Critiquing the North American Design PhD

A symposium exploring the institutional frameworks for practice- transforming design research.

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School of Design
Carnegie Mellon University

Participant responses - 2013

Bryan D. Orthel, Ph.D.

Kansas State University

As a graduate of the now-defunct doctoral program in design at Washington State University, I find that your question about design, practice, research, and interrelationships underlines the primary purpose of a design PhD. Doctoral-level explorations of design (whether formally practice, exclusively academic, or in-between) rely on engaging interdisciplinary problems. The uniqueness of a designerly way of thinking provides a distinct perspective on a problem, but the design process then inherently requires viewing the problem through a range of disciplinary knowledge sets. There are unique sets of design knowledge, but the design process cannot reach completion without outside knowledge and questioning. A student working through a design PhD engages issues at many scales and may only see the design solution for those issues multiple years after the formal completion of the academic program. The PhD provides the beginning of exploration, practice, and research. The degree recognizes the student's skill set as a designer and a researcher to approach problems in ways that can produce rigorous, recognizably valid results. While a design PhD student must learn (or recognize) a design way of thinking, the challenge derives from simultaneously drawing upon a range of disciplines to produce work that addresses a problem. The desired result becomes the process, not the product of practice or research.

The interdisciplinary of design, particularly at the level you are discussing, does frame a distinct approach from many other academic disciplines. Yet, the design way of knowing and practicing requires interaction and acknowledgement of its place within broader understandings of human knowledge, activity, and the practice of living.

The terminal degree for design educators?

In line with my previous comments emphasizing the need for interdisciplinary engagement in design, the question of degree levels appropriate for design educators should also draw from standards outside the design professions. Further, the issue—especially in a field using a practicebased approach—should align with demonstrated ability rather than simple accumulation of degree title. In this I mean, the strength and reputation of design within the academy will be judged on its products in comparison to other disciplines. Both inquiry-lead and research-lead scholarship can produce valid, vivid, and relevant research, but not all individuals holding either an MFA or PhD produce such work (or are capable of meeting the academy's standards). The recognition of multiple approaches to practice-based design research then requires multiple metrics for recognizing quality design research.

A standard of high-quality scholarship / inquiry / design and instruction should replace the designation of a singular 'terminal' degree in design. Both MFA or PhD degrees provide evidence for judging the abilities of a candidate for a position in the academy, but do not stand alone as the best qualification. The distinction between an educated designer and a credentialed designer must be recognized. Education is not simply showing up; developing the capabilities to be a design educator requires more than simply being a designer, an educator, a researcher, or an expert.

Duration, process and examination of the degree program

The question of degree process and examination must be reconciled with questions about research evidence / artifact and demonstration of diverse abilities (i.e., research, teaching,

presentation of ideas). The structure of how to assess and promote strong research links to the form and scope of the research itself. That said, the expectation for demonstrating excellence across a range of skill sets must be structured in some way.

A previous query pondered the responsibility of teaching PhD students to teach as a symbiotic or parasitic activity. Similarly, the question about the appropriate form of evidence and communication of result presents the PhD program in design as a challenge of expression rather than product. In these questions, the dichotomy of content versus communication remains unresolved even if the ultimate expectation is strength in both. While traditional forms of examinations and dissertation documents can test these, they are less appropriate for assessing thinking, procedure, and expression of design research in the human context. In contrast, a continual approach to assessment captures examples of thinking, communication, and evidence in progress and provides opportunity and expectation for integrated feedback in process.

An integrated, curriculum-wide approach to assessment would consider student development alongside teaching and research-skill development in numerous, less formal settings. Instruction observation, monthly research colloquia, revolving media representations (of design /research work and related to topical exploration using posters, gallery display, video, online interactions), and written reporting provide an even and sequential record of development. The cumulative set of evidence captures performance, research, and outcomes as a portfolio for self assessment and degree consideration. Further, the vitality of continuous low-emphasis activities and idea exchange throughout a program (e.g., revolving display, regular presentation) promotes collaboration between faculty, students at various levels, and invited outside participants.

This approach to assessment also affects the duration and typical structure of the academic year. If activities are to be even and consistent, the lags associated with term breaks and summer months should be minimized. Term-end assessment records

would note development in various areas rather than a specific topical course grade. Overall, a continuous climb replaces a rush of independent deadlines.

The questions of internal-external and supervisorial oversight are only partially addressed above because they also depend on other aspects of the program's structure. The issue of internal and external participation addresses program reliability and self-assessment rather than individual student demonstration. The structure of student-supervisor interaction draws in issues related to efficiency of human and university resources and expectations for performance and productivity.
Participant comment: The terminal degree for design educators?

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recognizing quality design research.

Beverly K. Grindstaff

San Jose State University

Designerly Knowledge

It is assumed as a matter of course that the design Ph.D. signifies advanced technical proficiency and general superiority over other forms of design education. But what efforts ensure its holders possess commensurate understanding and empathy with the fragile human bodies and psyches that will interface with their future work? Cameron argues, "knowledge about the be-thinged human condition is complemented by knowledge about materials and forms… knowledge that is significant for complex social challenges that derive from the networked nature of agency…"

The critical discourse of be-thingedness has strong overlaps with design history and theory as are currently taught. It is the language that describes the interconnected inquiry of anthropology and investigation into the affect and lived experience of the built environment. If this discourse is deemed to have validity, then it is imperative that it appears in the design Ph.D. Let's examine the issue empirically. From where I sit in the heart of Silicon Valley, surrounded by computer coders, Google employees and emerging dotcom billionaires, the brilliant sheen of technical proficiency is abundant and undeniable. Yet the ostensible cultural advantages and domains presented us by these best and brightest define in practice realities of unshakable isolation, a virtual terrain teeming with "friends" but not actual human relationships, MOOC "classrooms" that mock pedagogical methodology, and online marketplaces rife with unimaginable materiality. It's a virtual paradise that nonetheless duplicates the flattened world imposed by Aspergers syndrome; its products are of interest but often alien or hostile to human interconnectedness. In this the vaunted be-thingedness holds as its epistemological anchor the cultural anthropology that secures intersecting critical discourses of materiality, making, lived experience and reception. Compare

the foundational assertions of Clifford Geertz, who writes:

There is no such thing as a human nature independent of culture. Men without culture would not be… the nature's noblemen of Enlightenment primitivism… They would be unworkable monstrosities with very few useful instincts, fewer recognizable sentiments, and no intellect: mental basket cases… As our central nervous systems --and most particularly its crowning curse and glory, the neocortex-- grew up in great part in interaction with culture, it is incapable of directing our behavior or organizing our experience without the guidance provided by systems of significant symbols…We are, in sum, incomplete or unfinished animals who complete or finish ourselves through culture. (The Interpretation of Cultures, Basic Books, 1973, p.49)

The inclusion of non-studio coursework in design history and theory would expose those pursuing to the outcomes of prior successful applications of techne as well as to prevailing modes of discussing and thus furthering the designed object itself. The need for this component is demonstrated in contemporary design by event such the upcoming Universität für angewandte Kunst Wien conference, "Flows (Un)bound: Fluid Materials in Artistic and Scientific Practices," which will explore the assertion that within design as a "artistic and scientific practice, specialised know-how and strategies are necessary to do justice to the mutability, instability, formlessness and processuality characteristic of fluid materials."

Artefact vs Text as evidence of research

Here Cameron responds that "Focusing on diversity of writing foregrounds that writing it itself a design activity. Nevertheless, there is also a substantial literature (ironically) demonstrating that designs are themselves arguments: an artifact, communication, or environment makes claims about how people-with-designs like to live and work, drawing more or less explicit general principle warrants, and the success of the design with users is a kind of evidence. So artifacts are not in principle distinct from writing as a form of argumentation and are crucial to design research submissions."

The modes of communication proposed – artifact, text, curation,

installation, exhibition, museology – to adequately express design and design research are neither simple nor intuitive. Likes all skills, these are bound by method and standards; like all forms of communication, they are also required to "speak" eloquently within established and/or expected parameters to achieve the desired linguistic and/or visual legibility. Other equally necessary applications exist as well: the effective client brief, the team update, the interface with fabricator and manufacturer, and so on. My institution has yet to add a design Masters. However, my work with professional designers has made manifest the benefits of fluency across the broad range of communication. In all case, this fluency was acquired through exacting training in design practice proper in conjunction with personal or institutional engagement with cross-disciplinary studies.

Stephen Neely

Carnegie Mellon University

Greetings,
While I have no shortage of opinions as relates to the brief, I will offer two points for the purposes of this response.

1.
"I would insist that while there is research in design practice, its value is the difference it has with academic research." (pg. 5)

This différend is truly both the problem and the opportunity. The academy, and our university Carnegie Mellon University in particular, has preached a steady line of rhetoric espousing the merits of interdisciplinary work, yet the opportunities for these overlaps are not fostered in the traditional programs. The chasm between the ideal and the practical reality is as large as the valley that was filled in between Doherty Hall and Margaret Morrison. The university claims to understand that without the overlap and collaboration of disciplines and without exploiting the transdisciplinary opportunities the work can not grow, yet the systems are not in place to allow this evolution. The creative-practice-based PhD will establish such an opportunity. It is an opportunity both apropos and challenging to the institution.

2.
"the permanence of design is distinct from most kinds of performance" (pg. 9)
It appears I am well aligned with Hasemann in so much as this perspective mischaracterizes and worse, completely ignores the range of the term "performance". The definition of "performance" should be at the root of the discussion. Design is no more permanent or mass produced than are the multitude of interactions with a given design. The performance is ubiquitous.

Modern research in design must include attention to this dynamic, which speaks to the very nature of all interaction, a dynamic which can only be viewed in creative-practice.

Very best,
Stephen

Dimeji Onafuwa

Design Professional

Developing A Global Design Research Cannon

The Nigel Cross article, "Design Discipline," presents design research as the conception and realization of new things and processes as exemplified through a process of abductive problem-solving and distilling such challenges to their core components in order to derive options that can be further synthesized into a acceptable solution. While the concept of the designer's role as a problem solver is very useful, it isn't entirely Western in origin as it is evident in sub-saharan african examples like Nsibidi and Uli Designs - an intricate system of symbols found in southeastern Nigeria dating back to around 400 CE. These were created to solve societal problems ranging from aesthetic to legal to millitary. At a simplistic level, we can compare Nsibidi designs in that era to the design prototyping of products like the smartphone in this era, both derived through several iterations and stemming from a response to the basic human need for problem solving and new experiences which when approached adequately will add value to society as a whole.

Eulani Labay

Independent Scholar, Designer, and Researcher

Design practise as research

It is assumed that doctoral study enforces a rigor that is unmet in previous levels of study, particularly in design. However, in some institutions of design, the boundaries between modes and outcomes of learning at various levels have recently begun to blur. One possibility is that when doctoral faculty teach masters students, and masters faculty teach undergraduates, there is a tendency to challenge students beyond the expectations of their level of study.

While the design field is new to doctoral studies, it seems that a feedback loop may be in place that is beginning to re-establish the criteria for learning at all higher levels of education. As a result, certain values regarded as advanced—such as rigorous research methods as a manner of practice—are being pushed at even the introductory levels. (For example, Parsons The New School of Design has just reworked its First Year program to include a core course in Sustainable Systems, a seminar intended to engage the design process with scientific data from the start of one's training.)

In these scenarios, it seems critical that design continue to challenge the status quo of academic standards in order to remain relevant to our changing society. Note that design is not alone in this university debate; students and faculty in fields newly established to the doctoral level, like nursing, and those well established, such as psychology (see Beyond Academia), are also struggling to engage their work with real-world contexts. Ultimately, we might consider practice-based research as a way for PhDs in design and other fields to come down from the ivory tower and collaborate on the complex social issues we are facing now.

Design vs Art vs Performance

Let's look beyond performance-as-prototyping, or role play, as we see in human- computer interaction design, and in Scandinavian traditions of innovation consulting. As the complexity of social issues has demanded the examination and design of systems, the nuances of human-human interaction and behavioral outcomes have become more significant to design practice, giving rise to anthropological influence and empathetic research methods. For that reason, performance-as-art, or theatre, also has a place in design research as a way of probing human needs, perspectives, and responses towards a useful, practical end. Students in Parsons' MFA Transdisciplinary Design have proposed new uses of applied theatre to engage communities in challenging discussions about human rights and other topics, for the purpose of advancing political actions (see Christopher Patten's Enacting Policy).

Design vs Architecture vs Human Computer Interaction

See my response to Provocation 3, in regards to complexity of social issues > design of systems > relevance of 'human-human' interaction design research. Dynamic interactivity also exists between people; in this way, sociotechnical platforms can be seen as mediation for an outcome, rather than an outcome in itself. For example, where would we put Airbnb, Zipcar, Meetup, MOOCs, and other applications in terms of scale (digital platform vs. community vs. paradigm shift)? Where would we place them in terms of form (digital vs. analogue artifacts)?

If design was considered to be a meta discipline—over architecture, product design, and digital design alike—only the architecture field would need to come to terms that it exists parallel to others within a greater context of design practice. In terms of research and university standing, that perspective could level the playing field for the design disciplines to establish distinct research methods, and to collaborate more fluidly and with more defined areas of expertise.

Dr Jondi Keane

Deakin University

The document you have provided regarding PhD by design practice is comprehensive. As an artists whose has taught on three continents in art and design institutions over 35 years, I am well placed to offer insight and some form of benchmarking on the structure and implementation of PhDs in art and design. I am currently a senior lecturer in the School of Communication and Creative Arts at Dakin University with 6 principal PhD supervision and 6 associate supervisions. I am also a co-applicant on a 7 year, 3m$, SSHRC grant from Canada on 'research creation' or 'practice-led research' called Immediations: Art, Media and Event, with chief investigators Erin Manning (Concordia) and Brian Massumi (Montreal). The issues on which I would feel particularly able to comment include:

• Design practice as research and designerly knowledge. My contribution on this issues would be as a result of myemphasis in teaching and research on modes of knowledge acquisition that are informed by engaging with specific material processes and understanding one's own orientation and dispositions towards modalities of perception and action;

• Design vs art vs performance. My own education history and teaching experience over 35 years began with literature and philosophy and eventually visual art (undergrad) to the completion of an MFA degree in painting (with several colleagues pursuing PhDs and DAs in poetry), to the development of installation practices, interdisciplinary collaborations and the founding a performance company in

Switzerland and eventually completing a PhD in Australia. As a result I have a range of contexts to draw upon and cross reference;

• Artifact vs text as evidence of research. My supervision of PHD candidates in the two programs in which I have taught has allowed students to propose projects and appropriate supervisors as well as the forms of writing (mini-thesis, exegesis, creativenon-fiction) best suited to articulate the issues, ideas and discourses that contribute to the production of new knowledge. Often this contribution is a methodology that works across and through trans-disciplinary engagements (that recognize knowledge practices rather than disciplines or domains of knowledge);

• On the issues of collaboration, research and teacher training, ethics and terminal degree, I have much to say informed by my travels and experiences teaching art, design, and supervising Ma, MFA and PHD creative projects. I have been active in Australia on the recognition of creative work as research and been invited to participate in: Trans media forums, ARC research panels on assessment of Creative PhD projects, several RMIT PRSs in Melbourne and Ghent and examine 8 PhDs by practice in Australia. I am soon (Jan 2014) to be appointed the Associate Head of School (School of Communication and Creative Arts) with the portfolio of 'Technology and Environments', which attempts to match pedagogical concerns with the design of learning spaces and the implementation of learning and creative technologies.

In the interests of disclosure, Pia Ednie-Brown is my spouse and, while it would be very nice for us to come across and participate together, I am proposing to join this symposium because this is an area in which I have considerable and unique experience, being an ex-pat and having taught at Art Center Europe (affiliate of Art Center Pasadena) in addition to my involvement in the debates around practice-led research in Australia.

Sincerely,
Dr Jondi Keane

Peter Hodges

Institute of Design, Illinois Institute of Technology

Clearly design, for reasons including the ambiguity, subjectivity, and the physicality of humans, is, similar to medicine, a practice-based activity. However, design employs theory across many disciplines, and (formal) theory of design, although mainly arising from engineering design, does inform some fundamental, cross-disciplinary knowledge about design. Examples include why design arguably has a generate-and-test, search-based aspect, and why diversity is advantageous. David Deutsch's (The Beginning of Infinity) argument for humans as explanatory beings offers the optimistic perspective that design theory, in the still young field of modern design thought and practice, can continue to advance.

Human design is a pluralistic activity that can benefit from advanced, in-depth pursuit of both practice-based and theoretical research. This paradigm has academic precedence: some engineering doctoral programs offer both a Ph.D. and a Doctor of Engineering (professional practice). The increasing complexity of designed artifacts (sociotechnical and cyberphysical systems), the dynamics of social change, and the need to efficiently and sustainably manage resources argues for depth and breadth of understanding and knowledge generation; an inclusive, mutually informing paradigm of practice and theory. The School of Design at Carnegie-Mellon, a major academic center and research university, can lead in design education by engaging its community to support both practice-based and theoretical research.

All human artifacts began with some combination of intention and imagination. Explore, experiment, discover.

Jillian Hamilton

Queensland University of Technology

In the emerging literature on creative practice research, art and design are often referred to as a unified field. They are bracketed together (art-and-design), referred to as interchangeable terms (art/design), and nested together as if the practices of one domain encompasses the other. However, substantial differences arise out of the goals of the research, the intentions invested in the resulting "artefacts", and the knowledge claims made for the research outcomes. In a forthcoming book chapter, a colleague Luke Jaaniste and I use the terms evocative practice research and effective practice research to describe two distinct research paradigms. In short, evocative practice research (often pursued by creative arts fields) produces artefacts that evoke affect and resonance, and are poetically irreducible in meaning. On the other hand, effective practice research (often pursued in design fields) seeks a solution (or resolution) to a problem identified with a particular community, and it produces an artefact that addresses this problem by effecting change (making a situation, product or process more efficient or effective in some way). These fundamental differences give rise to a number of contingent attributes of the research such as its forming contexts, methodological approaches, the advent of the practice, and ways of evidencing and reporting new knowledge.

The above paragraph is an extract from a forthcoming book chapter, Hamilton, J., Jaaniste, J., Effective and Evocative: A Spectrum of Creative Practice Research, Material Inventions: Applying Creative Research, E. Barrett, B. Bolt (Eds), London: IB Tauris

Various other of the provocation topics are addressed in the papers listed below.

Book Chapters

In Press

Hamilton, J., The Voices of the Exegesis: Composing the Speech Genres of a Connective Thesis, Doctoral writing in the visual and performing arts, L. Ravelli, B. Paltridge (Eds.), London: Libri

In Press

Hamilton, J., Jaaniste, J., Effective and Evocative: A Spectrum of Creative Practice Research, Material Inventions: Applying Creative Research, E. Barrett, B. Bolt (Eds), London: IB Tauris

Journal Articles

2010

Hamilton J. and Jaaniste, L., A Connective Model of Practice-led Research Exegesis: An Analysis of Content and Structure, Journal of Writing for Creative Practice

Published Conference Proceedings

Kakee Scott

Lancaster University (Imagination Lancaster)

I'm interested in talking a bit about the value of design scholarship within a critique of North American design education generally. This theme appears throughout your discussion points. I had a moment the other day when the connection between my PhD work and my teaching was crystalized in such a coherent way in speaking with a colleague at Parsons. The conversation was typical of the angst that is felt in US design schools among design educators who put emphasis on professional practice almost in defiance of any scholarly approach. The colleague was responding to my focus on critical discussions in a design research 101 class- his comment, more or less: "I'm all in favor of a liberal arts approach, but we have to prepare them with skills to sell themselves on the job market." Me: "Yes, but we also have to prepare them to deal with a radically changing job market." This is what I'd like to emphasize. Practice-based design scholarship is essential to professional design practice today because the economy and nature of design work is changing so dramatically, so quickly. Practice-based design scholarship is one of the clearest ways to situate design professions within and to contribute design talents to larger discussions of global systems change, especially regarding sustainability and the economic (mega)crisis.

This leads to a second, bigger point. Design scholarship matters not only to design, but also to the development of general scholarship addressing these changing global systems because of the unique contributions that could be made through practice-based research. While the dominant modes of research in other disciplines focus on dissecting problems or identifying evidence of change, design is one of the few disciplines that allow for a pragmatic futuring approach valuing possibility, imagination, speculation and exploration in balance with description, evidence, analysis and critique. In particular, I'm thinking about

emerging forms like strategic design, critical design or design for social innovation, where design practices are extracted from their industrial context and history, and repositioned and rebuilt to address concerns of long-term societal change. Beyond arguing for validity within design education, there is a wider validation and valuation that needs to take place in the academy. Doctoral work, in itself and as demonstrating the institutional prioritization of design scholarship, allows for the kind of fundamental research on and through design practice necessary to establish design as a recognized, essential form of transdisciplinary practice.

Bonne Zabolotney

Emily Carr University of Art and Design

I think the key questions that you and Cameron have devised will generate many days of discussion, and I was reminded of Tony Fry's insistence that we consider new practices, or the concept of 'redirection' as a design practice. My two concerns (which may be distinctly Canadian) are (1) whether building a practiced-based PhD requires a critique of the design profession in which it intends to participate, and whether this may be required as we address all the provocations in your document; and (2) whether the role of a PhD designer in a political economy needs to be probed. Because designers are complicit in the commodification of the world, it is vital that they understand their contribution to political structures and the role of commodities in economies. Designers have a capacity to contribute (knowledge, ethics, design thinking and processes) to policies that affect government at various levels. This is, as I'm sure you know, particularly important in issues involving the environment and social justice. So, while political economy may seem like a genre of design or a research topic, design researchers and practitioners must be prepared to contribute to centres for policy, or think-tanks, in various political arenas.

Cameron also mentions a necessary oscillation between working from a design point-of-view and working from a critical-studies point-of-view. I pointed out that this oscillation could/should be a practice unto itself. The danger of critical theory and practice working as a binary is that Critical theorists often develop a cynicism towards the practice, and practising designers equally develop a disdain for non-practicing critics, and what is sometimes viewed as an esoteric approach to understanding design. This practice of oscillation can contribute towards an epistemology and rhetorical strategy unique to design -- something you also mention in the same topic (Designerly Knowledge).

Finally, in regards to ethics and research, we do have a framework for ethical research in design set-up through Canada's Tri-council ethics approval, which has been working quite well with our current research work: http://www.pre.ethics.gc.ca/eng/education/tutorial-didacticiel/ . It is a bit of a retrofit, as it was initially built for social sciences and humanities research, but it seems to be working for now. In Canada, building a distinct Design Ethics framework for approval for federal funding will need to work hand-in-hand with my point about design contributing to policy and think-tanks.

Colin M. Gray
Indiana University

Design v. Architecture v. Human Computer Interaction

As we look across traditional and emerging design disciplines, several of them seem to express a latent desire to lay claim to the "whole organism" of design—from small to large scale. These fields offer different perspectives on the design problem: architecture in the design of physical spaces, human-computer interaction in the design of virtual or augmented physical experiences, instructional design in the design of learning experiences or systems, to name just a few. On its face, these views might be seen as contradictory, but it may be more generative to see these perspectives as complementary in informing a truly transdisciplinary view of design research. In theorizing the scale of design more thoroughly, we might conclude that architecture currently "owns" the creation of physical spaces, regardless of scale, but it does not always naturally follow that architecture would indicate the creation of all experiences (thought of as transcending physicality in some cases in use of technology, service design, etc.). We must confront the idea of designing for experience, determining what elements are strongly theorized (with appropriately rich precedent) in architecture, and which elements must be created within this new medium—defined by the digital and the virtual, either as a replacement for or augmentation of the physical.

In addressing the historical dimension, many traditional design disciplines have been under-theorized, and have tacitly left questions of scale and wholism to architecture. But emerging design fields are now confronting and addressing these issues anew, building research and theory to better understand pedagogy and practice. While architecture has built inroads in practice-based research, non-traditional design domains such as HCI have tended to abstract or over theorize practice, often to the detriment of the resulting research—this knowledge

frequently has little or no utility to designers, and frequently caricatures practice, rather than understanding it on its own terms. A richer understanding of practice is critical for these design perspectives to be taken seriously in a research environment that is frequently dominated by "pure science" envy. Both sides have shortcomings, and in theorizing design as a transdisciplinary construct more completely, each perspective could learn something from the other. A professionalized field of design such as architecture should inform practice-based research in emerging design fields, creating a richer understanding of and appreciation for practitioners; likewise, emerging design fields also have valuable knowledge to share regarding their theoretical justifications for existence within the designedly tradition in a research climate often dominated by a rush to "scientizing." While traditional design disciplines have infrequently had to justify themselves as a social or pure scientific field, emerging design fields have had to provide precisely this form of justification. These new fields have had to build a research tradition around design, which in some cases may depart from the traditional "academy" view of design research. It is important to identify and learn from these varying approaches to understanding and applying design in fields or settings which would naturally be hostile to types of research that may be inappropriately labeled as non-empirical or characterized by a lack of rigor.

Tara Mullaney
Umea Institute of Design

Engaging with the design process within research has been called many things, from 'constructive design research' to 'research through design', to 'practice-based research', but the key aspect of each of these terms is that they describe design research in which making becomes the key means in constructing knowledge. As a PhD student in design research, I have been struggling to understand the many different forms of design research, and what it means to do practice-based design research, because it has become quite clear to me that academic and professional design practice are unique and different from one another.

I have come to see that within my own practice-based design research, the act of designing is a form of experimentation. The designed thing becomes the tool with which I can ask questions, and challenge 'what is' with 'what could be'. According to Koskinen et al. (2012), "When researchers construct something, they find problems and discover things that would otherwise go unnoticed". This type of design practice, focused on problem-finding and discovery, is quite different to the designing that occurs in professional practice, which is often problem-solving oriented and solution focused. However, the methods, tools, and approaches used in both of these design processes are similar or the same.

I agree Laurene's response to the question on design practice as research, where she states that not all practice is academic research, and that the outcome of a practice-based PhD must be a critical and transformed practitioner able to apply their evolved understanding of design in practice. What must be emphasized here is the focus on practice-based design research. From my interactions with other PhD students in Sweden and other European countries, practice-based design research PhD's

are often called 'industry PhD's' where the PhD student is paid by a company and does their research working on projects within the company. I believe that there is a risk in these types of practice-based research pursuits that the researcher remains too closely tied to the wants and needs of the company sponsoring the research, and doesn't get the chance to step away and develop their own critical practice. It is important to separate out design practice from design research practice, and be given the space to develop one's practice within design research during one's PhD, which can be facilitated by research funding without any industry strings attached.

The concern that PhD educated design researchers won't have the skills necessary to educate master's level students in Studio-based education is a valid one, if the research conducted is not practice-based. However, those individuals who do actively engage in and with the design process during their research, instead of studying it, i.e. those conducting practice-led research, will be just as qualified as those with an MFA. Furthermore, I believe that the training that these individuals receive in critical thinking throughout their PhD studies will set them apart from their MFA colleagues in their ability to ask new questions and challenge the future direction and role of design.

Koskinen, Zimmerman, Binder, Redström & Wensveen (2011) Design Research Through Practice. Morgan Kaufmann Publishers.

Peter Lloyd and Anne Boddington

University of Brighton

The CMU propositions have outlined an interesting discussion about practice-based design research that I've been aware of for some years. From my perspective in the UK it was (and is) necessary for practice to be interpreted as research in order to gain research credit (or justify the position of design and the arts within the university), something that I thought was good and have been supportive of. The PhDs that I've come across that have involved, drawn on, or used practice have fitted within existing systems of PhD regulation however. If the CMU proposition is to extend these regulations then I think the propositions need to be a little more concrete. The details will be important, and if re-writing the regulations opens the door to poor practice as an excuse for research then it shouldn't be done.

So my questions coalesce around quality and consistency and how practice-based research can ensure these things. The question is not 'should we have practice-based research?' but 'how can we ensure the quality of practice-based research?' or consistency of supervision, or of assessment. Or of simply detailing the size and shape of the thing that is handed in to the University. To progress the argument, we should concentrate on practical things like supervision, training supervisors, assessment, and quality.

At Brighton we have recently been involved in putting together a consortium funding bid for a doctoral training centre in Design for 50 PhD students over five years with four other Universities. Our reasons for doing so are not dissimilar to the CMU proposal:

"The Design Star consortium aims to develop future intellectual leadership in design: research leaders of the future who are equipped to engage with and make a difference to contemporary social concerns, knowledge production and creative practices. We recognise that design

research must address and respond to societal issues that are complex and that are irreducible combinations of social, political, economic and cultural elements. The heterogeneous nature of contemporary design issues in areas such as the environment, transport, democratic participation, science and technology, healthcare, and creative production therefore requires an approach to research training which places diversity and interdisciplinarity at its core."

We have framed practice in terms of 'engagement' and the PhD as being a way of intervening in the world then analysing and reflecting on the consequences of that intervention in depth. We have also talked about trying to progress the form of the design PhD to include practice-based elements along with, for example, history and theory, that together we think will demonstrate academic rigour and importantly fit existing regulations in a number of universities. A balance of different kinds of elements are important to any PhD, I think and this perhaps key – what are those elements and what is the correct balance?

There are of course other 'traditional' disciplines that have practice-based elements to them – computing, engineering and architecture are good examples – all rely on practice in their research to some extent so could provide useful reference points. As indeed do other practice-focussed areas - writing, film, music, and fine art. We usually think of the practice of filming, for example, as distinct from, say, film research. If we take any one of those disciplines and put it into the 'research into X through X' formula - e.g. research into filming through filming - we just seem to get more questions about what that second X would actually be. What distinguishes 'research' filming from 'normal' filming?

By practice, though, what is somehow not meant is the practice of design-as-it-occurs-in-commercial-reality because by and large this happens with a client, and a design team, i.e with other people. What is implied by practice is praxis: an individual process of making, and of knowledge being generated through that making, and present in the thing made. This might be at odds with the definition of practice-based research given in

the first paragraph: "the processes involved in the professional practice of designing".

A focus on practice alone is, I think, mistaken. While I can imagine some exceptional individuals producing work of great quality and rigour I think in general this won't the case. In this light I found proposition 5 interesting which seems to affirm this point.

"focussing on the diversity of writing foregrounds that writing is itself a design activity. Nevertheless, there is also a substantial literature (ironically) demonstrating that designs are themselves arguments: an artifact, communication, or environment makes claims about how people-with-designs like to live and work, drawing on more or less explicit general principle warrants, and the success of the design with users is a kind of evidence. So artifacts are not in principle distinct from writing as a form of argumentation and are crucial to design research submissions."

Could we conceive of the outcome of a practice-based PhD as a question and not an answer? Perhaps this would be arrived at through a series of processes that are in themselves rigorous but the outcome is not a thing or series of things that themselves represent an answer, they would be a means to creating the most refined and elegant question with which to engage further. In this sense it would be something that adds knowledge through the elimination, reduction and distilling of one's questioning.

Questions for me that would be interesting to discuss would be:

- What is the size of a practice-based PhD and what is its shape?
- What body of theory (and practice) does a practice-based PhD contribute to and how does it progress that?
- How is practice-based PhD work reported outside the PhD itself?
- What are the criteria for a practice-based PhD failing?
- What would it mean to end a PhD with a refined question?

Lisa S. Banu

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As a design historian with a background in architecture and philosophy, I have been happily lost in trans-disciplinarity for a while. I have looked to Heidegger's idea of dwelling as embraced in architecture, I have looked to post-colonial theory as it offered strategies to interrupt a dominant narrative, I have looked to American designers and design educators, like Ernest Batchelder, Raymond Loewy and Eliel Saarinen who have philosophically, pedagogically and personally argued that design cannot be taught but can be learned. Most recently, I have come to appeal to the works of Object Oriented Ontologists (Graham Harmon, Ian Bogost, Jane Bennett) and their strategies to uncouple intention with making, to offer teleology without causality, to relate without demanding correspondence through the use of metaphors, lists, ontographs and "meanwhiles." Traversing such trans-disciplinary terrain demands speculation, creative projection and dare I say, guessing. My effort to consider design as material philosophy that is inquiry driven rather than primarily problem solving challenges the rigor of academic responsibility founded on causal logic, historical precedent, methodology, peer validation and institutional housing. I am certainly categorically lost. However being lost gives me two advantages. First, I have no disciplinary borders to defend and second, without prescribed paths to follow I can linger on specifics, on a single text, an event, a poster as possibly a part of a path but always a singular event worthy of attention. Ian Bogost explains this philosophical perspective as follows,

Speculative realism really does require speculation: benighted meandering in an exotic world of utterly incomprehensible objects. As philosophers, our job is to amplify the black noise of objects to make the resonant frequencies of the stuffs inside them hum in credibly satisfying ways. Our job is to write the speculative fiction of their processes, of their unit operations. Our job is to get our hands dirty with grease, juice, gunpowder,

and gypsum. Our job is to go where everyone has gone before, but where few have bothered to linger. I call this practice alien phenomenology.

I write with the offer to amplify the "black noise" at the symposium and help question the assumptions that support a PhD as a researcher-practitioner-alien phenomenologist.

Mary Anne Beecher

Ohio State University

I have had the experience of undertaking a traditional North American interdisciplinary PhD with many courses that included exposure to a broad range of theories and research methods, some of which I used for my dissertation research and some of which I did not. I also briefly oversaw a Canadian PhD program in Design and Planning that was modeled after European PhD programs with minimal coursework and the expectation that research interests and approaches were to be well defined prior to entry into the program. These two experiences provide my insight (and opinion) about the issue of whether or not PhD programs should provide research "training."

The presumption of the European and Australasian Phd program model (few courses, focus on research) that their students will bring a strong knowledge of how to do research with them poses a problem for the design disciplines that is most likely not shared by older/traditional and perhaps more methodologically focused disciplines. My experience is that most MFA programs in design are, by their very nature, project focused in a way that does not always include a rigorous incorporation of research for the purpose of generating new knowledge. Projects often tend to be speculative and application-oriented. MFA students may not always be encouraged to understand their design projects as research. MA and MS programs in design tend to be less project-oriented and they often use the research methods of allied disciplines found in the humanities and social sciences instead of focusing on "design research" as a strategy for addressing their topics. Often these programs are populated by professors whose knowledge of research is not practice-based or by professors whose practices are not research-based which extends these tendencies by default. Therefore, designers interested in a PhD in Design may need instruction on how to do research and opportunities beyond their primary project to

apply and practice what they learn. Until the PhD in Design research is older and more established, this transition period will need to accommodate this condition.

The issue of the role of the PhD as research training and the importance of coursework as part of the program seem to me to be separate issues. Coursework may be one way of delivering research methods and opportunities to expand research experience, but other models of engagement such as industry partnerships/internships, mentoring relationships with established researchers, and participation in cross-disciplinary collaborations are also viable alternatives. I hope to see a model for the PhD in Design that puts design thinking and the act of design at the center of the expectations for the degree.