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Monsters in the borderlands: Designer-academics in action

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Abstract: Much attention has been paid to how design – as an activity and a discipline – takes shape, with a focus on the professional designer. This paper explores a different kind of design practitioner - the ‘designer-academic’ - who holds a unique position at the border of pedagogy, practice and research in the creation not only of new ‘things’, but also processes and ways of working. Taking a reflective look at two projects over a emergent over a thirty-six month period we provide a glimpse into the everyday complexities of design research-in-action. We argue that we should look at designer-academics alongside the ‘outstanding’ professional designers, for they stand proudly at the borders of knowledge domains and epistemological traditions and are worthy of more attention in the annals of design theory and history.

Keywords: design academics; borderlands; case studies; knowledge creation

1. Introduction

In 2007, Nigel Cross contributed an essay to the volume *Design Research Now* (Edelmann et al, 2007) in which he suggested that:

“...Outstanding designers can be expected to work and operate in ways that are at the boundaries of normal practice. Studying such ‘boundary conditions’ may provide more significant results and an extension of understanding that is not available from studying average designers” (ibid, p.50).

In a later paragraph, Cross argued that studying “average and novice designers” may limit our understanding of design and “hold back design methodology...leading to weak or even inappropriate models for design cognition” (ibid). An immediate response to this approach to the research of design is what is termed ‘outstanding’ and by who’s definition? In *Designerly Ways of Knowing*, Cross provides us with his example of outstanding designers, including engineering designer Victor Scheinman, product designer Kenneth Grange and the Formula One racing car designer Gordon Murray (Cross, 2006, pp.64-75). Cross’ interest in

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‘outstanding’ aligns with the tendency amongst design historians to focus on the canonical professional figures in design (for example, Meggs, 2010) yet as Goldschmidt (2014, 2016) and Christenson, Ball & Lavkov (2017) have shown us, design activity is conducted in multiple settings with many actors and is a collaborative, generative and social process.

‘Design’ – as both discipline and process - is shaped by a heterogeneous network of ideas, artefacts, projects, people and places. This is perhaps better conceptualised (drawing on Susan Leigh Star’s studies of scientific and technical knowledge) as an ‘ecology’ (Star & Griesemer, 1989). Star suggests that an ecological standpoint of a particular professional domain is “anti-reductionist in that the unit of analysis is the whole enterprise, not simply the point of view of the university administration or of the professional scientist” (ibid: 389). We may view the field of design as a mixed ecology of the mundane to the exceptional; from the ‘average’ to the outstanding and in such an ecology we find what we term ‘designer-academics’. These are designers who have hybrid roles inhabiting the spaces between design practice, theory, history and research. In these liminal space, knowledge and information flows between individuals and institutions whilst authorship and person-making are performed (Nickelsen & Binder, 2010, p.40).

Drawing on Anzaldúa (1987), Bowker & Star (1999) have conceptualised these spaces between communities of practice as ‘borderlands’ (1999, pp 302-305) and the people who refuse to be naturalized into any one particular professional membership as equivalents to Haraway’s ‘monsters’ (Haraway, 1992). These monsters may not be the highly esteemed designers sought after by Cross, but are they deserving of our attention? Do they not shed light on contemporary design practice?

2. Approach

The world of design discourse - exploring a predominantly action-oriented practice - relies heavily on auto-biographical, biographical and sometimes polemical approaches (Foster, 2003) to explain design-in-action and it is often written by individuals who themselves are practicing designers (e.g. Rand, 1947, 1983; Heller, 2017; Bierut, 2017). The advantages of these forms of design discourse is that they reveal the innermost thought processes and subsequent design actions of professional designers at a level of intimacy and intricacy that cannot be gleaned from a solitary theoretical or historical analysis of artefacts. The disadvantages are that such perspectives provide only a limited view of design-in-action with obvious personal biases that can allow for a ‘selective memory’ of how design projects have come about. As a result, the successes are often lauded over the failures; aesthetic concerns dominate strategic intent; and personalities outshine collective acts of creativity and innovation.

To counter this criticism, we take a reflective approach to the thick description (Geertz, 1973) of design activities as forms of action research. Such a reflective approach differs from a memoir or autobiography (which are usually self-narrations) in that we participate in a form of “halfway-house case of thinking” which is between the “disengaged thinking” of Rodin’s

le Penseur (The Thinker) and the deliberate thinking in-the-moment of a particular action (Ryle, 2009, p.481). We conceptualise design research here as action research because of its focus on producing pragmatic knowledge “developed in the service of action” (Romme, 2004, p.496).

In this paper, we present two design projects as case study samples drawn from a wider portfolio of ten projects which the lead author (Ely) has acted as lead design researcher over a thirty-six-month period in a university setting. Case studies are widely used in sociological, business and design research where the focus of inquiry is on the action of the researcher and not on controlling variables to measure their effects as we find in empiricist studies (Hammersley & Gomm, 2000, p.4).

The ten projects are the subject of a separate analysis of their ‘design value’ (Ely & Geneste, 2020); the two projects we present below are an in-depth look at demand-led design research in action, selected on the basis of their contrasting origins and outcomes. The first project, *Social Design in Action* was initiated on the back of an external approach for design expertise. The second project, *Humanities Research*, was initiated within the Faculty of Humanities on the back of a growing interest in adapting new working methodologies in the management of university research. As we suggested earlier, accounts of professional designers’ work tend to focus on the canonical work that has been launched, published or celebrated and we have sampled projects which provide a messier, incomplete – yet realistic – perspective on design initiatives.

All of the projects that Ely has been involved with over the course of thirty-six months, (including these two), are against a backdrop of teaching in undergraduate and postgraduate courses, PhD supervisions, journal article writing, continuous professional development delivery for industry, research leadership activities and curriculum development amongst many other common tasks and duties in higher education.

The two projects explored here cross the boundaries between design pedagogy, research and practice and draw upon knowledge from at least two design disciplines as outlined in *Table 1* below:

Table 1

Case Number	Project Name	Design Disciplines	Description	Status
1	Social Design in Action	Social Design/ Communication Design	The co-design of integrated health, education and community services	Terminated
2	Humanities Research	Design-Led Innovation/ Communication Design	Collaborative development of research narratives for public dissemination	Ongoing

In the following cases, we have changed the names of companies, projects or individuals to protect their anonymity and client confidentiality.

3. Case Studies

3.1 Case Study #1: Social Design in Action

PROJECT INITIATION

In April 2017, author 1 (Ely) was approached by the coordinator (“Mindy”) of *Zero-to-Eighteen*, a project involving primary schools in the delivery of integrated health, education and welfare services to families. The intention of *Zero-to-Eighteen* was to support families from a baby’s antenatal stage of development right the way through to the child entering the workplace or higher education, in an attempt to enable children to break the poverty cycle and reach their full potential. The project mirrors a similar initiative in New York – the Harlem Children’s Zone (HCZ, 2020).

Mindy contacted Ely requesting the student-led design of a brand identity for the project and, during a lengthy telephone conversation in which Ely explained the scope of both design research and pedagogy, it seemed that the project team not only required a name and brand identity for the project but also support in designing a complex, inter-agency framework for collaborative working. The school (on the geographical fringes of metropolitan Perth, Western Australia) in which Mindy was based had already garnered varying degrees of financial and logistical support from local government, not-for-profits, state-level departments and federal agencies but a complex, multi-agency and stakeholder project of this scale required a planning and coordination knowledge hitherto lacking in the project team.

An exploratory meeting between Ely, author 2 (Saad), Mindy and the primary school Principal (“Deborah”), we were able to agree collaborative steps forward: an initial visit to the School and local community to understand the context of the wider problem and a developmental framework built upon our own synthesis of design thinking methodologies (Brown, 2009, Liedtka, 2006) and the open-endedness of the project (Figure 1).

Figure 1 Zero-to-Eighteen Design Engagement Model, showing 11 distinct stages in a four-phase model. The diagram and process model were developed to show both iteration and a focus on building prototypes to test with the community. We simplified the design process for client groups unfamiliar with the plethora of design process models. [Image: Ely]

There are a couple of important characteristics of the project that we should highlight here, which became immediately evident to us as design researchers after our first meeting with a charismatic and motivational school Principal (Deborah). Firstly, our involvement with the project had extended after the initial enquiry from Mindy on branding into a broader processual or systems design project because of the compelling human stories that Deborah and Mindy were able to share on children and families who were facing extremes of domestic violence, destitution or ill health. We could not fail to want to be involved in positively supporting the school and wider Department of Education in realising their ambitions towards a local version of the Harlem Children's Zone; our empathic values as designers engaged us fully in this social problem. Secondly, our involvement in an ever-changing problem situation relied on us securing the necessary funding to drive the project forward. Unlike professional design commissions, this project would rely on all of the partners (school, state department, local agencies and not-for-profits) to work together to secure the in-kind and direct funding necessary to be able to take affective action through the project.

DESIGNING FOR ACTION

Given the scale and scope of the Zero-to-Eighteen, a number of experts and community leaders with expertise across educational psychology, family health, law enforcement, social care, health care, childcare, pre-School, high-school *and* design we felt the need to draw attention to our contribution directly as a social design project. To this end, Ely designed a

project identity - *Social Design in Action* (Figure 2) – which would act as an internal identifier between us as design researchers in the university but also to the wider cohort of experts contributing to the *Zero-to-Eighteen* project.

Figure 2 Project identity for *Social Design in Action*. This designed artefact, used as a rhetorical device demonstrates how designer-academics operate across epistemological and ontological boundaries. In this project, we both construct and interpret knowledge for community use. [Image: Ely]

Early-stage prototypes help build coalitions (Cottam, 2019) and signify the intent of project teams. Here we used *Social Design in Action* as an explicit rhetorical device to garner support for our well-intentioned involvement for *Zero-to-Eighteen*. We were able to secure internal funding, under the *Social Design in Action* identifier, to conduct a literature review of developments in social design, design thinking, health and education services (conducted by Author 3, Smith).

Uncertainties over future funding and the sheer complexity of multi-agency working meant that our first collaborative workshop with project partners in the school (n.9) did not take place until June 2018. We positioned the workshop as a ‘Team Studio’ with a series of co-design exercises conducted over three and a half hours with the express aim of understanding the individual and collective difficulties that the school and wider community were facing. Given that we were inviting participants from the student services team in the school to share their (in some cases harrowing) personal stories of interactions with pupils and their families, the workshop required prior ethical approval (approval HRE2018-0341) and the production of participant consent forms and participant information sheets.

The studio session was structured in five sections, as outlined in Table 2.

Table 2 Team Studio collaborative workshop for ‘Zero-to-Eighteen’

Section	Exercise	Purpose	Duration
1	Introduction	Welcome to country, personal introductions and purpose of Studio	15 minutes
2	Storytelling	Provide insights into the lived experience of children and parents in the local community – using customer journey maps	60 minutes
3	Needs Analysis	Identifying the service and support that address problems identified by the customer journey maps	50 minutes
4	Service Blueprinting	Here, we map (1) common issues experienced by families/children; (2) what we currently offer; and (3) what is missing	30 minutes

5	Next Steps	Through the use of 'Pledge Cards' individuals identify what they see as key priorities for the project and commit to a task of their own	15 minutes
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We (Ely, Saad, Smith) photographed each exercise during the Team Studio, capturing outputs from each participant. The narratives explaining the journey of children and their parents provided all (researchers and participants) with key insights into lives in trouble from the perspective of the support worker or educator (for example Figure 3). The process of re-telling of these interactions with children and their families reinvigorated the collective desire to improve the systems and relationships that create these problems in the first place; the exercise focussed attention on prevention and support services (see Figure 4).

Figure 3 (left) Customer journey map telling the story of one support worker's involvement with a child and their family [Photo: Saad]

Figure 4 (right) Service Blueprinting exercise mapping needs to existing services, using coloured string. This allowed the participants to understand how the work they undertook already had value to the overall project aims. [Photo: Saad]

A week following the workshop, we synthesised the outcomes from the Service Blueprinting exercise (and the complex web of services and needs featured in Figure 4), clustering issues into service domains (Figure 5).

Figure 5 This sketched summary of the mapping exercise identifies service needs and project aims. By visualising concepts and ideas in this way, we were able to communicate (and inspire) the project team towards shared goals and mapped the problem terrain [Image: Ely]

THE PROJECT LOSES IMPETUS

Following the Team Studio workshop, the *Social Design in Action* researchers highlighted to the Zero-to-Eighteen project team that our work to date had largely been altruistic and speculative and that to enable us to continue working on the project it was important that we secured funding. To that end, we were invited into a funding bid with a number of key stakeholders, including a local government, state government, international charity, local not-for-profit and a charitable foundation in the hope of securing a substantial grant to develop some of the services that we had identified in the *Team Studio*. Specifically, we outlined and costed a project to re-design the local built environment to create more accessible, user-friendly (family and child friendly) services. A key aspect of designing user-friendliness was the design of an environment that would acknowledge local, indigenous cultures whilst recognising the complexities of a community that included a larger immigrant population whose cultural norms (particularly in relation to gender, government services and schooling) had so far inhibited common goals around supporting children from birth to workplace. Unfortunately, two key events ground the project to a halt.

Firstly, our short-term bid for funding as a collective was distracted by a regional state-wide initiative supporting early childhood and this subsequently pulled the potential funder's

attention away from our project (and this community) towards another metropolitan area. As a result, the international charity, not-for-profit and charitable foundation turned their attention elsewhere. The bid – led by the School – was not submitted. Secondly, our key advocate and sponsor of a design-led approach, Mindy, announced her resignation as she was offered a lucrative position elsewhere in the sector. The complexities of redesigning multi-agency services had taken its toll on the school and attention was, perhaps understandably, focussed on education services only. The *Zero-to-Eighteen* initiative stopped. *Social Design in Action* no longer had a project to drive forward. Our design initiative had come to an end.

ANALYSIS

When we were first approached to design a mere logo for a project, first author (Ely) attempted to open lines of inquiry by offering wider strategic human-centred design expertise. Following Ely and Saad's meeting with the principal of the school and the project co-ordinator, it was clear that *Zero-to-Eighteen* needed more than a brand identity to deliver an integrated health, education and community service to support life outcomes for children in the locality. As Shea (2011) has noted, graphic design expertise is often leveraged to, later, tackle more complex social problems through holistic, social or service design methods. Graphic designers are initially called upon to work on what appear to be simple communication issues around projects and initiatives and they are later involved with more strategic use of design (ibid: 152), changing behaviour, systems or processes (cf. Boehnert, 2018). Like professional design studios who are approached by clients for logos or brand identities, these projects invite interrogation by the design researchers to understand the underlying reasons for such a request and to offer alternative framings of problems (Dorst, 2015).

Unlike professional design studios where projects are unlikely to come to fruition unless clients are prepared to pay for them immediately, designer-academics remained engaged in this project for long periods of time, driven by a combination of empathy, curiosity, action-orientation and - initially at least - not by financial constraints. By staying engaged with a problem situation for longer and through their rich interactions with stakeholders, we were able to understand the sheer enormity of the task of designing multi-agency services whilst understanding the limits of design. In our particular setting, social capital (Lin, 2001) alone is not enough to sustain a project, however well-intentioned and ultimately life-affirming it may be.

3.2 Case Study #2: Humanities Research

PROJECT INITIATION

In the case study above, designer-academics are shown to traverse modes of design knowledge, starting out working on 'everyday' forms of design (Dorst, 2011) where we make 'things' – logos – and then applying our strategic thinking to much more complex (and in many cases still unresolved) design or innovation problems. This boundary spanning

(Schaminée, 2018, pp.89, 112) becomes more evident in the next project: *Research in the Humanities*. This project originated from a senior academic in the Faculty of Humanities (a Faculty of which we belong) looking for new ways of working amongst research leaders. Author 1 (Ely) initially designed and delivered a part-day workshop looking at how we might develop working practices which were to be more generative (collaborative) than discursive (committee). The starting point was Jeanne Liedtka's ideas towards taking more design-centric approaches to managing:

"Most of us have learned to talk as if we are in a debate advocating for a position. But within a diverse group, debate is more likely to lead us to a stalemate rather than breakthroughs: breakthroughs come from asking new questions, not debating existing solutions; they come from re-examining what we take as given."
(Liedtka, 2006, p.17)

Ely applied Liedtka's process model for design - the Design4Growth model of '*What Is? What If? What Works? What Wows?*' (Liedtka & Ogilvie, 2013) – to frame the development of research 'narratives' that could explain the diverse forms of research in the faculty and to present Humanities research to a broader science/technology-oriented academy. The workshop was structured as outlined in Table 3:

Table 3

Section	Exercise	Purpose	Duration
1	Part One Introduction	Exploring the problems; introducing design thinking and introducing Problem 1: Our focus topics are not yet motivating our stakeholders	20 minutes
2	What is...research in the discipline?	Sharing of conceptual, theoretical, philosophical, methodological and practical interests	30 minutes
3	What is...the common ground? What are the outliers?	Summary of (2) above and share with wider team, followed by whole team synthesis	35 minutes
4	What If? What stimulates? What might challenge us?	Identify salient topics that discipline areas can coalesce. What themes matter to the outside world? What stands out?	30 minutes
5	Part Two: Introduction: Smarter, lean ways of working	Exploring other models of organising (e.g. tribes, squads, agile)	20 minutes
6	Get Organised	Agreement on nature of squads; appoint squad leaders	20 minutes
7.	Decision Making	Using design-centred thinking: Why? Why? Why? Why?; Make a Pledge	15 minutes

The aim of the workshop was to bring research leaders (n.23) from across the Faculty together to find new ways of working and to commit, through the formation of teams and a

pledge (similar to the Team Studio in Case Study #2) to take action. For the sake of brevity in this paper, rather than describe each stage in detail here in the following section we take a closer look at the outcomes.

DESIGNING BEYOND THE WORKSHOP

At the end of the workshop, a summary of key research themes within the Faculty emerged (Figure 6).

Figure 6 Concept map of key themes emergent from clustering of research themes in the workshop (Image: Ely)

Using the qualitative data analysis tool, NVivo, Ely also coded each of the sticky-notes from the first collaborative workshop to produce both a Word Cloud (Figure 7) and Coded Tree Map (Figure 8) below.

Figure 7 Word Cloud showing prominence of key terms on sticky notes from the first collaborative session

Figure 8 Coded Tree Map showing frequency of terms in first collaborative workshop. Reading top to bottom, left to right, we can see Social Justice, Sustainability and Pedagogy as the most mentioned, with Visual Social Media and User Experience & Technology next. This shaped subsequent discussion on research focii.

Acknowledging that key concepts emergent from the workshop were biased towards those researchers in the workshop, one team – led by Ely – focussed on the development of a written articulation of Humanities research intended for a public (popular) audience. The idea of small teams working on discrete work packages in a non-committee structure appeared elusive to the group, yet a quorate of 5-6 academics remained committed to the concept of small, action-oriented teams developing research narratives. Again, rather than simply meeting around a committee table, we synthesised ideas emergent from the workshop to develop (thinking through the question ‘What If...Humanities was articulated as this?’) overarching focus areas – *People, Planet and Technology*.

This focus on people, planet and technology became a way of framing a broad and diverse range of research projects, many of which cross these distinctions. Taking a series of projects from each functional School, Ely edited and designed a *Research for humanity* publication which, rather than reify these thematic distinctions, simply summarised the strength of research in the Humanities (Figure 9).

Figure 9 Thumbnails showing cover and double-page spreads from the publication “Research for humanity” designed and edited by Ely. The designed artefact is the result of a research endeavour in which design thinking methods have brought together researchers from diverse fields to develop a coherent narrative description of research activity and practice-based design has then turned these narratives into a discursive (Tharp & Tharp, 2018) artefact.

The resultant publication included contributions on the preservation of sensitive places in Aboriginal history; visual art and culture in times of conflict; Business Information Modelling and critical infrastructures; the deficit in audio description in Australian broadcast television; Open Knowledge initiatives; and online harassment and notions of free speech’.

ANALYSIS

We had taken an action-oriented design approach throughout and we have begun to ‘socialise’ our outcomes across the university (sharing practice and artefacts). Importantly, the idea of *People, Planet and Technology* as underpinning lines of inquiry for researchers in Humanities has allowed many diverse disciplines (for example, human rights and social justice; media, culture and technology; STEM education; creative arts and applied linguistics) to recognise their place and belonging in a research community. Design research has been applied in two important ways: Firstly, in a processual sense to find new ways of working. Our collaborative workshop, with a focus on *What If?* reoriented the academic gaze away from the problems of *now* towards creating a possible future (Binder & Brandt, 2019, p.102). Secondly, the making of ‘things’, here in the form of visualisations and publications is design as knowledge creation through a form of graphesis (Drucker, 2014). The publication is yet to find completion, yet such an artefact is a discursive form of design (Tharp & Tharp, 2018) which stimulates conversation, debate and (sometimes) disagreement.

5. Discussion

As the case studies of *Social Design in Action* and *Humanities Research* show, often the act of designing goes beyond artefacts and into the territory of services, experiences and processes. Indeed, in these instances projects can either begin or end in the creation of ‘things’. The projects outlined above provide a glimpse into the varied activities of ‘designing’ by designer-academics. As we explained, such projects are set against the backdrop of substantial curriculum development and delivery, PhD supervisions, information design projects, article submissions, executive education programmes, research bid-writing and design-led innovation initiatives aimed to improve university processes or services.

Designer-academics are, just like their professional brethren, design entrepreneurs (Hoover & Heltzel, 2013) who respond to the situations they confront and seek out alternative ways of framing problems (Dorst, 2015). Designer-academics are the innovative designers as Bonsiepe described them – ‘tinkerers’ who, like innovative scientists, try things out experimentally (Bonsiepe, 2007, p.29). As we have seen, not every design project that a designer-academic engages in or initiates ends in a positive outcome (or even *any* outcome other than failure in some instances) but this should not be the reason to ignore them in favour of the professional designer who works in industry. Designer-academics cross not only disciplinary boundaries but the boundaries of research, practice and pedagogy. Just as as Binder and Brandt (2017) have described design research as being homologous with any other design practice, so we must think of these monsters in the borderlands between academia and industry as homologous to the revered ‘outstanding’ designers that dominate our short history.

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