Scholarly design as a paradigm for practice-based research
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Introduction There is a shared history for how design, art, and other areas of study based on professional practice typically have been brought into the broader academy. Such a move has rarely been prompted by the area of study itself. More often the shift is a result of some political decision, taken to amalgamate a number of distinct learning organisations into a single institution (more broadly, to transform a three tiered into two tiered system). A demonstrably pragmatic decision, intended to make the overall system more efficient, simplified and cost-effective. The resulting amalgamation typically, however, is far from equal. The process has clearly privileged issues of research over issues of practice.

The consequence of these forced amalgamations for art and design schools has been profound. The criteria on which the performance of these schools is commonly now judged, have changed to emphasise precisely the kinds of activities (research) with which they traditionally do not conform. The issue, in part, has become one of equity: that all of the fields represented within the academy should have equal access to research funds, post-graduate degree places, etc. As it stands, professional schools have either to see the evaluation of their performance deteriorate, or rapidly develop a capacity to conform to methods and structures evolved without those areas of concern in mind. Many schools have therefore responded to the inequity of the merged academy by growing a research profile of conventional activities based on scientific inquiry. The move has further marginalised the professional practice on which many academics within professional schools are/were appointed, and further diluted what might be termed the "natural" constituency (art and design practitioners) for the research programs.

The issues pertinent to design and art research are not essentially political. The fundamental imperative that underpins the development of doctorate level programs and broader research definitions in these domains would clearly have emerged in different institutional and political settings. Rather this context is framing how these issues are engaged with. There should be no imperative to conform at the risk of being excluded. The task is to develop research procedures and protocols that are philosophically relevant to the agendas of design and art.

This paper ranges over a number of issues that emerge when professional schools look to grow a research profile grounded in practice.

Conventional Research Reconsidered

What is the problem with conventional research? The short answer is very little. Conventional research is characterised as common scientific inquiry. The approach is based on the notion that understanding comes from explicit knowledge (in the form of abstract theories) which can be generalised and tested. The knowledge is accumulated through an objective (detached) and systematic (methodological) program of study. The approach has provided spectacular insight, and is such a fundamental part of common wisdom that it is often difficult to imagine how understanding might come from any other means.

The longer answer to the question of what is the problem with conventional research, is a very great deal. Scientific inquiry, like any form of inquiry exposes only certain kinds of problems and validates only certain kinds of solutions. The kinds of problems scientific inquiry has most difficulty in exposing are precisely the kinds of problems and situations faced by practitioners: problems and situations that are complex, uncertain, unstable, and unique, often articulated across conflicting value systems. The kinds of solutions offered through scientific inquiry (descriptive generalisations) have little relevance back to the situations of practice.

"In recent years there has been a growing perception that researchers, who are supposed to feed the professional schools with useful knowledge, have less and less to say that practitioners find useful." (Schön, 1987:10).

Further, the status of conventional research in the academy at present is such that almost all of the regulatory frameworks governing research are tailored to scientific inquiry. What does not pass as scientific inquiry, commonly is disdained. Practices are not of themselves research but equally no disciplinary/form based boundary should exist to describe what is and what is not research. The conformist and regulatory approach to research recognition results in an instrumental approach that is used to control access to institutional prestige, influence and money. A tension has developed: those representing conventional research practices insisting that scientific inquiry hold sway, and those representing practice looking for ways in which their activities might be recognised and valued (as an equal to conventional research) more directly by the academy.

The initial response has been to compromise, and for a mix of practice and scientific inquiry to constitute academic research. The practice-based research program typically involves the development of practice-based work which is then (after the practice-based work is complete) contextualised and theorised with a related analytic paper. This directly contradicts efforts to have the practice-based component recognised as a potentially valid research outcome in is own right. If the work necessarily requires a text to explain it, this implicitly characterises the work itself as not research. The consequence being that practice-based work in this sense equates with scientific experimentation, a process that merely provides the data upon which the (real) research is based. This response is clearly unsatisactory: the practice-based work is devalued; the context paper is undertaken by practitioners often without the skills of, or motivation for, scientific inquiry; and the practice content itself is difficult to judge and evaluate as anything other than a piece of practice-

based work. The substantive part of the research program (the practice-based work) remains as a piece of practice and not as a piece of research.

Such attempts to equivalise practice and research, without any further constraints or expectations placed on the part of the practice component, have largely failed to move the issue forward. A comprehensive background to this particular aspect of the problem is presented in the Australian context by Strand (1998).

An alternative to this failed attempt, is for new forms of research and practice to be developed cojointly (as hybrids). The particular approach proposed in this paper, builds on more general notions of the academy under the terminology of scholarship. Scholarship is introduced to broaden the parameters for academic research beyond common scientific inquiry, and to embrace other forms of understanding and engagement. The intention is for these other forms to exhibit more direct relevance to, and draw more directly from, practice.

Scholarship Reconsidered

There is a balance of pragmatics and principle required if the conventional distinction between research and practice is to escape an impasse. Definitions, historical evidence and regulatory authorities are often employed to justify common scientific inquiry as the legitimate substance of research. Professional accreditation, studio-based teaching and a history of its own are used to justify a role for practice in research. None of these instruments, however, are owned or fixed by individuals or institutions. They exist as part of a background of social and cultural traditions, themselves in a constant state of reinvention through ongoing discourse and interaction.

The unifying institution is now the academy. Given its evolving constitution and expectations, what represents both research and practice in the context of the academy will need to evolve also. The guiding principle of the academy is scholarship. Boyer (1990) remapped the notion of scholarship in the modern academy across four (4), non-hierarchical enterprises, as follows.

A scholarship of discovery. Relates tot he conventional notion of pure, original research. It refers to the pursuit of knowledge for its own sake, freedom of inquiry, following an investigation wherever it may lead.

A scholarship of application. Refers to the application of knowledge to consequential problems, and the generation of new knowledges out of practice.

A scholarship of integration. Relates to putting isolated facts into perspective. Refers to the synthesising tradition in academic life. Integration is about making cross disciplinary connections and contextualising specialist knowledge for broader audiences.

A scholarship of teaching. Relates to the contention that the work of the academic becomes consequential only when understood by others. Refers to the Aristotelian idea that teaching is the highest form of understanding.
Within this broad framework, scholarship itself is seen to be characterised in terms of: contributing to our collective understanding (recognising various forms of understanding, including knowing-in-action); being grounded in a particular, explicit frame of reference (an epistemology or praxis); generating intelligible outcomes that are communicable; and dealing with substantive problems (it is non-trivial).

Boyers' initiative, though not completely specific to design scholarship, represents an important shift in the conception of research. It opens a space for negotiation at the intersection of research and practice. Broadening the focus of academic research to scholarship in this way admits a greater range of equally valid forms of inquiry. The conventional boundaries for what does or does not constitute academic research are challenged and dissolved as a consequence of this move to the level of scholarship. The move to a level of scholarship does not, however, signal a move to include everything as research. Practice, of itself, is not a valid form of scholarship. Indeed there are keen lessons to be learned from previous attempts to make the scope of academic research more inclusive.

For example, the Federal Government in Australia distributes specific funding to universities on the basis of their legitimate research output. At one stage over 20 different categories of research output were recognised as legitimate outcomes, including exhibitions, designs, etc. A recent independent audit identified an error rate of around 45 percent in the submissions made by universities against the full range of categories. The errors represent claims for outputs which were, on further investigation, not properly documented, accounted for, or otherwise unsubstantiated. As a consequence, all but four (4) categories were excluded, leaving only the refereed conference paper, refereed article, chapter in a book, and book as legitimate research outcomes. This was not intended by the Government to declare that the other forms of research were no longer to be considered as legitimate research, but simply that the reporting of such other forms of research outcome could not be trusted.

The impact of this retraction to a hard core of legitimate research outcomes has been varied in different institutions. Significant funding is now attached to research performance as measured by this group of four legitimate forms of outcome. Some institutions have continued to allocate research performance monies internally across a broad range of outcomes, but the signals are clear. There are difficult times ahead for the areas of emerging research practice, such as design and art. The entire move may have been opportunistic on the part of traditional disciplines and institutions, in a bid to limit claims against a fixed funding pool. Regardless of the motivation, however, the opportunity to (re)contain research as scientific inquiry was presented because more could and should have been done to devise effective protocols and procedures for reporting and documenting research outcomes from the other forms of research practice.

The position for design is actually quite a bit more difficult than for the arts, where the arts at least have a tangible research outcome from which to discuss equivalence. The outcome of art research can generally be expressed, quite reasonably, through the agency of an exhibition or performance: these describe a point or moment in the research process comparable to the refereed paper or book in terms of dissemination and publication. There is no such point or moment for design. Rather, for design, it is the process of artifacture which is key (Dilnot, 1999). Alternative forms and means of dissemination and publication of design research is necessary. These alternatives, and the need for them, set design inquiry further apart from scientific inquiry.

Scholarly Design Reconsidered

Conventional research is couched in scientific inquiry, and as such is poorly placed to deal with the kinds of problems of relevance to design in a way that is meaningful to design. Broadening the scope of academic research around the notion of scholarship admits

design inquiry as an alternative, valid form of research within itself. Scholarship does not denude research of method, evaluation, dissemination, etc., but rather expands the scope and form of valid research activity. It is now critical that effective procedures and protocols be instituted to avoid accusations that the new and emerging forms of scholarship are simply practice in some other guise. At the same time, design inquiry must not simply represent an inferior form of conventional research (where conventional research is measured primarily in terms of scientific inquiry). The question is then how scholarly design inquiry might provide the paradigm for such an alternative form of research: an alternative form of research grounded in practice.

"Artifice is therefore endemically contingent. What has to be posited as the realm of design is therefore possibility. … artifice is by nature uncertain, or, … propositional." (Dilnot, 1999:28).

Design is presented here as a form of engagement with possibility: it is categorically not engaged in the discovery of underlying laws. More subtly perhaps, design is also not about limitless possibilities: it both proposes and configures. The future is already configured (or bounded in terms of the possibilities available) through the historical predisposition of particular design actions to particular forms of design outcome. The predisposition of which we speak tends to be hidden within the norms of conventional design practice. In a similar vein to the ways in which scientific inquiry is predisposed to particular problems and solutions, design itself discloses only a limited range of future possibilities. This bounding of possibility has been described as a kind of defuturing (Fry, 1999).

What is critical about the fact that design not only creates futures but also denies them, is the onus this places back onto the designer (the person instigating the artifice) to ensure the process of artifacture is valid, ethical, etc. For scientific inquiry such concerns are dealt with externally, on behalf of the researcher, provided there is a rigorous adherence to methodology (valid scientific methodology). Effective design inquiry must still deal with the factors displaced when such methodology is no longer absolute or the primary objective for the research. Wherein scientific inquiry is "nothing less than the making secure of the presence of methodology over whatever is (nature and history)" (Heidegger, 1977:125, quoted in Dilnot, 1999:26), design inquiry involves the negotiation of how subjective and objective (artificial) worlds interface. Artifice - the province of design – Dilnot defines as "that which could be other", which in turn prescribes ethics as internal and fundamental to designing. For design inquiry (where the primary concern moves from rigour to relevance), therefore, issues such as ethics, validation, subjectivity and dissemination each demand new, explicit forms of exposure, discussion and articulation.

Scholarly design does bring some of the issues of ethics, validity, etc., back within the prescription of a given epistemological framework. The nature of design inquiry (as a form of interpretation and negotiation) is such, however, that these issues can never be subjugated to procedure or framework entirely. For example, where scientific inquiry largely evaluates research in terms of the epistemological framework itself (methodology, rigour, truth), design inquiry must rely on an evaluation of the agency and utility the research holds for practice. Design inquiry therefore demands that the reflections, suppositions and propositions that emerge from a particular research project, are subsequently applied to a practice situation: and therein must the issues of ethics and validity (amongst others) explicitly be addressed.

The framework of scholarly design does however offer some prescription about the nature of valid research. In particular, that the integration of reflections, suppositions and

propositions collectively should remain coherent. That is, coherent in, of and between themselves (relative to each other), and in there unfolding. The incorporation of studio work, reflective practices, close readings, texts, etc., regardless of their number, nature or relationship in time (the components of design inquiry in rich diversity), is necessarily comprehensive and coherent.

Design inquiry might therefore be described in terms of reflective practice itself: as a conversation with the situation where understanding the back-talk from the situation is essential to the process of inquiry itself. In the context of reflective practice, Schön (1983) proposes story-telling as an effective genre for the translation of research back into practice. Story-telling discloses relevant themes, rather than theories. Story-telling both facilitates and actively promotes a transformation of the story themes into a specific situation context. In this sense, the stories themselves represent design knowledge:

"There is knowledge about design. And there is design-knowledge. The former is, broadly, knowledge which results from research into the conditions under which design operates or which results from research into the results of design action. The latter can be defined, in a preliminary manner, as knowledge directly concerned with, or elucidated from, the knowing involved in the processes, means and ends of design (dispositional) action." (Dilnot, 1999:17).

Conclusions

Design (the configuration and proposition of possibility between the subjective and artificial worlds) has reached a water-shed in terms of academic research. The crisis point is defined in terms of an increasing gap between the limits of scientific inquiry and the needs of practice. Design not only exemplifies that gap, but is further revealed as having potential of profound and fundamental significance for how the shortfall might better be addressed. Design practice already provides an effective strategy for dealing with complexity and the emerging nature of practice more generically. However, design is also emerging as an alternative form of scholarly inquiry within itself: a third way of knowing, as outlined by Archer, (Archer, 1979:19 quoted in Dilnot, 1999:32). Scholarly design inquiry is presented here as a more effective engagement with the issues of practice than conventional forms of scientific inquiry:

"The situations of practice are not problems to be solved but problematic situations characterised by uncertainty, disorder and indeterminancy… . We are bound to an epistemology of practice which leaves us at a loss to explain, or even describe, the competences to which we now give overriding importance" (Schön, 1983:16)

Rather than reinvent scientific inquiry to more directly accommodate the needs of practice (which would undoubtedly bring many of the strengths of scientific inquiry along with the process), this paper argues for a more profound change. A change wherein academic research is no longer prescribed and driven solely by a rigorous adherence to scientific method. Effectively, scientific inquiry represents a complete package where findings are abstracted, in order to be generalised, in order to be disseminated, in order to be tested. This paper rejects that package as the only (or most) effective means of research for and of practice.

In place of scientific inquiry we propose scholarly design. In this sense, design inquiry (as with scientific inquiry) represents a valid form of scholarship. The value of design inquiry is as a contextual and situated engagement with practice: it is a means of grounding

research in practice. The validity of this engagement is not embodied in the rigour with which a particular method is applied, but rather the agency the enacted propositions carry with them for practice: the facility of the research work to reframe or provoke further action.

Scholarly design is not design practice. If practice itself were to constitute academic research, then the growing irrelevance of the academy to the professions can only be exacerbated as the academy will have little (if anything) remaining to offer the design profession. The strategic knowledge required by design will not be developed. Conversely, if there is no facility for design to represent valid academic research then design knowledge can have no purchase beyond the practice of design: there is no fundamental contribution to knowledge that design itself can make.

The project of which we speak will not simply arrive or be concluded. Indeed, it is important that in the speaking of such an alternative we do not move too quickly to a firm proposal. It is the tendency to move to a formal, generally polarised, position relative to scientific inquiry that often undermines the potential of such a move. The ideas of design inquiry, of research grounded in practice, and of scientific inquiry itself, must each be kept in play within an evolving sphere of open questions and discourse.

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