CONSTRUING THE DOCTORAL EXAMINER: WHAT THE DOCTORAL STUDENT SHOULD KNOW

Devi Jankowicz

Heriot Watt University, Edinburgh, UK

Doctoral candidates often worry about how their constructivist epistemology will be received, especially if their examiners come from a positivist background. The issue affects candidates in the more conventional psychology departments, and in the business and management schools too.

Methodology textbooks used by students, supervisors and examiners don't offer a unified terminology or a consistent analytic framework for the epistemological issues involved.

An exercise in student-examiner sociality, this paper seeks to remove some possible confusions arising from an imprecise use of the terms 'method' and 'technique', and from the simplistic use of such constructs as constructivist-positivist, subjective-objective, *and* qualitative-quantitative.

Key words: *Epistemology, doctoral examination, PCT associated techniques, methodology*

INTRODUCTION

This paper came about for two reasons, the first relating to assessment practice and the second relating to the preparation of a scholarly work.

In the first instance, correspondence with a doctoral candidate on the *Jiscmail* PCP forum indicated that the student and her supervisor were concerned about the methodological stance to adopt when approaching the phenomenological aspects of a topic which could benefit from a constructivist approach– the problem being that the External examiner was only familiar with positivist approaches in the field.

A similar concern was raised at the *XXIst International PCP Congress* at Hertfordshire University. A student had been advised to avoid a constructivist approach because, she was told, there is substantial disagreement among academics about the research paradigms that address how research methods should be combined.

The second instance was as follows.

The Academic Director of Edinburgh Business School approached me to "add a wee bit material about qualitative methods" to the School's 250-page distance-learning text, *Introduction to* Business *Research vol 3,* used by students during the empirical stage of the School's Doctorate in Business Administration.

Clearly, the task wasn't as simple as that. Adding the material to a text that was heavily positivist in outlook and quantitative in approach, for a School that runs the world's largest distance-learning Masters and Doctoral programme from a city steeped in the social philosophy of David Hume and the classical economics of Adam Smith, required revisions to the basic material of the other 2 volumes, one on research method and one on literature reviewing and theory development.

The task took two years, requiring the development of a stance towards methodology which, while not resolving the deep epistemological and ontological issues that still have academics in disagreement, (see esp. Bryman & Bell 2015: 642) provides a suitably rigorous framework within which the students' concerns might be addressed (albeit not entirely resolved: see the discussion below).

What follows is an exercise in Sociality: a trip into the external examiner's mind.

THE STANCE OF THE EXAMINER

It is a reasonable assumption that the external examiner is like the student's doctoral supervisor. S/he is someone with good will, who looks for answers that will make for a satisfactory outcome of the examination process of the thesis document, and in the viva or oral defense that follows.

It is likely that, even though the examiner may not be from a constructivist, or specifically PCP, background, he or she will be aware of the alternatives to the positivist stance. S/he may have reservations about how rigour is achieved when the traditional, null-hypothesis-based hypothetico-deductive stance is not being used; she may have heard of the debate about 'mixing methods", and may possibly have encountered the *Journal of Mixed Methods Research.*

Now, the notion of 'mixed methods', as its name suggests, seeks to avoid alternatives, one being 'appropriate' and the other being 'inappropriate' to a particular kind of research question. Instead, it tends to be debated in terms of three somewhat broad and generic issues – using three distinct constructs, as it were –

- *qualitative vs quantitative*
- *subjective vs objective*
- *constructivist vs positivist*

while seeking an appropriate mixture or balance of appropriate research methods (and techniques).

THE THREE CONSTRUCTS

Qualitative vs quantitative

This particular contrast should pose no difficulty for the Kellian constructivist, and a student based in this background should be able to offer two points.

First, s/he can point out that in actual fact, there is never a need to choose between the two orientations, since all discourse is a blend of the two.

The most phenomenologically-based constructivist content analysis, which seeks to categorise different sorts of meaning, gains its information by examining their *relative importance*– by some sort of counting or some sort of scaling. Conversely, the most statistically-based attempt to partition variance– e.g. a factor analysis– gains its information by means of an *interpretivist judgement* by the researcher, who draws on his/her experience and knowledge to propose a name for the factor that underlies the statistical commonality between the variables that have been grouped by the statistical procedure.

The second point will require a background in Personal Construct Theory, relating to concepts with which the examiner may not be familiar and which should be carefully addressed in the candidate's methodology chapter. If the data relate to the meanings expressed in a repertory grid, the meaning of the elements can only be expressed by combining the *qualitative content* of each particular construct, with the *extent to which* the emergent pole or implicit pole applies, the latter being usually expressed in terms of a numeric rating.

This is actually quite a profound statement, since Kelly insists that meaning does not reside in a single characterisation, as available in the emergent pole of the construct, but the characterisation as expressed by a contrast of implicit pole vs emergent pole meaning, stated either in extreme terms, or as a numerically scaled position in-between.

Subjective vs objective

It is likely that the examiner, in acknowledging the legitimacy of epistemologies other than the positivist application of hypothetico-deductive method to external events based on a realist ontology, will seek to probe the student's understanding of this distinction. Is the candidate a sloppy thinker or is his/her argument a rigorous one?

In particular, s/he will appreciate a clear statement of the student's stance somewhere between the two extremes of 'solipsism' and 'naïve realism'.

Yes, the phenomena being studied are not 'events out there'; they are active constructions, even to the extent that it is the observer, with a particular history, who defines what is an 'event' worthy of attention (Bennett, 2002; Shotter, 2002). But if the observer is a researcher, what kind of evidence is offered about the construc-

tion process? Does the analysis avoid solipsism by means of an explicit check on the reliability of construct categorization and coding; does it offer a triangulation against the results of other techniques; is there an argument demonstrating that the student understands what is meant by *bricolage* technique (see e.g. Kincheloe 2001) and its place with respect to conventional 'analytic generalisation' (Yin, 2014: 68)?

As regards the realist position, the examiner will hopefully be aware of *critical realist* epistemology, as used by 'mixed methods' researchers (see *the Journal of Mixed Methods Research, passim.)* and as helpfully presented in such texts as Maxwell, 2012; but the examiner may not be aware of the notion of *constructive alternativism* (Kelly, 1963: 3-45). A careful statement of Kelly's position here, and its centrality to any PCT-based perspective on the nature of the phenomena being studied, seems essential, and is usually placed towards the end of the literature review, or at the start of the separate 'methodology' chapter. The brief account provided by Chiari & Nuzzo (2003) is helpful to this end, with its emphasis on the understanding of phenomena as an interactionist, not an observational, endeavour.

This is a more radical stance than the critical realist position, and the examiner may need to be told this in a carefully prepared and referenced argument.

The argument might make connections to the work of Karl Weick (e.g.1993), whose concept of 'sensemaking' parallels Kelly's 'construing' in many respects, and whose work may well be more familiar to the business/management examiner than Kelly's.

Constructivist vs positivist

Hitherto, the position being taken is that neither *qualitative vs quantitative* nor *subjective vs objective* represents a necessary choice between ontological opposites: as with any construct, each is a matter of degree.

However, the constructivist – positivist distinction DOES represent a choice.

The constructivist approach is phenomenological and deals with *issues* as they are understood by both participants: the person being researched and the person doing the research. It seeks to *invent understandings* consistent with evidence. In contrast, the positivist approach is realist, dealing with *variables* viewed as existing independently of how they are perceived and governed by laws whose nature is the same whoever makes the observation; it seeks to *discover truths*. The two stances express mutually contradictory ontological assumptions and at any one point, one has to adopt one or the other; one cannot adopt both.

TWO KINDS OF CONFUSION

There are two possible kinds of confusion in the above.

Ontological muddle

The first identifies the ontological distinction between phenomenological and positivist subject-matter with the nature of the data when the data are largely qualitative or largely quantitative.

For example, respected authors like Miles and Huberman (2014) offer extensively developed techniques by which the researcher can, if s/he wishes, identify the variables that the researcher feels underlie the sets of qualitative data s/he has collected– but that is a separate issue to the content analyses of meanings and their frequency that Miles & Huberman's account presents.

A thoughtless conclusion is that because it is possible to mix qualitative and quantitative data in the same study, the study is simultaneously positivist and constructivist.

This is not the case. One can examine the meanings in a set of data in order to understand the phenomenological positions taken by the people under study, and understand how these positions convey and affect different stakeholders' views about a set of issues, offering that as a complete outcome of the research, in a study which is constructivist *throughout*.

Alternatively, one can examine the content of a set of data in order to identify how the variance might be partitioned across a set of variables one has identified, and offer that structure as a complete outcome of research, in a study that is positivist throughout.

The study is either one or the other; it cannot be simultaneously both.

One way of resolving the dilemma created by Miles and Huberman's search for variables has been to adopt the 'pragmatist' approach, which recognises the dilemma and either ignores it, (see e.g. Morgan 2007); or suggests that in a programme of research, it is possible to separate qualitative and quantitative data collection over time, and that it is thereby 'possible to be both constructivist and positivist but in sequence', thereby avoiding the simultaneous adoption of incompatible ontological positions. (A somewhat weak position and, again, there is the false assumption that one cannot combine qualitative and quantitative analyses at the same time.)

Bryman and Bell (2015) quote Morgan (1998) in support of a sequential approach; both this, and the review by Shannon-Baker (2015), are worth consideration.

Terminological muddle

The second kind of confusion relates to the careless, unconsidered and alas, habitual use of the terms 'method' and 'technique' as synonyms. Many of the examples used by methodology authors in the business and management fields in particular– see e.g. Bryman and Bell (2011; 2015), Easterby-Smith et al. (2015: 95), Saunders et al. (2016)– use the term 'method' when they are talking about the techniques used to collect and analyse data.

Relatively few – Corbyn and Strauss (2015), Jankowicz (2005: 220), and Jonker & Penninck (2010: 21-25) being notable exceptions – make the distinction.

A RESOLUTION

The reason that this matters is that much, if not all, of the confusion discussed above could be resolved by making a distinction proposed by Bennet (1991). Quite simply:

- '*techniques'* are procedures for *collecting and analysing data*
- 'methods' are distinct approaches to *establishing* a belief or testing a hypothesis; in other words, for *creating information from those data*.

It becomes apparent, both from Bennet's explicit presentation and as used by Jankowicz (2005), Corbyn and Strauss (2015) and Jonker & Penninck (2010), that *techniques* can be qualitative, quantitative and, (in the case of repertory grid), *necessarily* an integration of both. So long as the basic procedural rules and constraints for data collection and analysis are adhered to, there is little difficulty in mixing both.

However, the same cannot be said of *methods* as defined above, since the different methods involve distinct, and in some cases, mutually contradictory, epistemological and ontological assumptions. Different activities, priorities, and indeed values are required of the researcher if the different methods are to be applied rigorously enough for useful information to emerge.

Table 1 lists some of the *methods* discussed in Bennet's original, together with Grounded Theory and Action Research not discussed in his article. It is clear when examining the different methods that their mixture is likely to be problematic. Not only do some fit more comfortably within a constructivist paradigm and others within a positivist paradigm, but they rely on different forms of evidence, different procedures for the achievement of rigour, and rely on different proof indicators.

For example, while *experimental method* seeks to partition variance across different variables to create an explanatory structure in which the effect of potentially confounding variables has been controlled by a particular research design, in order to make ever more explicit and more generally applicable predictions... *case study method* triangulates data from a variety of sources using analytic generalisation (data-theory links that work as previously expected, Yin, 2014), in order to provide conclusions that the community of scholars and practitioners finds convincing and useful.

Table 1: *Six common methods in business and management research*

Method	**Nature of evidence**	**Rigour achieved by**	**'Proof indicator'**
Interpretive	Data, *and* researcher judgement about its meaning with respect to formal theory or informal expectations.	Careful assembly of argument; respondent comment on assumptions.	'Thick' description: respondents may participate in analysis.
Case Study	'Rich' description: variety of data sources representative of different stakeholdings; purposive sampling.	Analytic generalisation to different theoretical assumptions (Yin, 2014); triangulation.	Research and practitioner community agreement on contribution.
Survey	Relative frequency within/across stratified sample or sample subgroups.	Sample accurately represents population characteristics; sample size assumptions.	Emerging consensus in repeated polling of similar/related samples.
Experimental	Variance partitioned across different variables in an explanatory structure.	Control of moderator variables by careful research design based on hypothetico-deductive approach.	Improved prediction arising from greater precision/ enlarged scope of theory.
Action Research	Variety of performance sources agreed as relevant by participants (often, an intact working group).	Iterative comparison of data against interpretation until all cases accounted for by data.	Measurable performance improvement in the organisational unit(s) studied.
Grounded Theory	Systematic support of emergent theory.	Content analysis coding criteria; precision of data measured and of inference in analysis.	Final theory usable and matching data collected subsequently about newly emergent issues.

Notes:

1. 'Rigour' is used as a generic to avoid terms such as 'scientific approach' which is a) commonly associated with hypothetico-deductive method b) frequently used as a value-laden term that would diminish the status of methods other than the experiment.
2. 'Proof indicator' states the kind of outcome that serves to convince others that a credible contribution has been made. The term 'Proof' is avoided since the purpose of research is to *test* beliefs rather than to *prove* them.
3. Reliability of data analysis procedures must be established in all six methods before valid/believable information can emerge.

Source: Jankowicz et al. 2016.

To believe that experimental method is in some sense better than case study method or indeed any of the others is to assume that there is only one standard of rigour: the one associated with the physical, biological and engineering sciences. In fact, each different method develops, applies, and preserves its own distinct measurement conceptualisations in order to protect its own approach to rigour. Note the technical terms and concepts involved: 'variance partitioning', 'control', 'null and alternative hypothesis' are essential to experimental method; 'triangulation' and 'analytic generalisation' to case study method; 'representative sampling', 'stratification' and 'response rates' to survey method. Grounded theory method treats the literature as data and in its original, more radical form, (Glaser and Strauss 1967), minimized the need to construct a systematic literature review before empirical work begins.

A CONCLUSION

It should be clear by now how the confusion described above operates, leading to the unsatisfactory situation in which 'mixed methods' is regarded as such a problem that several journals (see e.g. *Journal of Mixed Methods*; *Qualitative Enquiry*) spend time on agonized appraisal. The same technique can be used with different methods– and one must distinguish between the two terms in order to think clearly.

Structured interview, questionnaire, and observation techniques can be used with all 6 of the methods, but their many distinct variations reflect the different constraints imposed by the method, in order to generate information from the raw data captured by the technique– not because they cannot be combined because they deliver qualitative, or quantitative, data.

Much of the confusion about 'mixed methods' would be resolved if the term 'mixed techniques' was used in its place, where the discussion is about mixed techniques as defined above. In the meantime, doctoral candidates and their supervisors might care to question whether the latter term might more usefully be substituted whenever the former is encountered, especially where the debate hinges on whether and how to mix qualitative and quantitative... *techniques!*

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ABOUT THE AUTHOR

Devi Jankowicz gained a first degree in Psychology (1969) followed by a doctorate in Management Cybernetics (1975), both from Brunel University. He has taught Organisational Behaviour and Research Methods, at universities in Ireland, USA, Poland and the UK, and has contributed to management education by developing two MBA programmes and a DBA programme prior to joining the faculty at Edinburgh Business School where he teaches on the MSC and DBA programmes. His research interests include knowledge transfer across cultural boundaries, the use of virtual environments in distance learning, and applications of constructivist theory and techniques in business and management. He has around 90 publications to his credit, including four textbooks on business research methods, one in Chinese translation. His consultancy clients include JPL/NASA, Unilever, Rolls-Royce (Bristol), and the Employment Service UK; he has contributed to Ministerial briefing seminars in the UK, and acted in an EU Expert role for the Ministry of Education in Poland.

Contact: animas@ntlworld.com

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