



Review Article

A Review of key paradigms: positivism VS interpretivism

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Abstract: This paper is aimed to explore key philosophical underpinnings of fundamental research paradigms with reference to Positivism and Interpretivism. It would Furthermore, outline and provide key interrelationships with the following: Ontology, Epistemology, Methodology and Method. The paper followed a literature review process and primarily supported by secondary research through inclusion and consideration of different peer reviewed academic papers relating to the subject as well as other publications such as books. Researchers can consider the fitness of each paradigm based on their research nature and context. This paper would support researchers to gain deeper understanding of the positivist and interpretivist paradigms. The interpretivist paradigm would enable researchers to gain further depth through seeking experiences and perceptions of a particular social context. The positivist paradigm on the other hand, would enable researchers to have more statistical reliance and generalisation leading to development of universal laws and findings.

Keywords: Positivism, Interpretivism, research paradigm.

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INTRODUCTION

The aim of this research is to explore key philosophical underpinnings of fundamental research paradigms with reference to Positivism and Interpretivism. Furthermore, the research would outline and provide key interrelationships with the following:

- Ontology
- Epistemology
- Methodology
- Method

The research focus above would provide key takings for researchers to consider one of the given paradigms based on the nature of their research and context.

According to several researchers that all research carried out scientifically should be based on several key fundamental philosophical

assumptions with consideration of the nature of the research, evidence available to support it, and the method used for the research (Myers, 1997; Neuman, 2011; Orlikowski & Baroudi, 1991). Those assumptions can be categorised in three main sections as the following: Firstly, belief regarding the object of study. Secondly, belief regarding the knowledge notion. Beliefs regarding the connection between knowledge and empirical world as discussed by (Orlikowski & Baroudi, 1991).

This understanding will enable improved: comprehension of research, application of theory to classroom practice, engagement in academic debate, and presentation of their own research findings. This paper gives an overview of what a paradigm consists of, and then explores and discusses the assumptions behind the scientific and interpretive paradigms (Orlikowski & Baroudi, 1991).

It is highly important for researchers to understand the key underpinning ontological and epistemological assumptions, and to further understand how the given assumptions determine researchers' selection of an appropriate methodology and methods. Moreover, how they connect with key findings of conducted research. The mentioned assumptions also enable improvement of the quality of research conducted in relation to research comprehension, engagement with academic resources and debates, theory application and presentation of research main findings and outcomes (Scotland, 2012; Raddon, n.d).

What is paradigm?

A paradigm is inclusive of several components that can be categorised as the following: Ontology, Epistemology, Methodology and Methods (Scotland, 2012; Raddon, n.d). Each of the given components is briefly defined and explained in terms of its interconnection with the other components.

Ontology

Ontology can be briefly defined as the nature of reality as given by (Hudson & Ozanne, 1988). Therefore, ontology is mainly concerned with the phenomenon in terms of its nature of existence. It is seeking an answer or reality to a research question through indicating to existing type of knowledge can be found.

Epistemology

Epistemology can be briefly defined as how reality is being known by the researcher as discussed by (Carson *et al.*, 2001). Therefore, epistemology is concerned with how a researcher is aiming to uncover knowledge to reach reality. Moreover, Epistemology is considered as an internal factor within the researcher as it is also concerned with how a researcher can distinguish between right and wrong, and it is about how a researcher is viewing the world around them.

Different paradigms have different assumptions and views in terms of ontology and epistemology. Therefore, each one of them can have different assumptions in the way of reality as well as knowledge being perceived which determine a research approach reflected within its own methodology and methods (Scotland, 2012).

METHODOLOGY AND METHOD

Methodology is concerned with the general research strategy followed to conduct research, this as a result would identify the methods to be used and match with the outlined research strategy. Methods are included and described in the

methodology provide clarity on the modes of the data collection. Methodology does not provide a specific method to be followed; it would rather focus the attention towards to the nature of the process followed to achieve the objective of the research in a procedure. Moreover, Methodology is about the design process for conducting research and it is not about the instruments or methods for doing things (Igwenagu, 2016).

Methodological assumptions are the key influencers of the research methods, procedures and techniques relating to collection and analysis of gathered evidence. Methodological assumptions of research include the research strategy, methods, techniques related to sampling, the size of the sample selected, as well as collection and analysis techniques for data included in the research.

Research methods are more related to the collection and analysis techniques used for data to produce and develop knowledge. There are two types to be adopted either quantitative or qualitative research. However, mixed methods can be also used in some cases.

Quantitative research is relating to measuring quantity with application to a specific phenomenon, and this is expressed in terms of quantity. Furthermore, quantitative research is used often to test existing theories (Creswell, 2002; Biggam, 2008).

Qualitative research is relating to the meaning and process where it might not be examinable through quantity or amount. Qualitative research aims to provide specific understanding to a phenomenon based on the ones experiencing it with less generalization. Furthermore, qualitative research is aimed to attain deep understanding of a specific case with in depth exploratory studies to enable finding quality responses throughout the research (Creswell, 2002; Easterby *et al.*, 2008; Biggam, 2008).

Methodology is the general research strategy that outlines the way in which a research project is to be undertaken and, among other things, identifies the methods to be used in it. These Methods, described in the methodology, define the means or modes of data collection or, sometimes, how a specific result is to be calculated. Methodology does not define specific methods, even though much attention is given to the nature and kinds of processes to be followed in a particular procedure or to attain an objective.

POSITIVISM: EXPLANATION AND DISCUSSION

Positivism is counted on the philosophical stance of natural scientist that is working with observable reality within society leading to production of generalizations. Positivism relate on the importance of what is given in general, with more strict focus to consider pure data as well as facts without being influenced by interpretation of bias of human (Scotland, 2012; Saunders *et al.*, 2012).

If a researcher adopted extreme positivist position this would lead to the following:

- The researcher would view an organisation or other related social entities as real like the same view of physical objects as well as natural phenomena.
- In terms of epistemology, the research would focus on the discovery of facts or regularities that are observable and measurable. Furthermore, phenomena to be observed and measured should lead to development of credibility and meaningfulness in the data.
- The researcher would aim to find causal relationships between the data gathered to further enable the creation of law-life generalization like the ones developed by scientists. Furthermore, the researcher would use and include key universal rules and laws to support and explain the studied behaviour or event within organisations.

Table 1: The positivism research philosophy

Ontology (nature of reality or being)	Epistemology (what constitutes acceptable knowledge)	Axiology (role of values)	Typical methods
Real, external, independent One true reality (universalism) Granular (things) Ordered	Scientific method Observable and measurable facts Law-like generalisations Numbers Causal explanation and prediction as contribution	Value-free research Researcher is detached, neutral and independent of what is researched Researcher maintains objective stance	Typically deductive highly structured, large samples, measurement, typically quantitative methods of analysis, but a range of data can be analysed

Source: (Saunders *et al.*, 2012).

The given table above provides clarity on positivism in terms of ontology, epistemology, axiology and the methods used for research.

The methods used in positivism to further understand the natural world are not always transferable to the social world. Therefore, it can be viewed that positivism has some limitations.

In some cases of research, it can be difficult to adopt positivism as it aims to reduce complexity to simplicity through simplifying and control of the

given variables, and considering the assumption that isolation of some variable can be difficult and challenging. For example, an investigation included 20 teaching models and 20000 children. A lot of the explored hypotheses included in the study were not rejected given the fact that the research did not consider several variables related to the given context. Variables such as specific life events and attitudes of individuals. Therefore, several predictions were included as correct due to random reasons selected and there was no scientific explanation of behaviour of human fully related to the specific context. This can provide a very difficult challenge to be more specific and take all variables that may affect findings into consideration during research (Scotland, 2012).

Further issues and challenges to be considered through adoption of positivism (Saunders *et al.*, 2012; Scotland, 2012; Collins, 2010; Wilson, 2010; Ramanathan, 2008):

1. Statistical tests can be misused leading to misinterpretation within research due to selection of incorrect test of statistics. Furthermore, the results of the test as well as its significance is largely dependent on the sample size.
2. Generalizations in the research can lead to ignoring of the intention of individuals and their actions may not be fully explored and understood in this case. In relation to the nature of the research to be conducted by the author require further depth to answer the research main question based on participants' perspectives.
3. Positivism is more reliant on status que with more of the research findings being descriptive. Therefore, this might be challenging for researchers to gain further insight of in-depth issues to be considered part of their research.

INTERPRETIVISM: EXPLANATION AND DISCUSSION

Interpretivism developed through critique of positivism with subjective perspective. Interpretivism is more concerned with in depth variables and factors related a context, it considers humans as different from physical phenomena as they create further depth in meanings with the assumption that human beings cannot be explored in a similar way to physical phenomena. Therefore, social sciences research requires this distinction, and should be different from natural sciences research. Interpretivism considers differences such as cultures, circumstances, as well as times leading to development of different social realities. Interpretivism is different from positivism as it aims to include richness in the insights gathered rather

attempting to provide a definite and universal laws that can be generalised and applicable to everyone regardless of some key variables and factors (Myers, 2008; Saunders *et al.*, 2012; Bhattacharjee, 2012). Some variations of interpretivism based on (Littlejohn & Foss, 2009):

- Hermeneutics: This refers to the interpretation and understanding philosophy. It is mainly focused on biblical sources and wisdom literature.
- Phenomenology: This seeks to understand the world through direct phenomena experiencing.
- Symbolic interactionism: It takes symbols into consideration as social objects providing shared meaning. Based on this consideration it is believed that symbols provide means to support construction of reality.

Beliefs of the interpretivist approach:

- Relativist ontology: Reality is perceived through intersubjectivity through consideration of meanings as well as understandings of social and experiential aspects in the research (Saunders *et al.*, 2012).
- Subjective epistemology: This approach is providing a clear link between the research and research subject as it assumes that humans cannot be divided from their knowledge (Saunders *et al.*, 2012).

this can lead to the understanding that research participants would not provide general interpretations (Scotland, 2012; Collins, 2010). Furthermore, the data gathered and analysed would be less likely to be generalised through adoption of the interpretivist paradigm given the consideration that data were mainly dependent on a specific context, viewpoint, and values (Saunders *et al.*, 2012). However, adoption of the interpretivism paradigm can provide in depth understanding of certain contexts such as cross-cultural studies, factors influencing certain development through collection and interpretation of qualitative data leading to deep insight and conclusions that may differ from others as argued by (Myers, 2008; Saunders *et al.*, 2012). Adoption of the interpretivism paradigm would lead to generation of high-level validity in data as it is based on personal contributions with consideration of different variables (Myers. 2008).

The interpretive paradigm as discussed above would enable researchers to consider different factors such as behavioural aspects based on participants' experiences, and this would help to describe reality given the assumptions and beliefs of the interpretivist researcher. Furthermore, the interpretivist paradigm would enable researchers to treat the context of the research and its situation as unique considering the given circumstances associated as well as participants involved. This paradigm would also support the research to be more focused on the specific topic and abstain the research from heading towards more generalisation as given in the positivist paradigm (Moustakas, 1994; Remenyi *et al.*, 1998).

Table 2: Interpretivism research philosophy

Ontology (nature of reality or being)	Epistemology (what constitutes acceptable knowledge)	Axiology (role of values)	Typical methods
Complex, rich Socially constructed through culture and language Multiple meanings, interpretations, realities Flux of processes, experiences, practices	Theories and concepts too simplistic Focus on narratives, stories, perceptions and interpretations New understandings and worldviews as contribution	Value-bound research Researchers are part of what is researched, subjective Researchers interpretations key to contribution Researcher reflexive contribution	Typically inductive. Small samples, in depth investigations, qualitative methods of analysis, but a range of data can be interpreted

Source (Saunders *et al.*, 2012).

The table given above is providing further details of the interpretivism research philosophy on ontology, epistemology, axiology and the methods commonly used.

Interpretivism as discussed is more sensitive towards individual meanings and contribution rather than being compromised through the positivism research philosophy. However, interpretive research may have its own critique as it rejects knowledge developed as foundation base shared as a universal law, and questioning its validity, and requires different set of criteria from the ones adopted in the positivist paradigm. Furthermore, interpretivism as a paradigm assumes that reality is subjective and can differ considering different individuals. Therefore,

There are several common qualities the research would adopt through following the interpretivist paradigm which can be summarised as the following: Firstly, the research would focus on the whole experience rather than considering certain parts of it. Secondly, questions and problems identification development of the research would be mainly influenced by the researcher in terms of interest, involvement as well as commitment. Thirdly, would enable researchers to explore further depth of individual experiences through in formal discussions and interviews. Fourthly, exploration of humans' experiences in depth through adoption of qualitative designs and methodologies. Fifthly, it would enable usage of experience as a highly important aspect and contribution to support scientific research. Sixthly, it would enable researchers to further explore in depth throughout individual experiences rather than considering generalised measurements or expectations as given in the positivist paradigm. Seventh, experience is largely integrated within subjects and objects

leading to valuable findings and insights (Moustakas, 1994). Therefore, based on the given qualities that the interpretivism paradigm enable researchers to have qualitative methods are most suited methods to gain the deep insights based on a specific context. In comparison, the positivism paradigm as discussed would not enable the level of depth and insight. However, using quantitative research would enable researchers to be more generalised and describe things more in numbers and measures instead of in-depth words (Thanh & Thanh, 2015). Therefore, the nature of the research and its context can influence the selection of the most appropriate paradigm.

CONCLUSION

The research conducted has included exploration, discussion, and examination of different paradigms with reference to the positivist and interpretivist paradigms as they are commonly used by researchers. However, there are other increasingly used paradigms that can be researched such as pragmatism. Based on the given discussion and examination supported by variety of arguments and viewpoints gathered from the literature, researchers can consider the fitness of each paradigm based on their research nature and context. The interpretivist paradigm and qualitative methods would enable researchers to gain further depth through seeking experiences and perceptions of a particular social context. The positivist paradigm on the other hand, would enable researchers to have more statistical reliance and generalisation leading to development of universal laws and findings.

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