RESEARCHERS' PERCEPTIONS OF THE DEVELOPMENT OF QUALITATIVE APPROACHES IN CONSTRUCTION MANAGEMENT RESEARCH

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Drawing on Kuhn's thesis of normal and revolutionary science, this study investigates how cultural factors impact on the production of qualitative research within the discipline of Construction Management.. Members of the CNBR e-mail network were invited to respond to a series of questions regarding their perceptions of qualitative research, and the responses were analysed as a text. Five broad narrative themes are identified: constraint, hopefulness, sanguinity, caution and scepticism. There also is a brief discussion of the way language is used to legitimise and problematise methodology. It is argued that there are agreed vocabularies which can be used to defend and critique qualitative research, and that the critical terms have connotations of blurring and unboundedness. It is also noted that terms historically used to endorse quantitative research which met with critical approval are now being used to signify the value of qualitative outputs. In conclusion, it is argued that what we know has a social dimension and, therefore, the need for shared understandings of epistemological legitimacy is emphasised.

Keywords: culture, methods, research, theory.

BACKGROUND

In 1997, Seymour, Crook and Rooke stated that "research in construction management has tended to underestimate or ignore the importance of the interpretive process". Runeson (1997) replied in defence of the positivist line of enquiry, and Seymour *et al.* (1998) replied to Runeson. Whilst it is interesting to note that the interpretists within this debate do not focus their arguments around qualitative and quantitative methodologies, this distinction was suggested by Runeson, who questions whether there has been an implicit equation of qualitative with interpretist and quantitative with positivist lines of enquiry. It should also be noted that Runeson, whilst arguing strongly for a focus on understanding causal relationships, does allow that there is a place for qualitative method in certain types of research, and goes on to problematise the relationship between approaches to theory and the debate regarding the employment of qualitative and quantitative methodology. Nevertheless, anecdotal evidence suggests that many within the CM research community view the debate as being of pivotal importance to the development of qualitative research within the field.

The theoretical debate is revisited in a more recent paper, which suggests that, whilst issue of quantitative and qualitative methodologies became "resonant" in construction management, there is a "more subtle and reflexive dimension to this debate" which is concerned with ideas of the value and legitimacy of approaches to the production of

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Collier, C (2006) Researchers' perceptions of the development of qualitative approaches in construction management research. *In:* Boyd, D (Ed) *Procs 22nd Annual ARCOM Conference,* 4-6 September 2006, Birmingham, UK, Association of Researchers in Construction Management, 751-759.

knowledge (Bresnen *et al.* 2005), suggesting that further work is still to be done in this area. Whilst many of the responses to the present study, perhaps inevitably, touched on these wider theoretical issues, the primary focus was to enrich our current understanding of how research practitioners currently view issues of method selection within their working lives.

SCIENCE AND SOCIAL STRUCTURES

Without intending to imply that the introduction of qualitative research into CM research papers is a scientific revolution in any way parallel to the discovery of quantum physics, it is argued that Kuhn's work "The Structure of Scientific Revolutions" can usefully inform our understanding of the relationship between scientific production and the social world. Kuhn sees the majority of scientific practice (normal science) as taking place within agreed paradigms, which are taught to the student in preparation for membership of a scientific community… *"Because he there joins men who learned the bases of their field from the same concrete models, his subsequent practice will seldom evoke overt disagreement over fundamentals. Men whose research is based on shared paradigms are committed to the same rules and standards for scientific practice."* (Kuhn: 1970: 10-11) (As an aside, it can be noted that this quote in itself now testifies to the effect of social norms on academic production, as this idea would be expressed quite differently in a contemporary academic work.)

Kuhn's work has been enormously influential in developing interest in the social dimension of the production of knowledge, even if this did leave him complaining of the *"nonsense attributed to me"* (2000: 220).

For the purposes of this enquiry, it is not necessary to ask whether or not Kuhn was correct to conceptualise the history of science as a series of revolutionary paradigm-shifts. What is most relevant here is that his work made an attempt to understand science within a social context. It may be useful to note, however, that Bird (2000: 139) argues that Kuhn need not be seen as a social constructivist, certainly not in its strong form, and that his framework "does not exclude the possibility of rational belief", even if he is sceptical about the knowability of the world-at-large.

Kuhn's work has been especially influential in the social sciences. Since his theory focuses notions of science on puzzle-solving rather than application, it can be read as a validation of a social discipline claiming scientific status (Bird 2000: 267). In Kuhn's framework, the competing paradigms of the social sciences can be read as the hallmark of a developing but as yet immature science, or, alternatively, as a science in the throes of a revolution.

In CM, its multidisciplinary constitution is particularly fertile soil for competing paradigms. The young researcher joins a community which may draw on many different models. To complicate matters further, its position in relation to other disciplines is perceived differently in different parts of the world, leading it to be considered a sub-discipline of civil engineering in some universities, and a specialist type of management studies in others. This previously has been noted as a potential cause of confusion with regards to academic conventions such as multiple authorship[1]. How do these different models impact upon researchers' perceptions of issues relating to method selection?

[1] See the CNBR debate of February 2002

METHOD

According to Kuhn, *"An apparently arbitrary element, compounded of personal and historical accident, is always a formative ingredient of the beliefs espoused by a given scientific community at a given time."* (1970: 4) In a Kuhnian spirit, therefore, an arbitrary invitation to participate in an investigation of the current perceptions of qualitative research methods, either by e-mail or telephone, was issued via the Co-operative Network for Building Researchers (CNBR).

There are around 1500 members of this group and this study, like most amateur productions, was severely resource-constrained, so a high percentage response rate would have proved problematic to process. However, a statistically valid sample was neither sought, anticipated nor received. Rather, the intention was to generate considered responses from a self-selecting group interested in engaging with the issues. The approach was kept informal, to distance the exercise from any appearance of a pretence to scientific rigour, and a series of questions regarding the respondents' perceptions of the usefulness of qualitative research was posed. Respondents were encouraged to respond as expansively or briefly as they wished. Two questions were also posed in order to provide some minimal personal context, asking the respondents' years of experience and gender.

The aim of the survey was to elicit texts which might be subject to analysis. The data was analysed with the intention of discerning patterns and themes. The approach is in some ways similar to the coding of qualitative data, but less systematic. The intention was to apply the analytical techniques common to the humanities to the data, drawing inspiration from Raymond's observation that *"Humanists produce knowledge without benefit of laboratories, sometimes working like scientists, but their medium is the word, and analogies, striking examples, and logic are their non-scientific proofs."* (1982)

A NOTE ON RESEARCHING RESEARCHERS

In the words of Wilkinson and Kitzinger (2000, quoted in Silverman 2005) *"There is a widespread assumption…that research participants are naïve subjects, intent primarily upon accurately reporting their cognitions to the researcher."* When one attempts to research a research community, this statement, and its implicit notion of power relations, is immediately and obviously problematised.

The respondents to the survey were highly research-literate, and, for the most part, clearly reflexively engaged with their reports of their perceptions and with the context in which they were submitting their data. This was reflected in the richness of the data gathered, and lent a sense of co-production to the proceedings. Several respondents to the survey reported in this paper critiqued questions, referenced previous work, and undertook to move the discussion forward.

As one respondent rightly pointed out, I lumped "qualitative techniques and critical approaches" together in my first question before, idiosyncratically enough, confining myself to questions about qualitative approaches thereafter. As they said,

> *"Neither qualitative nor quantitative research methods or data collection approaches are, themselves, 'critical' – that depends on their use by the researcher."*

This structure was not given a huge amount of thought, and can at best be dignified as another manifestation of Kuhnian arbitrariness. However, the introduction of

"critical" into the narrative proved a useful jumping off point. One respondent noted that although

> *"The use of qualitative research has found greater favour over the last 10 years…I still think there is a dearth of critical studies which provide explanatory power to the findings of research, be they qualitative or quantitative in nature."*

Researchers conducting similar studies have noted *"…the difficulties of conducting research with a group of people who are expert in the practicalities of conducting research."* (Wiles *et al.* 2004) This can make the researcher's experience occasionally nerve-racking, as when one (non-respondent) who had read the messages on CNBR wrote privately to question the validity of the approach. However, since the study was concerned with researchers' views of the research process, their expertise was clearly pivotal to the research. The project certainly offers an interesting critique of Gidden's notion of the double hermeneutic (1976), which implies a clear distinction between the researcher and the 'lay' researched.

Finally, as we blur the distinction between researcher and researched, it is appropriate to say something about the researcher within the research. In a study engaged in understanding Kuhn's element of "personal and historical accident" within the production of knowledge, it did not seem fitting to attempt the removal of the researcher from the process. Reflexively, then, I should state that I've never concealed my fondness for qualitative and critical approaches, and that a good many respondents (and non-respondents) know me and my views. Given this, it seemed fruitless to attempt linguistic neutrality within the framing of the questions, although I did emphasise that I was interested in hearing from researchers of all viewpoints.

Whilst in agreement with (Alvesson and Skoldberg 2000: 3) when they state that *"it is pragmatically fruitful to assume the existence of a reality beyond the researcher's egocentricity…and that we as researchers should be able to say something insightful about this reality*", it is argued that, in many forms of research, it is important to acknowledge that decisions about whether to respond to requests for information and, if so, what to say, can be influenced by intrapersonal considerations. This is unlikely to be wholly replicable research, although many of the dominant themes might re-emerge, and a different researcher might have received a quite different set of responses.

RESPONSES

26 surveys were returned. Three researchers provided information by telephone, two of whom also completed the survey. Responses varied from yes/no answers to quite involved discussions of the questions. One survey respondent and I went on to have a lengthy theoretical debate via e-mail.

Only one response was received from a researcher who did not use qualitative methods within their work. The others all used them, although opinions varied as to whether they were still under-utilized within construction management. It was not possible to ascribe any patterns to the responses by gender or by length of experience, except to note that all the respondents who queried me asking for this information or gave jokey responses (E.g. Are you male or female? "Qualitatively or quantitatively?" or "Yes!") were experienced male academics previously known to the researcher.

NARRATIVE THEMES

At a response-level, it was possible to discern five broad narrative themes, although this is not to suggest that all, or even most, responses would fit neatly into one of five groups. The relationship between narrative theme and the perception of inhibitors to qualitative research is also explored in this section.

Constraint

This narrative was used by researchers who experienced the academic environment as often unreceptive, if not actually hostile, to the wider adoption of qualitative methodology. Within this narrative, inhibitors tended to be positioned externally, relating to the wider perceptions of academic colleagues, and in particular to the perceived barriers presented by unsympathetic reviewers. This concern was widely reported. The uncertainty about whether approaches are universally perceived as valid led one respondent to report that:

> *"I had heartburn after submitting my thesis, because I didn't know how the examiners would respond. If they demanded statistical analysis…I thought, I will fail."*

Inhibitors identified were also resource-related, with the time and effort required to produce a qualitative paper felt to be unequal to the return, when the chances of publication were perceived as so uncertain.

Another respondent, whilst hopeful about the development of qualitative methodology, touched on issues of validity by talking about feelings of uncertainty:

> *"I definitely use qualitative methods myself – even though I often feel I should be also doing the quantitative hard stuff. I have to stop myself and reassure…[myself] that qualitative is okay!"*

Constraint could also be interpreted as affecting the levels of production of knowledge in a given area, one researcher noting that there was *"a paucity of studies"* in their field because:

> *"… by their nature they need to be qualitative and qualitative methods have not been encouraged…an evaluative and humanistic approach is what is required in my field of research."*

Hopefulness

Many respondents discerned and welcomed a shift towards the employment of qualitative methodology. Most saw this as having happened over the last five to ten years. Even those who saw qualitative techniques as currently underutilised made comments such as:

> *"Sooner or later researchers in the CM field will appreciate the value [of] qualitative methods."*

Some saw progress and resistance as coexistent:

> *"I think there is a greater awareness of them [qualitative methods] (& their scientific value) now than existed 10 years ago, but the demands of western scientific philosophy require us to obey numbers!"*

Sanguinity

Respondents who predominantly took this perspective tended to locate any inhibitors internally, citing the lack of appropriate skillsets as being the most important impediment. They also tended to emphasise the need for the method to be suited to the particular research question, and that methodological polarisation along doctrinal grounds was unhelpful.

> *"It's an unnecessarily polarised issue. It depends on what you want to know."*

This narrative, like the "hopeful" narrative, saw significant developments over the past ten years, although one respondent located the development as rooted in the UK Science and Engineering Council's Specially Promoted Programme in CM, which took place in the 1980s. Some respondents also identified differences based on the geographical location of the researcher, suggesting that qualitative techniques were more widely accepted in Europe than in the US. Some respondents whose narrative broadly concurred with this outlook still perceived external problems similar to those appearing in other narratives, but they viewed them as weaker:

> *"It is difficult to gain acceptance of qualitative methods when applying for funding from the EPSRC, although even here there has been a growing acceptance of the importance of socio-technical systems research. Some journals are more orientated towards positivist methodologies, but there are plenty that recognise the benefits of methodological pluracy too."*

The defining feature of this narrative was a sense of positivity and confidence – because inhibitors were seen either as internal or as external but more surmountable, this narrative focused more on development than upon concern, and the issue tended to be seen as less problematic.

Caution

Some researchers who used qualitative methods felt that these approaches were almost coming to dominate the discipline:

> *"I think quantitative methods are currently under-utilized. The pendulum has swung to the qualitative side, and a balance needs to be struck…Just take a look at the papers presented in conference and you would appreciate my point."*

It was also stated that qualitative methods "*should not be exclusively relied upon*".

One researcher also noted that:

> *"There is an increasing trend in qualitative research methods and more crucially, researchers that use such methods need to be aware of the discussions, debates, strengths and pitfalls of such methods."*

In an interesting mirror of concerns many respondents expressed regarding skills, this qualitative researcher went on to note that:

> *"I think I want to be able to expand my ability to use quantitative methods as well, and perhaps mature to a level where I can use mixed methodology."*

The defining feature of the cautious narrative, which was akin to sanguinity in its emphasis on the importance of appropriateness of method, was a concern with the limitations inherent in any one method of academic production. The *"ability to deal with ambiguity"* was also cited as a necessary condition of successful qualitative research.

Scepticism

Firstly, it should be stated that this category title is not intended to imply an affiliation to the philosophical position, and secondly, it should be stated that there is only one respondent whose narrative fits this category. It is difficult to identify the most apposite label for a community of one, and the term "sceptic" may not fully do justice to the robustness of this respondent's views.

> *"[Do you see qualitative approaches becoming a more prominent part of the CM discipline in the future?] I sincerely hope not, although the system of peer review isolates us from the wider academic community and allows us to accept mediocrity."*

The respondent differentiated between "sloppy research" and "proper quantitative research", so I e-mailed back regarding the definition of these terms. This led to a long and wide-ranging discussion which it is unfortunately impossible to do justice to here for reasons of space, but which was invaluable in terms of the intellectual challenge it presented. The respondent was concerned that

> *"qualitative research is used as an excuse for not bothering about finding existing theories……. It is only when "qualitative" means ignoring theories and objectivity and rejects generalizations that I don't like it and this is where a lot of the bad research originate."*

Interestingly, this argument was positioned against the contention that there is insufficient awareness within the CM community of academic production in related disciplines, a contention which was mirrored exactly within a "constrained" narrative which asserted that

> *"not many construction management researchers read materials from other disciplines. They are totally clueless about what happens in social sciences…"*

I put it to the "sceptic" that there might be commonality between his concerns and those of an interpretivist, not least a willingness to critique some forms of statistical surveying. This drew an interesting response:

> *"He and I have, I think, one thing in common: a clear picture of how we see reality. The pictures are different. I see it as an orderly system where science can create understanding. He sees it as a social construct existing only in our minds and different for each person. I can understand a consistent view like that even if I don't agree with it. However, I don't think either of us can understand the people that want to compromise and say that reality may be both an ordered system and an individual perception and which one I will believe in today depends on which research method I happen to prefer today."*

Paradoxically, this suggests that the "sceptic" and an interpretivist might have more in common with each other than they have with the researchers who are comfortable with the approach that the method should suit the question. It would have been interesting to receive more responses from this perspective, but, despite the small response rate, it seemed worth devoting significant space to this view, which most closely fits the perception that many of the other narratives ascribe to their more sceptical colleagues.

OVERARCHING THEMES: LANGUAGE AND LEGITIMACY

Many of the respondents who wished to argue in favour of the legitimacy of qualitative approaches did so by stressing their suitability for understanding social situations. Adjectival descriptions such as "holistic", "deeper" and "richer" reflected the belief that qualitative research could tell us something about social situations which could not be achieved purely through what was termed as "number crunching".

There was also a recurrent concern about how qualitative research was perceived by non-adherents. Terms that, it was felt, might be applied included "woolly", "soft", "dodgy" and "subjective" – a word which one respondent felt had acquired a discernibly pejorative connotation in methodological discussions. These terms, plus the previously quoted "sloppy", could all be read to imply a positivist critique: they undermine notions of an objective investigation with the researcher stood cleanly to one side, instead insinuating a worrying and unclassifiable blurring round the edges of the activity of research.

"Rigorous" also recurred, both as a descriptor of what might only be ascribed to quantitative productions by the gatekeepers of the journals, and also as an affirmation of the validity of qualitative approaches. "Robustness" was used in a similar way. It seems likely that these terms are widely understood as descriptors of respected research. Although they have traditionally been used to connote the strength of "hard", quantitative research, it seems they are being reformulated, perhaps quite consciously, to connote a different type of academic legitimacy.

CONCLUSION

If this is true, it bears out the theory that, without suggesting that the world-at-large is unknowable, how we agree what we know has a social dimension. Whilst it is arguable whether construction management can be understood as a homogenous discipline, and unlikely that it requires a single, over-arching paradigm, it is still an academic community, which has to negotiate shared understandings of academic convention and epistemological legitimacy.

This study has been concerned with perceptions rather than practice, but it suggests that there are several distinct narratives, inter-linked but sometimes dissonant, through which researchers make sense of their working environment.

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Acknowledgements
Many thanks to everyone who participated in this research.