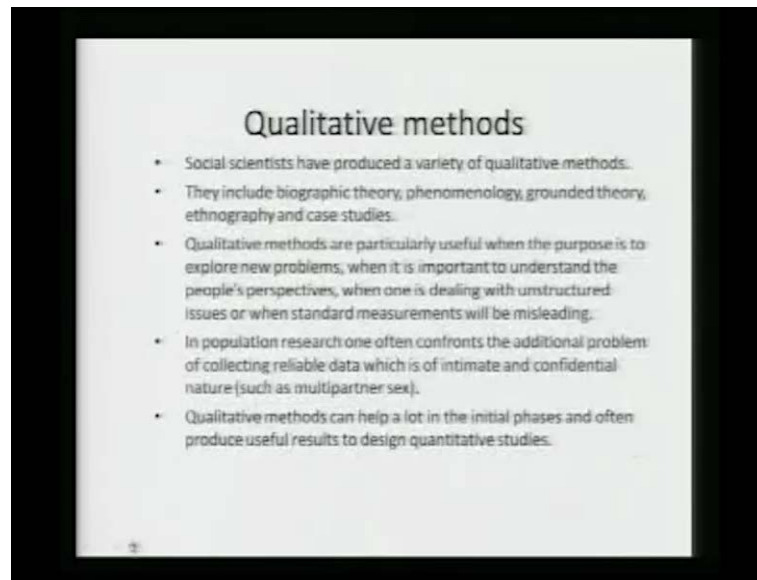
But there is a critique also, some people who do not like quantitative method they say that social scientists deal with complex phenomena. On the one hand one social scientist statistical methods are particularly useful method for complex phenomena. But qualitative sociologists say that social phenomenon is so, complex the meaning of the term complex is different in their statements. In the statements of quantitative sociologists complexity means that a large number of variables are involve, there are large number of interactions and relationships.

But in qualitative sociology they say complex social problems are complex in the sense that meanings of the issues involve meanings of the construct involves or the meanings of events meanings of facts you know are so, valid. That they are complex and one universal quantitative scientific approach to measure them or to analyze them would not be useful or much revealing about this complexity.

Complex social reality is not amenable to quantitative approach therefore; one major criticism of the traditional statistical approach in social sciences is that it emphasizes objectivity at the cost of tampering with reality. In sciences is also now in micro levels let us say atomic level or sub atomic levels theory says that atoms behavior or particles

sub atomic particles is greatly influenced by the methodology that you use to study that. Same way, when you are studying social reality or also influencing social reality, this relationship between studying and influencing is more stressed by qualitative sociology. This lends support to qualitative methodology and qualitative methods.

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Qualitative methods let us talk a little about qualitative methods now, social scientists have produced a variety of qualitative methods. They include biographic theory, phenomenology or subjective meaning. Meaning that individuals are attached to something it may be something like plague, it may be something like HIV, it may be something migration, it may be something like family size and then grounded theory. Theories which grounded theories means theories which are developed on the basis of study of reality only, without any biases, without any hypothesis or any theoretical prejudice or theoretical direction.

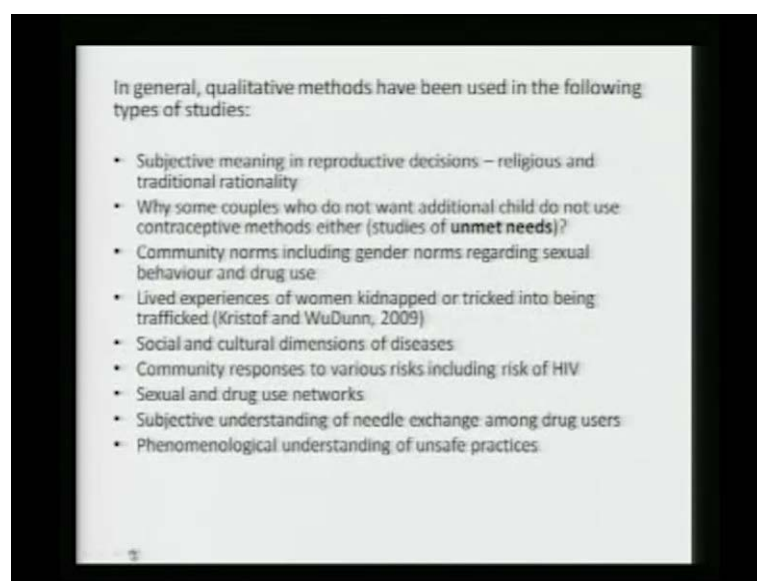
Ethnography, a method employed by anthropologies in early days and case studies. Qualitative methods are particularly useful when the purpose is to explore new problem what it is important, when it is important to understand people is perspectives, when one is dealing with unstructured issues or when standard measurements will be misleading. We have often founded our researchers the meaning that to attach to something is very different from the meanings from people belonging to diverse section of society attached.

Meaning our meaning of development in terms of per capita income or modernization or urbanization is different.

And the meaning of development for a tribal for a vulnerable section of society or a meaning of a section of society which has been adversely affected by development would be different. So, the purpose of the research should be to unearth or to understand these diverse meanings and qualitative methods are most suited for this. In population research one often confronts the additional problem of collecting reliable data which is of intimate and confidential nature such as multipartner sex I have part of a distinct situation analysis. And researches sponsored by unicef, researches dealing with HIV in which some variables related to multipartner sex were also included.

Now, do you think that in a survey in an interview structural interview if you are going to ask a rural woman whether she has sex with someone other than her husband is she going to answer your question? Even if she has sex with someone other than her husband she will not accept it. So, multipartner sex this is a this as an extreme example, but in other cases also perceivably simpler cases also, sometimes this may happen that you are dealing with intimate and confidential things. And the subjects may not like to will those things to you in your survey or when you go with your structure interview schedule. Qualitative methods can help a lot in the initial phases, in exploratory studies and often produce useful results to design quantitative studies.

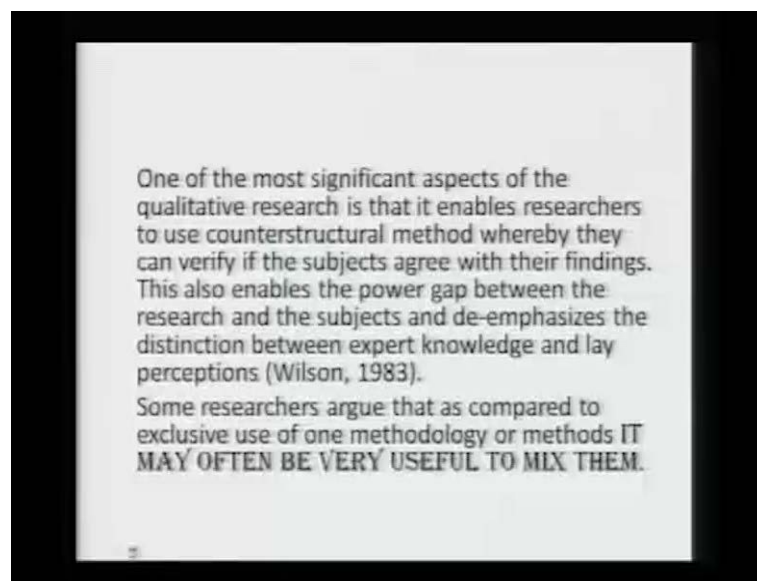
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In general qualitative methods have been used in the following types of studies subjective meaning in reproductive decisions, religious and traditional rationality. What are various types of rationality? Religious, rationality based on full calculations, rationality based on past calculation part calculations or full information, half information, traditional rationality, religious rationality, ethical rationality is not a one type. Why some couples who do not want additional child, do not use contraceptive methods either any studies of unmet needs. Then community norms including gender norms regarding sexual behavior and drug use, qualitative methods has also been lived experiences of women kidnapped or tricked into being trafficked.

In the studies of sex work, traffic female and in social and cultural dimensions of diseases. Community responses to various risks including the risks of HIV, sexual and drug use networks that can be done only by using participant observation or open ended interviews or through key respondent or life history method. Then subjective understanding of needle exchange among drug users and phenomenological understanding of unsafe practices. When people know some practices most of the time who indulge in unsafe practices they know that they are indulging in unsafe practices. Then what it is that make that make them to indulge in unsafe practices and that can be used knowing qualitative methods.

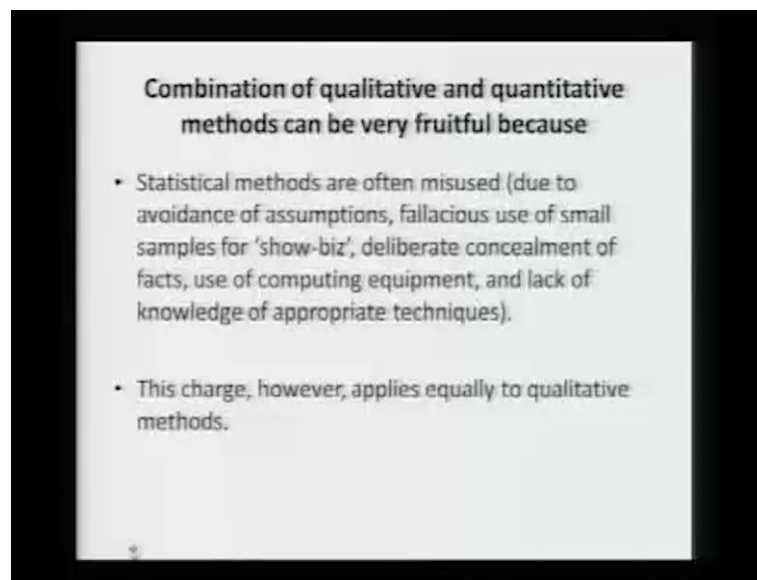
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One of the most significant aspects of the qualitative research is that it enables researchers to use counter structural method whereby they can verify if the subjects agree with their findings. You know in one student worked on the problem of n g os with me and he selected 2 n g os, 1 n g o which has started with some radical Marxist socialist ideology and another n g o which was formed registered and started taking up of developmental activities. Now, the person the student studies n g os for a sufficiently long period of time and writes a thesis. Now, it is important to see whether what he writes about those n g os is same as a n g os self perception.

So, I asked the student to go back to the n g os and share his findings of the study it gave us a very good feedback this is what counter structural method. Means going back to the field talking to the subjects these are what your findings are and taking their feedback may be in the light of feedback you need to make some modifications in some way. This also enables the power gap between the research and the subjects and de emphasizes the distinction between expert knowledge and lay perceptions. Some researchers argue that as compared to exclusive use of 1 methodology or methods it may often be very useful to mix them therefore.

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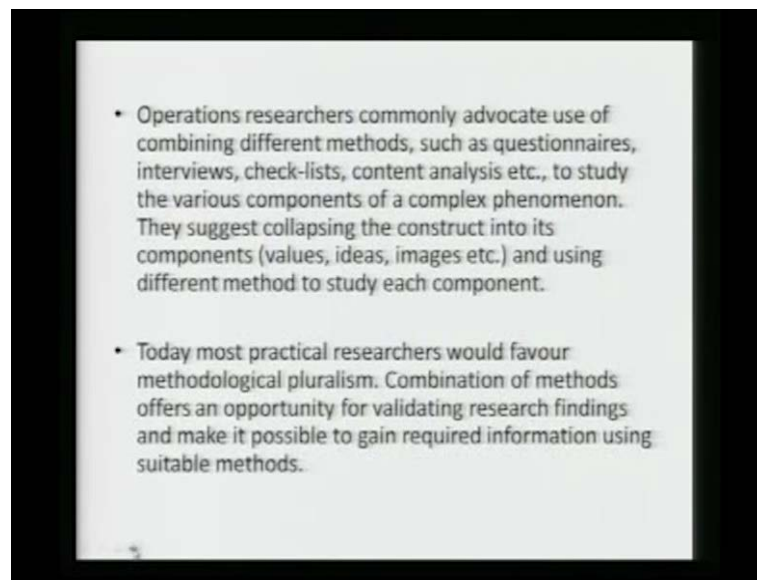
Combination of qualitative and quantitative methods can be very fruitful. Because statistical methods are often misused due to avoidance of assumptions fallacious use of small samples for show biz, deliberate concealment of facts, use of computing



equipment, and lack of knowledge of appropriate techniques. However, this is a charge which does not apply to quantitative sociologists. Only qualitative sociologists can also make mistakes hook up their data violates assumptions of the techniques that they are using.

So, we whether quantitative or qualitative we trust scientists we assume that scientists are objective and they are working on behalf of society by doing research. They are serving the interest of community and society they are not doing research for their own sake. So, the charges which are often laid against quantitative methods I would say that they are not so, significant charges they can equally apply to those which are qualitative methods, but combination is good.

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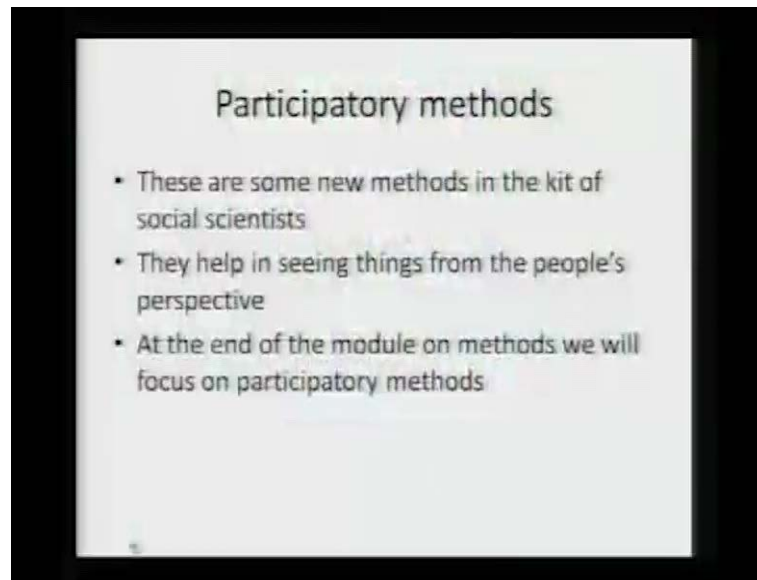


Now, operations researchers commonly advocate use of combining different methods such as questionnaires, interviews, check lists, content analysis. In one study of women faculty in IIT setup we use combination of questionnaire and interview. There are certain things questionnaire can reveal better there are certain things which interviews can reveal better. So, to study the various components of a complex phenomenon they suggest collapsing the construct into its components values, ideas, images, etcetera and using different method to study each component.

Today most practical researchers would favor methodological pluralism. Methodological pluralism is combination different methodologies and methods. Combination of methods

offers an opportunity for validating research findings and make it possible to gain required information using suitable methods. They recently Robert chambers and his colleagues have developed a new technique of research which is called participatory. So, accordingly there are participatory methods.

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We will talk about participatory methods in a future lecture in the next class. These are some new methods in the kit of social scientists and the help in seeing things from the peoples perspective. At the end of the module of methods we will focus on participatory methods. So, what we have learnt in todays lecture is that traditionally sociologists as well as those working in the field of populations have been divided along methodological lines quantitative and qualitative. And quantitative sociologists thought they are superior they are doing scientific work and they are superior to those who are applying qualitative methods.

Qualitative sociologists or populations experts thought that quantitative sociologists do not clearly understand things, because they are not familiar with the meaning systems of people of groups of individuals of communities and societies. But now it seems to make a sense to say that in real research to combine the two types of methodology u get better results. And let me tell you that in practical research in operations research, operation research which is done for interval for launching interventions or for testing success of intervention programs, for building development programs, community programs.

Programs to promote contraceptive use or for reducing maternal mortality ratio or infant mortality rate or child mortality rate or for educating people about various types of risk.

Donors expect that you will be combining quantitative methods with qualitative methods. Quantitative methods will give rates ratios, incidence rates; prevalence rates and causes connections between socio economic and demographic factors on the one hand and study variables on the other and qualitative approach or qualitative methods. Will tell you how do people at the grass roots live perceive their problems and perceive various intervals and program thank you.