Introduction

The purpose of this essay is to consider the position of the PhD in visual art and design within the field of education and the art world. To introduce this topic, two related arguments are made: When presented as a form of research, art practice is a site for the creation and construction of new knowledge and understanding; and when art practice is positioned within the research community in higher education, conventional systems and structures that traditionally describe and define research are challenged. Several claims underpin these points:

- Art practice is a creative and critical form of research
- Understanding is an outcome of research and inquiry
- Art practice takes place beyond the paradigms and traditions of social science research
- Art practice as research takes place in a post-discipline environment.

This essay consequently explores art practice as a reflexive form of research that emphasizes the role the imaginative intellect and cultural production play in creating knowledge that has the capacity to transform human understanding.

Claims and Assumptions about Research

Three characteristics of research and the methodological assumptions upon which they are based can be seen to give an overview of the changing contexts that frame conceptions of research. The first claim is that research is a logical and linear process of intervention and inquiry that builds on what we know. This is a foundational principle of positivist research and is based on the belief that, if you don’t know where you are going how do you know when you get there? The assumption is that clearly defined intentions, whether expressed as hypotheses, research questions, lesson objectives or standard statements, position the purpose of educational acts within the context of what is already known. Consequently outcomes can be readily assessed according to the conceptual limits imposed as this gives a measure of utility in comparing the new with the old. Knowledge in this sense is expressed as a difference in degree or quantity and is compared to other things we know. This has been part of the quest for modernist explanatory systems and describes how we construct probable theory based on the empirical premise that to see is to know.

The second claim is that research responds to issues and problems that need to be interpreted in real-life contexts. Here, inquiry is based on the assumption that knowledge emerges from an analytic and holistic account through consensus and corroboration where patterns and themes are the elements used to represent complex realities. The methodological assumption is that problems are not solved, but surrounded. Knowledge in this sense is explored as a difference in kind or quality,
where insights are characterized by their particularity. This is how we construct plausible theory.

Site-based research in the qualitative tradition responds to issues and problems that need to be interpreted in real-life contexts.

A third research claim can be identified, which is one that interests those proposing to introduce studio-based PhD programs. This is the claim that

artistic research can reveal new insights through creative and critical practice. The claim arises in response to the question about how we construct theories of 'possibility'. A studio-based researcher would more than likely subscribe to the view that if you don't know where you are going then any road will get you there. Rather than seeing inquiry as a linear procedure or an enclosing process, research can also be interactive and reflexive whereby imaginative insight is constructed from a creative and critical practice. Oftentimes what is known can limit the possibility of what is not and this requires a creative act to see things from a new view. An inquiry process involving interpretive and critical practices is then possible as new insights confirm, challenge or change our understanding. What is common is the attention given to systematic and rigorous inquiry, yet in a way that emphasizes what is possible, for to 'create and critique' is a research act that is very well suited to practitioners involved in PhD inquiry in visual art and design.

If an agreed goal of research is the creation of new knowledge, then it needs to be agreed that this can be

achieved by following different, yet complementary pathways. Yet this gives rise to some methodological challenges posed for studio-based PhD researchers, such as:

- How are theories constructed that interpret and explain who we are and what we do in visual arts and design?
- How is new knowledge created and communicated?
- What new research methods are needed for the complex visual and virtual worlds of today?

A common institutional strategy for considering the relationship between theory and practice and the goal of constructing new knowledge has been to theorize practice from the perspective of ends and means. Theory-driven approaches to research, however, leave little room for new theory creation and maintain a consistent interplay between low-level theorizing and applied practiced. The influence of means — ends theorizing using problem solving strategies has strong appeal in many fields. In institutional settings a dominant approach to means-ends thinking is seen in the emphasis on problem solving as a core research strategy. Problem solving approaches to theorizing emphasize how learning is a cyclical process and this is also a feature of participatory action research and critical approaches to teaching and learning. However, there is some ambivalence about the pervasive use of problem solving as a pivotal research practice in higher education at the doctoral level. Some theorists
Note the limitation of problem solving as a methodological emphasis in design and visual arts research in that even if problems respond to topical issues, a critical stance will invariably get caught within the systems and structures of institutional and professional practices. The contention is that any narrow emphasis on pragmatic problem solving will limit the potential to move beyond instrumental ends.

Irrespective of the methods used for means-ends theorizing, be they problem solving, practical reasoning, or inquiry-based learning, the analysis of the relationship between theory and practice generally remains constant. The principle is based on logical reasoning and assessing how consistent the ideas and concepts are as a basis for translating means into ends, theory into practice, and vice versa. A tactical benefit of means-ends theorizing, however, is that it is outcomes-based as the components of theory and practice can be readily broken down into elements to form policies, procedures and programs. This approach is particularly popular with policy makers, accreditation agencies, and government assessment practices, because it stipulates the terms and conditions that allow any performance to be ranked. Although this problem-driven approach is responsive to change in theory and practice, there are limits to the capacity that new, large-scale theory development can take place. Positioning research practices that move beyond traditional methods of inquiry is an approach that is characteristic of what can be described as the visual turn in research.

The Visual Turn in Research
As different conceptions of seeing and knowing were developed to accommodate the more complex realities emerging as the industrial age was superseded by the digital revolution this raised the status of the visual as a source of data, ideas and theories. New visual research strategies were developed that cut across methodological and discipline boundaries. As Gillian Rose noted, the limits of the modernist, empirical aphorism, to know is to see, was flipped as a consequence of postmodernist thinking because the way we framed reality according to particular interpretive regimes meant that to know is to see, and more crucially for studio-researchers, to know is to see... differently.

Critical traditions and practices in the arts

1 Brown 2006.
Several trends in research methodology and critical analysis that use visual forms as their central motif have emerged in recent years across various disciplines. Within fields such as anthropology and sociology there is a growing use of visual forms as crucial cultural markers that require analysis and critique. An important trend has been the shift to not only collect and analyze visual information, but the realization that visual means of expression and communication can also be created as a means to inquire into human agency within socio-cultural settings. Visual forms of documentation and analysis have also been used to good effect as a means to critique patterns of historical change in areas such as literature, where Franco Moretti’s mapping and graphing of the novel has challenged assumptions about genre categories among other things. Within fields of systems analysis and data management the development of immense computing power has also seen the explosion of visual image processing as a language of communication. What has been of singular importance for studio-based researchers arising from these digital developments in visualizing data is the realization that data are not static forms of code, but dynamic arrays of ‘living’ forms. As Ben Fry notes, ‘data never stay the same.’

In recent years art educators have also been exploring visual research approaches across arts disciplines to try to claim a foothold in a knowledge-based educational economy characterized by an exceptionally zealous return to a functionalist research model. Art education researchers responded to these changing demands and the search for more adequate methods resulted in the development of a slew of new research practices that take many forms. These approaches are being applied at the level of schooling, where research investigates pedagogy in classrooms and tries to capture learning in all its artistic complexity. Various terms are used to describe these developments, such as arts-based research, arts-informed research, and A/r/tography.

There is a need, however, to be clear about what Eisner and others present as arts-based research. The argument of arts-based researchers is that the arts provide a special way of coming to understand something. The claim, therefore, is that as research methods broaden within the domain of qualitative inquiry in the social sciences, there is a need to be able to incorporate the arts as forms that more adequately represent the breadth of human knowing. The approach taken argues for an expansion of inquiry practices, yet this is undertaken within existing research paradigms. Although proponents make a strong case for educational change that is informed by the arts, there are limits to what can be achieved if the conditions of inquiry remain locked within the constraints

4 Goldstein 2007; Rose 2007.
6 Fry 2008, p. 3.
7 Barone and Eisner 1997; Cahnmann-Taylor and Siegmann 2008; Leavy 2009.
9 Irwin and deCordova 2004.
of social science research. For an inquiry practice that is firmly grounded in the artist's studio the developments commonly labelled practice-based or practice-led research provide a more theoretically robust basis for application at the PhD level.

**Art Practice as Research**

A question to be raised here is that as notions of research broaden, how can art and design be a form of research that more fully account for the breadth of human understanding? For instance, questions about research methodology were key in the development of what became known as practice-based research in the 1990s and were answered differently in different fields. As a result, the term practice-based research is found in many disciplines. The thread of usage I find most appealing tracks back to the community health industries in the UK in the 1980s. At the time healthcare professionals were struggling to confirm their identity as practitioners committed to constructing new knowledge within the medical and health fields. The randomized controlled experiment was promoted as the only viable method of research. After all, success was evident not only in medical science but also in agriculture where new cures, therapies and remedies were supported by burgeoning industries in pharmaceuticals and agricultural biotechnology. Evidence-based research was proclaimed as the only valid way to produce reliable information that could be applied to help cure ills and improve health.

Healthcare practitioners, however, knew that much of the knowledge they created in *their fieldwork* emerged from research of a different kind. Because new knowledge was sought from an environment that was generally tilted towards *care* as much as it is *cure*, the evidence that was compiled came as much from practices and experiences, as it did from theories. Hence, the term practice-based evidence was invoked as a *neat inversion of the mantra of evidence-based research and it drew attention to the quality of experience where the unit of analysis became the patient as much as the problem. Practice-based researchers were responsible for creating and constructing new knowledge that was grounded in the multiple realities and experiences encountered within the lifeworld of individuals. The challenge was to balance evidence drawn from practices built around understandings of the quality of care, with decisions from case-based data and diagnoses about prevention and cure. With ready access to digitized banks of information it was not so much the evidence itself that was the concern, but more an issue of its relevance and how it was integrated into the reality of individual needs.

For those looking to identify how the artist is central to individual and cultural inquiry the claim is that artistic research has the potential to change the way we see and think. The studio experience is a form of intellectual and imaginative inquiry and is a site where research can be undertaken that is sufficiently robust to yield knowledge and understanding.
that is individually situated and socially and culturally relevant. When art practice is theorized as research it is argued that human understanding arises from a process of inquiry that involves creative action and critical reflection. One of the tasks involved in promoting art practice as research is to reconsider what it is that artists do. What artists do of course is to make art, and as an object and subject of study art has been well picked over by aestheticians, historians, psychologists, sociologists, critics, and cultural commentators for a long time. But what artists do in the practice of creating artworks, and the processes, products, proclivities, and contexts that support this activity is less well studied from the perspective of the artist. As an insider the artist has mostly been content to remain a silent participant and to leave it to others to interpret the relevance of the studio experience. Artists, who are readily able to take up the position of theorists, philosophers, researchers, curators and art writers, make many of the arguments found in the growing literature on practice-based research and its popular variant, practice-led research. Advocacy arguments, historical synopses, research guides, and case studies, in anthologies, position papers, conference proceedings, exhibition treatises, dedicated print and e-journals, on-line research centers, and to a lesser extent theorized arguments in monographs and single-authored texts now fill the ranks debating the significance of artistic research.

In theorizing art practice as research somewhat different approaches come into play in artistic research. Within a traditional social science research strategy theory is both the guide and the goal of inquiry for it provides the conceptual basis for designing interventions and assessing outcomes that can be verified by others. The task is to seek relational or causal connections so as to explain phenomena within the context of existing knowledge structures. However, if the goal of research shifts slightly from explanation to understanding the role of theory changes. Understanding, after all, is an adaptive process of human thinking and acting that is changed by experience and as a consequence of the forms of media we create and encounter. With this in mind, the research task of wanting to understand things rather than explain them means that the procedures must be more extensive, inclusive and creative.

In theorizing artistic research a basic assumption is that art practice is a means of creative and critical investigation that can be contextualized within the discourse of research. The process of theorizing is a basic procedure of inquiry and hence a core...
element in research. However, we know that theories are provisional and at best are approximations of reality. The long standing critical function of the arts also suggests that as a form of inquiry the role of artistic inquiry in problematizing phenomena is perhaps the most salient feature of artistic research. In this way, research strategies that are critical not only serve a re-viewing purpose, but lend themselves to creative interpretation as past structures of form and content may prove to be illusionary. Within this creative and critical research space past conceptual systems based on limited notions such as binary thinking, objectified knowledge, essentialist legacies, privileged perspectives and the like, are unable to encompass the new realities explored or created. Therefore theorizing art practice as research establishes a basis upon which visual art and design practice can be seen to be a form of inquiry that is sound in theory, robust in method and can generate important creative and critical outcomes. Several features can thus be identified:

First, theorizing is an approach to understanding that occurs at all levels of human inquiry and involves creative action and critical reflection.

Second, theorizing artistic research is a reflexive form of research that emphasizes the role the imaginative intellect and visualization plays in creating and constructing knowledge that has the capacity to transform human understanding.

Third, artistic research opens up new perspectives that are created in the space between what is known and what is not. Traditional research builds on the known to explore the unknown. Artistic research creates new possibilities from what we do not know to challenge what we do know.

Fourth, artistic research is a form of human understanding whose cognitive processes are distributed throughout the various media, languages, and contexts used to frame the production and interpretation of images, objects and events.

Fifth, visual forms are part of cultural practices, individual processes and information systems that are located within spaces and places that we inhabit through lived experience.

Finally, contemporary artists adopts many patterns of practice that dislodge discipline boundaries, media conventions, and political interests, yet still manage to operate within a realm of cultural discourse as creator, critic, theorist, teacher, activist and archivist.
In sum, it can be stated that art practice as research is a creative and critical process whereby imaginative leaps are made into what we don’t know as this can lead to crucial insights that can change what we do know.

**Art Practice as a Post-discipline Practice**

One of the important questions to be asked in conceiving of a studio-based PhD is to imagine a conceptual structure that might house the idea and forms in ways that offer some stability and flexibility. In other words, what structure might capture the complexity and simplicity of artistic research? It is argued here that only a *post-disciplinary practice* has the necessary and sufficient conditions to accommodate the philosophies and methodologies that can be envisioned within an artistic research paradigm. Post-discipline practice describes the way artistic research takes place within and beyond existing discipline boundaries as dimensions of theory are explored and domains of inquiry adapted. The discipline perspectives that surround art making reflect ways of engaging with theoretical issues and how appropriate methods might be used to meet research interests and needs. Part of this claim rests on the argument that the edges that once defined boundaries between disciplines as well as differences among artists, critics, scholars, teachers and their audiences have been irrevocably disrupted.

Contemporary artists are not bound by disciplinary distinctions, nor the physical and cultural
locations that can limit the perspective of what can be seen anew. Artists function within cultural discourse as creators, critics, theorists, teachers, activists, and archivists. When working from a base in contemporary art, the conceptions of the discipline are uncertain and the informing parameters are open-ended, yet the opportunity for inventive inquiry is at hand. In these circumstances the artist-researcher is seen to be participating in a post-discipline practice. Here there is little reliance on a prescribed content base. Rather it is the use of a suitable methodological base that supports the questions being asked, which may take the researcher beyond existing content boundaries. Although the university setting exerts its own disciplinary authority, the challenge is how to be informed by these structures but in a way that maintains a degree of integrity about the post-discipline nature of artistic research.

More traditional systems of theory and knowledge can be seen to be grids of information upon which the hope is to develop stable structures that confirm existing data systems and structures and offer opportunities to build within the spaces to create a more complete picture. Building knowledge from the known to the known is a powerful practice, but there are also other ways to work within and beyond these structures. In some cases there is a need to go beyond the structural solidity of assumed authority. Artistic practice offers the potential to conceive of a liquid structure that opens up new perspectives that are created in the space between what is known and what is not. As noted above, artistic research creates new possibilities from what we do not know, which challenges what we do know.

The two properties I find useful in conceiving of artistic practice as a dynamic post-discipline practice are self-similar structures and braided forms. These are described in the diagrams below.

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The structure for thinking about artistic practice proposed in *Art Practice as Research* \(^9\) is composed of a series of interlocking structures that can be separated and re-aligned. One way to visualize art practice as research is to see it as a simple and complex set of braided relationships with powerful generative potential for change. What is proposed is that the braid, with its infolding and unfurling form, disengages and connects with core themes while continually moving into new spaces and this serves as a useful metaphor that captures the liquid structure of artistic research.

![Artistic Research as a Self-Similar Structure](image)

This diagram shows a sequence of images that track what happens when artistic research opens up during studio practice as something new is created. The structure is based on self-similarity because the triangular units endlessly divides and builds upon itself. This reflects how artistic research responds creatively and critically to issues, actions, and changes at all levels of theory and practice. This self-similar feature of artistic research means that it is independent of scale and although it has a similar envelope, it takes on new forms and meanings irrespective of where it takes place, whether in studios, communities or cultures — it is simple, complex and dynamic all at the same time.

The principles of artistic research suggest that there is merit in thinking about the institutional conditions necessary to support studio-based PhD inquiry as being non-linear and non-foundational, and capable of new, emergent possibilities. As such, opportunities for research can be seen to be both informed by existing knowledge structures, but not to be a slave to them. This is a central tenet of the argument that artistic research is an essential part of the thinking to be done within universities in order to open up new ways of responding to pressing issues and to see the impact on existing information structures.

Thinking about the scale-free feature of self-similarity and the infolding explorations of braiding can help us understand the limitations of existing structural forms such as hierarchies, taxonomies, matrices and the like. As conceptual organizers these structures serve as reductive devices that allow us to represent information to assist with easy interpretation and are a key feature of research. Yet not all

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phenomena easily conform to such a structure therefore it is important to consider the forms of representation and discovery opened up by artistic research.

In summary, it can be acknowledged that artistic research comprises practices that are theoretically robust, creatively powerful, ideas-based, process rich, purposeful and strategic, and make use of adaptive methods and inventive forms whose uniqueness is best seen as connected to, but distinct from, traditional systems of inquiry.

References