

Social Research Traditions and the Relevance of Methodological Triangulation

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ABSTRACT

For researchers in the social sciences, when to combine the quantitative and qualitative methods is an issue. This is either because they do not understand the relevance, are more favourably disposed to one, or believe the methods are incompatible. Such dispositions deny the researchers and end users of empirical studies rich information. The objectives of this paper are to lay bare the limitations of using one research methodology, and sensitize social scientists on the benefits of combining social research methodologies. The paper discusses the research traditions and the quantitative and qualitative methodologies, and goes on to look at the limitations of each of the traditions and methodologies. It also discusses the relevance of combining qualitative and quantitative methodologies which includes enabling a social researcher overcome biases and deficiencies of any one method and thus capitalize on their individual strengths; allowing a researcher to produce a fuller account of the situation that covers not only the scales of the issue such as numbers involved, but also gives some insight into the motivational factors that gave rise to the behavior; and increasing the validity of results by incorporating several viewpoints. In addition, methodological triangulation aids in sampling – information from one method can be used as the basis for selecting a sample of people who will participate in the research through a different and contrasting method. It also provides a researcher with the opportunity to check the findings from one method against the findings from a different method. The paper concludes that methodological triangulation is relevant because it enriches social research findings as it provides in-depth information; thus, it recommends methodological triangulation for social researchers. However, the paper cautions that the decision to use methodological triangulation should be guided by how useful it is in addressing a particular question, issue or problem that is being investigated.

KEY WORDS:

Methodology, Social Research, Research Tradition, Triangulation, Relevance

Introduction

Social research is concerned with generation of knowledge about the social world. But there is no single pathway to this; there are options and alternatives. For every inquiry, one of the biggest decisions a researcher must make is on the appropriate methods to use. In practice, certain methods tend to be associated with particular philosophy. The discretion to use any one method is usually guided by the philosophical orientation of the social scientist concerned – whether s/he is a positivist or an interpretivist. Throughout the history of social sciences, there has been a conflict between what has sometimes been termed a very narrow positivistic approach, which has taken as its model the natural sciences (Durkheim, 1964), and

an interpretive tradition which has argued that human behaviour can be interpreted and understood rather than reduced to mathematical equations and law-like statements. Many who favour this latter view reject the claim that the social sciences can be or are science (Cuff & Payne, 1979). These two traditions have different ontological and epistemological arguments about society – world-views about what society is, as well as how society can be studied and understood.

Ontological and Epistemological Assumptions of Positivist and Interpretivist Traditions

Positivism is a philosophical tradition which seeks to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements. Positivist epistemology is based upon the traditional approaches which dominate the natural sciences. Positivistic approaches look for explanations that fit one universal reality. But positivists are not mindful of the fact that something which has been seen before will not always remain the same forever; their logic of universal identity in the path to knowledge and outcomes is fallacious. Positivists believe that to make progress in the search for knowledge about the social world we must make use of, and strive to follow, the methodological paths already established by physicists, chemists, and biologists; we must be objective in our study of the social world. In short, we must treat the social world as if it were the natural world, what Durkheim (1964) refers to as social fact.

To positivists, the successful achievements of the natural sciences in predicting, explaining and controlling the natural world, are intimately bound up with ability to quantify their objects of study – and this is the path that social sciences should follow in their quest to understand the social world (Collins, 2010). Durkheim's study of suicide is a good example of positivistic tradition in the study of a social phenomenon (Durkheim, 1952). Positivists believe the empirical analysis in suicide is vital to social researchers today as it was in 1897, forgetting or ignoring the fact that the social world is ephemeral, and social phenomena which social scientists study can, and do change. The quantitative method is a major characteristic of positivist research; it derives its importance from the significance of the experimental method used in the natural sciences. Positivism is an epistemology in which facts are thought to 'speak for themselves' instead of being left to common sense (Crowther & Lancaster, 2008), but we must not forget that facts can, and do change; the only thing that is constant is change. Therefore, when facts change they can 'speak for themselves', but speak differently in tune with the change they have experienced. Positivists thrust that social science and social research must be critical of common sense, must question what people tell you or give you as evidence because some may be false (Wilson, 2010). Positivists' emphasis on being critical of common sense should have been reason to be opened for assistance from the other tradition instead of antagonistic to it because then, social science and social research will be more in-depth and critical.

The positivists search for laws or underlying regularities in the world of social affairs is an exercise in futility because the social world is essentially relativistic and can better be understood if examined from multiple perspectives, including those which consider views of the individuals who are directly involved in the activities which are to be studied. The standpoint of the observer as a valid vantage point for understanding human activities is important, but one can better understand what is being studied by also viewing the frame of reference of the participant(s) in action. This is not reducing social science or social research to being essentially subjective rather than objective enterprise.

Interpretivism on the other hand is firmly set against the utility of a search for laws or regularities in the world of social affairs (Saunders, Lewis & Thornhill, 2012). Otherwise, the epistemology of interpretivism stands in stark contrast to positivistic approaches to social research that are premised on the assumption of one reality (Collins, 2010). Interpretive approaches celebrate the possibility of multiple realities (Saunders, Lewis & Thornhill, 2012). Interpretivists strongly believe things can be seen in different ways by different people at different times in different circumstances, and that each alternative version needs to be recognized as being valid in its own right (Denscombe, 2010). Useful as interpretivism is in providing diverse viewpoints on an issue of interest to the researcher, data generated through it cannot be used to make generalizations, or predictions because of its strong belief in change and relativity. For the interpretivists, the social world is essentially relativistic and can only be understood from the point of view of the individuals who are directly involved in the activities to be studied. Interpretivism rejects the standpoint of the 'observer', which characterizes positivist epistemology, as a valid vantage point for understanding human activities. They maintain that one can only understand by occupying the frame of reference of the participant(s) in the action; one has to understand from the inside. From this point on of view, social science is seen as being essentially a subjective rather than an objective enterprise. Interpretivists reject the notion that science can generate objective knowledge of any kind (Cuff & Payne, 1979).

Theorists located within the interpretive perspective adopt an approach consonant with the tenets of what may be described as the social science of regulation. The interpretive perspective is informed by a concern to understand the social world as it is, to understand the fundamental nature of the social world at the level of the subjective experience (Saunders, Lewis & Thornhill, 2012). Interpretivism seeks explanation within the realm of individual consciousness and subjectivity, within the frame of reference of the participant(s) as opposed to the observer of the action (Collins, 2010). In its approach to social research, interpretivism sees the social world as an emergent social process which is created by the individuals concerned. This stand may also consciously or unconsciously resuscitate the debate on matter and consciousness which comes first. Social reality, as viewed by positivists to have existence outside the consciousness of any

single individual, is viewed as extremely questionable and problematic as far as the interpretivists are concerned. Social scientists of the interpretive breed seek to understand the very basis and source of social reality by delving into the depths of human meanings which underlie social life. They are much more orientated towards obtaining an understanding of the subjectively created social world as it is in terms of an ongoing process(s).

Given the shortfalls of the obviously antagonistic epistemologies of the positivist and interpretivist traditions as we have laid bare with regards to social research, it would be foolhardy or sheer contempt for anyone to believe that any of the traditions can, singularly, offer adequate explanations or definitive knowledge that the two put together can.

The assumptions outlined above have direct implications of a methodological nature. Each one has important consequences for the way in which one attempts to investigate and obtain knowledge about the social world. Different ontologies and epistemologies of human nature incline social scientists towards different methodologies. The survey research design best suits both positivism and interpretivism, and that is the research design they adopt most times. Positivists and interpretivists rely on primary data, but in addition to primary data, positivists sometimes collect secondary data from documents while interpretivists also carry out observation for data. Positivists use questionnaire as research tool, and interpretivists can use in-depth interviews or focus group discussions or both to collect data from individuals and groups. A researcher who is carrying out a study with intent to get data that measures precisely the phenomenon of interest will most likely adopt the positivist approach. On the other hand, a social researcher who needs in-depth information on a social issue of interest will adopt interpretivist perspective. However, occasions may arise where a particular study would benefit from a combination of the two approaches, but many social researchers do not know when the need arises to combine both approaches. Others may know, but they are more favourably disposed to one of the approaches for personal reasons. If one subscribes to the positivist tradition, which views the social world as if it were a hard, objective, external reality, then the scientific endeavour would be to focus upon an analysis of relationships and regularities between the various elements of the phenomenon of interest. The concern would be the study of the social world or the issue of interest to identify and define social elements and ways in which relationships between the elements can be measured or expressed precisely. Positivists view that the social world can only be discovered through induction – developing theories through examining data, and deduction in which hypotheses derived from theories are tested against empirical data. This perspective expresses itself most forcefully in search of universal laws which explain and govern reality which is being observed. However, induction may not provide a solid basis for true statements because such statements rest upon our acceptance *a priori*, that the measurement or record-keeping methods are acceptable. The

methodological issues of importance are thus the concepts themselves, their measurement and the identification of underlying themes.

Positivism has its weakness; its assumption that facts “speak for themselves” is unrealistic. The social world is complex and the data we record about it is only rough, partial, and incomplete because some things are difficult to observe, more so, measure precisely. Furthermore, positivists' claim to be value free is not being honest, because all researchers exhibit at least restricted forms of evaluation, for instance, in identifying a research problem, selection of topic, group, and acceptable forms of research. Social researchers do not exist outside of the phenomenon being researched, we are part of what we study. As noted by Sayer (1992), objectivity in social science is a false and unattainable aim, and social scientists who advocate objectivity—which is impossible, are naïve objectivists.

Interpretivism places the ideas and reasoning of the individual or group being studied at the core of the investigation; it elevates the importance of people's thinking in terms of the research. Furthermore, it gives credibility and respects people's everyday thinking in its own right as valid. We agree with the interpretive perspective, people do not passively obey a set of social rules; people are 'agents' who interpret their experiences and who actively create an order to their existence. The social world is socially constructed, thus, there is the possibility that different groups of people might see things differently; there is the possibility of alternative realities—realities that vary from situation to situation, culture to culture.

Interpretivists argue that many phenomena in the social world such as culture, social status and relationship are observable; and can be studied through abduction which is the phenomenological attempt to get inside the thing being researched to understand its inner meaning. The importance of the subjective experience of individuals in the creation of the social world cannot be ignored, the principal concern of social scientists therefore, should be to understand the way in which the individual creates, modifies and interprets the world in which s/he finds himself or herself. The emphasis, in extreme cases, should be placed upon the explanation and understanding of what is unique and particular to the individual rather than of what is general and universal. The interpretivists question whether there exists an external reality worthy of study. One of the interpretivists, Burr (1996), argues that all social objects have a transitory element. Consequently, their definition and even visibility is dependent upon the lenses we wear when viewing them. It is little or no wonder therefore that, in methodological terms interpretivism emphasizes the relativistic nature of the social world to such an extent that it is considered unscientific, or worse, anti-scientific by reference to the ground rules commonly applied by the positivists.

The Research Methodologies

There are basically two methodologies in social research – the quantitative and qualitative methodologies. The quantitative approaches are based on the philosophy of positivism which relies on precise measurement, statistics or other

things generally associated with the scientific method. The quantitative methodology also emphasizes on objectivity and precise measurement in analysis. Qualitative or interpretive research does not rely on precise measurement, statistics or other things generally associated with the scientific method. In direct contrast to positivism, it is an approach that emphasizes subjectivity rather than objectivity, explanation more than analysis, interpretation rather than measurement, and agency rather than structure. Qualitative research focuses on human experience because people construe others' behaviours through their own subjective lenses or perceptions, and others' behaviour, too, is framed within their own subjective and discursive frame of reference (Denscombe, 2010). The task for social researchers therefore, is to present the experiences of those s/he has studied in a way that is highly reflective of the opinions of the respondents. This entails the ability to see things through the eyes of respondents, to understand things in the way that they understand things and to provide a description of matters that adequately portray how the group in question experiences the situation (Denscombe, 2010). Qualitative research recognizes the inherent subjective nature of social relationships (Silvermann, 1993).

The traditional position is that there is an epistemological chasm between quantitative and qualitative research; either being intensive (examining the topic in great depth) and qualitative or being extensive (examining a wide range of data) and hence quantitative (Sayer, 1992; Silverman, 1993). However, this dualism is far too simplistic. Such a strong polar dualism is questioned by realists (e.g. Sayer, 1992) who have also observed that occasions may call for adoption of the two traditions, and have therefore emphasized on a convergence of the two, otherwise, methodological triangulation.

Defining Methodological Triangulation

Each of positivism and interpretivism can offer a philosophical starting point for social research, however, in most instances combining the two social research traditions is ideal; making use of quantitative and qualitative methodologies could be best suited. Methodological triangulation, also called multi-method, mixed method, or methods triangulation (Greene & Caracelli, 1997; Barbour, 1998, and Polit & Hungler, 1995), is a research strategy that crosses the boundaries of conventional paradigms of social research by deliberately combining methods drawn from different traditions with different underlying assumptions. It refers to a pluralism of methods that enables the researcher to use different techniques to get access to different facets of the same social phenomenon (Carter, 2003; Danermark, 2002; Sayer, 2000). Bogdan and Biklen (2006) define methodological triangulation as the application of several methods in the study of the same phenomenon; it involves using more than one method to gather data, such as interviews, observations, questionnaires, and documents. At its simplest, it involves using both qualitative and quantitative methods (Denscombe, 2010) in order to cross-check data from multiple sources (O'Donoghue & Punch, 2003).

Here, methodological triangulation is the use of multiple methods to collect data about some phenomenon. The principle behind methodological triangulation is that the researcher can get a better understanding of the thing that is being investigated if s/he studies it from different positions or using different social research methodologies. Denzin (1989) and Denscombe (2010), have noted that methodological triangulation is the most common form of triangulation adopted by social researchers because it has benefits to the researcher; however, the benefits of methodological triangulation are not known to many social scientists.

The Relevance of Methodological Triangulation

Discussions about the relevance of methodological triangulation, when and how to combine social research methods go back to debates about the use of surveys and fieldwork as may be observed in the works of Vidich and Shapiro (1955), Zeldich (1962), McCall and Simmons (1969) and Sieber (1973). Scholars such as Carvalho and White (1997) and Rothbauer (2008) cited by Noble and Heale (2019), Denzin (1970), Bryman (2001), Olsen (2004), and Heale and Forbes (2013) have argued that methodological triangulation has benefits to the researcher and other end users of research information. For instance, Heale and Forbes (2013) maintain that methodological triangulation can mitigate the weaknesses found in single method. In the same vein, Denzin (1970) and Mitchell (1986) note that methodological triangulation reduces deficiencies and biases that stem from any single method; while Noble and Heale (2019) are convinced it can help explain differing aspects of an issue of interest. Other champions of methodological triangulation include Johnson and Onwuegbuzie (2004), Cresswell and Clark (2007), Greene (2007), and Cresswell (2009).

Despite arguments on the benefits of methodological triangulation and the wide support it enjoys, Johnson, O'Hara and Hirst (2017), Lamnek (1993), Silverman (1985), and Murdock (2019), believe expanding the methodology of research does not necessarily guarantee better results; it may in fact, lead to problems. Murdock (2019) maintains that, one of the problems of methodological triangulation is researchers may not adequately explain their techniques for harmonizing results. For Johnson et al. (2017), methodological triangulation adds to the complexity of the research and increases the time for the study. However, going by the benefits of methodological triangulation vis-a-vis its drawbacks, we maintain that it is relevant in social research as will be argued shortly.

The relevance of methodological triangulation cannot be overemphasized because each of the methodologies has its weaknesses, for instance, while the quantitative method enables a social researcher to measure precisely a phenomenon being studied, it does not yield data or information that is in-depth and representative of the exact opinion(s) of the respondents. On the other hand, qualitative method yields data or information that is in-depth, wholly and highly representative of the views of the respondents, but it does not give room for precise measurement. That is why we agree with Webb, Campbell, Schwartz, and Sechrest

(1966), who have frowned at complacent dependence on single method to carry out a study. In claiming that all research methods are biased, Webb et al. have argued for the use of a collection of methods, “multiple operationalism” (p.2), which reduces the negative effects of one. Combining methods enables a social researcher overcome biases and deficiencies of any one method and thus capitalize on their individual strengths. Denzin (1989, p.307) notes that, “By combining multiple ... methods, researchers can hope to overcome the intrinsic bias that comes from single-methods”.

Furthermore, quantitative method enables a researcher to gather data from a representative sample size which can be used to make generalization, but such data does not provide in-depth information. On the other hand, with the use of qualitative method a researcher collects data that provide in-depth information on a phenomenon of interest, but from a sample of informants that is too few to consider as being representative of the study population. Methodological triangulation provides a researcher an opportunity to collect data that is complementary to each other in terms of in-depthness as well as being able to make generalizations.

Furthermore, methodological triangulation enables a researcher to map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one methodological standpoint. Methodological triangulation allows a researcher to see things from alternative perspectives and, thereby, getting a more complete overview of the subject. It allows a researcher to produce a fuller account of the situation that covers not only the scales of the issue such as numbers or percentage involved, but also gives some insight into the motivational factors that give rise to a behaviour. Triangulation can provide a fuller description and /or more complete explanation of the phenomenon being studied by providing more than one perspective on it. A combination of different methods allows the researcher to look at a research topic from a variety of perspectives as a means of comparison and contrast, with each method approaching the topic from a different angle. Similarly, it enables for a more comprehensive account of the thing being researched. Altrichter, Feldman, Posch, and Somekh (2008, p.47), see the relevance of methodological triangulation in the fact that it “...gives a more detailed and balanced picture of the situation”.

By employing more than one method for a study, triangulation increases validity of results by incorporating several viewpoints. For instance, Lenin's methodological triangulation (a qualitative methodology), and survey data (a quantitative methodology), to study the end of the Russian peasantry and the early beginning of working class conflict with employers in Russia, helped to validate the findings (Freire, 1972). According to Webb et al. (1966), “...when a hypothesis can survive ... a series of complementary methods of testing, it contains a degree of validity unattainable by one tested within the more constricted framework of a single method (p.174). A social researcher can be more confident with findings

from a study if different methods led to the same result. Cohen and Manion (2000, p.254), agree that methodological triangulation helps to “...explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint”.

Researchers can improve their confidence in the accuracy of findings through the use of different methods to investigate the same subject. Methodological triangulation provides the researcher with the opportunity to check the findings from one method against the findings from a different method. As noted by Greene, Caracell and Graham (1989, p.259), it allows for “...convergence, corroboration, correspondence of results from the different methods”. Where different strategies produce data that are more or less the same, the researcher can feel more confident in concluding that the findings are accurate. Where different strategies produce data that do not align, it should spur further research to investigate the difference in findings. Further research can reveal limitations to the methods of data collection or tease out fascinating complications within the phenomenon being studied.

Methodological triangulation can also aid in sampling; information from one method can be used as the basis for selecting a sample of people who will participate in the research through a different and contrasting method. This may involve the use of a quantitative pilot study to provide background information that researchers use to guide their selection of the individuals who will participate in subsequent qualitative research involving things like focus groups and interviews. Alternatively, qualitative research can precede quantitative research as a means of identifying the appropriate kind of people to take part in a piece of research and as a means of filtering out those who might not be suitable. The qualitative methods can aid the quantitative methods by identifying the kind of people who are required for the study, by finding out what things might influence their willingness to take part in the study, and even by finding out at a later stage what caused some to drop out from the research (Collins et al., 2006).

Methodological triangulation is relevant because it can enable social researchers capitalize on the individual strengths of the methods by combining them. However, the use of methodological triangulation may be undermined by a lack of awareness of the different and incommensurate ontological and epistemological assumptions associated with various methods. While some combinations of methods may be used with common ontologies and epistemologies, serious problems may arise when methods based on different assumptions are used because methodological triangulation demands creativity and ingenuity from its user –in collecting data, in data analysis and insightful interpretation of same.

Furthermore, methodological triangulation should not be used to legitimize a dominant, personally preferred method, particularly, where or when either quantitative or qualitative methods become mere window dressing for the

other, then the design is inadequate. This does, however, raise the question whether the various instruments may be viewed as, or must be equally sensitive to the phenomenon being studied. The methods can be of equal strength, or one method may, in fact, be stronger or more appropriate, but this needs to be carefully justified and made explicit. Otherwise, the purpose of methodological triangulation is subverted.

Lastly, a methodologically triangulated study demands more time and cost. The time and costs of a research project can increase; the time frame for fieldwork and data analysis can extend. In addition, the researcher needs to have skills in more than one method; the researcher needs to develop and exercise skills covering both qualitative and quantitative approaches. But these are not demands that should put social scientists off because, expectedly, benefits from methodological triangulation could be greater.

Conclusions and Recommendations

We conclude that the suggestion by Sarantakos (1993) and Silverman (1993) that there is always a clear distinction between the two main research traditions and methodologies, and that these two traditions and methodologies are incompatible is not true. Positivism and interpretivism as well as the quantitative and qualitative methodologies stand poles apart, however, this dualism is far too simplistic, occasions may call for adoption of the two traditions – and they often do, to complement each other through methodological triangulation. But many social researchers are ignorant of the relevance of methodological triangulation.

We recommend that social researchers get acquainted with, and adopt methodological triangulation when and where it is necessary. By combining multiple methods, researchers can hope to overcome the weaknesses or intrinsic biases and the problems that come from single method studies. Methodological triangulation is relevant where quantitative or qualitative methods alone will not provide adequate findings for the particular piece of research being undertaken. In many instances, good social research can, and do benefit from the use of both epistemologies and methodological triangulation because it provides adequate answers or information about a social phenomenon being studied. A social researcher can be excused for using single method only where such can adequately provide data or information useful in addressing a particular question, issue or problem that is being investigated.

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