MIXED METHODS RESEARCH: POSITIVISM DRESSED IN DRAG?

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Abstract

The claim that mixed methods is the third methodological movement of the 20th century could have unexpected consequences for the future of research in the social sciences and health disciplines. Implied is a belief that the mixing of qualitative and quantitative methods will produce the 'best of both worlds'. This assumption, combined with inherent promises of inclusiveness, takes on a reality and certainty in research findings that serves well the powerful nexus of economic restraint and evidence-based practice. I argue that the use of the terms qualitative and quantitative as normative descriptors reinforces their binary positioning, effectively marginalizing the methodological diversity within them. Ideologically, mixed methods covers for the continuing hegemony of positivism, albeit in its more moderate postpositivist form. If naively interpreted, mixed methods could become the preferred approach in the teaching and doing of research. Rather than the promotion of more co-operative and complex designs for increasingly complex social and health issues, economic and administrative pressures may lead to demands for the 'quick fix' that mixed methods appears to offer.

Key words: mixed methods, postpositivism, evidenced-based practice, qualitative research, quantitative research, methodology

Introduction

The recent promotion of mixed methods research as "the third methodological movement" (Tashakkori & Teddlie, 2003, p. ix) may have unexpected consequences for social science and health research in the 21st century. Clothed in a semblance of inclusiveness, mixed methods could serve as a cover for the continuing hegemony of positivism, and maintain the marginalisation of non-positivist research methodologies. I argue here that mixed methods as it is currently promoted is not a methodological movement, but a pragmatic research approach that fits most comfortably within a postpositivist epistemology. In this paper I explore some of the issues involved,

specifically the conflation of the terms methods and methodology, the use of qualitative and quantitative as normative descriptors, and the philosophical assumptions reflected in the 'thinking' of mixed methods research. I conclude with a discussion of some of the possible consequences if mixed methods is accepted uncritically as offering the 'best of both worlds'.

Origin of the Idea

The origin of my thinking for this article was my experience of co-writing a paper on mixed methods research with a colleague from the social sciences (Giddings & Grant, in process). I have been an enthusiastic supporter of mixed methods research since the early 1990s and developed and taught the first postgraduate Integrated Research Methods course at my university in 1999. I could see the advantages of mixing descriptive qualitative and quantitative methods within one study. In preparation for writing the article I had begun reading nursing research studies that purported to use mixed methods designs (Giddings & Williams – in process). Very few acknowledged any theoretical methodological positioning. I became aware of an assumption veiled within the descriptions given by some authors that this type of research is inclusive of both research paradigms, that it offers 'the best of both worlds'. This assumption moved beyond descriptive integration. I wondered what effects it might have on current research approaches, specifically those subsumed in the qualitative end of the mixed methods continuum. What were the underpinning philosophical assumptions of research that used both qualitative and quantitative methods? And so my questioning began.

Background

In the 1990s, the idea of combining qualitative and quantitative methods into one methodology with variant typologies was proffered as a way to extend the repertoire of social science and health research (Creswell, 1994; Miller & Crabtree, 1994; Morse, 1991). The idea was not new. From the 1950s, methods were often combined in evaluation research (Patton, 1981) and to explore issues and problems when little was known (Campbell & Stanley, 1966). The notion of using two or more methods to study a phenomenon was also promoted by Denzin (1978) as a way to ensure confidence in the conclusions made. Mixed methods approaches along with qualitative research were classified in hierarchical taxonomies. They were mostly

fitted together in Level I -Exploratory in the scientific research taxonomy although, when involving a survey, mixed methods slipped into Level II - Descriptive (Brink & Wood, 1978). What was new in the 1990s promotion was the argument that mixed methods was an emerging 'new paradigm'. Claims were made that this integrated approach was the solution to the 'paradigm wars' that ostensibly had been raging between proponents of what are commonly termed 'qualitative and quantitative research paradigms' since the 1970s (Gage, 1989; Hammersley, 1992). What mixed methods offered, it was argued, was a bridge between the paradigms and more diversity in methods available to researchers dealing with complex problems in practice. The combining of qualitative and quantitative findings would give more evidence, more certainty and therefore more confidence in the 'truth value' of the outcomes. These claims fell on fertile ground.

Mixed methods fitted well with the global economic imperative of the 1990s to do more with less and with the rising evidence-based practice movement. The growth in support for mixed methods, I suggest, was related to this economic/ideological nexus that created space for a new form of positivism. Logical positivism's high ground in research had been shaken since the 1960s by critique from philosophers of science (Popper, 1959; Kuhn, 1970; Toulmin, 1961; Feyerabend; 1975) and numerous proponents of the competing 'qualitative' research paradigms. These challenges to the epistemological, ontological, and axiological underpinnings of positivism by the 1980s heralded a more moderate form – postpositivism. It was the advent of postpositivism that enabled the more general acceptance of qualitative research in the mainstream and its inclusion in research methodologies curricula leading eventually to publication in leading journals. I would argue, however, that it is the economic imperative expressed in the recent calls for mixed methods research by government and private funding agencies worldwide that has shifted the interests of the more traditional positivist researchers in the social science and health disciplines toward this research mode.

The Mixed Methods Movement

The mixed methods movement is undoubtedly still in the process of developing its philosophical and theoretical base. Also there are many variants within and between social science and health disciplines. Recent work by Greene (2005) in the social sciences and Kirkham and Anderson (2002) in nursing are moving away from the

positivist, pragmatic, a-paradigmatic positioning, to using dialectical processes a feature of the postmodernist positioning. They are uncovering contradictions and divergence in research findings and highlight the need for diverse solutions for diverse problems. The majority of mixed methods research, however, is still primarily based on the construction of a qualitative–quantitative dichotomy, variously described as 'paradigms', 'binaries' and 'continuums'.

That mixed methods has made it on the world stage is evidenced by the holding of the first international mixed methods conference in Cambridge, UK in July 2005. I was privileged to attend. An underpinning interest often expressed in the discussion was how to make mixed methods work so that the demands of funding bodies could be met. As one presenter put it, "How can we create our designs to work effectively so we can achieve the outcomes desired by those who are funding our work?" This pragmatic interest in how to make mixed methods 'work' to ensure reliable evidence to meet funding criteria was evident in many of the papers. Of particular interest to me, there was energy and enthusiasm to support the notion of mixed methods as the third methodological movement. Positioning mixed methods as an evolutionary historical development within social science and health research was eloquently argued by protagonists such as John Creswell and David Morgan. Creswell outlined the history of his interest and commitment to mixed methods and posed pragmatic questions including asking how we can make mixed methods work effectively in the practice settings to answer practical questions. Morgan debunked the quantitative–qualitative divide which he argued was created erroneously by Lincoln and Guba (1985, 1989, 1998). He suggested that pragmatism was its alternative and the basis for integrated research methods, paradoxically creating another binary positioning, Morgan also argued that 'paradigm' and issues of epistemology and ontology were purely metaphysical so should not direct the research process. Equally eloquent were challenges to take seriously issues of a philosophical nature from other keynote speakers including two who positioned themselves as poststructuralist. Gary Rolfe and Dawn Freshwater. Rolfe asked, "Can we learn more about 'what is nursing' from fiction rather than the structured rigour of traditional quantitative and qualitative methods that more correctly belong in social science not nursing research?" Freshwater explored, among other things, why mixed methods quest for certainty? However, it was a comment at the end of my presentation at the conference that energised me to continue troubling the claim that mixed methods is the third

methodological movement and write this paper. After dismissing the value and use of paradigm frameworks in relation to mixed methods research, one conference participant said: "In all my years as a researcher and a teacher, I have never heard any scientist describe themselves as a positivist or a postpositivist." His position echoed the hegemonic stand of the traditional positivists. When part of a dominant culture there is no need to explain our selves; we do not need to self-label or accept labels, though often quite liberally dispensing them to others. Although I personally believe "labels are for jars", naming can make clear who has power and who is benefiting within certain relationships and situations. I left the conference convinced of the potential for 'mixing' within a design and still an ardent supporter of mixed methods as a versatile and useful approach when combined at the descriptive level. At the same time, I had even more conviction in my premise, however, that mixed methods, if not open to philosophical critique, was likely to become positivism dressed in drag. In this guise it would endanger the multiple methodologies subsumed in the qualitative category of research.

Discussion

The most often presented arguments for using a mixed methods approach is its ability to be 'holistic' or to "give a rounded understanding of process and outcome" (Bazeley, 1999, p. 284), and its ability to be inclusive of multiple approaches to a problem so there is more certainty in the results. On the surface these arguments for mixed methods research sound quite reasonable. So does their logical extension into education: rather than social science or health postgraduate students having to choose between doing quantitative or qualitative research, why not a mixed methods course so they are better equipped to deal with the complexity of social and health issues and problems? Why not have the best of both worlds? An equally compelling argument is that it would help break down the divide between the worlds of the qualitative and quantitative researchers. Or as Tessa Muncey (2005) argues it could be 'a bridge over troubled waters'. There are, of course, some 'truths' in these arguments so, why my disquiet? To help explain, I will discuss some sites of confusion in mixed methods, the conflation of the terms methodology and methods and the use of qualitative and quantitative as normative descriptors. Interspersed within the discussion I will explore the 'thinking' of research, and in the process posit some unexpected consequences of the 'catch all' argument.

The conflation of the terms methods and methodology

Mixed methods research at the level of design can give mixed messages. Creswell's (2003) definition clearly places the 'mix' on the methods and specifically the processes of data collection, analysis, and presentation of findings. However, published papers in nursing journals that purport to use mixed methods designs (Giddings & Williams, in process) show persistent inconsistencies in the use of the terms, methodology and methods, not only between papers but within them. On this matter I position myself with Denzin and Lincoln (2005), to argue that methodology is concerned with the abstract theoretical assumptions and principles that underpin a particular research approach, and is often reflective of specific scientific or social science disciplines. Methodology guides how a researcher frames the research question, and decides on the process and methods to use. The 'methods', in contrast, are how one gets to the outcome; they are the practical means, the tools for collecting and analysing data. The consistent use of these definitions would not only clarify what is being 'mixed' but would contribute to internal consistency and congruence so often lacking in mixed methods studies.

The qualitative and quantitative descriptors

The continuing use of the qualitative-quantitative descriptors to categorise research in mixed methods is a major site of confusion. First, some background information to position my argument. The use of the terms as normative descriptors for research paradigms was popularised in the 1970s and 80s. Qualitative became a 'catch all' for non-positivist inquiry. It gave a platform from which ethnographers, grounded theorists, phenomenologists, hermeneutists, feminists and so on could claim recognition in the research mainstream. Originally the use of the descriptor 'qualitative inquiry' was a way to join together multiple, rich traditions with the political purpose of promoting their acceptance within the mainstream, rather than creating a new tradition or a new paradigm as has since been claimed. The binary descriptors gave non-positivist researchers a place to stand. Then, as now, what has become known as 'Qualitative Inquiry' encompasses diverse worldviews that are often quite contradictory. In the first editorial in *Qualitative Health Research* in 1991, Janice Morse reflected this political intent when she emphasised the importance of

qualitative researchers having a "combined face" and establishing "a legitimate place in the scientific community" (p.4).

The new academic discipline of nursing had led the way in popularising the qualitative orientation within the health disciplines. Nursing theses and dissertations using qualitative methodologies in the 1970s and 80s often contained apologetic chapters dedicated to the comparison of quantitative and qualitative research, followed by impassioned arguments as to why the study was not positivist. By and large these new researchers were convincing the already converted and their arguments probably did little to change their positivist colleagues' views. What they did contribute to was a shift to a more methodologically inclusive nursing research culture. By the early 1980s, for example, 'qualitative' had become a theme for papers at nursing conferences and headed chapters in research texts. In 1989 the word qualitative first appeared in a textbook title: *Nursing Research: A Quantitative and Qualitative Approach* by Carol Roberts and Sharon Burke.

By the late 1990s, the apologetic positioning in theses and research articles was becoming less common. Qualitative researchers were gaining a place in the research mainstream and returning to naming their methodologies without reference to the qualitative descriptor. In retaining the terms in a paradigm sense the mixed methods movement is turning back the clock. An effect of maintaining the binary positioning makes methodological diversity invisible and hides the dominant positioning of scientific positivist research. Bottom line, mixed methods profile of inclusiveness serves as a cover for positivist ways of thinking about research.

The thinking of research

Liz Smythe (2005) interviewed experienced researchers from a variety of research backgrounds to explore the issue: "What is the thinking of research?" She argues that methodologies reflect particular approaches to thinking: "An idea does not fall into a value-neutral, experience-equal calculating mind" (p. 241). She goes on to say that selecting methods "is shaped from past experiences, epiphanies, embodied understanding, and many complex and nuanced insights as well as the nature of the phenomenon to be studied"(p. 242). I would like to extend Smythe's argument to suggest that novice researchers' embodied understanding of research is shaped by their unique contexts – cultural, social, political, economic and so on. These frame the knowing, thinking and understanding that come together in the construction of a

person's world view. Although the novice may not yet know the language and processes of research, they already know in part the research culture they are entering. Unless students have experienced being different from the cultural mainstream, the equation of research with science is not questioned; the beliefs, values and attitudes that go along with it, are taken-for-granted. Teachers often wonder why students 'hate research' even before they start their classes. Yet students, a very diverse group, often already know where they are positioned on the various research continua, for example, who it is that can and cannot 'do' research. Women for example, often 'know' they cannot do statistics, while men 'know' that they cannot write poems and stories. Research is engendered; it is already 'lived' by those faced with the task of learning its rituals, its language. It is also encultured. Students, who for whatever reason are marginalised, may have experienced the effects of being a 'target group' or a 'special case'. Linda Tuhiwai Smith (1999) notes that the word 'research' "is probably one of the dirtiest words in the indigenous world's vocabulary" (p.1). She argues that Western ways of knowing and researching are assumed within the traditional research paradigms and other cultural ways of knowing are marginalised.

What the novice researcher is learning is the "ready made thinking" (Smythe, 2005, p. 248) of their discipline's research. They learn that methodologies from certain paradigms hold more value than others. Smythe concluded that "each methodology seems to have its own thinking spaces in which to dwell" (p. 250). I would argue that mixed methods dwells within positivism; the 'thinking' of positivism continues in the 'thinking' of mixed methods.

The thinking in mixed methods research rarely reflects a constructionist or subjectivist view of the world. The majority of studies use the analytic and prescriptive style of positivism, albeit with a postpositivist flavour. Smythe's (2005) description fits well: "Thinking is planned in advance … [it] goes ahead in structured ways in the journey of design and data collection" (p. 257). A design is set in place, a protocol followed. In the main the questions are descriptive, traditional positivist research language is used with a dusting of words from other paradigms, and the designs come up with structured descriptive results. Integration is at a descriptive level. A qualitative aspect of the study is often 'fitted in'. The thinking is clearly positivist and pragmatic. The message often received by a naïve researcher, however, is that mixed methods combines and shares 'thinking' at the paradigm level.

Mixed Methods as the 'best of both worlds'

The belief that mixed methods is inclusive of the quantitative and qualitative paradigms, that it is 'the best of both worlds', contributes to the *methodological talking past each other* phenomenon. Common in university research from the 1970s into the 1990s, it now continues in a new guise. For those who come from a positivist pragmatic standpoint the issues concerning mixed methods research may appear straightforward. The focus is on preparing inclusive protocols that work and can be funded: "Let's just get on with it". For qualitative researchers who use methodologies that go beyond description the issues are more complex.

Qualitative researchers concerns about mixed methods

Qualitative researchers have concerns about how mixed methods researchers actually use qualitative methods. Morse (2005) expressed urgency that the "many methodological issues … [be] resolved" (p.583). Although highlighting issues of method - the nature of qualitative data and the form of the qualitative interview – her concerns appear to be more about patch protection. She expresses disquiet about issues of "control" and who will "establish the rules" and proposes that qualitative researchers "develop sound principles of appropriate use" (p.583).

The concerns I have for qualitative research with the current promotion of mixed methods research are best captured by the following scenarios. Though in part fictitious, they are based on incidents that to my knowledge have happened in the past two years.

> *Scenario I*: *A Masters student from a science department who was using a mixed methods design for her dissertation research (survey and semi-structured interviews) was overheard saying to a faculty member after a research forum in which a hermeneutic phenomenologist had presented her work: "You know, I don't know what they are going on about. Why they go on into all that philosophical and methodological stuff. I'm doing qualitative research and it is pretty straight forward … doesn't need all that …" Both walked away looking somewhat satisfied and somewhat bemused.*

The student had no conception of the multiple and diverse methodologies glossed over by her assumption that descriptive qualitative is 'all that there is to it'. This belief was reinforced by the response of her supervisor. If this belief was generally

held within the research community, it could become a barrier to funding and the obtaining of support for teaching methodologically driven qualitative research.

The following scenario is a possibility when institutional pressure and naïve understanding come together.

> *Scenario II*: *Fallout in the budget and reducing student numbers necessitates a review of postgraduate papers being offered in a health faculty. The reviewing committee are primarily managers and administrators. They note that there are a variety of research methods papers being offered from schools within the faculty that appear 'similar'. A memorandum is issued that for the following semesters only the Integrative Methods paper will be offered as it gives "the students the opportunity to learn both qualitative and quantitative research so preparing them most adequately for clinical research". It is assumed that the teachers would share the teaching and be pleased to have more time for clinical practice and their research. The chairperson of the committee wonders why this solution had not been enacted before. She is then very surprised when the teachers who taught the research methods papers (one qualitative the other quantitative), in a deep sense of unity, turn up in her office saying 'It mustn't be done'.*

Both scenarios reflect the potential for *methodological talking past each other* and the possible effects of naïve understanding. A concern not yet discussed in any detail in the literature is the effects of the promotion of mixed methods research on funding.

Funding agencies are already favouring pragmatic mixed methods approaches to social and health issues. Compared with experimental and qualitative designs, mixed methods research requires less specific methodological expertise, take less time, and when compared with qualitative research, produces more generalisable findings. Ideologically, mixed methods research captures the imagination of those determined in their efforts to achieve evidence-based practice, especially those agencies charged with spending government money to ensure health and education for all. It fits well too with the demand for standardisation in education and healthcare, both compelling reasons for funding. The modern mixed methods movement, I would argue, is now more driven by economic necessity than its original ideological intent. It is powerfully supported by the efficiency now possible with new computer technology that apparently enables the "piecing together of qualitative and quantitative data" (Bazeley, 1999, p.279). In the funding stakes mixed methods

inadvertently marginalises those qualitative methodological designs that focus on meaning, symbolism and the power of words. 'How many?' renders the individual invisible, squashes metaphorical and emergent understandings and strips away context. The unique, the contradictory, and the contestable, need words not numbers to hold their place amongst the 'many'.

I suggest that the 'mixing' approach that works most effectively for local and global well-being and social action is multi-methodological *co-operative inquiry*. People with a variety of backgrounds, some with research skills, but all with a shared concern and interest, design and carry out a multi-methodological study that has relevance to the needs of their diverse community. No matter what the paradigmatic positioning, if a co-operative inquiry framework is used, there is a chance we can move beyond methodological competitiveness to collectively dealing with social and health disparities and issues.

Conclusion

Internationally, researchers are scrambling to create proposals with mixed methods designs, for they are now a high priority for funding. Academic survival is fast becoming dependent on effectively combining qualitative and quantitative methods – a mighty driver for motivating researchers to find out how to 'do' mixed methods research. But is it really a 'new methodological movement'? Is it really integrating the 'best of both worlds'? I have argued 'no' on both counts. The 'thinking' of positivism continues in the 'thinking' of mixed methods, its postpositivist pragmatic underpinnings assumed. The positivist scientific tradition continues to be privileged as a way to know; its dominance is strengthened, rather than challenged, by mixed methods research. If accepted naively as a new inclusive research movement, the methodologies from the interpretive, radical/critical, post structural and indigenous paradigms, so recently 'accepted' within social science and health research disciplines, may become relegated to the margins as electives or advanced research specialties. Our vision for a research culture in the social science and health disciplines which embrace all research paradigms may be lost.

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