AN ILLUSTRATION OF THE DEVELOPMENT OF A STRATEGY FOR EVALUATING THE DESIGN OF HOSPITALS WITHIN A PRACTICE ORDER NETWORK

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This paper is part of on-going research that is investigating the potential of a practice theory perspective to understanding stakeholder evaluation of hospital design. Practice theory offers numerous affordances, especially to researchers and practitioners who seek alternatives to the problematic assumed universality of other 'traditional' theoretical perspectives. However there are several disagreements left unresolved in the literature about practice theory methodology that risk compromising its full potential. Drawing on Schatzki's notion of site ontology and illustrated by an on-going ethnographic study of the practice of evaluating the design of a major UK National Health Service (NHS) hospital, this paper seeks to contribute to resolving such disagreements by developing a strategy that generates a methodology for use with practice theory. The strategy is based on the premise of ontological salience and phenomenological congruence. Arguments for the mobilisation of a pluralistic portfolio of methodologies, methods and the synthesis of a pair of analytical devices ('design evaluation as practice' and 'design evaluation in practice') that emerged from the application of the strategy are explored. Dialogical reflexivity is foregrounded as a further and essential part of the strategy. The paper elucidates and enhances both the praxis and practices stimulated by current approaches to design evaluation. It raises important implications for the future development of UK Government policy to substantively improve the design quality of NHS healthcare building sand, in turn, improve patient healthcare outcomes.

Keywords**:** methodology, practice theory, design evaluation, pluralism, dialogical reflexivity.

INTRODUCTION

The continuing failure of large publicly funded national building, infrastructure and IT projects has led some commentators to conclude that such projects *"never go according to plan"* (Financial Times, 1999). Critical authors from the so-called 'Scandinavian School' (Hodgson and Cicmil, 2006, p. 11) identify the lack of empirical studies and other alternative representations of 'projects' together with the assumed universality of project management theory as major deficiencies even in the improvement efforts made to address such failures.

Such deficiencies are also encountered by United Kingdom (UK) National Health Service (NHS) organisations that have experienced design quality failures in their hospital building projects.[2] They too have implemented important policy-based

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2 For example, see Prasad in Macmillan (Macmillan, 2004, p.176).

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regimes that seek strategically to improve design quality. Current UK NHS Design Quality Policies[3] mandate the use of objectified and positivist design evaluation instruments to capture stakeholder views. However these policy improvement efforts have been critically analysed and weaknesses have been identified that also resonate with those identified by the Scandinavian School in relation to project management failures (O'Keeffe et. al. 2012).

This paper is part of on-going research that is being undertaken to investigate the potential of a practice theory[4] perspective as an alternative representation and theoretical approach for improving the design quality of hospitals to the above policy-based regimes. Practice theory affords the potential to mobilise a radical alternative theoretical perspective that avoids many of the irreducible dualisms (such as actor/system, social/material, body/mind, and theory/action) used to describe the social world that remain unresolved in other traditional perspectives (Nicolini, 2013, p.2). Since the 1990's its use is increasing across many organised activities[5](Reckwitz, 2002; Schatzki, 2002; Schatzki *et al*., 2001).

Because practice theory can grant these affordances, it may hold promise and is likely be of particular interest to those researchers and practitioners who take a critical perspective, drawing on critical management studies within a wider organisational and societal context (Hodgson and Cicmil, 2006) and others who continue to find themselves dissatisfied with traditional theoretical perspectives. However, despite these affordances, the literature on methodology[6] for use with practice theory remains nascent and contested (Schatzki, 2002; Hirschauer, 2005; Halkier *et al*., 2011, p.6 ; Nicolini 2013). This is a matter of concern; left unresolved such uncertainties might affect the potential of practice theory as an alternative theoretical perspective.

Specifically, this paper seeks to contribute by addressing this concern. At its core, the paper provides an argument for a strategy that oversees the reasoning and process used to generate methodology for use with a practice theory. Because it is regarded as a pre-requisite for any qualitative enquiry, the strategy is based on notions of congruence and salience. Salience is defined as the need to ensure that the methodology fits with the assumed ontology and with the resultant epistemic consequences of the overarching practice theory perspective (Dainty, 2008, p.3). Adopting Richards and Morse (2002. p.34), congruence is defined as the need to ensure that the methodology fits with the research aims, questions and is sensitised (Blumer, 1969) to the characteristics of the phenomenon being studied. The paper illustrates the development of such a strategy of salience and congruence (hereafter 'the Strategy') and its consequences by reference to empirical findings that have emerged from the study of the practice of evaluating design for a major new NHS hospital.

3 Typified by NHS Scotland's Design Quality Policy CEL (19) 2010, available at http://www.sehd.scot.nhs.uk/mels/cel2010_19.pdf [Accessed 26th September, 2013].

4 Also variably referred to in the literature as practice standpoint, practice lens, practice idiom, practice order and practice based approaches (Corradi *et al*., 2010).

5 For example published studies in cooking, telemedicine, teaching, business strategy, hiking, family photography, consumer studies, information transfer studies, herb production, and on-line trading to mention but a few.

6 For the purposes of this paper a methodology is defined as coherent research study framework that sits above and governs specific methods proposed to collect data.

THE HETEROGENEITY OF PRACTICE THEORIES

A distinguishing feature of all practice theories is that they are all, to some extent at least heterogeneous: there is no such thing as 'a' unified, single corpus of practice theory (Schatzki *et al*., 2001, p. 11) which is not without contested views (see Turner, 1994). This fact has at least two important methodological implications in relation to the Strategy. First is that a single 'one size fits all' methodology, or even a set of methodologies, cannot be used generically with practice theory. Second is that the heterogeneity of practice theory creates the opportunity for a 'programmatic' (Nicolini, 2013, p. 215) methodological approach; in that an eclectic portfolio of different methodologies can be applied in combination in the field in response to a reflexive understanding.

METHODOLOGICAL CONSIDERATIONS IN RELATION TO SALIENCE

Building on insights from Wittgenstein and Heidegger, Schatzki has *"offered one of the more explicit and clear illustrations of the implications of a practice-based approach"* (Nicolini, 2013, p.163). He provides two clearly expressed notions of practice: first that practice is *"temporally unfolding and spatially dispersed nexus of doings and sayings"* and secondly the notion of *"practice is that of a performing an action.."* (Schatzki, 1996, p. 89-90). It is for this reason of clarity (i.e. about what a practice is and what it is not (Cox, 2012, p. 2) that Schatzki's assumed ontology[7] (hereafter ontology) - as carefully explicated in his book 'The Site of the Social' (Schatzki, 2002) - is used. According to his ontology the understanding of design held by the stakeholders involved in design evaluation is co-created and transpires amid an elaborate, constantly evolving, (both temporally and spatially), nexus of arranged things and organised activities. The scope of Schatzki's ontology can therefore be seen as radically different to the much narrower view of design evaluation implicit in NHS policies. This consideration of site ontology has at least three significant epistemological consequences for evaluating design: first, it means that we can, within the site (e.g. in the context of evaluating design), scrutinise the knowing and the lived experience of the knowing (its phenomenology) as a series of distinct moments of the practicing without assuming them as separate. In other words, knowing and practice can be seen as ontologically equivalent, inextricably linked as constituting one another but also as analytically different: the practice being the backdrop against which the other - the knowing - emerges.

Second is the role of individualism. In Schatzki's words *"this [i.e. his ontology] contravenes individualism in holding that actions, groups, and constellations of individuals exist in the social"* (Schatzki, 2002, p.141; emphasis in original text). As such, the unit of analysis for researchers who want to use practice theory for evaluating design should not be individual design skills or knowledge but the practice under consideration.

The third, and indeed distinguishing, feature of Schatzki's site ontology from other contemporary practice theories (and a feature in common with Heidegger and Wittgenstein) is the centrality granted to intelligibility in human affairs. All of these authors subscribe to the fundamental view that, at all times and always, and manifest

7 Schatzki is careful to point out that ontologies only describe "basic characters, compositions and structures" as an assumption of reality and that ontologies do not explain social phenomena - but they may act as an explanatory resource and can ground pronouncements (ibid, p. xvi): hence the use of the term 'assumed ontology.'

as part of an on-going practical activity, people mostly do and say whatever it makes sense for them to do (and say). Schatzki's precise term for this essentially anthropological trait of humans is 'action intelligibility' or 'practical intelligibility' (used interchangeably): *"the articulation of action intelligibility is the specification of what makes sense to people to do"* (Schatzki, 1996, p.118). Schatzki further adds that practical intelligibility is not the same phenomenon as normativity. *"What makes sense to someone to do is not the same as what is, or seems to the actor to be, appropriate, right or correct"* (Schatzki, 2002, p.75). This distinguishing feature of Schatzki's ontology is reflected upon in the observed behaviour of the participants as set out in the early empirical findings below.

According to Schatzki's ontology, to say that the doings and sayings that comprise a practice constitute a nexus is to say that they are linked according to four *"avenues"* (Schatzki, 1996, p. 89) of linkages: practical understandings,[8] rules,[9] teleoaffective structures[10] and general understandings[11] all of which characterise the social site through which the practice emerges. All of these avenues provide a basis for analysis, and the avenue of teleoaffective structure has a significant methodological implication. Its temporal and spatial implications for reflexivity require any exploration of evaluating design inevitably[12] to take into account other social phenomena (e.g. other practices and actions at different times and settings) that influence and arrange its manifestation and the outcomes this practice of evaluating design produces. Referring back to the heterogeneity of practices, this observation also has further epistemological significance: it means that a pluralistic methodology will almost always be necessary when undertaking an empirical study of a practice. Furthermore, and as pointed out by Nicolini, this has another *"far-reaching implication [....]. To understand social life as it happens, it is not enough to grasp its real-time happening. One has to grasp what is not happening"* (Nicolini, 2013, p.167). Consistent with its Heideggerian traditions of coping with present circumstances, this implies that, to understand what is actually going on, also requires, to some extent, an understanding of what else could have happened. The epistemological considerations of spatiality, temporality and reflection upon the methodology will be revisited in further discussion below.

Introducing new analytical devices: design evaluation as practice and design evaluation in practice

The above epistemological consequences of adopting Schatzki's ontology are now synthesised into a pair of analytical devices: 'design evaluation as practice' and 'design evaluation in practice;' both of which occur within the practice of evaluating design as part of a wider network, or practice order of practices. The epistemological concern of design evaluation as practice is: what and how can we know what goes on during the actual practice of evaluation? It refers to '*the here and know'* of it as it happens. The epistemological concern of design evaluation in practice is: what and how can we know about the connections between the practice of evaluating design and other related practices? It refers to *'the elsewhere and when'* as part of, to use Schatzki's

8 For example knowing how to do things like reviewing design drawings and proposals.

9 For example explicit formulations that direct how evaluating design is done.

10 For example the overarching purpose, mood or feelings that are linked to the tasks that comprise evaluating design.

11 These are reflexive understandings of the overall project in which the people are involved and contribute to practical intelligibility hence action - for example in the design evaluation of a hospital the general understanding that the design of the hospital will impact on how the hospital can be used to treat patients.

12 On the premise that no single practice can operate entirely in isolation.

terminology, a 'network' of practices taking place in other spaces at the same or at other times during the course of the design development thus emphasising the spatiotemporal dimension of practice.

METHODOLOGICAL CONSIDERATIONS IN RELATION TO CONGRUENCE

Relating the Strategy to congruence requires consideration of the compatibility of the methodology with the research aims and the research questions, as well as the prominent characteristics of the phenomenon being investigated, as the awareness of them improves. This position has been informed by three principal assumptions briefly outlined as follows.

First is an assumption that the practice of evaluating a design within a large NHS project is, by definition, a complex affair subject to numerous external constraints. As a public-sector project, the Project's principal constraints manifest themselves as matters of affordability, value for money, compliance with established technical and health and safety standards and regulations and overall delivery timescales.

Second is the assumption that practice cannot be simply regarded as *"just what people do"* in some unmediated way: such a notion is a merely a return to a naive form of empiricism (Schatzki *et al*., 2001). Careful consideration, therefore, of matters that are suspected of mediating the practice of evaluating design is required. Such matters considered in the study to date include:

The architectural motto of 'form follows function' requires the clinical adjacencies of distinct departments to be considered and how, the flow of patients, visitors, staff, supplies and waste are separated.

The issue and implications of the public accountability that impose strict budgetary, value for money, affordability and business case considerations. These frame the project team to *"qualculate"* (Tryggestad and Georg 2009, pp. 970-971) the concept design by actively managing the social relations and expectations of stakeholders when evaluating the design.

Against a background of NHS hospital design being dominated by functionality (Francis *et al*., 1999) is the body of literature advocating 'evidenced based' design (Ulrich, 1984; Ulrich, 2000; Ulrich, 2005).

The increasingly influential role that visual representations (enabled by BIM, modelling simulation and visualisation technique is such as CAD and CGI. This democratisation is transcending historical boundaries, permitting individual designers to position design evaluation as a continual spatiotemporal social activity distributed amongst the participants and artifacts generated by computers (c.f. Ewenstein, B. and Whyte, J. (2009)).

Finally, the authority and deference granted to senior clinical and medical stakeholders included in the design evaluation team alongside highly experienced design, legal, financial and project management professionals. This observation 'matters' because, in a mutually deficient way, clinicians are for the most part novices in architectural design and, to the contrary, architects are novices in clinical procedures: this can incite demanding requirements for sense-making.

Third is the assumption that praxiographic research has at its centre an observed materiality interlinked with supra-individual social practices. If practices are understood as a 'nexus of doings and sayings' in Schatzki's sense (2002), then

firsthand reports from participants engaged in the practice (e.g. interviews, diaries, fieldnotes, other remarks and personal documents) at different times and settings provide important methodological access in the quest for the meaning that they attribute to their experiences and their developing understanding of evaluating design. In other words, articulating and foregrounding practice requires a material activity and surrounding discursive work that is of itself, another practice. As Nicolini (2009, p. 4) points out, studying practice always requires the scrutiny of two practices at the same time: epistemic practice and the what we are concerned with.

SOME EARLY EMPIRICAL FINDINGS

By way of illustrating the development of the Strategy the paper draws upon the research work undertaken by the authors for an on-going ethnographic study of a large (£250 million / €298 million) new NHS acute hospital project (hereafter 'the Project') in Dumfries, Scotland.[13] The project is currently in its procurement phase.[14]

The following two examples represent some of the thematic content emerging at this point in the ongoing study. It is submitted that they provide instances of what Schatzki calls 'integrative'[15] practices, to illustrate the unfolding complexity of evaluating design.

Role of stakeholder power relations in the practice of design evaluation

Stakeholder power relations have been exercised most notably to date by the more senior hospital consultants. These have manifested initially as verbal exchanges in promoting or presenting their cases for proposed changes in the Model of Care (e.g. the Clinical lead for Women and Children's service announcing in a presentation made directly to the members of a full and specially convened meeting of the Board that *"we are special"*; other examples include 'championing' particular departmental spaces such as Executives promoting the particular needs of a spiritual care centre and well-rehearsed arguments for *"special considerations of office and seminar spaces"*..

These displays of power by senior clinicians also indicate that space, and in particular clinical space, is regarded protectively as a territory and marker of professional boundaries and not as merely a resource. As such these findings resonate with the recent accounts of such matters (Wagner *et al*., 2002; Wagner, 2006; Marcum, 2013) and also those accounts of both the oft-strained relationships between doctors and managers and those of the identity of doctors working within hospitals (Konteh *et al*., 2011; Davies and Harrison, 2003).

It is suggested that these micro-struggles and displays of power relations serve as a reminder that evaluating design cannot be regarded conclusive at any given point and that design evaluation in practice continues to be an *"unfolding ontology"* (Knorr Cetina, 2001, p. 190).

Manifestations of practical intelligibility and 'arresting moments'

Relations between the design evaluation practitioners have been observed generally as episodic enacted dialogically through generative encounters. However on numerous occasions these have been disputed by 'arresting moments' (Cunliffe 2001, p. 358;

13 The Acute Services Redevelopment Project, the largest hospital project within the Scottish Government's innovative Non-Profit Distribution (NPD) Programme, see http://www.scottishfuturestrust.org.uk/our-work/funding-and-finance/non-profit-distributing/ [Accessed 26th September, 2013].

14 See http://www.bbc.co.uk/news/uk-scotland-south-scotland-24110838 [Accessed 26th September, 2013].

15 Schatzki categories practices as 'dispersed' or 'integrative' (Schatzki, 1996, 91). Dispersed practices include the practices of describing, following rules, explaining, questioning, examining. Integrative practices refer to those more complex practices found in and constitutive of particular domains of social life.

Beech *et al*., 2012) in which previously taken-for-granted notions and beliefs become disrupted in the course of evaluating the design. It is suggested that these may represent a manifestation of instances of the practical intelligibility (as defined by Schatzki) of one practitioner acting in challenge to that of another: these instances suggest instances of what makes sense in a taken-for-granted way to one practitioner may not make sense for another. Several instances of such arresting moments have been observed involving design evaluation. Take for example the disruption surrounding the evaluation of the mechanical and electrical (M&E) engineering design.

...."all M&E engineers designing new NHS hospitals 'over-engineer' their designs" (Brian- a pseudonym - Head of Estates and Engineering for the Health Board)

This strident viewpoint represents the manifestation of the position power of Brian's hostile reaction to the use of output specifications and cynicism of design risk transfer: matters that are actually enshrined in the contract documents. As the discussions ensued he was increasingly convinced that the Bidder's M&E designers 'over-engineer' and are complacent and profligate - with notions of *"fat-cat"* engineers and wasteful duplication being articulated. Observed emotions included distrust of the Bidder's M&E engineers coupled with a tangible resentment of being divested of design responsibility; being highly defensive and ultimately displaying a stubbornness and reluctance to accept the proven expertise of Bidder's M&E designers. Tactics used to press his viewpoints included the use of isolated incidents of over design from earlier entirely different projects procured by the Health Board based on entirely different procurement routes. Furthermore these 'concerns' were articulated to non-technically qualified but highly influential stakeholders such as the Project Sponsor.

Another example relates to strongly entrenched views held a key member of the Board's maintenance staff evaluating the design in relation to flat roofs and external drainpipes.

...." I don't care what the bidder's want or how good they think they are at building flat roofs - we don't want them - it's not them that has to face the Chief Executive later on"

Tactics included again the use of position power to influence others and again citing examples of problems with older projects coupled with an outright rejection of modern construction methods or the acceptance of design risk transfer. In both of these instances of 'arresting moments' further reflection and discussion ensued that eventually ameliorated these polarised positions - in summary what was observed is conflict and emotional tension between practitioners may serve as a catalyst for new insights and potential for new knowledge.

REPRESENTING THE DATA: EPISTEMIC CHALLENGES ENCOUNTERED

A challenging ethnographic consequence of the Strategy is the task of analysis and the subsequent representation of the data. Since October 2012, in terms of data gathering, a total of 60 such events and meetings ranging in duration from about 30 minutes to four hours have in aggregate been collected by the researcher together with eight interviews and review of numerous artefacts and documents and a research diary. To date, Czarniawska's (2007) narrative approach has been adopted to produce a succession of short vignettes to illustrate themes that have emerged recursively from the data. These vignettes are framed by a prologue: the objective being to provide, not

only a rich-picture and insight into the 'world of evaluating NHS hospital design' but also a nuanced view of the dynamics of evaluating design represented by observations of decision making and how decisions are shaped and reshaped as the relationships between the stakeholders unfold.

DISCUSSION

At its core, the Strategy foregrounds notions of congruence and salience to generate the reasoning and process by which methodologies and methods are developed to enact the particular practice theory perspective. The Strategy leads a reflexive multi-dialogical approach, not as detachment from, but as engagement in the means of acquiring knowledge. Early empirical findings from the Project are contributing to the research aims by revealing insights through these dialogues in terms of (amongst others) power relations between stakeholders and instances of arresting moments. To date the settings have been grounded in and constrained by the procurement phase with both bidders. As the study progresses the prospect of working with a single-bidder, in contract, to finalise design evaluation will afford another empirical opportunity to compare and understand the influence that a different teleoaffective structure and spatial setting may have on the practice of design evaluation.

As analytical devices, design evaluation as practice and design evaluation in practice transcend some of the deterministic and reductionist shortcomings of the current NHS design evaluation. Conceptually, this analytical approach represents an application of Schatzki's practice theory to evaluating design. Empirically, they let the researcher see how evaluating design is practically and relationally done, re-done and perhaps slightly re-done again as it is situated, at different times and settings; capturing a multiplicity and variety of ways and performances of the participants during the development of the hospital design.

Moving to consider the implications of this work for wider practice, at least two questions emerge. First, could the Strategy be extended beyond the confines of the observed NHS hospital project? As the unit of analysis is the practice of evaluating design the answer is arguably yes if the researcher remains attentive and sensitive to potentially different spatiotemporal characteristics the phenomenon and concurrent practices (e.g. the type of hospital project; the procurement route, the constituency of the participants). Second, what research implications does the Strategy have for those considering its use? Certainly the likely period of time required for access to and immersion in the field may present challenges for researcher-practitioners. The researcher-practitioner's pre-understanding and 'insider' status and their ability to influence organisational politics may warrant debate through which the researcher-practitioner resolves the political framing of practice-theory research project within the host organisation, including balancing that organisation's justification for granting access, with the researcher-practitioner's personal research ambitions.

CONCLUSION

Qualitative forms of inquiry are considered by many to offer as much a perspective on how to investigate a particular research problem as it is as of a particular research protocol. As illustrated by the Project, empirical investigations that mobilise practice theory ontologies are likely to be emergent. As understanding deepens and situations unfold the researcher may wish to avoid rigid designs that eliminate responsiveness so that they can pursue new paths of discovery as they emerge: the Strategy as presented has this flexibility.

The works extends approaches that advocate methodological pluralism in forms advocated by the likes of Nicolini (2013) beyond theoretical considerations. The Strategy suggests that a form of methodological pluralism structured around multiple reflexive dialogues is required in addition to methodological pluralism.

Further implications and potential limitations of the Strategy in relation to the challenges such a Strategy presents to a researcher- practitioner have been highlighted. The Strategy has the potential to mobilise new insights and sense-making to the participants involved in evaluating design not afforded by the sole use of the current NHS design evaluation policy. The Strategy has the potential to be used in other areas of empirical investigation and this may encourage the wider use of a practice-theory based empirical research as an alternative theoretical approach. Perhaps in the future the reasons why large publicly funded national building, infrastructure and IT projects fail can be better understood by the mobilisation of such a practice theory methodology; thereby reducing the current trend of commentators to conclude that such projects *"never go according to plan"*.

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