

Nonreactive Research: An Alternative Measurement to Social Phenomenological Approach

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Abstract

Every research aims to identify or provide a solution to a predefined problem. This is often done through systematic investigation of a problem in question. The central theme of this paper is to critically examine the intellectual contributions to the significance of nonreactive research in the social phenomenological approach. The work reviews some works of literature on measurements or instruments of data collection for research purposes. It argues that reactive measurements such as questionnaires and interviews played a domineering role in phenomenological studies. However, the weakness associated with such measures in an understanding phenomenon often affects the reliability and validity of the research owing to the manners in which the research participant practically react to the measures. The application of nonreactive measurements became imperative in complementing these reactive or obtrusive measures as it did not only create room for more reliable data but ensures that behaviours of research subjects do not change in the course of an investigation or when gathering data. The work, therefore, concludes that theoretical underpinning suggesting nonreactive or unobtrusive measures in pragmatically understanding people's perception about an event is not to completely jettison the reactive measurements but served as a remedy associated with methodological weakness of reactive measures in comprehending social phenomenon.

Keywords: Nonreactive Research, Measurement, Phenomenological Approach.

JEL Classification: C8

1. Introduction

The most dominant and prominent methodological approaches to social sciences research are interviews, questionnaires, focus-group discussions and in most cases personal observations. These are instruments of data collection that often inspired the participants in a research endeavour to react or manipulate information in the process of data collection by a researcher. In phenomenological social research where the researcher seeks to answer his research questions by examining the perception of a phenomenon in question, interview, focus group discussion and personal observation played a domineering role in the process of data collection.

However, nonreactive research or unobtrusive measurement has become prominent to understand a social phenomena without interfering with the subject of the research. As observed by Jennifer (2002), qualitative research is both excitingly celebrated and faces a lot of challenges where the debates arouse as to whether be qualitative researchers have strong capability to establish truth and reality in the social World. The skepticism that generated this debate might not be unconnected to the methodological approach in social sciences that might sound limited to the positivist approach in research.

Though reliability on orthodox data collection instruments in social sciences research such as interviews and questionnaires continued to gain momentum, the lightening limitation of these instruments cannot be underestimated. Lee (2000), admitted this continued dominancy and massive use of these instruments by social sciences researchers but out-rightly queried the over-reliance and dependent on these instruments in gathering data for research purposes. The weaknesses of the interview and questionnaire identified by scholars and researchers in the field of social sciences are not to completely undermine or erode the known instruments of gathering data but to supplement it with virtuous alternatives that guarantee reliabilities and validities of the data collected by the researchers. Oppenheim (1992), admitted that a questionnaire is the most objective tool of data gathering in generalizing research results owing to the large number of target respondents. However, he fiercely exposed the limitation associated with such instruments such as the design of faulty questionnaires, unreliability on the part of respondents, biases, ignorance and misunderstanding of questionnaires wordings, coding error and most significantly the wrong interpretation of results. This point is buttressed by Bryman (2008) who argued that over-reliance on a questionnaire as the instrument of data collection has created unnecessary disconnection from everyday life and with some measurements that have some degree of accuracy.

Similarly, an interview which is the most popular used instrument of data collection in phenomenological social sciences research often creates room for research participants to perceive phenomenon from their social, religious, political and cultural perspectives. This usually makes data generated from the field using interview method with credibility dubiousness and validity suspiciousness. In defaming the overemphasis on an interview by social phenomenological researchers, Mathew (2001), averred that researchers seeking the right perception about a phenomenon only relied on the honesty of respondents to narrate their specific live experience, circumstances, opinions, thought and behaviour. This honesty no doubt might be attributed to emotion on the part of respondents which might be difficult for a researcher to detach the truth from reality. Esterberg (2002), have captured with some measurable degree the significance of nonreactive research in comprehending people's perception toward a particular phenomenon. To him, if you want to know actually what people do, rather than what they utter or said they do, observation is probably the best instead of interview (Esterberg, 2002).

The intellectual exercise by the social scientists to emphasizes the richness of nonreactive research in a social phenomenological study is not to debase the

interview and other reactive or intrusive instruments of data collection in phenomenological approach but to show epistemological evidence that nonreactive or unobtrusive research could tremendously serve as alternatives and remedies to the manipulation of data in the reactive research process. More so, time, expenses and technicalities involved in transcription and interpretation of interview data make nonreactive measurements the fundamental alternative to interview in phenomenological social sciences research.

2. Phenomenological Approach: Origin and Conceptual Clarification

The fact that the phenomenological approach in social sciences has created an intellectual space for social scientists to assimilate social phenomenon from a broader perspective is incontrovertible. It is a philosophical doctrine in social sciences intended to observe and understand human experience and their perception toward a given event. Historically, Thomas (2004), traces the foundation or the origin of phenomenology to Emmanuel Kant and Frederick Hegel. However, contemporary usage of phenomenology in research enterprise could be traceable to German philosopher and mathematician Edmund Husserl who live between 1859 to 1938 (Vandenberg, 1997). Husserl's philosophical enterprise was later propagated by other scholars such as Merleau-Ponty, Heidegger and Sartre (Spiegelberg, 1982). Phenomenology is multidimensional as its usage cuts across disciplines, especially in social sciences and health sciences. For instance, the approach enjoined usage in nursing and the health sciences (Oiler, 1986), psychology (Giorgi, 1985; Polkinghorne, 1989), education (Tesch, 1990; van Manen, 1990) and sociology (Borgatta & Borgatta, 1992).

Experimenting with the historical account of the phenomenological approach in social sciences, Eagleton (1983) cited in Thomas (2004), argued that Husserl as the contemporary proponent of the phenomenological approach employed the approach to unravel and understand the post First World War (1914 – 1918) events. The European continent was said to be in ruin with dwindling economy owing to the horror of war that follow afterwards. Husserl, therefore, embarked on a philosophical approach by adopting a phenomenological style in understanding the perception and experiences that shaped the post-war events.

Conceptually, the phenomenological approach is a popular social science enquiry that tends to examine and understand the live experience of complex events in our social World. The leading exponent of the phenomenological approach, Husserl, strongly believed that people are often connected to social events and for such events to be meaningful, the experience and perception of individuals involved must be shared. This is the reason why Husserl is often described as a descriptive phenomenological scholar (Reiners, 2012). While Creswell (2007) conceived of phenomenological approach as a research endeavour in which several individuals participating in research share their live experience about the scene or event. A Phenomenological approach is occupied by methodological tradition that is associated with qualitative research mechanisms. This is probably why Vagle (2014), argued that phenomenology is both inductive and reflective. The approach is ferociously involved in gathering insight into people's past and lived experiences as they recollect them (Vagle, 2014).

Two major scholars in the field of phenomenology have identified two approaches to phenomenological studies. Van Manen (1990), identified hermeneutic phenomenology while Moustakas (1994), identified empirical or psychological phenomenology. According to Van Manen, hermeneutic phenomenology is an interpretation of text as a live experience about people and events. He emphasized in his hermeneutic that the phenomenology approach is not only to observe and examine people's thoughts, emotions, and perceptions about the phenomenon but the researcher's ability to interpret them to generate meaning about actions (Van Manen, 1990).

Moustakas's empirical or psychological phenomenological approach on the other hand has given premium to researcher perceptions about study phenomenon and then follows by a description of participant's behaviour about an event (Moustakas, 1994). To avoid researcher bias, Moustakas has followed Husserl's deployment of *epoche* or bracketing in the phenomenological method. The aim of this is for the researchers to set aside their perception about the studying event and to settle for new insight discovered in the course of the investigation (Moustakas, 1994). Moustakas though believed in the researcher's perception about the event or phenomenon to be investigated, however was conscious of the reliability of the result which might be the reason why he remained the apologist of bracketing in the process of description and interpretation of result by a researcher.

Thus, it is categorically clear that the phenomenological approach is the most convenient and most reliable approach to understand the social, economic, political and cultural phenomena. Social and political intricacies such as crimes of various categories, juvenile delinquency, ethnic cum religious conflicts, civil wars etc are best understood in our social World using the parameter of social phenomenological approach. Similarly, health science also found the phenomenological approach prominent in explaining the values, perceptions and ethical issues in the field of nursing and other paramedical lines.

Nonreactive Research

The reliability and validity of research findings largely depend on the instruments used in the process of data collection and interpretation. This is the reason why a researcher is always conscious of the instrument that would best suit his or her research endeavour. Nonreactive research is a research instrument through which a researcher gathers information about a specific problem without involving any participant in the process. Webb et al. (1966), see nonreactive research as a research endeavour in which the researcher directly elicit information from the subject of research. Neuman (2014), conceived nonreactive research as unobtrusive measurements in which the subject of the research are not aware they are being studied but the researcher traces some of their behaviour or social actions. The major characteristic of this research is that the process does not influence the people being studied as obtainable in reactive research instruments such as interview and questionnaire. This enables researchers to be independent in both data collection and interpretation. This might be the reason why Webb and his colleague advocated and advanced that the reason why the nonreactive instrument

is significant in research is that it enormously gives room for the avoidance of problems caused by researchers (Webb et al, 1966).

In their book, *Unobtrusive Measures: nonreactive research in the social sciences*, Webb and his colleague did not only coined the concept of nonreactive research or unobtrusive measurements but identified three (3) types of this measurement in research. The three typologies are physical trace measurement, archival information and simple observation.

Physical Trace Measurement: according to Webb et al (1966), physical trace measurement in nonreactive research entails sourcing of data by a researcher through tracing the physical environment of the research subjects. They buttressed further that people's attitude, experience, thought, feeling and belief are best understood if physical shreds of evidence about their words and actions are traced. Physical trace measurement is further typified into two (2) types by Web et al (1966), as follows;

Erosion Measure: This is the type of physical trace measurement in which the measure is the extent of selective wear (Web et al 1966). In this type of physical trace measurement, a researcher physically visits the research scene and take account of events and happenings regarding his research questions. For instance, a researcher investigated the alleged maltreatment of internally displaced persons (IDPs) in their camps. The allegation was that IDPs have no access to toilets, water and other sanitary. On reaching the camp as a researcher involved in erosion measures, he noticed that there are over Three Thousand IDPs in the camp with only one toilet and one bathroom and rarely functional tape water. This physical evidence by a researcher is enough to confirm the allegation that IDPs are actually maltreated with respect to their hygiene in the study camp. Many social scientists have used this measurement in explaining and interpreting social events from different perspectives. For instance, Duncan (1966), used the erosion measure in the Museum of Science and Industry in Chicago to examine the replacement of vinyl tiles' exhibition. With the erosion method, the popular exhibit was deduced by Duncan. Similarly, Mann et al. (1990), applied the erosion measure in determining the period of death using the parameter of insect activity, body weight, body trauma and body decomposition in the cemetery.

Accretion Measure: This is the type of physical trace measure in nonreactive research where a researcher justified his research findings by the evidence of what research subjects left behind. Neumna (2014) argued that accretion measure is not only the residue of the activity of people or what they leave behind but suggested that accumulation of physical evidence justified people's behaviour. The researcher involved in accretion measure, therefore, is interested in the deposit of the materials left by the research subjects that will serve as evidence in justifying his research findings. For example, a researcher embarked on alleged sexual abuse in a refugee's camp which led to the closure of the camp by the authority. On visiting the camp using the accretion measure, a researcher found a multitude of condoms not only in girls' and boys' apartments at the camp but even in the apartments of camp officials. The deposit of numerous condoms found in the closed camp by a

researcher is a strong justification that the camp was actually habited by sexual abuses. Gray (2009) categorized accretion into natural and controlled accretion. Natural accretion to him includes fingerprint, objects at home and other things that accumulate. While control accretion measure is when the researcher intervenes or control the measure (Gray, 2009).

Archival Information: This is the type of nonreactive research where a researcher accesses the stored historical artefact for the purpose of generating data to answer his research questions. According to Palys and Atichison (2014), archival measure enables the researcher to record or hardcopy documents which includes; tape-recorded material, diaries, books, magazine, letters photograph and newspaper. They also opined that in addition to written materials, webpages could also be seen as a source of archival measure which may include files, audio, video and images. In his contribution to the meaning of archival measure in social research, Lee (2000), identified two types of archival measures which are running records and episodic records. Lee explicates that running records are those records that are continually generated and are often used for research purposes. Examples of such records are marriages, deaths and births rate from hospitals. While episodic records are those records generated by a researcher from a bureaucratic institution such as records of criteria for police arrest, criteria for conviction of individuals by the court (Lee, 2000).

Simple Observation: This is referred to as a type of nonreactive research in which a researcher or investigator personally observe a phenomenon thereby deducing the meaning about the people's action that could be used to answer his research questions. Since there are different types of observation in social research such as naturalistic observation, participant observation and structured observation, the observation used in nonreactive research is naturalistic as is the type that is unobtrusive where the research subjects are not aware they are been observed. Lee (2000) identified five categories of simple observation which includes; time-related behaviour, expressive movement, in situ conversation and exterior physical signs. This categorization was corroborated by Neuman (2014), a tripartite simple observations which are external appearance, count behaviour and time duration. In external appearance, the observer takes notes of the physical attributes of research subjects while in count behaviour and time duration, the researcher takes notes of the number of people involved in an event and time respectively.

3. Literature Review on Measurements

Measuring data in a research process to ascertain the reliability and validity of gathered data remains the core value of any scientific research. The desirable characteristics of measurement are reliability and validity. Both are significant for the conclusions about the sincerity of good research (Waltz et al., 2004). From the perspective of Prasanth (2020), measurement in research methodology is the process of assigning a numerical value to a phenomenon while describing its property. Michell (1997) conceived measurement as the estimation or the discovery of the ratio of some magnitude of a quantitative attribute to a unit of the same attribute" (Michell, 1997). In simplifying the concept of measurement in the research process, Trochim (2020) conceptualized measurement in research

methodology as the process which involved observing and recording the observation that is gathered as part of a research effort. Measurement is no doubt the core attribute that makes research valuable. Measurement therefore could not only be seen as quantification of a phenomenon but make a researcher be conscious as to whether data generated in the research field is reliable by considering their consistencies.

Obviously measuring data for research purposes is not only peculiar to quantitative data or data that are subjected to numerical manipulation. While natural and applied scientists measure physical objects in the research process, social scientists measure abstract objects such as poverty, height, population, conflict, peace, migration, income and development. To measure these abstract phenomena, consistency is rarely achieved because of the multidimensional opinion and personal attachment of most respondents. Neuman has vividly encapsulated this phenomenon as thus;

Our everyday measures of the nonphysical world are usually less exact. We are measuring when we say that a restaurant has excellent food, that Pablo is really smart, that Karen has a negative attitude toward life, that Johnson is really prejudiced, or that last night's movie contained lots of violence. Such everyday judgments as "really prejudiced" or "lots of violence" are sloppy and imprecise (Neuman, 2014 p. 203).

This has captured the difficulties in the inexactness of measurements in the nonphysical world. Such measurements in the nonphysical world are always easily amenable to manipulation due to human nature. Buttressing this, Kimberlin & Winterstein, (2008), averred that measurement of reliability and validity of the research remained the key indicator of quality measures. Measurement does not only create an avenue for the researcher's distinctiveness but according to Prasanth (2020), give varieties of information about theoretical concept under investigation. Similarly, Neuman (2014), argued that we need measurement not only to evaluate, hypothesize but to provide empirically the support for theory. In furtherance of this analysis, Blalock (1970) also emphasized the positive impact of measurement in theory building. He advocates that measurement consideration regularly widen the researcher's mind to clarify theoretical thinking thereby creating room for the suggestion of new variables to be considered.

One of the fundamental usefulness of measurements in a research process is that it unequivocally reduces errors in data collection. This is an indication that error cannot be completely eradicated in social science research measurement but could be drastically reduced using the doctrine of good measurement. American Psychologist Stanley Smith Stevens have identified Four (4) levels or scales of measurement. These are nominal, ordinal, interval, and ratio scales (Stanley, 1946). Though Stanley's measurements typology was criticized by other scholars, it remained among the popular and dominantly used level of measurements in methodological scholarship. A nominal scale is the level of measurement in which variables are labelled or simply named with no specific order. John et al. (2007), exemplified the nominal scale in measurement to include marital status, gender,

employment status, religion, race etc. Conversely, ordinal scale is referred to as the level of measurement where variables are named in a specific order. A typical example of an ordinal scale is when a researcher asks respondents about job opportunities and industry's brand as 'good', 'poor', 'moderate', or excellent (John, et al. 2007). The Interval scale on the other hand is a measurement level that creates an interval between each of its variable options beyond labelling them in order. The price index in which the number of the base is always set to be 100 is according to the John et al. (2007) an example of an interval scale. While ratio scale as the level of measurement is attributable with all the characteristics of interval scale but additionally accommodate on any of its variables the value of "zero" (Stanley, 1946). The absoluteness in zero in ratio scale measurement represents a point on the scale where there is the nonappearance of the particular attribute. Money, age and weight are typical examples of ratio scale measurement because they have interval properties and absolute zero (John, et al. 2007).

For any measurement to be accurate and justifiable to support the development of theory and answering of research questions, it must be armed with essential characteristics that make it unquestionable. This exactness is not only imperative but remained essential, fundamental and a core value of research credibility. It is on this note that measurement in research is characterized into three (3) major or key attributes which are reliability, validity and practicability.

Reliability: This is the characteristic of measurement that create an avenue for researchers to evaluate the consistency of data collected from different sources using the same measure. Reliability, therefore, is an essential ingredient of measurement which tremendously support positive research output. According to Nunally (1967), reliability is the repeatability of measurements by the same individual using divergent measures of the same attribute or by divergent individuals using the same measure of an attribute. On his own part, Blumberg et al. (2005) see reliability as a measurement that provides consistency of result with the same standard of value. While Chakrabartty (2013), defined reliability as a characteristic of measurement that measures trustworthiness, precision, repeatability, and consistency. The credibility of research thus immensely depends on the degree of consistency of measurement used in garnering data.

Validity: This is referred to as the capacity of measuring tool to coherently measure what it proposes or expect to measure. It can also be viewed as the extent to which an instrument measures what it declare or affirm to measure (Blumberg, et al. 2005). In a similar definition, Robson (2011), conceived validity as a degree to which the instrument measures what it is intended to measure. More elaborately, Pallant (2011), sees validity as the degree of truthfulness of result. He buttresses further that this requires the research instrument such as a questionnaire to appropriately measure the thoughts under the investigation. The central theme of validity in research, therefore, is the capability of a researcher to validly measure what he intends to measure without considering his personal opinion, sentiment or belief. It fiercely justifies the absence of bias of the researcher in measuring data.

Practicability: this is the characteristic of measurement that entails that measures used in assessing people or events must be practicably obtainable. Kunwar (2021), conceptualized practicability in measurement as a practice of measuring instrument in which measure established to measure people's altitude must be applied in practice. In other words, the measure must functional, useful, pragmatic capable of transforming the research into realities. Ideally, practicability as a characteristic of good measurement in research according to Kunwar (2021), is armed with three (3) qualities; economic, convenience and interpretability. Economic practicability in measurement assumed that researcher's budget is correspondent to the measure chosen to collect data from the field. Convenience practicability in measurement entails that the researcher makes it convenient for his respondents to provide answers to his questions. For instance, a researcher can construct questionnaire language in simple terms for easy assimilation by the respondents. While interpretability is concerned with the extent to which researchers provide room for interpretation of results with evidence of their reliability and most importantly evidence of the relationship of the text to other measures used (Kunwar, 2021).

4. Nonreactive Research: Underpinning the Reactive Measurements in Phenomenological Approach

In their own contribution to the methodological weakness of questionnaire and interview in social science research, Webb et al. argues thus;

Interviews and questionnaires intrude as a foreign element into the social setting they would describe, they create as well as measure attitudes, they elicit atypical role and response, they are limited to those who are accessible and who will cooperate, and the responses obtained are produced in part by dimensions of individual differences irrelevant to the topic at hand (Webb et al. 1966: 1).

One of the major albatross bedevilling the social phenomenological approach is an instrument used in measuring data. Reactive measurement, dominantly interview is often used by researchers to conduct phenomenological studies. As opined by Webb et al. above, the instrument is not only weak but the accessibility of respondents largely depends on their cooperation. In addition to this weakness, the researchers face the risk of encountering persons of low or completely no knowledge of issues under the investigation and might provide themselves to participate in the research. For instance, in their survey of voting behaviour, Presser and Traugott (1992) averred that some of the participants in the survey who claimed to have voted have not actually voted. Coupled with this risk of facing unknowledgeable respondents, some participants on many occasions in a phenomenological interviews often tried to be emotional by either looking different or indifferent to their interviewer. Lee (2000) captured this phenomenon when he opined that interviewees always create a scene in part by commonly trying to manage their impression to maintain their standing in the eyes of a researcher.

Another fundamental common threat to reactive measurements in a phenomenological approach is the degree of measuring reliability and validity of

the instrument. The data collection using nonreactive measurement is collected in the social context which is amenable to manipulation. The manipulative tendency might be a human factor and or environmental factor. Mohajan (2017), for instance, argued that multiple factors impeded the reliability and validity of research findings. To him, one of these factors that hampered research findings is an error. In identifying error that affects research validity and reliability, Lillis (2006), infers that errors could be obtained through the carelessness of a researcher, the research participants and most significantly the method of data collection and analysis. This is a mere testimony and justification that studying social phenomena using the reactive instruments is bedevilled by lots of anomalies which can only be normalized with the employment of nonreactive measurements to supplement the possible overreaction or under-reaction of respondents in reactive measurements.

In his critique of Husserl's phenomenological approach, Heidegger (1962), established a more comprehensive phenomenological approach where he argued that our social engagement with the world was indeed intentional and that people cannot be detached meaningfully from their social context because a world is occupied by an object, people, culture and language. The fact that people are socially, linguistically and culturally linked to this physical world as argued by Heidegger laid credence to the fact that reactive measure in phenomenological approach faced a higher risk of manipulation of the instrument to suits the societal, linguistic and cultural values of research participants. In addition to the societal attachment to respondents' attitudes in reactive phenomenological approach, Langdridge (2007), opined subject of research hardly suspend their prior assumptions completely in order to ascertain *epoche* which is essentially setting aside personal opinion in favour of objective thought about the topic under the investigation.

Complimentarily, the nonreactive measurements in the social science phenomenological approach such as physical trace, archival information and simple observation have assumed a centre stage for the researcher to gather data about his research question without necessarily obstructing or influencing the behaviour of others. Theoretically, this measurement is not designed to completely replace the reactive measurement such as interview and questionnaire but serve as a necessary alternative to methodological weaknesses that are often associated with reactive measurements.

5. Conclusion

This paper discusses the methodological deficiencies of reactive measures in the social phenomenological approach. It acknowledges the fact that reactive measures such as interview and questionnaire dominated the phenomenological studies but vividly argues that many factors have hampered these measurements thereby necessitating the employment of nonreactive measures to supplement and blatantly eradicate its deficiencies. With the employment of nonreactive measures, a researcher independently controls the instrument of data collection without involving the participants. In most cases, the people being studied are not aware they are part of research in this measurement which guaranteed validity and

reliability of the instrument as opposed to the error and manipulation of data by research participants obtainable in reactive measurements.

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