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Rigour in Research: Theory in the Research Approach

Abstract

Purpose – The purpose of this paper is to re-examine the importance of theory in research. The paper focuses on discussing the underlying principles which influence the research approach.

Design/methodology/approach – This is a theoretical paper that discusses the importance of theory in research, and opens up the area for discussion and debate.

Findings – The paper contributes to the research methodology literature by adopting a sense making perspective, and focusing on the ontological and epistemological dimension of research. The paper furthers the debate on the link between theory and research, as the basis for developing further theory.

Research limitations/implications – The paper provides a limited focus to management research and has not at this stage engaged in any practical testing of the ideas.

Practical Implications - There is opportunity for changing practice at a variety of levels in engaging with research. These include implications for researchers, teachers, students and practitioners.

Originality/value – The paper re-emphasises the importance in understanding philosophical concerns which underpins research activity. It is designed as a tool for discussion and guidance.

Keywords – epistemology and ontology, research approach, research philosophy, theory

Paper type – Conceptual paper

Introduction

This paper looks to build on the work of Guzman (2013) and Svensson (2013) by developing and emphasising the link between theory and research. Guzman (2013) provides an exposition of the relationship between knowledge and practice, while Svensson (2013) articulates how theory informs research, which informs theory. This paper furthers the discussion by taking a retrospective look at how the basis of research and theory are formed, and how they are enshrined in academic rigour to enable credibility.

The importance of the relationship between theory and research cannot be underestimated. There is a fundamental relationship between the two that influences the approach the researcher undertakes in their pursuit of knowledge advancement. This paper will critically evaluate the role theory plays in different research approaches. In doing so it will initially explore the concept of research and then clarify how research approaches are influenced, followed by identifying the concept of theory and evaluate how theory links to the research approach, and finally discussing how the research approach and the ensuing theory influence research design and methods. The paper shall take a limited focus by concentrating on Management Research, although some minor links are made to the more general area of Social Science Research.

The research approach undertaken is influenced from start to finish by ontological and epistemological concerns, and it is these concerns which have theory embedded at the heart. Ultimately we seek to “use theory as a sharp instrument for interacting with data at a level beyond

mere description" (Walshaw, 2012 p56). It is important therefore to recognise the inter-connectedness between research and theory. If the link between theory and data is enabled, meaning is created through interpretation and application. However the essence of this interpretation is determined by how the world is seen and accepted. Interestingly many writers distinguish Management Research from other forms of research. The greatest explanation of this links to the belief and purpose of outcomes, whether they are academic (and theory based) or practical based for the use by managers within organisations. Donaldson et al (2013) highlight the significance of this in their approach to discussing the importance of rigour in academic research, while highlighting that it need not be at the expense of practicality and applicability.

The Concept of Research

The term research is often linked to academic activity, however several writers (Bryman and Bell, 2011; Ghauri and Gronhaug, 2012; Johnson and Gill, 2010; Saunders and Lewis, 2012; Walshaw, 2012) link research to everyday life and see it as a fundamental activity of everyday living. They suggest that everyone is engaged in the research process through attempting to find solutions to problems which are perceived. The purpose of much research tries to find a causal relationship (Matthews and Ross, 2010) between occurrences. Management Research therefore tends to be most effective and useful in solving organisational or operational problems in the workplace. Research is therefore a conscious activity aimed at demonstrating the link between variables, however not all research is a conscious activity. Walshaw (2012) distinguishes between active and passive participation in the acquisition of knowledge and the outputs that result. As individuals we consume new information and create linkages with our existing knowledge on a regular basis, often without thinking. In essence we are conducting research on a continual basis without really engaging in formal research activity. Looking up the time of the next bus and train or how often they run may be a simplistic and an unconscious research activity. We may in doing this consider ourselves passive in the actual process of carrying out research but this is what we have done. This paper is concerned with active participation. That is research which is being actively conducted with purpose and focus.

Lee and Lings (2008 p6) argue that "Research is about generating knowledge about what you believe the world is". This is supported by Jankowicz (2005) and Quinlan (2011) who emphasise that research is about creating new knowledge and that its development is based on a judgement of what is known and how it is known. This emphasises the nature of an individual's reality. Fundamentally an individual's reality relates to the concept of rational thinking (Jankowicz, 2005), however Zikmund et al (2010) refer to inductive reasoning. Here we may highlight that rational thinking relies on using previous knowledge and the expectation of a causal effect, whereas inductive reasoning follows the chain of events to help predict a conclusion. These may seemingly be contradictory as they potentially have different starting points, however both are based on the mental processing of data and encapsulate the view of the world which is held, a lens or conduit as to how truth and knowledge are viewed and incorporated into what is trusted, thus drawing conclusions from both standpoints. Therefore the starting point of the research process is determined by the position of the researcher, and is determined by how they process data and information and their mental functioning.

Building on how we perceive the world and make sense of it, Choudhury and Zaman (2009 p992) emphasise “truth and falsehood as well defined and non-intersecting domains of understanding”. The importance of truth and how we consequently perceive it is further acknowledged by Fisher (2010) who makes use of early Christianity, to identify the gnostic (subjective) and orthodox (objective) views of truth. In essence, truth and knowledge and the acceptance of such becomes a mental perception based on what individuals have previously pre-determined and possibly been pre-programmed by. Our experiences and understanding of situations will therefore influence and determine the basis of our research activity and our interpretation. Alongside this, Voros (2005) considers the idea of perceptual filters in interpretation. These perceptual filters are developed through the reality which is expected. In essence, individual filters out (or in) filter what is deemed important and significant. Thus emphasising the perceptual nature of the interpretation of what has gone before. In a study, Akinci and Sadler-Smith (2012) chartered the role of intuition in Management Research, emphasising the important role that intuition has played in the development of Management Research. Often intuition is little more than the visualisation of causal effects that are expected to occur in given or anticipated situations. Without these causal effects, much research would not necessarily begin. It is individuals or alternatively collectives, intuitive insistence of the relationship or the need to investigate which begins much of the research activity that takes place within most organisations.

Easterby-Smith et al (1995, 2012) distinguish Management Research as different from Social Research; however we accept the relationships between the two in many of the approaches taken. Management research in essence attempts to analyse and explain management activities or the actions of individuals within organisational settings. Social Research alternatively, is more concerned with research into social and everyday experiences, which may involve organisations. They suggest Management Research fits into three categories pure, applied and action. These three categories raise the debate as to whether management research should lead to the development of academic theory or to solutions to practical problems. Lee and Lings (2008) further highlight differences between commercial and academic research, which they distinguish from pure and applied research. Their argument suggests that commercial research is linked primarily to consultancy. Roth and Senge (1996) further this argument identifying that different needs rely on different research approaches. Saunders et al (2009) suggest Management Research suffers a “double hurdle” in that there is a need for theoretical and methodological rigour, while also embracing the world of practice and being of practical relevance. Svensson (2009) links to the notion of theoretical or managerial implications in the research process. Many early writers on Management were split into categories of academics or practitioners (Managers). It is likely that academics and practitioners are likely to have different perspectives and therefore approach research differently, and potentially review the results differently.

Research Approaches

A review of the literature would indicate there is no clear agreement as to what is meant by research approaches. The term may be used to indicate how a researcher undertakes the research activity, such as the methods the researcher intends to use; equally it may be used to explain why they are undertaking the research in a particular way. For this paper research approaches is being

interpreted as the underpinning rationale for the way the research is being carried out. Fundamentally this starts with an understanding of the philosophical stance taken by the researcher and why such a stance is being taken. As such it is important to appreciate an individual's position of reality (ontology) and their appreciation of what they consider acceptable knowledge (epistemology) to identify their rationale for their research approach (Bryman and Bell, 2011). We cannot split the view of the world and how we go about it. We need to understand why we are carrying out the research.

Several writers have tried to represent the role and importance of ontology and epistemology through the use of diagrams. Easterby-Smith et al (2012) represents ontology and epistemology through a tree trunk suggesting that they are at the core, while Saunders et al (2009) use the research onion to suggest that ontology and epistemology are the outer layers and wrap around methodologies and methods. A surface view of the representations would suggest a contrasting viewpoint; however both highlight the importance of ontology and epistemology as the starting point of the research process. The significance of whether you start from the inside and work out or from the outside and work in is inconsequential, the importance of both models lies in the importance that Easterby-Smith et al (2012) and Saunders et al (2009) and many other writers (Ghuri and Gronhaug, 2012; Lee and Lings 2008; Stokes 2011; Wilson 2010) place on ensuring a focussed and consistent background to the process.

Crotty's (1998) model, highlights a process in which epistemology feeds the theoretical perspective, which in turn feeds methodology and ultimately methods. This again highlights the link between epistemology and theoretical perspectives as crucial in the process and is supported by Quinlan (2011) who highlights a methodological pyramid which places fundamental philosophies at its foundation, emphasising the importance of understanding the reality and the basis of knowledge which is at the forefront of research approaches.

Stokes (2011) highlights that individual theories have their own ontological and epistemological roots, while Farquhar (2012) argues that the credibility of the research rests in the philosophical assumptions that underpin the research. The importance of appreciating the basis for our beliefs and the beliefs of others gives credibility to the principles of the research, which must be understood as the key foundations for the research. Critically Grix (2002) describes understanding the research process and the bedrock of ontology and epistemology as 'tools of the trade' (p 176). How we approach research and the factors that underpin our thinking therefore determine the role of theory.

Concept of Theory

Bryman and Bell (2011) consider theory as observed realities, or what we see and accept around us, suggesting it can be practical or abstract. Similar views are held by Robson (2011) Zikmund et al (2010) and Walshaw (2012). Walshaw (2012) further highlights the importance of the development of frameworks, models and concepts in assisting the understanding of the world, or at least the individuals' view of it. Significantly how aspects of our perceptions of the links between happenings and occurrences are inter-connected for everyday life. It is this theoretical perspective that is driven

by ontological and epistemological assumptions. The combination of these, determine methodology through influencing philosophy and the type of methods that may be used.

Collis and Hussey (2009) emphasise the importance of theory as the starting point from the positivist paradigm, as the concept of testing a theory relies on the principle. However this is not to suggest that the importance of theory is not as fundamental to the interpretivist paradigm, it merely uses the theory in a different way. The positivist approach concludes that the world is external and therefore should be measured by objective methods, while the interpretivist approach, concludes that the world is open to interpretation and is socially constructed by people who may be regarded as social actors (Easterby-Smith et al, 2012). Subsequently these contrasting views dictate how research is undertaken and how data and theory are related. Thus we return to the issue surrounding interpretation and perception as the basis of our research.

Approaching research from an inductive or deductive stance still has a reliance on theory. Gill and Johnson (2010) further highlight the complexity in trying to understand the relationship between theory and management research methods. They identify two positions in which we may test theory by observation or create theory through observation. Other writers (Bryman and Bell, 2011; Collis and Hussey, 2009; Ghauri and Gronhaug, 2010; Saunders et al, 2009; Wilson 2010) emphasise this debate as to whether to use deductive or inductive research processes. In either process the importance of theory is fundamentally important, however in a purist approach the inductive process seeks to create theory from the situation. This is not to suggest that there is no theory or no knowledge prior to this, merely to articulate that there is no pre-judgement taking place. Alternatively, the deductive process has an expectation of what is likely to occur. Gill and Johnson however further this discussion and differentiate between research being “theory-dependent or theory-laden” (2010 p39) in the influence that theory holds over the researcher. Essentially they struggle to identify a position where the researcher can be completely objective to prior ideas and concepts. Thus suggesting that even within the inductive process, knowledge and theory must be present. It is therefore crucial within the research approach to appreciate how data is seen.

Klaes (2012) argues, that there is an acceptance that if we accept the assumptions of one approach we automatically defy the assumptions of another, therefore we choose between seemingly competing paradigms. This choice is determined by how a person views the world (Grix, 2002). Saunders et al (2009) suggest that a clear distinction is unrealistic, while Klaes (2012) would advocate the recognition of methodological plurality as a stance of investigating and researching organisations. Therefore on many occasions researchers mix methods to achieve their outcome, however they constrain this through limits which relate to acceptability.

Quinlan (2011 p108) further argues that “theory is of the most fundamental importance to research”. To give the area of interest legitimacy as a scholarly field of research, Haugh (2012 p7) further argues “is dependent on the quality of the theories that explain and predict the phenomenon of interest”. Meanwhile Ravasi and Canato (2013 p198) state that “the development of a field of study depends on the convergence of scholars around a set of clear and widely accepted principles.” Grix (2002) suggests that failure to fully grasp ontology and epistemology impacts on this quality. For research to be judged as quality it must meet the standards expected by others (Matthews and Ross, 2010), and this ties in with acceptability. Bryman and Bell (2011) however, highlight a range of debates as to what management research is and how it should be evaluated.

They suggest there is no definitive answer, which supports the suggestion that what determines acceptance is subjective due to differing ontological and epistemological positions. They also consider the subjective nature of the rationale regarding the purpose of the research and the underpinning desired outcomes.

Gomm et al (2009) suggest that research helps us to develop case study material which assists in the development and acceptance of theory, through the development of evidence and empirical data (Bryman and Bell, 2011). The role of data to support theory, or develop theory has been discussed earlier, however it must be emphasised that the acceptance of relationships and the building of theories has a fundamental basis in the collection of data either through qualitative or quantitative means. Case Studies help researchers develop generalizable concepts and models which underpin the theoretical debate, add to existing knowledge and inform the research agenda. Woodside and Wilson (2003) highlight this process in their research and suggest that through the use of case studies, individuals and organisations gain a deeper understanding of organisational phenomena and are able to learn more efficiently. The article concentrates predominantly around industrial marketing to highlight case study usefulness. Through this research they highlight criticism of the large sample strategies that create generalisation, as organisations are not homogenous. It is therefore of difficulty to generalise in all cases. What is causal in one organisation is not always so easily explained in another. This is highlighted by Bunch's (2007) review of the literature in which their knowledge and expertise of a subject area is developed. This creates the basis for understanding the theoretical principles, while also helping to inform what is deemed acceptable.

Theory and Knowledge

In considering the concept of theory, the concept of knowledge must also be attributed. Accepting that the basis of theory is the construct and acceptance of knowledge then we can within certain boundaries accept that knowledge and theory can be considered interchangeable, at a simplistic level, in how we use them. Quinlan (2011) suggests that academic research projects emerge from a particular body of knowledge (theory) and in turn contributes to that body of knowledge, thus emphasising that the majority of research builds on existing knowledge. Zikmund et al (2010) highlight this development of theory within Management Research as a way of creating a framework to provide guidance to managers.

The inter-disciplinary (Easterby-Smith et al, 2012) and trans-disciplinary (Saunders et al, 2009) nature of Management Research may lead to contrasting views on where knowledge is drawn from. The basis of acceptable management knowledge may be drawn from several other disciplines including sociology, anthropology and economics. Each of these subject areas will have different bases of accepted knowledge. Bluhm et al (2011) further emphasise the influence of acceptance of the basis of knowledge through the production and publication of journal articles. They highlight the increased readiness of European Scholars and institutions to accept qualitative methods in the study of organisational phenomena over their American counterparts.

Bluhm et al (2011) highlight the importance of previous literature in determining the approach to be taken. The reading and nature of the literature influences, and often dictates, the direction that is undertaken in the research study. Many writers and researchers follow what has gone before, as

this often aids issues around validity and reliability. Following previous studies gives greater credibility to one's own work and the work of others. However, this reliance could therefore distort future research activity, and could hinder future discovery and innovation in the management field. Alvesson and Sandberg (2013) highlight the over-reliance on incremental gap-spotting within research, suggesting that building blocks do not always assure rigour. Lack of challenge and debate leads to continuation rather than creation of new theory. They advocate the need for path-setting research. Donaldson et al (2013) support this in principle, but contend that gap-spotting does not exclude rigour. They highlight the schism between rigour in methods and rigour in theory.

Further to this, Garvey et al (2009) highlight the importance of understanding the perspective of the writer in comparing and contrasting writers and their approaches. They emphasise "gaze" (p29) as looking through the writer's eyes. It is the understanding of the position of the writer which helps to determine the credibility of the research in the reader's guise. This is no more evident in the distinction between the cultures of credibility in terms of qualitative research which has more support among European scholars than it does American counterparts (Bluhm et al, 2011).

From Philosophical Concerns to Methods

According to Edmondson and McManus (2007) the decision to approach a research study from a quantitative or qualitative stance depends on the nature of the research questions which drive the study, any previous work undertaken, the structure of the research design and the ultimate output and contributions that the researchers are aiming for. In essence the development of the research question is driven by the individual's ontological and epistemological view. Walshaw (2012) emphasises that it is the combination of ontology and epistemology which determines the methodology, through influencing philosophy and the types of methods that may be used. In simplistic terms this may be from a positivist or interpretivist stance. However it is important to also identify other influencing factors that may influence an individual. These may include power relationships, social relationships, practices, psychoanalytic, socio-cultural influences and hermeneutics (Walshaw, 2012). While it may be considered that these factors may influence, it is arguably at the beginning and as the basis for their acceptance that this influence take place. In other words these factors will influence individuals' ontological and epistemological views.

Several studies have demonstrated the researchers' focus down a particular approach, which is influenced by their underlying beliefs. Sanders and Ritzman (2004) and Irani et al (2012) have both adopted quantitative studies reliant on large data sets as ways of analysing and interpreting activities. Both sets of writers drew on large data sets from a variety of organisations, linked to their projects in an attempt to find a causal relationship and create generalizable findings. Alternatively Logie-Maclver et al (2012) and Goulding (2005) approached their studies through the use and collection of qualitative data. Their studies were linked to behaviour and as such both sets of research focussed on the need to study human phenomena rather than merely collect data sets. Interestingly all four papers were in the field of marketing and demonstrated the underpinning beliefs from within each research team. In fact Goulding (2005) highlighted that there was a growing acceptance of different research methods in the study of marketing phenomena. This falls in line with the growing acceptance of qualitative methods as the tool for researching and measuring

phenomena, particularly as successful marketing would be seen to rely on understanding individuals' perceptions.

According to Walshaw (2012) data collection and theory application and analysis are a circular process. She suggests that data informs theory, and theory informs data. Either can come first and influence the other. It is crucial to determine whether this inductive or deductive process (Saunders and Lewis, 2011) is distinctive. Many articles attempt to make sense of the data collected and theorise from it suggesting that an inductive approach is prevalent from within research design, however there is greater evidence to suggest that the majority of research starts with more preconceived ideas, so perhaps lean more towards being deductive in nature. However, consideration must be given to whether any paper is pure in nature and therefore perhaps could be argued to be retroductive (Saether, 1999). Furthering this, Svensson (2009) advocates a counter-intuitive approach as a method of ensuring an effective deductive research process. He suggests that too much time and resource is wasted with failed process, which could have been identified at an earlier stage. The process of research requires a large amount of time and effort in carrying out the research. It is therefore imperative that the process remains as rigorous and efficient as possible. In achieving this, the researcher must ensure that the process can be managed and adapted as required. This is again influenced by the perceptual filters which are contained within the researcher. Scherbaum and Meade (2013) further advocate the need for more sophisticated and detailed measurement within management research. They suggest that the majority of research activity, and in particular the measurement and analysis of data requires greater rigour and that current research only draws on a limited and simplistic range of statistical techniques. This view goes a significant way to emphasise their underpinning beliefs, and suggests a dislike or distrust for qualitative research and its naturalistic stance.

In taking a positivist or interpretivist stance the researcher is influenced down a particular research design (Saunders et al, 2009). This links positivist approaches to experimental design, while interpretivists usually link to Ethnographic designs. The research design subsequently feeds the choice of research methods (Bryson and Bell, 2011). The 'Onion', the 'Trunk', the 'Pyramid' are complete.

Implications for Practice

Giving consideration to the ontological and epistemological concerns and the acceptance of the importance of theory within research and the research process leads to implications for practice at a variety of levels.

Research

A general overview of research papers across a range of journals listed on the ABS Rankings under the Management Development and Education sub group demonstrates a shortage of emphasis on philosophical concerns highlighted by the authors. A small scale sample was taken of three journals from each grade category. Journals were selected through a purposive sampling strategy (Saunders et al, 2009) based on grade category within the subgroup and access via an online database. The

latest issue for each journal was accessed and the content of the methodology section of each article (where present) considered. Generally there is detailed explanation of methods but little articulation of underpinning concerns. This is particularly evident in the lower ranking journals and in articles which are more applied in nature. Greater amplification of ontological and epistemological reasoning is more likely to provide greater academic rigour to the research undertaken. In turn this may provide a double benefit, firstly a greater impact value in the journal raising the status of the journal, while raising the credibility of the research and enhancing the researcher's status.

Lecturing / Teaching

An increased emphasis on the delivery of research philosophy is crucial to students' understanding of that which underpins the research process. Too often teaching within research methods concentrates too much time and attention on methods, concentrating on techniques for analysis rather than that which provides the basis for the research. A small scale investigation into accessible module descriptors available on the internet was undertaken to consider the content of research methods teaching within business undergraduate and postgraduate programmes. A review of the module descriptors and learning plans across a range of 'Research Methods' modules places greater emphasis on the design and methods aspects of research. Much of the literature (book stock) associated with the delivery of modules also places greater emphasis on the design and methods side. This is particularly evident within undergraduate provision, but is also evident within taught postgraduate provision. Individuals involved in the delivery of research methods training need to provide greater concentration on the development of an understanding of philosophical concerns which should lead to improved and more rigorous dissertations and theses submitted by students. Coupled with this is the need for greater emphasis on the research methodology section within the assessment process.

Students

Generally students learn what they feel is important and what they will be assessed on. Therefore by placing greater emphasis within the teaching and within the literature students will be guided towards an increased importance of where theory comes from and what theory is. This will in essence provide the students with improved understanding of the research process and hopefully improve their academic and employability skills.

Practitioners (Managers)

As suggested earlier, Management Research faces the double hurdle which includes the need for practical relevance alongside academic rigour. Increased rigour in research and greater explanation of the basis of that research will provide greater relevance to practitioners allowing them to assess relevance to their organisation or situation. This will allow the practitioner to make a judgement of the applicability and usefulness of the research to aid performance in the organisation.

Conclusion

In conclusion, research approach is determined by ontological and epistemological beliefs. This determines what is accepted as theory and knowledge and the way to go about collecting evidence which supports or challenges existing research. The role of theory is paramount to all research approaches; however it can be and is used in different ways. In discussing the role of theory this paper concentrates predominantly on Management Research, however it is accepted that research approaches may differ in other study areas. The concentration on Management Research provides boundaries on which to base ideas, rather than develop an overly broad discussion which is unsustainable in the parameters set.

How we perceive and use theory in our research approach is dictated by internal influencers. This is not to say that external factors do not provide further influence but primarily we are influenced in our use of theory and our approach to research by what we view as acceptable and right. Therefore this is centrally determined through our internal decision making processes and determinants.

Overarching this is the requirement to move practice on. Whether focussing on the academic or practical side of research, there are implications which should improve the research process. Greater emphasis and understanding of the basis of research is required for both the process and application of research and also for the development of the next generation of researchers, academics and practitioners. This is achieved through greater emphasis within scholarship and teaching.

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