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The Academization of Design and its Consequences for the Visual, Textual and Artefactual Production of Practice-based Research

Keywords ↳ academization ↳ design identity
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↳ academic literacy

Postgraduate design research, and particularly its practice-based forms, is currently in a process of academic legitimisation. This legitimisation has consequences for faculty and student identities particularly where the propositions for scholarship in design may marginalise the distinctive mix of artifactual, textual and visual vocabularies that characterize practice-based design research. For design, I suggest how the social practice to academic literacies in emergent disciplines can help make transparent the strategies and forms in dissertation text construction, supervision and writing. This paper exemplifies the practical relevance of these strategies through reference to student case studies.

1. The academization of Design, Designer Identity and Practice-Based Vocabularies

The restructuring and academization of design in Australia and the United Kingdom, in the late 1980s and early 1990s led many art and design institutes and colleges to be merged or re-designated into the university sector. Prior to this much of design was found in Art Schools and Institutes of Technology [e.g. Broadbent and Davis 1987], and restructuring brought challenges to the academic identities of indi-

viduals in the newer professional and vocational disciplines, which continue to resonate [Adams 1998]. In emerging applied academic fields disciplinary consensus remains a much debated project, and this is true for design [e.g. Becher 1989; Cross 1999; Durling 2002]. Studies of recently academized and neighbouring built environment disciplines show continuing tensions and varying allegiances regarding conceptions of teaching, research and practice among academic staff [Durning & Jenkins 2005].

With few precedents in the field [e.g. Cliff & Woodward, 2004], I recently completed a qualitative study of conceptions of design research in a university of technology in Australia, recruiting 53 full time and part time design educators for the study. A grounded inductive analysis was employed using qualitative data analysis software (NVivo 7™) to develop data models, which were visualised both during and after analysis [Bazeley 2007]. Emerging from the interviews were a series of themes on academic and industry design research conceptions; debate around possible variation to traditional scholarship to accommodate design; the significance of visual and artefactual materials to the design research submission; and the particular research training needs both conventional and 'designerly' that postgraduate research demands. [Fig. 1 ↪ 192]

Embedded in the narratives that respondents supplied were claims about the visual, textual and artifactual vocabularies of design as potential components of the design research project. These narratives also showed considerable uncertainty regarding scholarship in design at the postgraduate level, which for many respondents was a current concern as students and supervisors of projects.

For pragmatist philosopher and educator, John Dewey, art and aesthetics were significant modes of public communication and experience, which could transcend ideological and moral boundaries [Dewey 1959]. Dewey deplored the separation of industrial from fine arts as a dichotomy between objects for use (industrial arts) and those for speculation and theorizing (fine arts), emphasizing rather evaluating technology, science and the humanities was about the individual and social consequences of different proposals. Richard

Rorty appropriates Dewey's insights but also emphasizes the power of vocabularies – the value of Freud, Derrida, Wittgenstein and others for redescribing aspects of the world in new ways – to achieve public and private aims [Rorty 1982; Rorty 1989]. I suggest we see the material, textual and visual embodying a set of vocabularies – for example, realist, romantic, post-modern – and the distinctive weighting of these vocabularies in particular research outcomes as the space for design [Melles 2008b]. Making these choices available and apparent to students is a pedagogic issue and one that, I suggest is best addressed through a social practice approach to academic literacies.

2. Academic Literacy as Social Practice for Design

L'art ne reproduit pas le visible; il rend visible. [Paul Klee]

The field of academic literacy as social practice has emerged from the body of ethnographic and discourse analytic work exploring the form and significance of the multiple literacies that articulate community and cultural practices [e.g. Barton, Hamilton, & Ivanic 1999; Street, 1995]. Studies of academic literacies have focused on the value of the social practice approach to the current epistemological and cultural student diversity in HE in emergent academic disciplines where essayist literacy continues to be privileged [e.g. Street, Jones, & Turner 1999]. According to Lillis [2001], the social practice approach sees language as socially situated discourse practice which are ideological inscribed and research and pedagogy are oriented towards making visible and challenging official and unofficial practices. The oppositional, dialogic and socially situated approaches to writing of the academic literacies approach has particular relevance to emergent discipline areas like design.

Fairclough's [1989] three level characterization of the mutual dependencies between texts and processes and social conditions of interpretation and production has become a common framework for academic literacy studies. In this framework the formal linguistic and rhetorical properties of the text is created in a context of situation composed of processes of production and interpretation. This context of situation itself is ultimately dependent on the broader social

conditions of genre production and interpretation. In Bakhtinian terms [Bakhtin, Voloshinov, Medvedev & Morris 1994], the text dialogically *addresses* and is addressed by this context of situation.

In my supervisory work and writing, I have attempted to work out the practical consequences of a social practice approach to practice-based design research. In a recent paper [Melles 2007a], for example, I look at what can be learned through close analysis of existing conventions in design research, particularly regarding discourses of scholarship in design regarding text, visual language and artefact in the practice-based academic space. Texts, including the thesis and dissertation, are central resources and objects in the communities of practice [Lave & Wenger, 1991] that students and faculty inhabit.

Art and design dissertations may exploit visual rhetorics alongside conventional textual practices, and this is often seen as a distinctive 'designerly' characteristic of such work [Edwards 2004]. Visualizing the research process is also relevant at many different stages of the project [Gray & Malins 2004], but is particularly significant for the critical literature or contextual review of substantive and methodological domains, which itself is a form of creative inquiry [Montuori 2005]. It is this use of visuals to mediate and depict knowledge production rather than its 'natural' use for illustration or representation of design objects which is the focus here.

3. Knowledge Production, Interdisciplinarity and Design Research

Horlick-Jones and Sime [2004] note that in contrast to conventional disciplinary work, current mode two knowledge production [Gibbons et al. 1994] typically combines disciplinary and non-disciplinary sources of knowledge, making 'connections not only across the boundaries between disciplines, but also between scholarly inquiry and the sphere of tacit and experiential knowledges' [Horlick-Jones and Sime, p. 445]. The 'struggle' of becoming competent in multiple disciplines can lead to breadth not depth. Working between 'disciplines means conceptualizing and undertaking research in the absence of proven frameworks and models ... [and] often means resolving conflicts between paradigms and methods' [Golde & Gallagher 1999, p. 283]. As a colleague

and I argue in a recent paper [Barnes & Melles 2007], current knowledge production in higher education, particularly for design in the new universities of technology sector, involves the close interaction of many actors and objects throughout the process, and this has consequences for contextual reviews.

Boote and Beile [2005] identify key dimensions of adequate contextual reviews in the epistemologically and methodologically diverse field of educational research: coverage, synthesis, methodology, significance, and rhetoric [Fig. 2 ↪ 193]. The criteria that emanate from these dimensions are applicable to postgraduate design research, although they need to be developed to account for the material and visual components of practice-based design research.

Referring to visual arts knowing, Sullivan [2005] defines it as 'a way artists think as they make use of a cognitive coalition of ongoing dialogue between, within, and around the self, artworks, viewers and settings, where each is used to create new understandings' [Sullivan 2005: 190]. While not all design research projects engages fully with this artistic dialogue, project-based work often does require such a 'coalition'. Design research students may, however, underestimate the potential of visual strategies to generate and enhance the research process [Shreeve, Bailey and Drew 2004], including what Gray and Malins [2004] call 'mapping the terrain'. As I show [Melles 2007b] through exemplification from student projects, the use of such a tool has proved valuable in my work with research students.

4. Case Study Illustrations

To exemplify the principles identified above three student case studies are described below. The value of such narrative case studies has been recognized in the literature on research supervision as a valuable complement to theoretical discussion [Mercer 2001; Ryan & Zuber-Skerritt 1999; Taylor & Beasley 2005; Wisker 2004]. The accompanying presentation provides visual representations of the relevant student projects.

4.1 Student Case Study: The Visualisation of Activity-centred Digital Wayfinding

The first example I have taken from a recent supervision project with a Taiwanese Doctor of Design (Practice-based Doctorate) student who is developing a digital wayfinding system for the National Science Museum in her country. When I joined the project, the student had no overriding model of the design process, and a superficial understanding of the nature of interaction design, preferring to limit herself to aspects of layout and typeface in designing her digital interface – at best traditional concerns of information design.

One of the key issues with the practice-based doctorate is that it typically recruits professional designers with little or no exposure to academic design into a project space of ill-determined processes and outcomes – a double challenge for the student. The student not only could not see her project in terms of a more robust concept of interaction design [e.g. Sharp, Rogers & Preece 2006], she had a poor understanding of the literature in the field on digital wayfinding, including in the museum context, and seemed to believe that a convenience sample survey (n=100) of visitors to the museum was 'her method'. It seems frequent in practice-based design, that students may not only have limited exposure to academic scholarship but may focus on the text to the exclusion of the visual exclusively since this is the privileged institutional form (the text). The student's impoverished view of design methodology had to be de-centred through supervision meetings, expanded readings in the area, and an insistence that the visual become not only a technique for representation but itself a mediating tool for conversations.

Exploiting the student's visual literacy and introducing her to activity-centred design [e.g. Gay & Hembrooke 2004] helped relocate the questionnaire in a larger process, which she diagrammed as a segmented series of concentric circles. The decentering and expansion is exemplified in the visual diagram the student was asked to produce recently. While still demonstrating some weaknesses of conception, this diagram has now become a point of conversation with her two supervisors as it provides – from an activity theory view point – a symbolic tool for a mediated conversation about her progress.

While the diagram shows no traces of its history and genesis it is the product of multiple readings, social interaction, and visual reformulations consistent with the social practice approach to academic literacy.

4.2 A Multi-media Antismoking Campaign for Primary School Aged Children in Malaysia

The second example is taken from a previously cited case [Barnes & Melles 2007] of my co-supervision of a multimedia project linked to WHO funding involving the development of a media TV campaign for anti-smoking education aimed at primary school children in Malaysia. The project requires the student to position his research within multiple fields, including public health and the economics and politics of smoking in South East Asia, any one of which literatures could have overwhelmed the project. The project incorporates empirical testing data of the multimedia design (n=300) and the transformation of this data from statistical forms (using SPSS) to a communicative format is currently being worked through.

A visual dimension of the project of relevance to this paper has been the representation of the project itself – this 'map' serving again as a conversational tool. A pithy early generated map of the design methodology and process was requested in supervision conversations as a way of simultaneously 1) making transparent and coherent the multiple components of the project 2) exploiting the visual capacity of the student, and 3) providing a mediating symbolic tool for dialogue and further development. This figure, which has been modified and developed over time, provided an essential articulation point for work which followed, and became, as such, thoroughly generative.

4.3 Brokering Meaning with Design (Anita Kocsis PhD Student, University of New South Wales, Australia)

The third example comes from my workplace where my contribution was minor but an example of where collegial conversations in relation to design research can serve to help broker meaning in relation to visualization. Anita had developed a human-centred approach to scientific visualization drawing on a hybrid between social science, HCI, human-centred design (HCD) and Phenomenology (in the loose

sense of the word). Terms such as advocacy, negotiation, mediation, activist and participation are integral to HCD philosophy, and the work of Bruno Latour is critical to her work. Having developed the notion of brokering and communities of practice in relation to education [Melles 2008] I suggested to my colleague working on the visualization of astrophysical data that both concepts may work for her project. Following up this suggestion, communicating with Wenger on the notion of brokering in communities of practice [Wenger 1998], and employing cultural models in discourse analysis [Gee 2005] her visualization work she theorized as brokering. She claims in a recent paper.

“The visualization of scientific and historical content for exhibition spaces presents a twofold problem for the designer. The first problem is to interpret complex or intangible, discipline-specific concepts, while the second is to frame appropriate interpretations through design. Here, designers, one particular community of practice, effectively act as a knowledge broker, working with a scientific community of practice in order that audiences can engage with the boundary object, that is, the visualization of astrophysics data that seeks to disseminate scientific knowledge... it became apparent that the actual meanings and techniques of visualisation were contested ground.”

Thus, this third example shows that the substantive use of visualization within the design project while it exploits the visual literacy of the designer requires an informed (viz. theoretical) positioning of the strategy. Given the limited exposure of designers to the social science and other literature but in an environment of collaborative mentoring such as my workplace, there is scope to contribute to an understanding of the brokering role of visuals and of designers. Somewhat similar to the mediational function of knowledge production processes in the previous two examples the informationally enhanced spatial representation sits at the intersection of negotiations between scientist and designer about the meaning of images.

5. Discussion

Der Begriff ‘sehen’ macht einen wirren Eindruck. Nun, so ist er. – Ich sehe in die Landschaft; mein Blick schweift, ich sehe allerlei

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klare und unklare Bewegung... Und nun schau an, was ‘Beschreibung des Gesehenen’ heisst! – Aber das ist eben, was man eine Beschreibung des Gesehenen nennt. Es gibt nicht einen eigentlichen, ordentlichen Fall so einer Beschreibung – und das Übrige ist eben noch unklar. [Wittgenstein, Philosophische Untersuchungen II]

Wittgenstein reminds us that the relationship between textual descriptions and real world objects is not correspondence but rather purpose. Purpose is at the heart of the emergent academic discipline of design and its exploration of the kinds of vocabularies it wishes to form part of its community discourse and conventions. Judging by the literature, the field is alive with contestation and conversations around the visual, artefactual and textual. These conversations are thoroughly ideological and consequential in their claims for what is right and wrong – and it is in these moral terms that the arguments are often made. And yet the current climate of knowledge production in higher education and the pragmatic legacy recognised by some design disciplines speaks for forms of rigorous plurality *and* play.

To research students in design we must communicate this playful and rigorous potential of design through pedagogies that do not hide behind the institutional mystery game that the social practice account of academic literacy has uncovered. While play, plurality, and imagination, among other things are potentials for design this should not be an excuse for poor pedagogy in the context of supervision and writing. Given the uncertainty and lack of experience of many design educators who are sometimes thrust into supervision roles with little practical experience or expertise in conventional academic scholarship the likelihood of dominant models of scholarship prevailing is high as these research novices, themselves often doctoral students, aim to find a path in the design research space. Those of us with the will and experience should provide both faculty and students with the tools, thoughts and environments that offer both possibilities and boundaries for postgraduate research supervision, and the proposals and examples I have offered, I hope, suggest what some of these might look like.

Personal Dimension	Potential Significance for conceptions of design research
Professional and educational career aspirations	Need to be credited with higher degree and therefore come to some understanding of academic design research
Experience of the nature of research in industry	Different experiences among older and younger generations affect potential practical and academic concepts
Gendered nature of design work	Options for research engagement and careers constrained by male and female responsibilities and roles
Prior exposure to research in other institutions and training	Breadth of vision about other models of research and options for the field
Specialism culture of research	Distinct metaphors (products, spaces, etc) and practices central to research

Fig. 1: Significant personal dimensions and design research conceptions. ↳ **184**

Dimension	Criterion
Coverage	Justified criterion for inclusion and exclusion of sources from review
Synthesis	Distinguished what has been done in the field from what needs to be done
	Placed the topic or problem in the broader scholarly literature
	Placed the research in the historical context of the field
	Acquired and enhanced the subject vocabulary
	Articulated important variables and phenomena relevant to the topic
Methodology	Synthesized and gained a new perspective on the literature
	Identified the main methodologies and research techniques that have been used in the field
	Related ideas and theories in the field to research methodologies
Significance	Rationalized the practical significance of the research problem
	Rationalized the scholarly significance of the research problem
Rhetoric	Was written with a clear structure that supported the review

Fig. 2: Contextual Review (Boote & Beile 2005). ↳ **187**

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