A Researcher's Dilemma - Philosophical and Methodological Pluralism

Karl Knox
Nottingham Business School, Nottingham Trent University, UK
karl.knox@ntu.ac.uk

Abstract: In many research textbooks the distinction between qualitative and quantitative research is inadvertently linked with philosophical perspectives. This in essence creates a mutually exclusive relationship between method and philosophy. Initially researchers are led to believe, from these textbooks, that research is neatly divided into mutually exclusive categories, these being quantitative and qualitative research and 'never the twain shall meet'. This divide is further strengthened with the inference that the relationship extends further; associating deduction with quantitative methods and similarly induction with qualitative methods.

> *What happens in most texts is that qualitative research methods and quantitative research methods are set against each other as polar opposites*. (Crotty 1998, p19)

This paper argues that methodological pluralism is acceptable but what is not acceptable is philosophical pluralism. By naively linking methods and approaches to specific philosophy researchers and students may miss out on potentially innovative or creative data collection methods. Alternatively and more importantly by feeling tied or constrained by their philosophical stance to particular methods and approaches, associated with them by textbooks, they may in fact reduce the credibility, validity, and or significance of the research. There maybe an elective affinity between certain philosophies and methods but this should not necessarily constrain the methods chosen.

Keywords: Methodology, Philosophy, Pluralism, Qualitative and Quantitative Methods

1. Introduction

In this paper the focus is placed on exploring the nature of pluralism in research as it may be applied methodologically and philosophically; and suggests that what is needed is a refocus or thought in terms of a 'hierarchy of research needs'; based on the level of study undertaken. Initially the variety of research approaches are identified together with the research methods, which are aligned to them. This then creates the opportunity to discuss the relationship between theory and method, as part of the research process. This also raises the issues surrounding the expectations of both academics and students involved in research, can vary dramatically; not least in the latter's ability to understand, interpret, and engage successfully in the philosophical and methodological debate expected of them within their programme of study.

2. Initial problem

The misalignment between methodological pluralism and philosophical pluralism is an important issue for debate amongst research students, yet it is rarely investigated. This misalignment, between method and philosophical stances, can create confusion throughout the whole research process. By linking quantitative and qualitative research methods with the understanding and interpretation of philosophy (positivism and interpretivism) the research process becomes a quagmire often too difficult for many researchers or students to fathom successfully, given the number of other constraints they face ranging from lack of time, intensity of programme, through to willingness to engage with the literature.

The result of this confusion is that researchers and students remove themselves from the theory and tend to carry out the research they initially set out to achieve. They then construct a form or set of words that they think justifies the research they have carried out. This then creates a situation where the justification for carrying out the research becomes weak and highlights the fact that they (the students or researchers) do not really understand why they have done the research in the first place. Therefore the credibility, accuracy, relevance and rigor of the research may become questionable. This inevitably detracts from the whole research process both in terms of the individual piece of research and within the research discipline.

This non-rational alignment between methods and philosophies and the

debates surrounding them creates a situation where students and researchers remove themselves from the difficult discussions and tend then to follow and use methods, which they have previously encountered. One such example of this could be the term 'empirical' in both its use, and its relationship to philosophy. Often this term is taken to mean 'numbers', or 'the facts', and is used this way by empiricists. Many students, at a simplistic level, would also relate this term directly and purely to quantitative methods. The term empirical can be taken to mean 'evidence drawn from concrete situations' as opposed to arguments developed either from purely theoretical bases or from experiments (Mutch 2004). Therefore it is possible to use empirical work within a social science context; which according to many texts is interpretative and placed at the opposite end of the research spectrum.

However many students and researchers take terms they have seen elsewhere and include them within their research without fully understanding them or the implications they have on the research process. This naivety may suggest a reason for many quantitative methods being used in the social sciences, to the exclusion of qualitative methods. This is not initially a problem but does create problems when the methods are incorrectly or inappropriately used because of the researchers or students limited understanding.

The use of other approaches (quantitative methods) within the social sciences may come from the fact that *natural science methods appear to be so successful in their field of use* (Yates 2004).

Sayer (1992, preface) argues that *sadly many social scientists can still only think of 'method' in terms of quantitative techniques.*

However, in not fully appreciating the relationship between the philosophical debates and methods used within the research process students and researchers run the risk of misaligning and misinforming their readership.

3. Reflectivity on my current research

This relationship between philosophy and methods has caused much anxiety and thought provoking discussions within my current piece of research where both qualitative and quantitative tools are being used as well as inductive and deductive approaches. This, initially, seemed misaligned in light how many texts approach the research process.

Many texts place induction and deduction at either end of a spectrum, just as they have placed quantitative and qualitative at the same polar extremes. However the interpretation of induction and deduction has been viewed in a similar fashion to Kolb's (1984) experiential learning cycle, where initially involvement within a activity occurs, then reflection on that involvement occurs, this is followed by learning through analysis and finally feedback or application of thoughts and ideas; this in turn starts the cycle off again. The table below links Kolb's learning stages with induction and deduction interpretation.

Kolb's Experiential Learning Cycle Stages	**Induction or Deduction**
Concrete experience Feeling – learning takes place by being immersed in the problem, and relies more on intuition than logic	Induction
Reflective observation Watching – consideration of previous experience, reflect so as to formulate expectations	Induction/deduction
Abstract conceptualization Thinking - analysis of the problem, reflection so as to develop theories for the future	Induction/deduction
Active experimentation Doing – the application of thoughts and ideas, learning through trial and error	Deduction

This use of both inductive and deductive approaches is important as the research uses 'Grounded Theory'. Glaser and Strauss (1967) initially introduced Grounded Theory where theory is generated or derived from data, systematically collected and analysed through the research process. This use of induction and deduction is supported by Bryman and Bell (2003, p12) who argue that grounded theory is an iterative process which includes elements of both induction and deduction. Hussey and Hussey (1997) cited in Saunders, Lewis et al (2003) refer to grounded theory as having both inductive/deductive elements, that is, theory being grounded in such continual reference to the data. This, again, seems to contradict, how many texts refer and introduce the role of induction and deduction within the research process.

> *The emergence of social sciences in the 20th century led social science researchers to be wary of the deductive approach.*

(Saunders, Lewis et al. 2003)

4. The relationship between philosophy and methodology within research texts

Within the research arena there are varying views on how to carry out research. One only has to look at the number of research texts available to students and researchers to identify this wide and varied approach. Given the number of texts, within a variety of disciplines, by a multitude of authors, one may assume that the process of research should be straightforward. On reflection this is certainly not the case and is in fact one of the most daunting, messy and controversial areas of any piece of research. Saunders, Lewis et al.(2003, p5) state that the research process is rarely rational and straightforward, *the reality [being] considerably messier.*

Most research texts divide research into two main areas, quantitative and qualitative approaches. Whether this is done for ease of explanation, or to reflect differences in style or marketing, (for structural reasons or for addressing alternative research disciplines) or simply differences in approach is in hindsight not necessarily useful for the researchers or student. The important issue is not necessarily the number of texts but that some texts misalign and mangle the research process. The outcome of which is that students and researchers follow this format, therefore falling neatly into the two divisions and in turn base their research upon these divisions. It may be common for students' to start with the distinction between philosophies and then to group tools accordingly in separate and distinct sections.

5. The dilemma

In many cases research may be categorized as 'positivist', and may in fact, be designed to reflect the goals of positivist thinking. That is, the world is measurable, controllable, and explainable. Easterby-Smith, Thorpe et al. (2002, p28) argue that the key idea of positivism *is that the world exists externally, and that its properties should be measured through objective methods*. This infers that only knowledge, which is observable, is in fact valid. This then brings together the epistemology of positivism with quantitative methods i.e. methods, which are essentially numerical evidence, following a very 'natural science' approach to the research in hand.

The issue for researchers and students alike then becomes how to use positivism and quantitative methods within the social arena? Given the definition of positivism how can the concept of social science research be controlled, measured, and replicated? One way may be for social scientists to create or construct 'closed systems' or alternatively they can use sampling methods within the design of the research to try in some way to replicate what 'natural sciences' take for granted within their experimental approach to research. They may ask the question is there a truth that they believe they can objectively describe? However often this relationship and the impact between philosophy and methods are not addressed.

One could, from the research texts, take this relationship between positivism and quantitative methods as being almost a law or 'truth'. Yates (2004) does highlight (with other authors) that quantitative methods can be used within other areas for example within the social sciences. However, this discussion in many texts is

often limited and given as an 'add-on' which inevitability students seem to neglect. This results in the selection of the 'easy' option, which perpetuates and maintains the relationship between positivism and quantitative methods. Alternatively the selection of tools may be due to disciplinary expectations but what must be emphasised is that the researcher should choose the most valid approach given his/her research question. Yates (2004, p14) goes on to argue that *though one can therefore clearly argue that positivist thinking has influenced quantitative or numerical research we need to be careful how far we take this argument.* This could be seen as the justification that quantitative methods are just as appropriate within an intrepretivist piece of research as within a positivist or how positivists can use qualitative tools.

Ticehurst and Veal (2000, p15) support this linkage between quantitative and positivism by stating that *the quantitative approach to research is also known as management science or operations research.* Therefore linking disciplines with philosophy. They then argue that quantitative and qualitative methods are linked to positivism and interpretivism epistemologies, as shown in their diagram below:

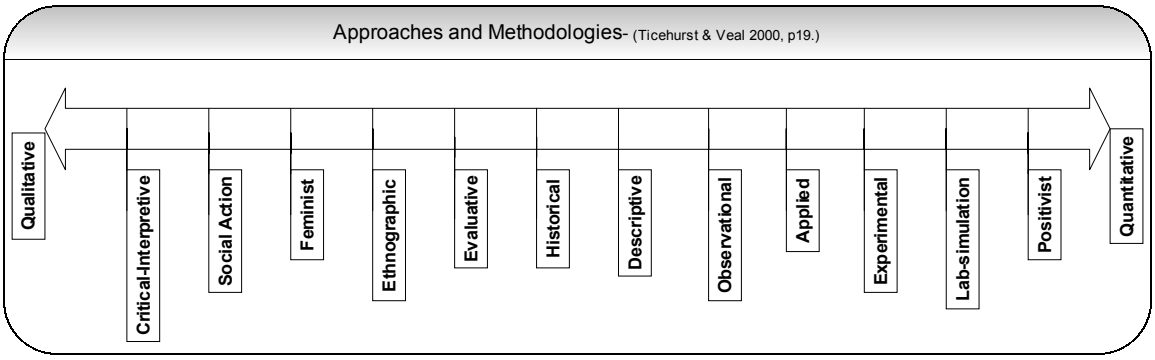

Figure 1: Approaches and methodologies – Ticehurst and Veal (2000, p19)

The placement of qualitative and quantitative methods as polar opposites is further reinforced by Ticehurst and Veal (2000, p18) when they argue

> *that there is considerable debate among scholars……about the relative merits and value of qualitative versus quantitative business research ……and that the debate is often aligned with differing philosophical positions.*

This in essence creates an almost mutually exclusive situation for students and researchers; whereby depending on whether one takes a positivistic or critical interpretivistic stance one will use either qualitative or quantitative methods. Closer inspection of figure 1 (Ticehurst and Veal 2000, p19) raises the issue of placement of other approaches and methodologies. For example, by placing feminists on the qualitative end of the scale are Ticehurst and Veal suggesting that there cannot be positivist feminist scholars. Again the placement of historical approaches suggests that econmetric historians do not exist; surprising given the work by Fogel and Engerman (1974) *Time on the Cross: the economics of American Negro slavery*; where quantitative methods were used to investigate a morally-laden topic, that of slavery.

This concept of polar opposites is further encourage by Saunders, Lewis et al (2003, p82) who refer to the research process as an 'onion'. Within this 'onion' the second layer refers to *the subject of your research approach that flows from your research philosophy.* Therefore linking the philosophy of positivism with different approaches, in this case deduction and similarly interpretivism with induction.

Therefore whether one's research should use a deductive approach, in which you develop a theory and hypothesis (or hypotheses) and design a research strategy to test the hypothesis; or the inductive approach, in which you would collect data and develop theory as a result of your data analysis is paramount. Again this gives the student a seemingly either or dilemma. It infers to the student or the

researcher that the research approach of induction or deduction are in fact mutually exclusive; in the same way that positivism and interpretivism are placed at polar opposites (Saunders, Lewis et al. 2003, p85).

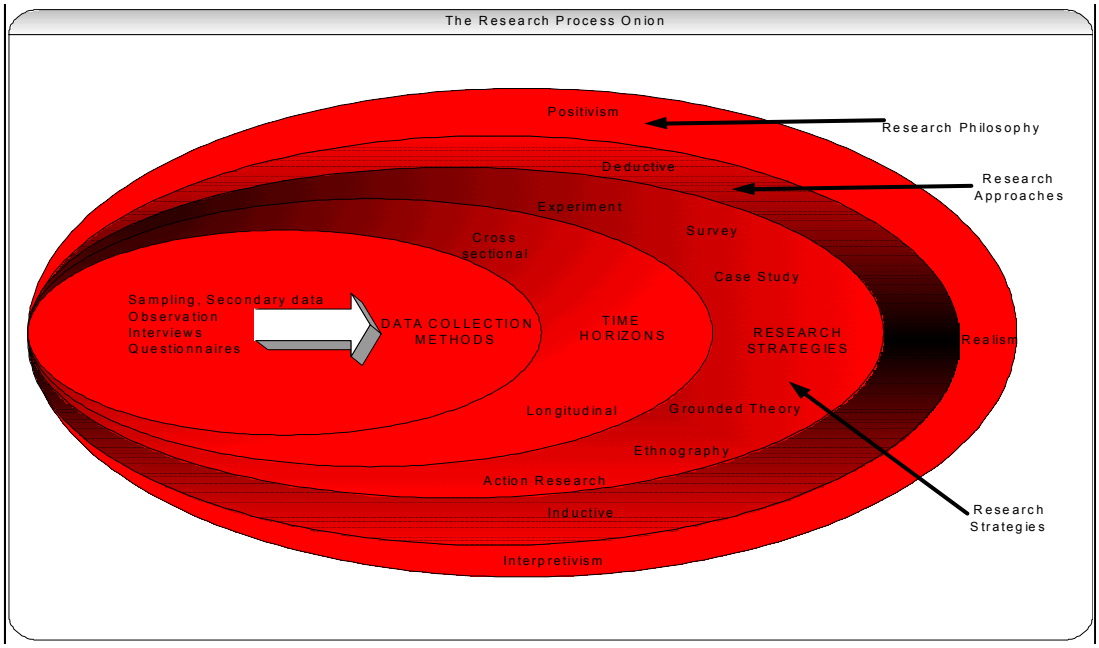

Figure 2: The research onion – Saunders, Lewis, Thornhill (2003, p83)

Saunders, Lewis et al.(2003, p87) perpetuate this polar opposite interpretation by arguing that *followers of inductive approach would also criticize the deductive approach because of its tendency to construct a rigid methodology that does not permit alternative explanations of what is going on.* This again creates, in terms of students and researchers, a situation of an either or approach to research. Inferring that it is not possible to use an inductive and deductive approach within the same piece of research.

Saunders, Lewis et al (2003) do identify that such labeling is potentially misleading and of no practical value. However this caveat is not enough to persuade students and researchers that methods are dependent on the research questions not on one's philosophical stance.

Therefore this non rational alignment between positivism, quantitative methods and deduction and the opposing alignment of critical interpretivism, qualitative methods and induction limits and confuses the research process, within the eyes of the student researcher.

Waring (2000, p2) sums up this mismatch by highlighting that this naïve approach and understanding is unfounded by saying

> *it is a mistake to adopt only one approach in some form or another,…… methodologies are best used in a complementary way.*

That is to say if researchers focus on one approach, all of the time, there is a possibility of losing sight of the bigger picture.

6. The relationship between philosophy, theory and research methods

The relationship between research philosophy and research method is an important one, as highlighted by Easterby-Smith et al, (2002), as it allows one to:

- Take a more informed decision about the research approach;
- Decide which method(s) are appropriate for the piece of research, and;
- To think about constraints which may impinge on the research

Pickard and Dixon (2003, p2) in their article address similar issues when they ask *does the choice of a methodology*

imply adhesion to the axioms of an individual paradigm or is it possible to mix and match methodologies to achieve a research goal?

Therefore for the researcher designing a project there is a requirement to identify and understand the relationship between theory and methods. The aim is not to say that there is no relationship between research philosophy and research methods. At best the concept of philosophical pluralism and methodological pluralism is trying to identify that a method does not select a theory but that there is an *elective affinity* between a theory and a method. This is not the same as saying that if one follows a positivistic epistemology one would use quantitative methods and a deductive approach. The idea of an *elective affinity* (Mutch 2004) allows one to identify that one's ontological views do in fact select, or lend themselves to certain approaches but being aware of these allows one to select what is best, from the myriad of tools available, for a particular piece of research.

This relationship between philosophy and methods can be described as follows:

> *If one thinks that the social world is constructed by narrative and that there is no means of discriminating either between story and reality or between different stories, then one can't (logically) employ methods that assume an external reality. There would be no point, as one does not believe there is such a reality to be counted or categorized. The only outcome of this would be to write narratives that appear more persuasive.* (Mutch 2004)

Therefore the concept of an *elective affinity* allows one to state that there is such a relationship between theory and methods. In hindsight, there is no question that such an affinity exists, given the regard for natural sciences elicited between positivist social science researchers and quantitative methods.

What is argued is that although this relationship is identified it is not regarded as totally exclusive, as argued by Saunders, Lewis et al (2003) with their view of ethnography.

Saunders, Lewis et al (2003, p93) argue that *ethnography is firmly rooted in the inductive approach* which ties in a particular methodology to a particular approach. i.e. *it [ethnography] emanates from the field of anthropology. The purpose is to interpret the social world the research subjects inhabit in the way in which they interpret it.*

As Crotty (1998, p15) argues that *many methodologies known today as forms of qualitative research have in the past been carried out in an utterly empiricist, positivist manner……this is true of the early use and history of ethnography.*

This indicates that even methods that are currently viewed and connected to one epistemological stance are not totally exclusively tied. Therefore what is important for researchers and students to realise is that there is an *elective affinity* between theory and methods but that it is not a fundamental law. Saunders, Lewis et al (2003, p88) acknowledge this by saying *so far as we have conveyed the impression that there are rigid divisions between the two approaches to research [inductive and deductive]. This would be misleading.*

The ability to blend, and use methods, which are appropriate for each individual piece of research, is an important issue for researchers and students to realise and incorporate into their research. Crotty (1998, p15) supports this by arguing that *we should accept that, whatever research we engage in, it is possible for either qualitative methods or quantitative methods, or both, to serve our purposes.*

This debate on the misalignment of philosophical and methodological pluralism is an extremely important one for research students, if only to clarify one's ontological and epistemological perspectives and research approaches. Unfortunately, students and researchers alike often neglect this important thought provoking debate.

This upon reflection has generated the discussion and thought which has brought about the concept of a 'hierarchy of needs'. The aim of this is to raise debate,

for researchers and students, about the research process and their interaction within it; specifically the relationship between research philosophy and research methods.

It is also not only an opportunity for students and researchers to debate but also for supervisors to engage in and discuss how the research process is actually disseminated. Often there is a misalignment between expectations of supervisors and those of the research student.

Although the process of research has changed i.e. at one time only doctoral students were expected to engage with the philosophical issues of research. Now Easterby-Smith, Thorpe et al (2002) argue this engagement is expected at masters and in some undergraduate courses. This is seen as beneficial as Easterby-Smith, Thorpe et al (2002, p3) argue that *it is unwise to conduct research without an awareness of the philosophical….issues that lie in the background.* The approach to research is influenced and *involves some kind of philosophical choice about what is important.*

However the question is whether or not undergraduate or in some cases master's students need to engage fully with the philosophical debates surrounding the research process. Or are there more important issues for researchers and students to undertake at different levels of research, in terms of the research process. As the current requirement for students at all levels to engage with the whole research process, from philosophy through to methods and techniques inevitability causes problems. The result is that words, concepts or ideas become mixed and confused because the pressure to engage with these debates is not appropriate or at times is too much for students at this stage or level within the research process.

Therefore for researchers and students to state transparently what their philosophical and methodological stance is, and more importantly the relationship between the two requires a great deal of understanding and level of sophistication. Unfortunately this concept of stating clearly and transparently that the piece of research, in question, is using for example a multi method approach is not that common within the research literature and has traditionally caused much debate. Mingers (2003, p1) argues that *multimethod research was quite scarce*.

Reflecting on the issues between philosophical and methodological pluralism has generated the 'Hierarchy of Research Needs' seen in fig 3. The aim is to identify what is expected and what is feasible at different levels of research.

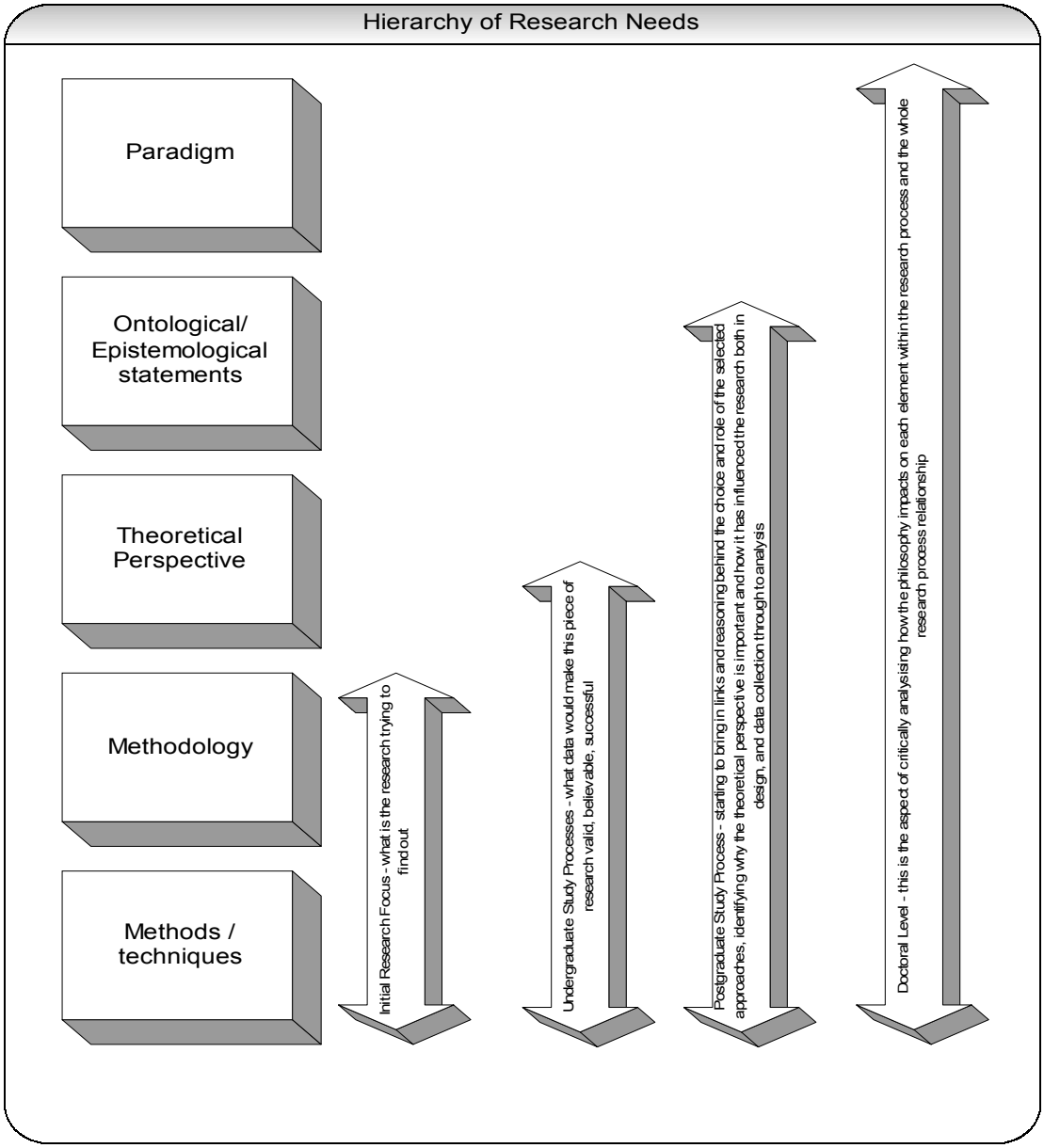

Figure 3: Hierarchy of research needs

The overall result of the issues discussed is that researchers and students tend to be confused and wary of the research process. Often just trying to get through the process as best they can and in doing do so they construct a research methods section that they think justifies the research they have carried out. If instead of the pressure to engage in the philosophical debates was removed, at certain levels, and more emphasis was placed on the collection, analysis and dissemination of the evidence gathered this maybe a step in the right direction for students, researchers and supervisors.

7. Conclusions

The overall outcome from this paper can be highlighted with the following points:

Methods and their use are influenced by philosophical arguments but these methods are not fundamentally applicable to any one or particular argument.

That the linking of methods to philosophies sometimes confuses in choosing the most suitable or appropriate research approaches to use in a given situation.

Although caveats may be given in textbooks to say they are not the same

(positivism = deduction = quantitative methods); care should be taken with regard to aligning methods with philosophical stances.

Students depending on their level within the research process find it difficult to deal with the ambiguities of the research process – therefore some form of *research hierarchy of needs* could be a useful starting or discussion point between students, researchers and supervisors, i.e. what is expected in terms of understanding, analysis, synthesis and criticality at various levels of the research process:

- **undergraduate –** using research methods or approaches and focusing the generation and analysis of evidence;
- **post graduate –** an introduction to research philosophies and their relationship to research methods and approaches; and
- **doctoral level -** a critical analysis of these philosophies in line with the research being undertaken

What may be more beneficial or important is a debate on the feasibility and implementation of hierarchy of research needs. This may involve for example undergraduates basing their research on evidence – 'what evidence would persuade one that this is a valid piece of research; as opposed to the philosophical debate surrounding the piece of research.

References

Bryman, A. and Bell, E. (2003). Business Research Methods. Oxford, Oxford University Press.

Crotty, M. (1998). The foundations of social Research: meaning and perspective in the research process. London, Sage Publications.

Easterby-Smith, M., Thorpe, R. and Lowe, A. (2002). 2nd. Management Research: An Introduction. London, Sage Publications.

Fogel, R. and Engerman, S. (1974). Time on the Cross: The Economics of American Negro Slavery. Boston, Little, Brown and Company.

Glaser, B. G. and Strauss, A. L. (1967). The Discovery of Grounded Theory: Strategies for Qualitiative Research. Chicago, Aldine.

Hussey, J. and Hussey, R. (1997). Business Research: A Practical Guide for Undergraduate and Postgraduate Students. Basingstoke, Macmillan Business.

Kolb, D. A. (1984). Experiential Learning. Englewood Cliffs, Prentice-hall.

Mingers, J. (2003). The paucity of multimethod research: a review of the information systems literature. Information Systems Journal **13**: 233 - 249.

Mutch, A. (2004). Personal communication with Alistair Mutch on the merits of philosphical pluralism and methodological pluralism. K. T. Knox. Nottingham.

Pickard, A. and Dixon, P. (2003). The applicability of constructivist user studies: How can constructivist inquiry inform service providers and systems designers? K.T.Knox. Newcastle upon Tyne.

Saunders, M., Lewis, P. and Thornhill, A. (2003). 3rd. Research Methods for Business Students, Prentice Hall.

Sayer, A. (1992). 2nd. Method in Social Science: A realist approach. London, Routledge.

Ticehurst, G. W. and Veal, A. J. (2000). Business Research Methods: a managerial approach, Longman, Pearson Education Pty Limited.

Waring, A. (2000). Practical Systems Thinking. London, International Thomson Publishing.

Yates, J. S. (2004). Doing Social Science Research. London, Sage Publications in association with the Open University Press.

