Practice-informed Research: An Alternative Paradigm for Scholastic Enquiry in the Built Environment

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Abstract:

Purpose – The article introduces a model for practice-informed research and proposes this as an alternative paradigm of enquiry, capable of satisfying the competing demands for research in the built environment to be both academically rigorous, and also relevant to practice.

Design / methodology / approach – The model is defined in terms of research whose primary purpose addresses the immediate needs of professional practice, rather than theoretical, policy, or other academic concerns, and which also utilizes the researcher's experientially-gained knowledge as a methodological device. The extent to which this model is capable of demonstrating the required degree of rigour demanded by the academic world is then evaluated through a review of relevant theoretical and methodological literature.

Findings – The model is seen to draw upon the Aristotlean notions of *techne* and *phronesis*, and to belong to a long epistemological and methodological tradition associated with the concept of *knowledge in action*. The relationship between this concept and that of *tacit* knowledge, as well as *emic* and *ideographic* approaches to research are demonstrated. The model is also seen to have particular resonances with recent developments in the arts and design disciplines, in qualitative social research, and in aspects of the current discourse surrounding the emergence of the knowledge economy.

Research limitations / implications – The article demonstrates the academic legitimacy of the proposed model as an alternative research paradigm for use in a built environment context.

Practical implications – The model presents an approach that has the potential to increase the relevance of research, and to generate an increased level dialogue between academics and practitioners in the built environment field.

Originality / value – The article places the concept of practice-informed research into the public domain for subsequent consideration and debate by members of the built environment research community. The concept's insider and practice-centric approaches distinguish it from earlier contributions to the relevance versus rigour debate. By drawing on a wide range of interdisciplinary sources the article also offers new theoretical insights that have not previously been aired in a built environment context.

Paper type – Conceptual paper.

1   Introduction

The built environment as an academic field emerged from, and is often defined in terms of, the property and construction professions that it has traditionally served (Temple 2004). In this context Griffiths (2004, p. 712) described the field as "a range of practice-oriented subjects concerned with the design, development and management of buildings, spaces and places". He noted that these included "architecture, town planning, land and property management, building surveying, construction technology, landscape design, housing policy and management, transport planning and urban regeneration".

This vocational focus reflects the origins of the field in the 1960s as being primarily concerned with the delivery of programmes of study leading to admission to the types of profession referred to above (Ashworth 2009, p. 27). As the field has matured since its early beginnings - and started to lay claim to the status of an academic discipline in its own right (Chynoweth 2009, Langford 2009) - it has increasingly engaged in academic research in addition to these traditional teaching-related activities. Nevertheless, it is argued by some that the way in which aspects of this research are presently undertaken may be acting as a barrier to engagement by potential stakeholders from industry and the professions.

According to this view a so-called research-practice divide is beginning to emerge between the academic and practitioner components of what was traditionally a single vocational community. This divide is frequently remarked upon by practitioners and policymakers in the field and is also the subject of occasional published commentary from within the built environment academic community itself. Notable contributions by Barrett & Barrett (2003), Sexton & Lu (2009), and Green et al (2010) highlight the problem and their proposed solutions to it are discussed later in this article. The divide is also evident in the comparatively small number of delegates from outside academia who attend built environment research conferences and, in a similar vein, Murray (2009, p. 53) has recently lamented the

lack of co-authorship of journal and conference research papers by industrialists. Koskela's (2011) description of research, at a recent academic conference on lean construction, as a "wild goose chase" representing "fifty years of irrelevance" is perhaps the most graphic description of what is now a well-recognized phenomenon. Indeed, the fact that his words were directed at management science research within the field highlights the fact that the phenomenon is not unique to the built environment. It has been extensively discussed in the academic literature relating to other professions, for example in nursing (Hutchinson & Johnston 2004) and in the general field of management, where it is often now referred to as the "relevance gap" (Starkey & Madan 2001).

Any perceived relevance gap between the academic research undertaken in the built environment and its purported end-users will inevitably be of concern to the affected professions. However, at a time when research funders are increasingly demanding that academic research is able to demonstrate *impact* beyond its contribution to the academic world (for example, REF 2011), it is also now becoming a priority for the academic community itself. This article therefore briefly considers some of the possible causes for the relevance gap in a built environment context. It goes on to define a notion of 'practice-informed research' and proposes this as one possible mechanism by which the gap might be closed. It then explores some of the epistemological challenges presented by the concept and, based on a discussion of some alternative theoretical and methodological perspectives, proposes solutions to them. Finally, before drawing conclusions, it highlights some of the other solutions to the relevance gap discussed in the built environment literature and distinguishes these from the practice-informed research model presented here.

2   The Relevance Gap

2.1   Research by Outsiders

A criticism frequently levelled at academic research by practitioners, in terms of its perceived lack of relevance to the real world, is that it displays a naïveté about the nuances and complexities of the subjects being addressed (Reed & Procter 1995, p.

3). Because of this, research may be dismissed as lacking in credibility by a practitioner audience if it is seen as over-simplistic, or focusing more on the theoretical preoccupations of an academic audience, than on the actual concerns of its purported end-users in the professions.

Such criticisms might arise for a number of reasons. Most obviously, it might simply be that – as professional academics - those undertaking the research lack the necessary familiarity with the professional environment to enable them to fully understand it, and therefore to establish a meaningful dialogue with practitioners. Alternatively, as many built environment academics do have at least some background in relevant areas of practice (Lansley et al 1995, p. 186), the problem might often be more to do with the demands – or, at least, the perceived demands – of the research environment itself.

In relatively new and emerging fields of academic endeavor the conventions of academic research are often modelled closely on those of the traditional natural sciences. This was true, for example, of sociology in its formative years (Giddens 2009, pp. 10 – 22; Williams & May 1996, pp. 47 – 48) and also appears to reflect the situation in today's built environment research community. This was one of the findings of Barrett & Sexton's (2001, p. 19 & 20) study of the community's approach to the sustainable construction agenda and is also consistent with Dainty's (2008, p. 7) observations about an "ongoing adherence to natural science methodologies and reductionist approaches" in his analysis of articles published in a respected peer-reviewed journal within the field.

The methods employed within such research traditions emphasize the importance of researcher detachment from the objects of study, and of the importance for science of developing general theories, described by Popper (2002, pp. 37 – 38) in terms of "universal statements" or "nets cast to catch what we call the world - to rationalize, to explain and to master it". According to this view, the researcher must, of necessity, remain an *outsider*, and must maintain objectivity by basing their findings solely on neutral observations, uncontaminated by any previous *insider* knowledge.

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In this context, so-called naïveté – although derided by the practitioner – can actually be seen as a virtue in terms of maintaining the academic detachment and rigour which is essential to generate truly universal knowledge.

2.2 Epistemic Drift and Academic Norms

A closely-related issue concerns the disciplinary priorities of the built environment academic community, and the ways that these relate to those of its associated professions. In the early years the priorities of each would presumably have been synonymous with each other, and overwhelmingly concerned with the delivery of vocationally-relevant professional education. However, over time, academic disciplines undergo what Elzinga (1985) has described as a process of *epistemic drift* - changing values and priorities in response to changing drivers affecting the academic environment.

As the built environment academic discipline has grown to maturity it is therefore perhaps understandable that its former practitioner academics have sometimes adopted the mores of their new environment in preference to those of practice. Murray (2009, p.53) has highlighted some of the consequences of these developments in the construction management (CM) field, where he describes the development of "two separate CM communities of practice and cultural norms" and a resulting "stand-off" between its professional and academic branches. As a result of these cultural changes there is a natural tendency for academics to view research in terms of academic, rather than practice-based, norms. This might, for example, involve defining a research project in terms of current theoretical debates within the academic literature, rather than simply as a response to a specific problem identified by practitioners. Equally, perceptions about the demands for academic rigour are more likely to lead to reliance on the use of established research methodologies, rather than the seeking of solutions to problems via more informal and - it might be argued by the practitioner - potentially more creative approaches.

In this sense, as previously argued by Aram & Salipante (2003) in the context of the management discipline, the challenge of the relevance gap can be seen in terms of a

tension between the practitioner's need for *relevance*, and the academic's need to demonstrate the value of their research work according to accepted conventions of academic *rigour*. The difficulty, in a vocational field like the built environment, is that conventional scientific and outsider views of the knowledge creation process fail to acknowledge – and to build upon - that which is well-known by practitioners in the professional environment, but which is not scientifically proven according to traditional methods. It is, according to Reed & Procter (1995, p. 4) "almost as if experientially gained knowledge and understanding is something which is an embarrassment, rather than a resource for research".

The notion of *practice-informed research* is therefore proposed within the remainder of this article as one means by which these issues might be resolved in a built environment context. The term is introduced and defined in the next section, and presented as a means of satisfying the built environment practitioner's requirement for relevance in research. The following two sections then explore theoretical and methodological aspects of the proposed approach with a view to evaluating the extent to which it might also be capable of demonstrating the required degree of rigour demanded by the academic world.

3   Practice-informed Research

3.1   Definitions

A distinction should be drawn between the more common concept of 'practitioner-research' and that of 'practice-informed research' introduced here. The former is generally defined (for example Groák & Krimgold 1988) simply as research which is undertaken by practitioners, rather than by professional academics. Apart from the identity of the researcher it may therefore be indistinguishable, in terms of substance, from much of the research which is presently undertaken within the built environment field. In contrast, the concept of practice-informed research is used here to describe research projects where practitioner knowledge and understanding are used to inform both the purpose and the methodology of the research. This may, of course, include research undertaken by practitioners, but only in those

circumstances where their knowledge and understanding are allowed to inform the research. The term is not therefore synonymous with practitioner research. Equally, as we will see, practice-informed research need not necessarily be undertaken by practitioners as it refers to the inherent qualities of the research, rather than to the characteristics of the researcher.

Specifically, drawing on aspects of Reed & Procter's (1995, pp. 11 - 31) observations in the context of health care research, the term 'practice-informed research' can be described as research:

(a) which defines its purpose primarily in terms of the immediate practice needs of one of the built environment professions, rather than by reference to the policy, theoretical, or other concerns of the built environment academic discipline, and

(b) which uses the researcher's experientially-gained professional practice knowledge and understanding as a methodological device, both as a direct and legitimate source of data, and also as a tool for enhancing the quality and insight of the analysis.

The significance of each of these aspects is explored below.

3.2   Research Purpose

The sometimes conflicting research priorities of academia and practice were noted above, and were seen to include the important question of the purpose of the research itself. In this context it was suggested that, whilst practitioners see research as being concerned with the resolution of specific problems in practice, the academic world takes a less immediate, and less instrumental, approach. Their priorities are as likely to be informed by gaps in the literature as by a wish to confront the minutiae of the professional environment. They are also likely to take a more theoretical and policy-driven view of the research purpose, seeing it as a means of making a long-lasting and perhaps context-independent contribution to knowledge, rather than

simply in terms of fixing a particular aspect of practice that is currently malfunctioning.

These differences conceal what is arguably a more fundamental distinction between the two worlds, namely that between research purposes which take either an *insider's* or an *outsider's* perspective. For example, within the context of the surveying profession, this might be described as the difference between research *in* surveying, and research *about* surveying. The priorities of the (social science) outsider researcher, and the ways in which these contrast with those of the practitioner are articulated by Reed & Procter (1995, p. 11) in the following terms:

> "For the social science researcher or 'outsider' the aim of the research is usually to contribute to the body of social science knowledge….therefore, practice is only examined for what it contributes to an understanding of practitioner action, not practitioner knowledge."

Indeed, the understanding of practitioner action (or human 'agency'), its juxtaposition with structural theories of society and, more recently, an ongoing reconciliation between these opposing schools of thought through the so-called 'practice turn' (Schatzki et al 2001) have been major concerns of sociology since the earliest days of that discipline (Giddens 2009, pp. 88 – 90). In direct contrast to this external academic perspective the insider practitioner's more instrumental requirement for research is, of course, precisely that it should contribute to the development of practitioner knowledge, thereby enhancing the professional knowledge base and leading to improvements in practice. Whilst recognizing the long-term strategic importance of fundamental scientific research within the field, the suggestion in this article is that an increased proportion of the research undertaken within the built environment might legitimately define its purpose in terms of the immediate practice needs of the relevant professions.

This is therefore a challenge to the academic world to focus a greater proportion of its research work on the development and application of the professional knowledge

base employed by those professions in their routine daily work. In so doing, it would bring its research activities more into line, not only with the concerns of practitioners, but also with its own teaching activities. A shift to this style of research would require researchers to become better acquainted with the detail, complexity, and the intricacies of professional practice and therefore, by implication – where this style of research is undertaken - less concerned with some of the contextual theories which have traditionally defined the academic endeavor. The extent to which this is achievable, whilst continuing to demonstrate the required degree of academic rigour, will be discussed later in this article.

3.3   Research Methodology

The second stated requirement for practice-informed research is a methodology which regards the researcher's experientially-gained professional practice knowledge and understanding as a legitimate research resource, and which draws unashamedly on this. Following Polanyi's (1966, p.4) familiar notion that "we can know more than we can tell" a significant aspect of this resource will take the form of what he described as *tacit,* rather than explicit knowledge. In the language of research it will form a component of the research data, and will also inform the researcher's analysis of those data.

Although not exclusively defined in these terms, one manifestation of 'practice-informed research' may, of course, involve research undertaken by existing practitioners (the 'practitioner research' previously referred to), either alone or perhaps more often through having some connection with the academic world. The recent growth of professional doctorate programmes for practitioners in the built environment professions (Chynoweth 2006, Frame 2006) provides one model whereby practitioner-researchers can undertake the kind of research advocated here. Recent peer-reviewed publications by Defoe (2009) and Defoe & Frame (2012) provide evidence of the success of this model in delivering academically rigorous research outputs that are also capable of direct relevance to practice.

Nevertheless, the required degree of practice-based knowledge and understanding inherent in the concept of practice-informed research might potentially be harvested via alternative means. Perhaps most obviously, this might be made available through collaborative research projects between academics and practitioners, thereby delivering a synthesis of practitioner knowledge and research expertise. In this context what is being proposed echoes what Reason (1988, p. 1) has described as 'co-operative experiential inquiry' rather than the perhaps more traditional collaborative arrangements whereby the researcher gathers data from a practice-based research subject for analysis and subsequent reporting back to practice. Under these traditional arrangements Reed & Procter (1995, p. 11) suggest that "the practitioner is both the subject and the user of the research but never the developer". Instead, the proposal here is for what Reason (1988, p.1) envisages as research which is "*with* and *for* people, rather than *on* people [where] the distinction between researcher and subject disappears, and all who participate are both co-researchers and co-subjects". It is argued later in this article that this approach differs in important respects from some of the approaches to collaborative research advocated by others in the built environment.

A further approach draws on the fact, previously alluded to, that built environment academics overwhelmingly possess significant experience of professional practice in their own right. Indeed, this would generally be regarded as an essential prerequisite to enable them to function as effective teachers within the discipline. It is suggested here that these qualities are equally applicable to research in the discipline, at least to the extent that this follows the practice-informed research paradigm proposed within this article. It follows that the approach advocated here can be undertaken by many academics in the field, even in the absence of collaborative arrangements with existing practitioners.

To be effective this might call for continued immersion in, and engagement with, the world of practice, and a proactive approach to maintaining one's professional development and subject knowledge. However, this is arguably no greater a commitment than is already necessary for built environment academics to perform

as effective teachers in the discipline. The difference is simply a methodological one whereby existing practice knowledge and experience are recognized, cultivated and drawn upon in a research context, as well as in the teaching environment.

By drawing on this resource the research can avoid the criticisms of naïveté and over-simplification described above, and can build on that which is already known, rather than having to start from an artificial position of feigned ignorance. The challenge, of course, is to demonstrate that such an approach also possesses the necessary degree of academic rigour demanded by the research community. This aspect is addressed in the following two sections.

4   Theoretical Foundations

4.1   Knowledge in Action

On first impressions, the proposed combination of research goals which are pragmatically rather than theoretically determined, and methodologies which draw on experientially gained tacit knowledge rather than detached observation, might be seen to represent something of a challenge to accepted notions of academic knowledge and research, as generally understood within the built environment. As we have seen, these typically align with the natural sciences which, according to Barnett (2000, pp. 16 & 17) see knowledge in terms of "ordered conceptual frameworks", as an "edifice, having a durable character", and as "bodies of knowledge…with systematic strategies to add to those bodies of knowledge through research". However, Barnett (ibid) also draws attention to a parallel tradition in western thinking that is as old, or older, than these ideas, and which echoes the concept of practice-informed research proposed in this article. Rather than seeing knowledge as an edifice which is self-consciously created by external actors, this tradition recognizes that it can also be generated *in action*. Within this tradition the knowledge is seen as being embedded within human action, and as being inseparable from it.

These ideas were famously articulated by Aristotle in *The Nicomachean Ethics* (Thomson 2004) where he distinguished the concept of ep*isteme* (defined here as 'theoretical know-how') from those of *techne* (similarly, 'technical know-how') and *phronesis* (again, 'practical wisdom'). Barnett (1997, p. 12) describes the latter two concepts, collectively, as Artistottle's notion of 'practical knowledge' which he interprets as asserting the legitimacy of knowledge gained through practice. This connection between knowledge and action is not simply of historical interest but has also attracted increasing attention throughout the twentieth century and beyond. Described by Argyris & Schön (1974, p 3) as "one of the most prevalent and least understood problems of our age" it continues to provide a powerful alternative knowledge paradigm across many areas of human endeavour.

In philosophy this relationship is perhaps most simply expressed in Rhyles' (1949) distinction between "knowing how" (encompassing the twin concepts of *techne* and *phronesis*) and "knowing that" (which equates to *episteme*). In the field of professional education Schön (1983) has himself built on his earlier writings with Argyris to develop his seminal work on the *reflective practitioner* and its related concept of *knowledge in action*. In politics and sociology the Marxist notion of *praxis* – often associated with the work of Gramsci (2011) – also draws an intimate connection between ideas and their realization through practical action. In business and education these ideas also underpin Kolb's (1984) concept of *experiential learning*, as well as the practice of *action learning* (Brockbank & McGill 2003; Revans 2011; Pedler 2008).

In a research context the latter two business-related practices have obvious parallels with the now well-established techniques of action research originally pioneered by Lewin (1946). More generally - and as further explored in the section on methodological traditions below - social researchers have increasingly drawn upon this alternative strand of thinking in allowing them to develop rich, context-specific understandings of social situations. This is nowhere more evident than in Flyvbjerg's (2001) development of the Aristotlean concept of *phronesis* to articulate what he describes (ibid, p. 60) as a *phronetic* approach to social science. Drawing on Dreyfus

& Dreyfus' (1986) model of intuitive human learning, and by emphasizing the tacit, experientially-gained, nature of situational knowledge, he distinguishes this approach from what he describes as traditional *epistemic* science. In terms reminiscent of this article's earlier references to the outsider researcher's potential naiveté about the intricacies and nuances of practice he argues (ibid, p. 24) that the latter's exclusive reliance on context-independent theories "has caused people and entire scholarly disciplines to become blind to context, experience, and intuition".

4.2   Mode 2 Knowledge Production

The above discussion demonstrates that there is nothing new in the idea, proposed in this article, that the process of formal knowledge creation can legitimately draw upon tacit, experientially-generated knowledge from the workplace. Indeed, as will be seen, it might be argued that recent developments have now catapulted such ideas into the intellectual mainstream. These developments were foreshadowed in Drucker's (1968) insightful work, *The Age of Discontinuity*. In this prescient account of future (now present) society he anticipated the effects of information technology, globalization and mass education, and introduced the terms "knowledge economy", "knowledge society" and "knowledge worker" into the lexicon.

More recently, the impact of these changes on the research enterprise has been articulated by Gibbons et al (1994) in terms of a move from *mode 1* to *mode 2* knowledge production. Mode 1 is identified as the disciplinary, theoretical knowledge which has traditionally been generated in universities through research. The authors' thesis is that this is now being displaced by a more dynamic process (mode 2) where knowledge is increasingly generated "in the context of application" as a response to immediate problems identified in the working environment, rather than in universities.

The knowledge so-generated is no respecter of disciplinary boundaries or hierarchical power structures and is said to be trans-disciplinary in character. It will often be produced by transient teams of workers. Significantly it will rarely be formally codified, and will therefore only be apparent in the solution to the problem

it was designed to address, and hence *in action*. The quality of the knowledge so-produced is then evaluated, not by formal academic conventions, including peer-review, but by more pragmatic criteria based on its overall utility. This latter observation echoes Lyotard's earlier (1984, pp. 41 – 47) concept of *performativity* – essentially the evaluation of knowledge according to its commercial value.

In recent years the mode 2 discourse has become ubiquitous in a higher education system which increasingly judges itself according to the effectiveness of its contribution to the knowledge economy. The parallels between the concept of mode 2 knowledge production, and that of practice-informed research articulated within this article, are clear. Each draws attention to the value of knowledge created in the workplace as a deliberate response to real-world problems. In each case the knowledge so-created is intimately connected to the action that gave rise to it, and is therefore likely to exist tacitly in the minds of practitioners, rather than being formally codified. Given the dominance of the knowledge economy discourse within universities at the present time it therefore seems appropriate for practice-based disciplines like the built environment to embrace research approaches designed specifically for the process of mode 2 knowledge production, rather than restricting themselves to those which have come to prominence in the very different conditions now described as mode 1.

4.3   Knowledge Management and the Rediscovery of Tacit Knowledge

The significance of Polanyi's (1966, p. 4) concept of *tacit* knowledge to the process of practice-informed research has already been referred to on several occasions. Before concluding this discussion, a further related strand of thought, also associated with the development of the knowledge economy, should therefore briefly be introduced. This concerns the detailed consideration that has been given to the tacit knowledge concept in the burgeoning volume of literature on 'knowledge management' that has emerged since the early 1990s.

Like the concept of mode 2 knowledge production, the knowledge management field is also a product of the knowledge economy. As knowledge has grown in importance

within modern society it is increasingly being seen as a key asset within organizations, the effective management of which is likely to provide a source of competitive advantage (Hislop 2009, p. 3). Because much of a firm's knowledge resides within the minds of its employees in tacit form this has understandably generated a renewed interest in Polanyi's ideas - by Nonaka & Takeuchi (1995) and others - as well as a recognition of the central role of tacit knowledge in contemporary organizations.

In the context of the current discussion, this rediscovery of the importance of tacit knowledge within a contemporary body of academic literature is itself significant. The different approaches to the treatment of this intangible concept by academic writers in the knowledge management field are also of interest, and preface the discussion of methodological traditions in the next section. As demonstrated by Hislop (2009, pp. 18 – 49) these approaches fall into two distinct categories which echo the two parallel traditions of knowledge production previously discussed as having been highlighted by Barnett.

In the knowledge management field the dichotomy is between what Hislop identifies as an *objectivist* and a *practice-based* perspective on knowledge. The former – which he describes (p. 19) as being "deeply-rooted in the philosophy of positivism" – sees knowledge as objective, capable of existing independently of people in a codifiable form, and privileges explicit knowledge over tacit knowledge, which it regards as less rigorous and subjective. Objectivist approaches to knowledge management therefore typically seek to capture, and to codify, the tacit knowledge of employees, and to convert as much of it as is possible into explicit form.

In contrast, the practice-based perspective might be seen as being synonymous with the idea of *knowledge in action* discussed above. This perspective – which Hislop (p. 33) describes (after Cook & Brown 1999) as "an epistemology of practice" - rejects the notion that tacit knowledge can be separated from either the people who possess it, or the practice that gave rise to it. It therefore regards knowledge as both personal and context-specific. Its approaches to knowledge management therefore

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shun attempts to generate objective, value-free knowledge and instead focus on facilitating effective communication between employees to enable tacit knowledge to be shared within the organization. Significantly, in common with the notion of practice-informed research advocated here, the value of tacit knowledge is recognized as a resource *in its own right,* without the need to first transform it into a more conventional format.

5   Methodological Traditions

5.1   The Humanities

This *action-based* tradition of knowledge creation therefore has a long history which continues to develop. As has been seen, it is characterized by an attention to the detail and complexity of particular contexts and situations which can only be achieved through long-term and intimate connection with them by the knowledge creator. This, of course, is at variance with the scientific tradition's emphasis on the creation of general theories, undertaken through pre-planned and detached observation.

Nevertheless, this theoretical tradition has its own methodologies which are quite distinct from those employed within the sciences. These are often described as *ideographic*, as opposed to *nomothetic*, and as taking an *emic*, as opposed to *etic* approach to the subject of study. The former distinction was first articulated by Wilhelm Windelband in his address on assuming the rectorship of the University of Strasburg in 1894 (Windelband 1900). Sayer (2000, p. 3) describes Windelband's *ideographic* methodologies as being concerned with "documenting the unique", and contrasts these with the general "law-seeking" priorities of *nomothetic* science. The origins of the second are to be found in Pike's (1954) extension of the linguistic terms 'phonetic' and 'phonemic' to the study of human behaviour in general. Utilizing the final part of each word he describes how an *emic* approach to study seeks to understand contextual meaning and purpose, and will often be synonymous with an insider's view of a subject. This is, of course, distinct from the outsider's *etic*

approach which seeks to make sense of particular instances in terms of their relationship to existing theories or frames of reference (ibid, pp. 8 – 28).

Historically, ideographic and emic approaches to scholarship have been associated with the humanities, rather than the sciences. These disciplines emphasize the central role of the scholar in divining meaning from the subject of study – typically a specific artefact, situation, practice or work of art - through critical insight based on their existing expertise. This dual role – as both an insider and expert in the field, whilst at the same time taking a detached and critical position – is perhaps best encapsulated in Walzer's (2002, p. xviii) notion of the "connected critic", in the "disciplined subjectivity" of the heuristic researcher (Moustakas 1990, West 2001, p. 128) and in Eisner's (1976) concept of "connoisseurship and criticism". Within the creative arts and design disciplines the legitimacy of these traditional insider, and critique-based, approaches to research has been re-affirmed in modern times (for example Frayling 1993; Archer 1995) and this has enabled its practitioners to draw directly on their own practice in an academic context through the emerging concept of 'practice-based' (UKCGE 1997) or 'practice-led' (Rust et al 2007) research.

5.2   Qualitative Approaches to Social Research

More generally, and since at least 1980s, ideographic and emic methodologies have increasingly been adopted within the social sciences. Whilst initially favouring methods which replicated those of the natural sciences, Erlandson et al (1993, pp. 5 - 9) describe a growing disillusionment by social researchers with techniques which were not always capable of generating credible accounts of the social world. This focused, in particular, on the prescriptive nature of the scientific method, and on the extent to which it failed to capitalize on the power and insight of human experience.

This disillusionment generated a move to what was variously described as "new paradigm research" (Reason & Rowan 1981) or "alternative paradigm research" (Guba 1990, pp. 17 - 27) which sought to legitimize, within the social sciences, some of the more subjective, researcher-centric methods which had previously been associated only with the humanities. Although having many different forms the

iconic version of the emergent paradigm is arguably Lincoln & Guba's (1985) *Naturalistic Inquiry*. In this important text they set out (ibid, pp. 39 – 43) an approach to research which seeks "ideographic interpretation" by a "human instrument" through the "utilization of tacit knowledge". They envisage the use of "qualitative methods", "negotiated outcomes" with research participants and research outputs which adopt a "case study reporting mode".

Today, this new methodological tradition within the social sciences is more usually described simply as 'Qualitative research' and, over a period of almost 20 years, its main tenets have been exhaustively rehearsed in the literature, including the four successive editions of Denzin & Lincoln's (1994) seminal volume, *Handbook of Qualitative Research*. Significantly – as revealed through the many contributions to this and other publications – Qualitative research is now regarded as far more than an alternative (non-quantitative) type of data collection and analysis in research that otherwise conforms to traditional concepts of the scientific method. Kidder & Fine (1987, pp. 59 - 62) describe the latter simply as 'qualitative' (with a small 'q') research in order to distinguish it from the more usual use of the term. Rather, Qualitative research (with a large 'Q', and increasingly seen as synonymous with interpretative research in the phenomenological and hermeneutic traditions) now represents a self-contained paradigm which challenges the notion that natural science methodologies – with their emphasis on the objective measurement of inanimate objects – can meaningfully be applied to the study of people, or of society.

As these ideas have gained increasing purchase within the social sciences there has been an understandable move away from methods which seek to distance the researcher from the research participants, in favour of those which emphasize his or her role as a part of the research setting. For example, Francis & Hester (2004, p. 22) note that "Where once the survey method and statistical analysis dominated social research, nowadays ethnography has become the most popular approach to inquiry". As a response to these developments a range of techniques – most notably the concept of *reflexivity* (Alvesson & Sköldberg 2000), where the researcher self-consciously acknowledges their role in contributing to the research outcomes - have

been developed in order to accommodate the close involvement of the researcher with the research setting.

These developments suggest that the model of practice-informed research proposed within this article can comfortably be accommodated alongside what are now well-established traditions of social research. Indeed - as is clear from the burgeoning body of literature on practitioner research in health and social care (for example, Fuller & Petch 1995; Fox et al 2007; Sanders & Wilkins 2010) - this is already the case within some other professions. Before drawing conclusions based on the preceding discussion, let us briefly place it within the context of some other recent responses to the challenges it seeks to confront.

6   Addressing the Relevance Gap in Built Environment Research

6.1   Recent Contributions

This article is not, of course, the first attempt to address the relevance gap in built environment research. Valuable contributions have been made, in particular, by Barrett & Barrett (2003), Sexton & Lu (2009) and Green et al (2010) and there is much common ground between each of these accounts and the ideas discussed in the present article.

In the first of these, Barrett & Barrett (2003) highlight the preponderance of natural science based research approaches within the field and argue for a more pluralistic approach to methodological choices. They describe the existing natural science methods as 'microscopic' and advocate that 'telescopic' (broadly, *theoretical*) and 'periscopic' (essentially, *qualitative*) methods should be employed alongside them in order to provide a more integrated (or 'kaleidoscopic') view of practice. They envisage the 'periscopic' methods being employed by "researchers working with industry" (ibid, p. 760) and offer action research, grounded theory, participant observation and case studies as indicative examples (ibid, p. 763).

In the second contribution, Sexton & Lu (2009) introduce the concept of 'actionable knowledge' – defined as knowledge production that meets the dual needs of both academia and industry – as a possible solution to the problem. Although they too acknowledge that a diverse range of methodologies might have the potential to develop such knowledge, action research - undertaken as a partnership between researchers and industrialists - is singled out as a particularly appropriate technique.

Finally, as with the earlier contributors, Green et al (2010) also advocate a reliance on "mixing methods" which they describe in terms of "a combination of inductive and deductive approaches which transcend simplistic dichotomies between quantitative and qualitative research" (ibid, p. 124). In so doing they present a model of 'contextualist research' which seeks – through the "coproduction" of knowledge by practitioners and academics - to examine issues in "the context which makes them meaningful" and which "directly questions the relevance of narrowly construed positivist research methodologies" (ibid, pp. 118-9).

6.2   Common Themes

A number of common themes are evident in each of these three contributions which are worthy of further exploration in the context of the present article. Firstly, their collective call to bridge the research-practice divide through collaborative research arrangements between academics and practitioners certainly chimes with one of the three approaches to practice-informed research advocated above. Secondly, in common with the thesis contained in this article, their respective research models are all presented as alternative approaches, capable of operating alongside the dominant natural-science-based paradigm currently employed within the field. Finally, this challenge to the universality of the prevailing paradigm - and also the particular examples of research methods cited - suggests that all of these authors might potentially share this article's earlier conclusions about the significance of the recent developments in qualitative research within the social sciences.

6.3   Collaboration: Shared or Competing Interests?

Nevertheless, and despite the extent of the common ground between them, significant differences remain between the solutions proposed in these contributions and the model of practice-informed research as herein defined. For example, although each of the contributors advocates collaboration between academia and practice, it is evident that this is assumed to take place between parties who, of necessity, have different and irreconcilable interests. Green et al (2010, p. 118) describe the competing needs of these "two different audiences" as "one of the central challenges" of collaborative research. Indeed, the assumption that the researcher must inevitably operate in the role of a "professional stranger" (Agar 1980) rather than a professional colleague represents a common theme within each of the three contributions. It is evident in Barrett & Barrett's (2003) metaphor of research being undertaken through an external optical instrument, and in their assumption that it should necessarily be "on" – rather than "in" or "into" - practice. It is also perhaps most obvious in Sexton & Lu's (2009, p. 688) references to their industry-based collaborators as the "indigenous people" of the research "social setting". Whilst acknowledging the existing tensions between research and practice, the practice-informed research model seeks to overcome these, rather than to accommodate them. Specifically, it seeks to demonstrate how research can directly address practitioner needs whilst simultaneously delivering academically credible research outcomes. As such, it would not accept the premise of the three contributions, namely that the researchers and practitioners must self-evidently pursue separate goals and interests, and that credible researchers must necessarily adopt the perspective of detached outsiders.

6.4   Research Goals: Knowledge or Process Based?

This outsider perspective within each of the contributions generates a further distinction between the nature of the research advocated by them, and that proposed here. It was suggested earlier in this article that practitioners frequently seek research outputs that contribute directly to their ability to perform their professional roles, through the development and application of their professional

knowledge base. In defining its research purpose primarily in terms of the practice needs of professionals, the practice-informed research model clearly allies itself with this perspective.

This is at variance with the goals advocated by the three contributors. Rather than addressing their collaborators' immediate professional development needs, they take a less instrumental view of research and focus instead on strategic and process-related aspects of their organizations. In particular, each of the three contributions identifies 'innovation' – "the effective generation and implementation of a new idea which enhances overall organizational performance" (Barrett & Barrett 2003, p. 760) - as a significant goal for research within the field. In particular, Green at al (2010, p. 118) suggest that practitioners are "more than capable of deriving their own knowledge for instrumental use" and largely dismiss this as a worthwhile research output. Indeed, they argue that focusing too much on the research outputs at all "is to misunderstand that the prime benefit of practitioners taking part in coproduction research lies in their participation in the research process". Instead, they see the value of collaborative research primarily in terms of exposing practitioners to new ways of thinking, capable of orienting them towards innovation. Although worthwhile in its own right, this represents a significantly different perspective from that adopted within the practice-informed research model proposed here.

6.5   Methodological Viewpoints: Small or Large 'Q'?

A further distinction – also related to the differing insider or outsider perspectives – may also be evident in the methodological viewpoints adopted by the three contributions, compared to those inherent in the practice-informed research model. In common with the thesis contained in the present article, each clearly demonstrates a level of affinity with the qualitative social sciences. However, in advocating the use of particular qualitative methods it remains unclear whether the various contributors are referring to qualitative research (with a small 'q'), or whether – in common with the model advocated here - it reflects an acceptance of the more radical tenets of Qualitative research (with a large 'Q') as previously defined. The former may simply reflect an acceptance of the qualitative methods of

data collection and analysis that are already increasingly being employed within the built environment field as part of research projects which are otherwise epistemologically indistinguishable from quantitative studies. The latter, of course, would also demonstrate common cause with the present article in asserting the legitimacy of a range of intuitive, subjective, tacit, ideographic and experientially-based approaches to research that have previously been anathema to the built environment research community.

The fact that such radical departures from existing practice are not explicitly articulated within each of the contributions is therefore perhaps indicative of a commitment merely to the more restricted view of qualitative research, as previously described. The emphasis placed by each of the authors on the use of mixed or multiple methods – suggesting a degree of compatibility between the quantitative and qualitative methods actually employed - might also be seen as being consistent with this view. Further collaboration might also be found in the range of literature relied on by the contributors in developing their respective theses. In all cases the sources are drawn overwhelmingly from the management field – itself often seen as dominated by positivist orthodoxy (for example, Johnson & Duberley 2012, pp. 38 - 61) – to the virtual exclusion of those from the social sciences. One consequence of this is the extent to which recent developments in those fields are absent from the various contributions. A case in point is the important concept of reflexivity: introduced above and described by Finlay (2002, p. 211) as "the defining characteristic of qualitative research". Despite the centrality of its role in contemporary social science research Dainty (2008, p.8) has noted its omission from published research within the built environment and, with the notable exception of a single passing reference towards the end of Green et al's (2010, p. 125) article, it is similarly absent from any of the three contributions under discussion.

If this analysis is correct it should not be regarded as a criticism of any of these earlier contributions, all of which present convincing and coherent theses of their own. It does however help to distinguish those theses from that presented here,

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namely that insider practice-informed research, drawing on the subjective insights of the investigator, has a legitimate intellectual pedigree, not only historically and within the humanities, but also as part of an established tradition within contemporary social science.

7   Conclusions

Despite its vocational origins, it is suggested by some that a research-practice divide might be starting to open up within the built environment field. It has been argued in this article that that this may be due to the apparently conflicting demands – respectively from practice and academia - that research must be both relevant, but also academically rigorous.

In the built environment, it has been seen that the latter requirement has tended to generate research which satisfies the requirements of the traditional scientific method. This is characterized, in particular, by an emphasis on the creation of general theories, undertaken through pre-planned and detached observation. Unfortunately, whilst delivering rigorous findings, these approaches have sometimes failed to satisfy the practitioner's demands for relevance. Research has therefore sometimes been criticized for being over-theoretical and not sufficiently focused on the problem in hand. Closely related to this, it is also suggested that academic research into practice can sometimes display a naïveté about the realities of the research setting, with a tendency to over-generalize the unique and complex aspects of practice.

This article has therefore proposed a model of 'practice-informed research' as being potentially capable of satisfying the requirements for both relevance and rigour. It is proposed, not as a replacement for existing approaches to research within the field, but as an alternative paradigm, capable of enriching the range of methodologies currently employed. Practice-informed research is described in this article as that which defines its purpose in terms of the immediate needs of professional practice, whilst also drawing on the researcher's experientially-gained knowledge as a tool for

data collection and analysis. This close identification with the mores of professional practice distinguishes the proposed model from other contributions considered within the article.

Whilst offered primarily as a response to the practitioner's demand for relevance, the proposed approach has also been demonstrated to conform to a longstanding, but recently-reinvigorated, tradition of knowledge creation within the academic world. Drawing on Aristotle's concepts of *techne* and *phronesis* this tradition continues to find regular expression, most recently in the academy's various responses to the emergence of the knowledge economy. Within academic research the tradition employs methodologies which emphasize the importance of *ideographic*, *emic* and *tacit* approaches to investigation and these have been seen to be enjoying something of a renaissance, for example in practice-based and practice-led research in the arts and design disciplines, and also more generally in the qualitative social sciences.

The depth, longevity, and currency of this alternative tradition demonstrates that research which draws on participants' subjective and experientially-gained professional knowledge is nevertheless capable of demonstrating the academic credibility demanded by the universities. In short, it admits the possibility of delivering research in the built environment and other vocational fields that is both academically rigorous and also relevant to practice. The practice-informed research model presented here is offered as an alternative paradigm for use within the field alongside those currently in use. Although reference has been made to a number of existing methods and methodological traditions in demonstrating the legitimacy of what is proposed, none of these are presented as methodological prescriptions. Rather, the article has attempted to define a broad philosophy for an alternative style of research within the field. The various methodological forms that this might take are the subject of ongoing work and these will be explored in a number of subsequent articles.

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