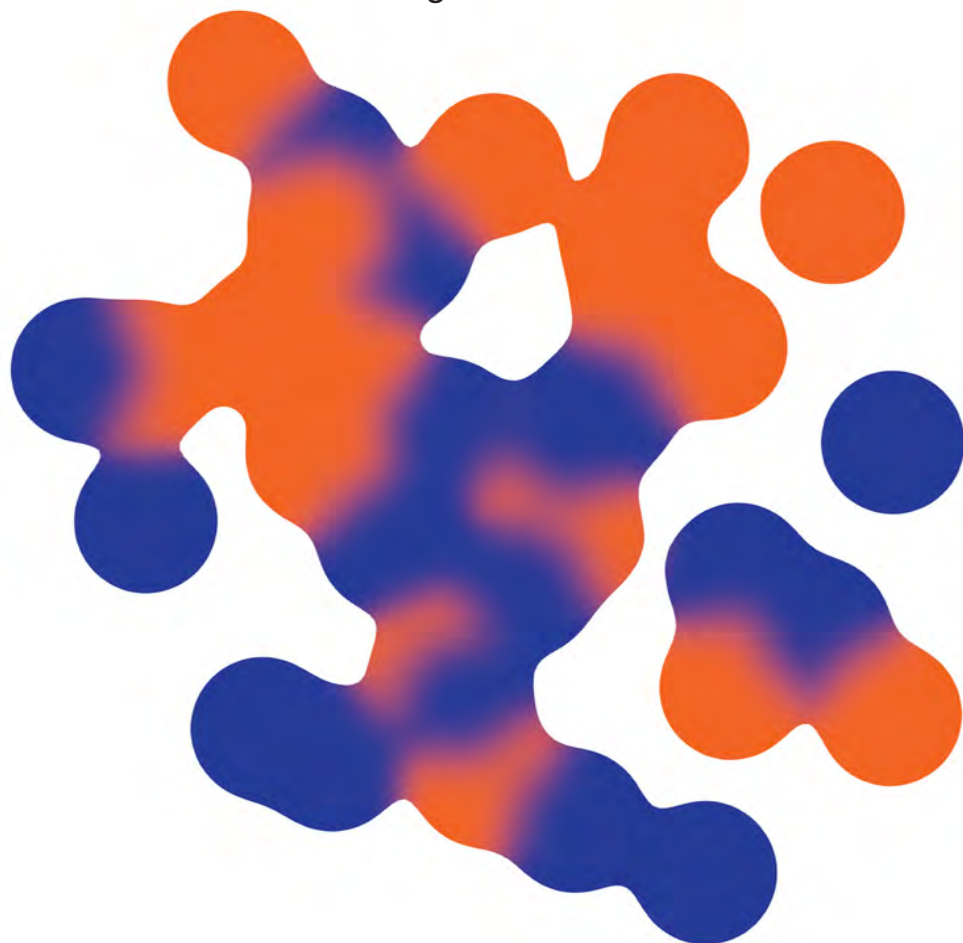DAP_r

DESIGN RESEARCH TRAINING

(2016–17)

The contribution of the practice-based doctoral training on professional practice and pedagogical approaches to studio teaching.

Cecilia De Marinis

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Title: Design Research Training. The contribution of the practice-based doctoral training on professional practice and pedagogical approaches to studio teaching.

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INTRODUCTION

DAP_r: THE RESEARCH FRAMEWORK

Design and Architecture Practice Research (DAP_r) is an inter-institutional research project examining doctoral training in design.

A collaboration of 14 Australian universities, the Commonwealth-funded project led by RMIT, brings together partners from across design disciplines with the aim of mobilising the adoption of a practice-based approach to doctoral training. [Fig.1, opposite]

DAP_r explores a model that fills an internationally identified gap in postgraduate training. This doctoral model involves the production of new works during the period of the PhD, and the placement of the work of the practice in a broader disciplinary context. The work examines, and is also transformative of, the practice within which it is situated.

This model is specifically aligned with the core teaching and learning components of design and architecture programs in Australia. Further, it provides a radically new way of connecting the academy with practitioners in small and medium-sized enterprises (SMEs) that were identified as the site of new knowledge discovery.

DAP_r enables partner universities to explore the applicability of a practice-based PhD to their institutional contexts; establish an open supervisory network and allied support resources; and capitalise on nascent pedagogical scholarship. Partners join at RMIT's biannual Practice Research Symposium in Melbourne, and at DAP_r events taking place around the country, to work towards key project outputs.

DAP_r: RESEARCH DIRECTIONS

The research conducted within DAP-r moves in two main directions: on one side surveying the impact of the practice-based doctoral training on the context of professional practice, on the other, providing a review of its effectiveness on pedagogical approaches to studio teaching.

The first research direction, presented in *Section 2: Impact on Practice. The contribution of the practice-based doctoral training on professional practice,* focuses on the contribution of the PhD program to industry, as stated in the DAP_r Grant Document (DAP_r, 2015):

QLD	BOND	Bond University
	QUT	Queensland University of Technology
NSW	NEW	University of Newcastle
	UTS	University of Technology Sydney
	UNSW	University of New South Wales
	UoC	University of Canberra
VIC	RMIT	RMIT University
	MONASH	Monash University
	CSU	Charles Sturt University
	DEAK	Deakin University
SA	USA	University of South Australia
	UoA	University of Adelaide
WA	UWA	University of Western Australia
TAS	UTAS	University of Tasmania

[Fig.1] DAP_r Institutions in relation to the practice-based PhD model

"Specifically, the survey will look at the ways in which the development of "researcherly" ways of working by practitioners/PhD candidates impact on professional practice and the way in which engagement with the venturous practices impact on academic research".

The survey involves observation of and interaction with industry. This evaluation builds on the research findings produced within the ADAPT-r [1] (Architecture, Design, and Art, Practice Training-research) program, which provided evidence of how doctoral training allows creative practitioners to surface their tacit knowledge to understand the urges that move their practice; to be able to articulate that knowledge; and to improve their ability to communicate it with their clients and community of practice.

The second research path, presented in *Section 3: Impact on pedagogy. The contribution of the practice-based doctoral training on pedagogical approaches to studio teaching,* follows the evidence that many PhD candidates have mentioned the productive ways in which studio teaching is interfaced with research.

Moving from this assumption, this work reflects on the nature of academic studio teaching and explores the effectiveness of the practice-based PhD on the pedagogical practices and approaches that practitioners and researchers apply within the studio environment. The work looks at the benefits of studio teaching environments in the academic system, and the potential benefits for students and their understanding of the nature of practice.

The evaluation starts from the hypothesis of the connection, interaction, and mutual nourishment between practice, research, and teaching. The two themes have been investigated in close alignment, observing intersections and overlaps.

The document is organised in four sections, each comprised of a series of chapters.

The first section, *The Research Context,* addresses the background for the investigation, over three chapters.

The first chapter, *Positioning Design Research* (1.1), aims to contextualise the research work within the broader context. It addresses the topic of design research from different perspectives, providing an overview of the concept in relation to scientific research, and exploring its layers, dimensions, possibilities, and implications in the academic and professional realms.

The chapter begins exploring the mechanisms of knowledge in design, focusing on the role of tacit knowledge in creative practice and the specificity of design thinking. It proceeds to analyse different knowledge paradigms in design research, presenting its evolution through a series of interpretations by practitioners/researchers who have interrogated the role of design knowledge within the academic and professional realms and society at large.

Following the discussion on design knowledge, the existence of, and the need to create a new epistemology in design research has arisen, to support its positioning and validity.

Furthermore, the difference between design and design research is outlined, including possible strategies for understanding the value of the latter.

Finally, an overview of doctoral training in design research is presented, explaining its key features and possibilities for future programs.

The second chapter, *Research Methodology* (1.2)*,* articulates, contextualises, and describes the research operations that were undertaken in order to collect data for the analysis, including an explanation of the motivations behind them.

The third chapter, *Collection of Data* (1.3)*,* serves as an archive for the collection and reading of data acquired through the research operations. The *voices* of practitioners/researchers involved in the work have been recorded and organised within the Annex: *DAP_r Interviews Transcriptions.*

The second section, *Impact on Practice,* addresses the contribution of the practice-based doctoral training on

professional practice. The first chapter, *Impact on Creative Practice Research* (2.1), is dedicated to the exploration and contextualisation of the concept of *impact*. This chapter provides a series of interpretations of *impact* within and external to the academic context, yet tries to capture the specific meanings of *impact* within the context of design research and its training model.

The second and third chapters of this section present the research findings. The *Individual Value and Contribution Narratives* (2.2) account for each practitioner / researcher involved in the research, interpreting their work and words in relation to the contribution of the PhD to professional practice.

The *Cross Value and Contribution Narratives* (2.3) address a comparison of the individual narratives, showing trends and similarities and differences, through text and diagrams. The research findings outline the contribution of the practice-based PhD to the professional realm, suggesting what a practitioner/researcher might learn and acquire through undertaking a PhD by practice.

The third section, *Impact on Pedagogy,* addresses the value and contribution of the practice-based doctoral training on a pedagogical approach to studio teaching. This section begins with an exploration of the role of studio teaching in creative disciplines and its connection and intersection with the practice-based PhD model, as illustrated in the first chapter, *Studio Teaching and the practice-based PhD* (3.1).

The same structure was used to show the research findings through the *Individual* and *Cross Value and Contribution Narratives* (3.2, 3.3), in relation to the contribution of the practice-based PhD to pedagogy.

The last section, *Conclusions,* addresses a cross-reading of the contribution of the PhD to professional practice and pedagogy, and what such a contribution might mean to a practice's specific stage, path, and development, with regard to both professional and teaching practices, as explained in the chapter, *Value and Contribution to Whom? Narratives* (4.1).

A conclusive chapter, *Epilogue* (4.2), summarises the main research findings, tracing a thread across the contribution of the practice-based PhD to both practice and pedagogy.

SECTION 1 : THE RESEARCH CONTEXT

1.1 Positioning Design Research

The following chapter addresses the topic of design research from different perspectives, providing an overview of the concept in relation to scientific research, and exploring its layers, dimensions, possibilities and implications in the academic and professional realms.

Rather than attempt to define what design research is, the chapter seeks to offer a constellation of ideas – suggesting a narrative of what it could be.

1.1.1 On Knowledge in Design

Reflecting on what *knowledge* is or could be in design disciplines, the threefold interpretation of *knowledge* provided by ancient Greek philosophy is explanatory. The Greeks distinguished between three different types of knowledge relative to its purpose: *Episteme*, *Techne*, and *Phronesis*.

Episteme comes from the word ἐπιστήμη made up of the preposition *epì*, meaning on, and the verb ίστημι, meaning set. This interpretation refers to a type of knowledge that is certain and incontrovertible of causes and future effects, thus a knowledge established on, and deducted from certain foundations. For the philosophers Plato and Aristoteles, *Episteme* is the most certain type of knowledge, ensuring a universal and true scholarship. It is often translated as *science*.

Techne, from the term τέχνη, means art in expertise. It is understandable as the set of rules applied to an activity, either intellectual or practical. Its common translation is *craft*.

Phronesis, from the term φρόνησις, means wisdom or intelligence. It refers to a type of knowledge relevant to practical operations, correspondent to the exploration of what should be, or the setting of values (Hoadley & Cox, 2005: 22) with reference to practice. It is often translated as *practical wisdom*.

The three concepts offer an outline of the types of knowledge embedded in design research.

Further, reflecting on the ways of design knowledge, Glanville (2014) introduces another distinction and a complementary relationship between *Phronesis*, intended as skill-based knowledge, and *Sophia* (Greek σοφία), the intellectual knowledge or wisdom. The design researcher defines *Phronesis* as "*knowledge that guides what we do*

with our hands (for instance) without needing formalised instructions".

Skill-based and intellectual knowledge are thus strictly connected in a circular process of mutual nourishment – neither one superior – each necessary to the development of the other. As Glanville (2014) suggests:

> "(...) we get our intellectual knowledge from doing and we test it by returning to doing. (...) it places Phronesis and Sophia on the same level. The doing, the making, is as significant as the thinking. Theory is not superior to practice, and it does not make sense to impose theory on practice".

Pragmatism is another key concept emerging from the reflection and discussion over knowledge in design. The philosophical framework of pragmatism embodies the focus of design knowledge with regard to action, experimentation, pragmatic experience, and experiential learning. Pragmatism can be seen in opposition to rationalism. The latter claiming that knowledge can be obtained by deductive reasoning, with the former showing how knowledge can be attained inductively through sensory experiences.

Reflecting on the idea of pragmatism in design knowledge, Findeli (2016:28) suggests that valid and trustworthy knowledge is best produced in experiential situations of inquiry, with a focus on the ideas of rigour and relevance. Findeli (2016:28) states, *"Our task as researchers remains to make sure the inquiry is rigorous and conducted according to what the research community at large recognises as being scientifically consistent and valid – provided one cares about such orthodox"*.

From such a perspective, rigour assumes the sense of a set of shared values and ideas about what is consistent and valid. Design knowledge is hence not neutral, as it concerns how we value things, referring to appropriation and adaption rather than rules and prescriptions.

Another layer of interpreting the realms of knowledge relevant to design is the binomial tacit/explicit knowledge, that works in contraposition and concurrence.

The concept of tacit knowledge was forged by Michael Polanyi. In his work, *The Tacit Dimension* (1964), the theorist stated, *"I shall reconsider human knowledge by starting from the fact that we can know more than we can*

tell". His thinking is founded on the idea that creative and exploratory acts are driven by strong personal feelings – arguing against the formerly dominant position that science is value-free, objective, and true. He suggested a critical interrogation of more tacit forms of knowing, terming this pre-logical phase *tacit knowledge.*

It can be described as a flexible and dynamic realm of knowledge – hidden, unspoken, subjective, hard to grasp, an invisible *baggage* that every individual owns and carries. It is knowledge embedded in practice, operational and experiential, related to intuition and heuristic thinking.

Intuitive heuristics are a way of learning through discovery, by approaching solutions to problems without following a clear and logical path; rather, as suggested by Kahneman (2011), *"entrusting to the intuition and to the temporary states of the things"* instead.

Explaining this thinking process, the psychologist claims that when faced with a difficult question we often answer an easier one instead, usually without noticing the substitution. Kahneman (2011), calls this intuitive thought *"fast thinking"* as opposed to *"slow thinking",* which is deliberate thought – intentional, voluntary, and effortful.

"Fast thinking" includes both variants of intuitive thought – the expert and the heuristic – as well as the entirely automatic mental activities of perception and memory.

Such a way of thinking operates through an associative connection process, namely, a resonance process in our memory. It works in terms of resemblance, in this sense *"intuition is nothing more and nothing less than recognition"* (Herbert Simon, quoted by Kahneman, 2011:11).

Recognition depends on which ideas are stronger in the mind, thus relating to a sense of familiarity.

Accordingly, Kahneman (2011), claims that there are two selves: the experiencing self, which does the living, and the remembering self, which keeps score and makes the choices.

Associative connections in memory produce a response to an answer, therefore, *"Creativity is associative memory that works exceptionally well"* (Sarnoff Mednick quoted by Kahneman, 2011).

Memory holds the vast repertoire of skills we have acquired during a lifetime of practice – skills which automatically produce adequate solutions to challenges.

Consequently, tacit knowledge (in relation to design and creative practice), can be interpreted as the mental space of perception and memory, built through our spatial intelligence. Everyone builds up a spatial history for themselves and through this, establishes their mental space of assumption about space (Van Schaik, 2008).

In opposition, explicit knowledge works instead in terms of "slow thinking", (Kahneman, 2011), and is concerned with the rational process of acquiring knowledge. It is tangible, theoretical, easily articulated, codified, and communicated.

The binomial tacit/explicit knowledge implies a circular and dynamic process of mutual enhancement and enrichment. The two types of knowledge are interdependent, as Maffei (2014:60) explains:

> "Intuition, without an experimental or logical/ rational test/check made by slow thinking, remains a dream and doesn't become something that can be communicated, understood and accepted from or by other individuals".[2]

The scientist further described how the completeness of mental work is organised through three essential steps: fantasy (guiding free associations of the mind and imagination); materialising them in a product; and rational thinking, that analyses and verifies them with the logical and experimental method. [Fig.2, pg.18]

1.1.2   Mechanisms of Knowing in Design

The mechanisms of *knowing in design* can be explained through a threefold structure of thinking or three phases: induction, abduction, and deduction.

Induction relates to the analysis phase; deduction represents the synthesis; whereas abduction is the projection phase that bridges the gap between the first two:

> "in science the gap is finally removed by means of a generalized logical construction, and PROJECTION can remain a mystery. In design, the gap is temporarily bridged" (Jonas, 2012:33).

EXPLICIT KNOWLEDGE

Records

Documents

Know
What

Rational

Theorical

Tangible

Data
Information

Know
Who

Objective

Experience

Urges

Mental
Space

Memory

Spatial
Intellegence

Intuition

Perception

Fascinations

Mental
Models

Eidetic
Archive

Know
How

Heuristic
Thinking

Intangible
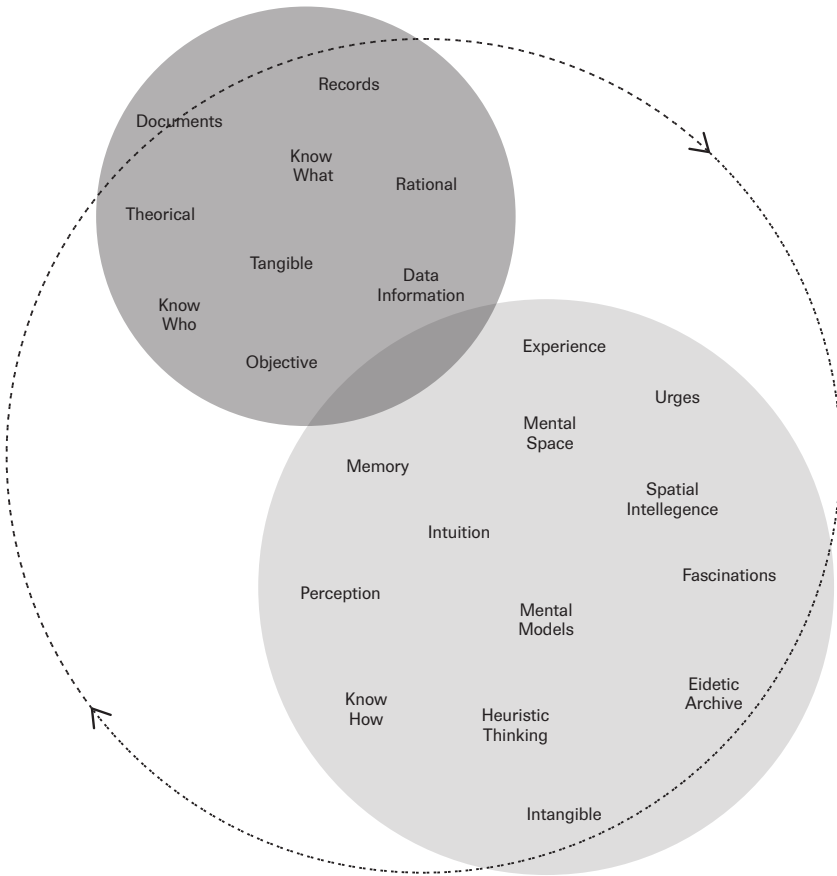
TACIT KNOWLEDGE

[Fig.2] The Circular and never-ending interplay between implicit and tacit knowledge.
Source: Buoli, De Marinis & Ottaviani, 2016:49.

Projection, or the abductive phase, is an essential task in design, combining "the otherwise sterile syllogism of induction (formulating a rule out of existing data or cases) and deduction (deriving special cases from rules) into a productive learning cycle" (Jonas, 2012:33).

The term abduction was introduced by the philosopher Charles Sanders Peirce to define the forms of logical inferences that introduce new ideas. The scientist stated:

> "Abduction is the process of forming explanatory hypotheses. It is the only logical operation which introduces any new idea; for induction, does nothing but determine a value; and deduction merely evolves the necessary consequences of a pure hypotheses" (Peirce 1931-1935: 5.172).

Accordingly, abduction can be seen as a mechanism for knowledge generation, to address the unforeseen.

In this perspective, it is possible to see a parallel between the way "fast thinking" (Kahneman, 2011) works and the phase of projection, in addressing a design question. As suggested by Jonas (2012:32), *"production creates, deduction predicts, induction evaluates"*. Abduction therefore represents a pivotal element of design knowledge.

Looking at design knowledge from a methodological perspective, it is possible to interpret it as a type of *meta-knowledge,* as it leans less toward answers and more toward *"methods leading to answers"* (Hoadley & Cox 2005:22)

Design knowledge is not meant to address a problem in order to find a general truth, but rather to find specific patterns and methods for each unique situation. Indeed, it is concerned with *"local knowledge"* (Carter, 2005).

This idea of *meta-reflection* and of *thinking about thinking* finds its possible definition in the concept of "*Metacognition"* (Flavell, 1985), which means observing thoughts, reflecting upon processes and methods, and the strategies applied to the design activity. It is thus a process of self-exploration.

1.1.3 Different Design Knowledge Paradigms

> "The idea of design discipline is more recent still. We are still debating whether the arena of design knowledge constitutes a discipline, a field or a science" (Friedman, 2000).

Since the reflection on design knowledge started, a series of different paradigms have been identified to assist in interpreting and defining its boundaries, limitations, possibilities, and directions.

A first reading of design knowledge as a problem-solving strategy started with the Design Methods Movement of the early 1960's. The Movement was the outcome of the work of a group of designers including, among others, Bruce Archer, John Chris Jones, Christopher Alexander, and Horst Rittel. The aim was to make design more *scientific* in areas such as industrial design, architecture, and town planning, following post-war optimism and the belief that it would help create a better and safer world (Langrish, 2016).

The paradigm of design knowledge as a rational problem-solving activity was later developed by Herbert Simon, who claimed the originality of design thinking, defining it in terms of goals:

> "Everyone designs who devises courses of action aimed at changing existing situations into preferred ones...Design so construed, is the core of all professional training; it is the principal mark that distinguishes the professions from sciences" (Simon, 1969:111).

The theorist suggested that professions such as engineering, medicine, business, architecture, and painting *"are concerned not with the necessary but with the contingent – not with how things are but with how things might be – in short with design"* (Simon, 1969:XI).

Such an approach to design as *problem solving* makes a statement in opposition to the model of design being *crafts* oriented, as developed by the Bauhaus in its system of masters and apprentices.

Following Simon's approach to design, design research and education could legitimately enter the academic research system of the post-war university.

This shift from studio practice to laboratory research represents a new understanding of design as a scientific discipline (Huppatz, 2015:35).

Inherent in this shift, there is a negation of problem solving as a creative process in itself. In Simon's interpretation, solving a problem means representing it and making a solution transparent, rigorous, and universally repeatable:

> "Simon's logic of optimization promised knowledge that could be clearly and efficiently communicated, data that was free from the subjectivity of intuition, experience, and judgment" (Huppatz 2015:35).

Problem solving theories introduced by Simon provide a framework for this extension within the scope of design studies, by allowing the study of designers and design problems within the paradigm of technical rationality.

This paradigm of design knowledge has shaped design methodology ever since – influencing generations of designers, and leaving a legacy in relation to the need for *scientific* procedures and methods in design, while resisting intuition and experience. This has continued to have implications on design research and practice (Huppatz 2015:29).

Simon's "*rational problem solving*" interpretation of design is often juxtaposed with Donald Schön's "*reflection-in-action*" (1983), a paradigm for design knowledge that allows for both professional expertise and intuition. [Fig.3, pg.23]

Schön approaches design as a reflective practice, transferring the concept of "*reflection-in-action*" from mainly methodological to the epistemological realm. In his work, *The reflective Practitioner* (1983), Schön indeed proposes an alternative epistemology of practice that interprets design as a *"reflective conversation with the situation"*.

The philosopher suggests that reflection in practice often begins when a routine action produces an unexpected outcome; that surprise gets our attention and drives us to a process of reflection:

> "We reflect on action, thinking back on what we have done in order to discover how our knowing-in-action may have contributed to an unexpected outcome" (Schön, 1983:26).

Reflection is an action that works in observing repetition in time. Through reflection, the practitioner can surface and criticise the *"tacit understandings that have grown up around the repetitive experiences of a specialised practice, and can make new sense of the situations of uncertainty or uniqueness which he may allow himself to experience"* (Schön, 1983:61).

Furthermore, Schön provides a first definition of what a design researcher is or could be, stating:

> "When someone reflects-in-action, he becomes a researcher in the practice context. He is not dependent on the categories or established theory and technique, but constructs a new theory of the unique case" (Schön, 1983:68).

In such a design knowledge paradigm, the scientific requirement of rigour is contraposed with the "*mess"* that design is able to address and solve. Schön raises this issue of *rigour* in relation to, and in conflict with *relevance,* drawing a distinction in the professional realm between the "*hard ground"* where practitioners can make effective use of research-based theory and technique, and the "*swampy lowland"* where there is confusion and mess and it is impossible to apply technical solutions.

He affirms the potential of the *"swampy lowland"* saying:

> "The difficulty is that the problems of the high ground, however great their technical interest, are often relatively unimportant to clients or to the larger society, while in the swamp are the problems of the greatest human concern" (1983: 42-43).

Hence, practitioners who choose to address the *"swampy lowland",* deliberately engage themselves with messy but crucial issues. This method of inquiry is driven by experience, intuition, trial and error. Whereas, practitioners who stand for the *"high ground"*, following scientific rigour, seem to stay within the boundaries of a technical practice, following procedures and rules, yet not contributing to real and relevant issues.

Ranulph Glanville, another significant figure within the debate on the definition of a design epistemology, endorses the idea of addressing the mess and the

	Rational Problem Solving	Reflection in Action
Designer	Information processor (in an objective reality)	Person constructing his or her reality
Design Problem	Ill defined, unstructured	Essentially unique
Design Process	A rational search process	A reflective conversation
Design Knowledge	Knowledge of design procedures and 'scientific' laws	Artistry of design: when to apply which procedure/ piece of knowledge
Example/Model	Optimization theory, the natural sciences	Art/the social sciences

[Fig.3] The rational problem solving and the reflection-in-action paradigms summarised.
Source: Dorst &Dijkhuis 1995:263.

"swampy lowland" – considering the experience of getting lost and not knowing where to go, as a main feature of design knowledge.

He offers a poetic and meaningful description of the action of designing:

> "Design is like wandering in the countryside with some vague idea of going somewhere while not really knowing exactly where you are going, making repeated decisions over which path to follow (…). This repeated action is at the heart of the circular process. After some time, you find yourself in a sunny glade, or perhaps sitting on a tree stump, and know not only that you have arrived (and therefore, that you have achieved an end and hitherto unknown), but also that you have found something that makes sense of your wanderings and from where your path begins to make sense to you even though most of the time you were rather lost – scarcely knowing where you were going. The trust involved in the wandering (believing that you will arrive), the sense of arrival (recognition), and the ability to, after arrival, make sense of the path you took, all contribute to a successful wander" (Glanville, 2016, 154-155).

Repetition and reiteration are pivotal for the design process as they drive the direction of the process itself. Designers test their ideas until they arrive at something that satisfies their desires. As Glanville claimed:

> "We test and test again, repeat with refinement and extend, and when driving to extremes we find our patterns no longer hold, we rejig them or start from scratch" (Glanville, 2012:50).

Grand and Jonas in their work, *Mapping Design Research* (2012), endorse and reinforce the idea that design research needs to find itself in the mess of the "*swampy lowland*", suggesting the importance of remaining messy and controversial (Grand & Jonas, 2012, 156).

This process of productive disorientation as a method of inquiry enables designers to find alternative and unconventional solutions to questions and problems.

The design knowledge paradigm proposed by Glanville sees research *as* design. In his view, the matter that should be researched in design research is design itself:

> "(...) as a subject (a way of acting) in its own right, as an undertaking that is worthy of our respect and affection, meaning that we research it in order to understand it is its own terms, not to force it into some other form" (Glanville, 2016:158).

The aim of the research is to design better and to act better, not just to understand more. In this perspective, design knowledge is read as "*knowledge for*" (Glanville, 2016), going beyond the idea of transferring and translating knowledge from practice to research, and rather considering design knowledge as valuable in its own right.

Furthermore, Glanville introduces a distinction between "*knowledge of*" and "*knowledge for*" in design disciplines. The former refers to what scientists and engineers are after, whereas the latter relates to what designers need, as their work is concerned with solutions and *"knowledge for"* enables them to change the world (Glanville, 2014). [Fig.4, pg.26]

Knowledge in science is aimed at predictability – to define models in order to convert them from vague hypotheses into prediction machines. When a scientific problem is solved, this truth survives as long as the solution does not turn out to be false (false meaning less true than a new solution). Jonas (2012:12) provides an interesting explanation of what the aim of design is instead:

> "[Design] is aiming for single new phenomena that must be able to fit various unforeseeable conditions. Design has to intentionally create variations – differences – because the 'fits' will dissolve, fade away, grow old-fashioned. Design environments change too fast to be able to speak of 'true' or 'false' design knowledge. The archive of design knowledge is like a memory, a growing reservoir of variations as well as restrictions. Design expertise seems to be the art of dealing with scientific and non-scientific knowledge, with fuzzy and outdated knowledge, and with not knowledge at all, in order to achieve these value-laden fits. The 'art of muddling through' or, more positively,

Observer position / Looking ● →	Outside the design system First-order cybernetics	Inside the design system Second-order cybernetics
Outwards	Research FOR design Research based upon certain assumptions regarding the structure / nature of design processes, aiming at their improvement	Research THROUGH design Research guided by the design process, amining at transferable knowledge and innovation
Inwards	Research ABOUT design Research by means of disciplinary scientific methods, applied in order to explore various aspects of design	INACCESSIBLE (Research AS design?) Probably the essential mental and social "mechanism" of gernerating new ideas, the location of abductive reasoning

[Fig.4] Knowledge generation in design research: the concepts of research FOR / THROUGH / ABOUT design in relation to observer positions. Source: Jonas, 2012:34. Reference to Glanville, 1997.

of 'informed intuition', should not be scorned, but seen as a core element of design".

The aim of design is then not a definite "*true*" representation of an external reality, but rather *"a process of (re-)construction, for the purpose of appropriate (re-)action"* (Jonas, 2012:32).

Scientific research considers knowledge as verified and tested truth, whereas design knowledge is concerned with generating useful, practical ideas to resolve existing real-world problems. Ideas are constructed and proposed freely and evaluated within the socio-historical context of the community of discourse (Koh, Chai, Wong, & Hong, 2015).

Designers do not address problems by providing answers that are clearly correct or incorrect, right or wrong, they rather make assumptions and judgments and then learn how wise those are, observing their consequences:

> "Judgment is neither rational decision making nor intuition. It is the ability to gain insight, through experience and reflection, and project this insight onto situations that are complex, indeterminate, and paradoxical" (Rowland 2004).

1.1.4   From Design to Design Research

> "(…) the question for design researchers and practitioners remains: When does design practice become research practice?" (Bredies, 2016:12).

> "Design may be everything. Is every design research?".[3]

Exploring the relationships, connections, and interplay between design and research, it becomes clear how design practices can be interpreted as research practices. Design methods, processes and activities can be understood as research frameworks (Grand, 2012).

Within the paradigm of design knowledge that sees design *as* research, a forward step needs to be taken to explore and make visible which elements turn design into research, and which qualities turn design practice into design research.

In this sense, Grand (2012:156) argues that "*it is not these qualities per se, but their enactment and performance, that is essential for the activity to qualify design research. This implies that design can be seen as research if it explicitly attempts to qualify as design research, with respect to some essential quality criteria*".

To identify these qualities, Grand (2012) suggests reflecting on four central dimensions of design practice, in order to define the "*swampy lowland*" discussed by Schön (1983). Such dimensions are:

Designing new artefacts
New images
New interfaces
New usage

The list moves from the creation of physical objects as a learning process to visualisation as a way of representing the world as it could be. It then progresses towards the exploration of tangible and intangible interfaces, before finally arriving at the idea that users play an important role in the research itself, as "*artefacts, images, and interfaces are never completely predetermined, but are co-designed in their use by their users*" (Grand, 2012:158).

Following this reasoning, Grand suggests four important qualities of a "*designerly*" way of knowing (Cross, 2007) that should be considered:

Design implies creation
Design implies intention
Design implies materiality
Design implies process

The first quality, *creation*, refers to the role of creativity and innovation in design. It is important for design research to identify processes, methods, and approaches that make it possible for us to explore design as creation "*at the edge*" (Grand, 2012).

The quality of *intention* relates to values, urges, simulation and imagination. It reflects on what it is that drives practitioners across their design processes.

Materiality argues for experiential and physical engagement as a central design activity, "*operating at the interface between the future and the present, the possible*

and the actual, the imaginative and the real"
(Grand, 2012: 159).

Finally, *process* refers to the level of strategies, procedures, and methods carried out within particular processes. Grand suggests that it is important to understand how these elements *"act upon and shape design as outcome, design as process, design as method, and design as activity, and thus how they are intertwined, and thereby inform design as practice"* (Grand, 2012: 160).

In such an interpretation of design qualities, design is seen as a reading of the world that is open towards uncertainty, ambiguity, and future possibilities. Design is then considerable as a field of practice and research focusing on the world as it could be.

1.1.5   A New Epistemology of Design

"Design is about what is not (yet). This statement expresses the main epistemological problem/paradox the discipline has to face in order to construct an own paradigm" (Jonas 2007: 1373,1374).

Over the last decades, design research has established itself as an autonomous and distinct academic field, defining its own journals, PhD and training programs, conferences, and communities. The relationship between design practice and knowledge creation in design research has changed significantly, from an activity that researchers observed from a distance to an epistemic practice in its own right (Bredies, 2012: 12).

Today, design research is still in search of an appropriate and specific epistemology, which can be considered as *"the study of the nature and validity of ways of knowing, believing, and feeling in the Design area"* (Jonas, 2012:15).

In the debate over the relationship between design and research, Glanville finds his position in considering research as a design act, rather than design being an *"inadequate research"* (Glanville, 2012:43).

This approach overturns the traditional dynamics between research and design, considering design as a primary and necessary element for research, as

research itself needs to be designed. Glanville claims the independence and specificity of design, stating that design should be studied on design's terms rather than attempting to fit it within scientific research paradigms. He criticises the approach adopted in academic contexts, highlighting the specific value of design to the academic realm, and suggesting that the scientific paradigm itself should be embedded in the design paradigm, instead.

As suggested by Jonas (2012:12), *"Accepting the limits of project-oriented science and acknowledging its similarity with design suggests a new role of design: at once more modest and more self-assured. More modest in its claim to solve problems, and more self-assured in its claim to present its own designedly paradigm of project-based knowledge production"*.

Following Glanville's ideas about the dynamic between design and research (Glanville, 2012), the need for a new and shared design epistemology remains, in order to better understand the role of design in academia, what it could be, and how it could contribute to academic research.

Design knowledge still needs to be fully validated as a specific way of knowing in the academic context. A new design epistemology is thus an urge shared amongst the design community. The shift from design practice as the object of research to design as a research method in itself has produced an ongoing debate over the framing of practice as part of an *"academic knowledge creation process"* (Bredies, 2016:12).

During the course of the debate, the concept of *materiality* becomes a dominant element in defining design practice. Compared to other fields and realms of knowledge more focused on ideas, systems or people, design focuses its know-how on material products (Tonkinwise, 2016).

Therefore, *materiality* needs to be seen as a crucial element for the definition of a design epistemology, as Tonkinwise (2016:83) suggests:

> "Design is now at last in a position to be accorded recognition as a discipline amongst others in the university precisely because of its expertise with respect to materiality".

Carter (2005) refers to the concept of "*material thinking*" saying that *"local knowledge"* is the *"distinctive yield"* of

creative research. It is a way to look at, interpret, and imagine the world. As Carter claimed:

> "(…) the process of material thinking enables us to think differently about our human situation, and, by displaying in a tangible but non-reductive form its inevitable complexity, to demonstrate the great role works of art can play in the ethical project of becoming (collectively and individually) oneself in a particular space".

Thus, *"material thinking"* offers a way of considering the mechanisms that take place within the very process of making, creating, and practicing. In this perspective, material is seen as not just passive objects to be used instrumentally, but rather as materials and processes of production and creation.

1.1.6   Doctoral training in Creative Practice Research

> "A design PhD is about making ideas tangible, (…) it is an exercise in perseverance and transformation" (Grocott, 2017).

The practice-based PhD is an original investigation undertaken by designing and producing new knowledge by means of practice.
It is concerned with the nature of the practice, and leads to new knowledge that has operational significance. The main focus is then to investigate the practice and shape its future.
Practice is indeed at the core of this PhD whereby creative practitioners/researchers interrogate their practice *while* practicing.
They are simultaneously projected towards the past, observing outcomes and experiences built and produced before starting the PhD; present, undertaking new design projects to be analysed during the PhD; and future, envisioning future directions for the practice through the PhD process.
The emphasis is on generating new knowledge about the nature of practice and how to improve it, rather than creating and reflecting on new artefacts.

The outcomes of a practice-based PhD are required to be described in text form, namely Catalogue, Exegesis, or Dissertation.

Creative outcomes, as design projects and products, need not be included in the final submission, but are rather part of the investigative process. The outcomes constitute claims for originality and novelty and ideally, these claims should be founded on a clear methodological position, including methods and techniques for revealing and substantiating those statements.

Ultimately, the contribution practitioners/researchers make to both the academic and professional discourse is underpinned by their capacity to reflect upon and communicate a way of thinking.

As a conclusion of the PhD, practitioners/researchers may be asked to perform a viva presentation to synthesise and display their research outcomes and achievements. As part of the submission, they may be asked to include an exhibition of their research and work as part of the final examination.[4]

THE PhD AS AN INDIVIDUAL JOURNEY

The practice-based PhD works as a methodological framework for practitioners/researchers who are interested in investigating their practice. The PhD model doesn't provide rules or procedures to follow, but rather enables practitioners/researchers to shape their own research journeys, and define their specific investigatory methods.

Thus, the PhD framework provides a methodological scaffolding while the research (and practice) methods that practitioners/researchers apply and experiment with, are not pre-defined rules to follow but rather outcomes of the investigation itself.

The effect is that each PhD is different and has the potential to not only generate new knowledge, but new methods of inquiry.

The PhD could be seen as an individual journey for practitioners/researchers to undertake through their practice, that involves a series of steps, training activities and supervisory moments, provided by the doctoral framework.

DIFFERENT APPROACHES: THE GENERATIVE AND REFLECTIVE MODELS

It is possible to recognise two key models of undertaking a practice-based PhD based on the focus of the investigation, namely the *reflective model* and the *generative* one.

The *reflective model* draws on Schön's understanding of design as a framework for reflective practice (1987:157), and relates to a retrospective examination of past practice as a starting point for the investigation.

Practitioners reflect on their past practice to make sense of it, to validate it, and to surface embedded knowledge, so they may become aware of what their modes of operation actually are. They apply the reflective process to new projects undertaken during the PhD, as a way of testing and challenging their acquired knowledge.

The aim for practitioners, is to achieve a deep understanding of their practice, methods and modes, which will then guide the future direction of their practice.

The *generative model* shifts the focus towards the generation of new knowledge as a production process. Practitioners/researchers investigate their practice through the production of new design projects during the research journey. They interrogate these new designs with the aim of transforming their practice, tracing new paths and directions for their practice, and positioning themselves as practitioners.

The PhD becomes a path of experimentation that is intended to test and verify new knowledge.

THE SUPERVISORY PROCESS

The supervisory process is a pivotal element within the framework of the practice-based PhD. It works at two parallel levels: the individual and the collective.

The *individual level* works through a series of one-on-one conversations between the candidate and the primary (and/or secondary) supervisor, during the research journey.

The *collective level* works through a series of encounters with panels of peers, in which practitioners are invited to present their research work and receive feedback. The collective supervision process is an additional tool the practitioner can use to direct their research path, by using feedback from multiple and different perspectives.

The supervisory process works then as a knowledge co-production, generated through conversation. It is both training and a tool that the PhD offers practitioners in order to guide them through their research journey.

A "CONVERSATIONAL" MODEL:
THE PhD COMMUNITY

The practice-based PhD also supports practitioners/ researchers through their engagement in a Community of Practice – a forum for sharing interests, ideas, doubts, and modes of operating – a space for collective exploration of the boundaries of design knowledge itself.

The learning process works as a social dynamic that generates new knowledge through conversations.

In the case of the PhD model established by RMIT University, the focus is on the relevance of collective learning. The model works through a series of Practice Research Symposia events taking place twice a year, where practitioners are invited to present their research work to a panel of other practitioners/researchers, as well as to their peers. Presentations are public, making space for new and unexpected contributions and conversations.

The public process of presenting is of great value to practitioners/researchers in terms of training, encouraging them to become clearer and more structured in their communication, and in acquiring new skills. Public presentations also offer an opportunity for sharing and generating new ideas – working as a guide for the practitioners' research journey.

Moreover, Practice Research Symposia enable and encourage the learning process through informal moments of encounter. Social events are organised with the aim of triggering new discussion and conversation among peers around their research and work, and exploring new directions and possibilities of collaboration.

1.2   Research Methodology

The following chapter presents the methodology underpinning this research. In this occasion, the operations that were undertaken for the research will be illustrated and analysed.

1.2.1 Qualitative Research Approach

This research work lies within the context of the qualitative research methodological approach, primarily derived from the social disciplines (Strauss, 1987; Strauss & Corbin, 1998).

The value of qualitative methods lies in its ability to examine motivations, modes, behaviours, and opinions, alongside the quantitative and dimensional analysis.

Qualitative research provides the tools to interpret and better understand the complex reality of a given situation or phenomenon, and its implications. The qualitative approach offers richer information and deeper insights into the phenomenon under study.

The main methods for collecting qualitative data include:

- Individual interviews: structured, semi-structured or unstructured (Merton, Fiske, & Kendall, 1956)
- Workshops or focus groups (Krueger & Casey, 2000)
- Observations

Each method is particularly suited for obtaining a specific type of data.

Observation is appropriate for collecting data on naturally occurring behaviours in their usual contexts.
Individual interviews are optimal for collecting data on individuals' personal experiences, perspectives, opinions, and specificities. They can be:

- Structured, following a pre-defined set of questions
- Semi-structured, following a scheme but allowing for deviation from the layout
- Unstructured, allowing space for an open conversation between the interviewer and the interviewee, starting from a suggested topic

Workshops or *focus groups* involve moderated group interview processes. They are effective in eliciting data on the cultural norms of a group and in generating broad overviews of issues of concern. They aim to trigger a

collective debate and interchange, producing new knowledge through conversation.

All three data collection methods have been used for the purpose of this research. The way they have been structured and applied will be explained in-depth in the following sections.

1.2.2   Data Collection Methods

INDIVIDUAL INTERVIEWS

In this research, the structured model for individual interviews has been applied, with space to deviate from the interview path if needed.

Interviewees were invited to answer a pre-defined set of questions in written form or during a recorded conversation with the interviewer/researcher.[5]

The pre-defined set of questions enabled the interviewer to compare the results and observe differences and similarities with ease.

The structured interview guide provided a clear set of instructions that assisted in obtaining reliable, comparable, and qualitative data.

The interviews were organised in two steps:

1. The first step involved an informative meeting between the interviewer and interviewee. This informal conversation enabled interviewees to better understand the research topics and the reasons and expectations for their involvement.
2. The second step involved two possible paths – the delivery of written answers from the interviewees or a recorded conversation between the interviewer and the interviewee addressing the pre-defined questions.

Practitioners/researchers involved in the interview process were invited to choose their preferred interview model.

Both methods presented positive outcomes. The written response allowed space and time for deeper solitary reflection – the spoken interview acted as a tool to foster the reflection.

SELECTION OF THE INTERVIEWEES:
THE CASE STUDIES OF THE RESEARCH

For the purpose of this research, 40 people (practitioners/researchers) were invited to take part in the interview process. The invitees had completed their practice-based PhD in the last 10 years at RMIT University or at one of the other academic institutions that were part of the DAP_r project.

The selection of invitees was chosen from a broad range of PhDs from different institutions and fields, and at different stages of their PhD completion. This allowed for a comparison of different models, ways of interpreting the PhD, and perceptions of the PhD contribution over time.

Of the 40, 15 responded positively, agreeing to taking part in the research project and the interview process.

Most of the interviewees completed their PhD at RMIT University, because the institution has run a practice-based PhD model for some time, whereas the other institutions (part of DAP_r project) have only recently established the same model.

Therefore, the critical mass of practitioners/researchers engaging in Creative Practice Research were found within the RMIT University context. Of the 15 interviewees, only two came from other institutions – one from the University of New South Wales (Sydney), and the other from the University of Technology (Sydney).

Another aim of the selection process was to include practitioners/researchers who undertook a practice-based PhD and are now supervising PhD candidates. This provided another perspective on the practice-based PhD from the side of the supervisory process, and the evolution of the PhD within academia. Two of the 15 interviewees were also supervisors at RMIT University.[6]

The people involved in the interview process are identified as the *case studies* of this research work.

Interview Guide Questions

1. Could you please provide a short description of your practice through words and/or drawings/images?

Impact on Practice

2. What has been the impact on your understanding of your practice?
3. What has been the impact on your design process?
4. What has been the impact on your ability to articulate in spoken and written language your practice?
5. What has been the impact on your public behaviours with clients and peers?
6. Has your community of practice changed and/or expanded?
7. Has your practice changed in economic or dimensional terms?

Impact on Teaching

8. What has been the impact on your studio teaching strategies? Have you changed your approach?
9. What has been the impact on your public behaviours and communication effectiveness within the studio environment?
10. Are you able to see changes in the way students react to your teaching?
11. What relationship do you see between your studio teaching, practice and research?

Impact Outline

12. What do you think has been the impact of your doctoral research on the field of Creative Practice Research?
13. How would you briefly define the meaning of impact in Creative Practice Research?

Furthermore, interviewees were invited to select and include a series of images (1 to 5) from their PhD Catalogue/Exegesis and/or from their work, to support their answers.

OBSERVATION AND FIELD WORK

In this research, the observation focused on two main directions:

- The individual work of the interviewees studying their PhD Catalogue/Exegesis/Dissertation, publications, and design work
- Collective moments of discussion about Creative Practice Research, organised during the course of the research project, such as:

  - The two Practice Research Symposia, RMIT University, June and October 2017
  - The conference*, The Language of Practice Research,* University of Technology (Sydney), May 2017
  - The two-day conference*, Practice in Research <> Research in Practice,* Bond University (Gold Coast), and m3architecture (Brisbane) July 2017
  - The conference*, Interdisciplinary Impact of Creative Practice Research,* Monash University, Caulfield Campus (Melbourne), September 2017

Some of the case studies took part in, and presented their work and perspective on Creative Practice Research at the above-mentioned conferences.

WORKSHOP

The workshop or focus group functioned as a moderated group interview process, aiming to trigger collective debate and conversation among participants. The platform aimed to build the case studies' collective knowledge, and encourage the exchange of thoughts and experiences through discussion.
        During the Practice Research Symposium (RMIT University), June 2017, a workshop entitled *Mapping Impact in Creative Practice Research* provided an opportunity for debate over the possible meanings, interpretations and perspectives of the impact of doctoral training on both

professional practice and pedagogical approaches in Creative Practice Research.

This forum allowed the researcher to develop a greater understanding of the expectations of both PhD candidates and completed PhDs, while collecting qualitative evidence.

During the workshop, participants were informed about the research topics and introduced to the DAP-r project, before dividing into small groups. The groups were tasked with addressing the research questions and topics using coloured post-its, which they then positioned on a wall to depict a map.

The discussion hinged on the maps as tangible products – a method that aligned with the participants' visual and material way of thinking, and successfully engaged them with the research topics.

SELECTION OF PARTICIPANTS

All the PhD candidates taking part in the Practice Research Symposium were invited to participate in the workshop, as well as the practitioners/researchers involved in the interview process, and all representatives from the DAP_r partner institutions.

1.2.3   Interpretative Methods

DIAGRAMS

Diagrams were applied to the body of work as a method of understanding, interpreting and communicating the research outcomes. Specifically, they were developed to investigate the topic of *impact* in Creative Practice Research,[7] to read and interpret the data collected from case studies,[8] and to communicate the research outcomes.[9] This visualisation technique enabled a more immediate method of communication and effectively highlighted topics of relevance in an alternative format.

INDIVIDUAL NARRATIVES[10]

The *Individual Value and Contribution Narratives* are the individual accounts of the case studies, describing their perspectives on the main topics of this research: the contribution of the PhD on professional practice, and its contribution on pedagogical approaches to studio teaching.

The analysis and interpretation are based on the data collected along the research path, through a series of research operations.[11]

The narratives interpret the work and words of each practitioner/researcher, summarising relevant topics through a series of key themes.

CROSS NARRATIVES[12]

The *Cross Value and Contribution Narratives* represent a further interpretative step, drawing on the comparison and intersection between the aforementioned individual narratives.

The aim of this set of narratives was to explore a series of thematic clusters that were transversal, shared, and relevant among the case studies. This assisted in showing trends, similarities and differences, through text and diagrams.

These narratives aimed to summarise and explain the main directions, perspectives, and interpretations of the case studies in relation to the contribution of the practice-based PhD to professional practice on one side, and pedagogy on the other. They show the relevant areas where practitioners/researchers identified such a contribution.

This section aimed to explore the contribution of the practice-based PhD, including what a practitioner/researcher might be able to learn through undertaking a PhD by practice.

A series of interpretative categories were identified, highlighting the main contributory paths. They are presented below in the –ing form, suggesting the idea of action and transformation inherent in design research.

The narratives within the context of the contribution to practice are:

Positioning
Articulating
Experimenting
Expanding
Shifting
Sharing

The narratives within the context of the contribution
to pedagogy are:

Articulating
Experimenting
Translating
Merging

Another set of narratives entitled, *Value and Contribution to
Whom*, focus on the contribution of the practice-based PhD
in relation to the specific path and development of a practice,
observing what the PhD can offer at different stages of the
process.
    These narratives are shared between the two contexts
of the contribution to practice and pedagogy.

The connections and intersections are:

Establishing
Transforming
Consolidating
Integrating

PARTICIPANTS

Brad Haylock, RMIT
Christopher Kaltenbach, NSCAD
Romaine Logere, RMIT
Simon Spain, RMIT
Warren Reilly, Newcastle
Suzie Attiwill, RMIT
Manuel Muehlbauer, RMIT
Melisa Duque, RMIT
Magi Sarvimaki, BOND
Laurene Vaughan, RMIT
Jan Van Schaik, RMIT
Nigel Bertram, RMIT
Jo Russell Clarke, Adelaide
Beth George, UWA

Topics
As a starting point for the workshop, the researcher
presented her initial insights and reflections on the research
work completed within the DAP_r project. Participants were
shown diagrams as a method of exploring and explaining the
research topic and as a trigger for further discussion.

Activity
Participants were invited to reflect on the concept of
impact in the context of Creative Practice Research
training, before dividing into groups to discuss their
response to the below trigger questions. Groups were
asked to write their ideas/opinions on post-it notes and
position them on a collective map that was visible to all.

CASE STUDIES	PLACE	INSTITUTION	TIME
Adele Varcoe	Melbourne	RMIT	2016
Ashley Hall	London	UTS	2013
Beth George	Perth	RMIT	2009
Guy Kuelemans	Sydney	UNSW	2015
Jan van Schaik	Melbourne	RMIT	2015
Jo Van Der Berghe	Brussels	RMIT	2012
Julianna Preston	Wellington	RMIT	2013
Lisa Grocott	Melbourne	RMIT	2010
Matthew Bird	Melbourne	RMIT	2012
Petra Pferdmenges	Brussels	RMIT	2015
Pia Interlandi	Melbourne	RMIT	2012
Riet Eeckhout	Brussels	RMIT	2014
Sam Kebbell	Wellington	RMIT	2016
Mick Douglas	Melbourne	RMIT	2010
Suzie Attiwill	Melbourne	RMIT	2012

[Fig.5] Case Studies: Data

FIELD	PRACTICE	ACADEMIC ROLE
Fashion Design	Adele Varcoe	Lecturer
Product Design		Professor
Architecture		Assistant Prof.
Product Design	Guy Kuelemans	Lecturer
Architecture	MvS Architects	Lecturer
Architecture	Jo Van Der Berghe	Assoc. Prof.
Interior Design		Professor
Graphic Design	THRIVING	Head of Dept.
Architecture	Studiobird	Senior Lecturer
Architecture	Alive Architecture	Casual Teacher
Fashion Design	Garment for the Grave	Lecturer
Architecture		Lecturer
Architecture	Kebbell&Daish	Senior Lecturer
Performative Art	Mick Douglas	Senior Lecturer
Interior Design		Assoc. Prof.

[Fig.6] Case Studies: Geographies and Motilities

AV   Adele Varcoe
AH   Ashley Hall
BG   Beth George
GK   Guy Keulemans
JVS   Jan van Schaik
JVB   Jo Van Der Berghe
JP   Julieanna Preston
LG   Lisa Grocott
MB   Matthew Bird
PP   Petra Pferdmenges
PI   Pia Interlandi
RE   Riet Eeckhout
SK   Sam Kebbell
MD   Mick Douglas
SA   Suzie Attiwill

Perth
BG

Sydney UTS & UNSW
GK

Melbourne
MONASH
& RMIT

AV MD SA JVS
LG MB PI

JP SK

Wellington

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	2009	2010	2011	2012
Adele Varcoe				
Ashley Hall				
Beth George	●			
Guy Kuelemans				
Jan van Schaik				
Jo Van Der Berghe				●
Julianna Preston				
Lisa Grocott		●		
Matthew Bird				●
Petra Pferdmenges				
Pia Interlandi				●
Riet Eeckhout				
Sam Kebbell				
Mick Douglas		●		
Suzie Attiwill				●
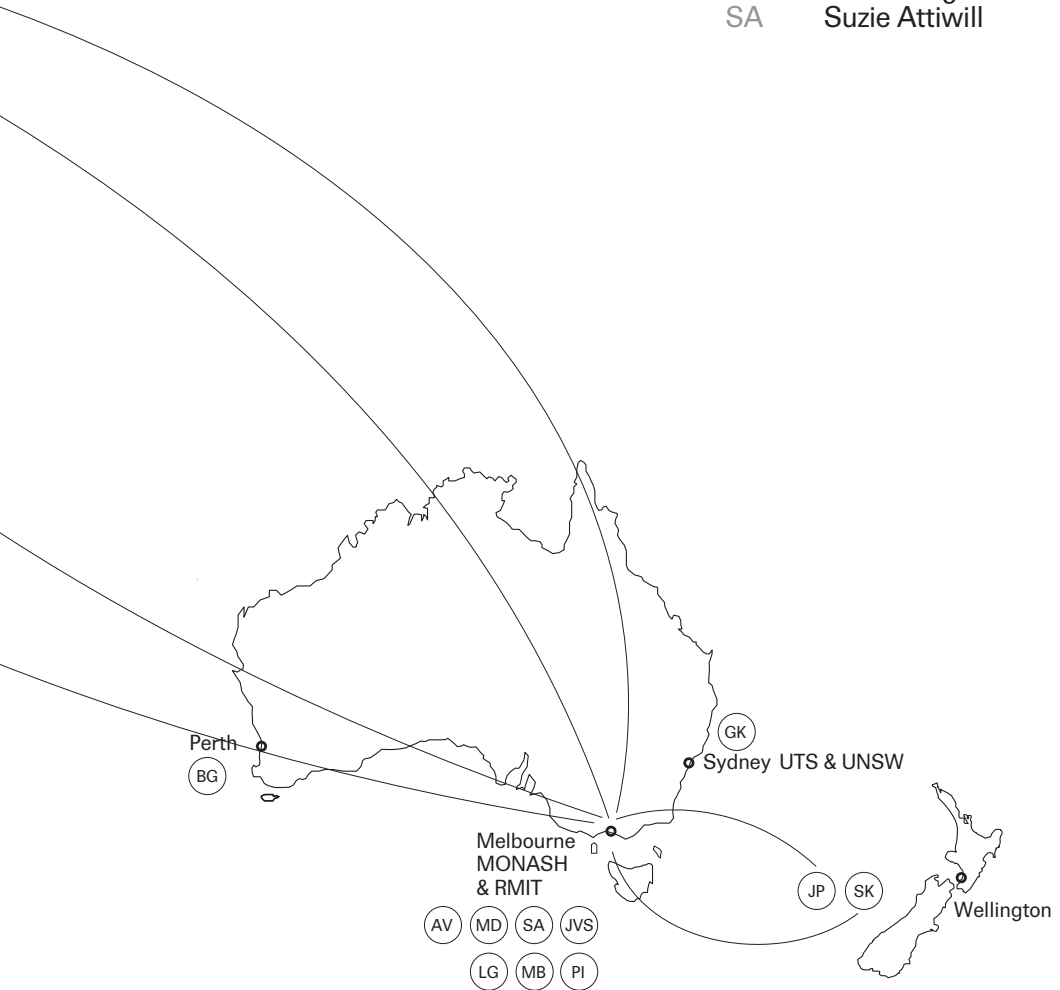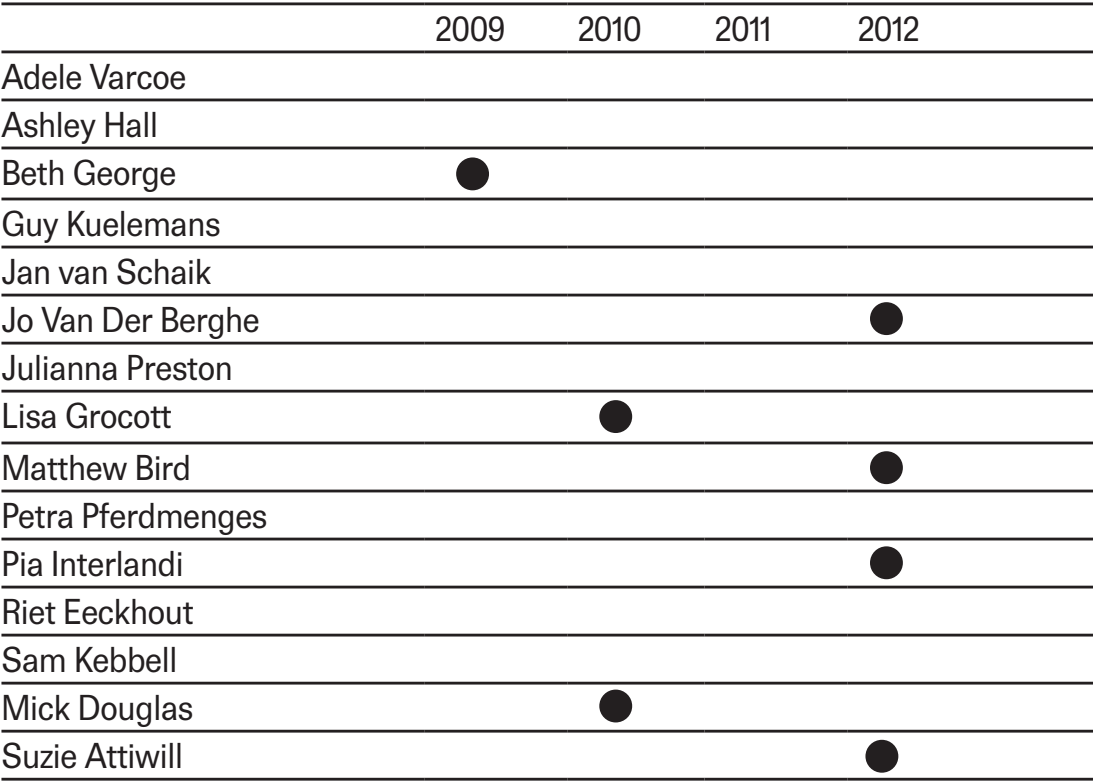
[Fig.7] Case Studies: PhD Completion

2013	2014	2015	2016	2017	2018

Architecture

Visual Art

Graphic Design

Product Design

Writing

Philosophy
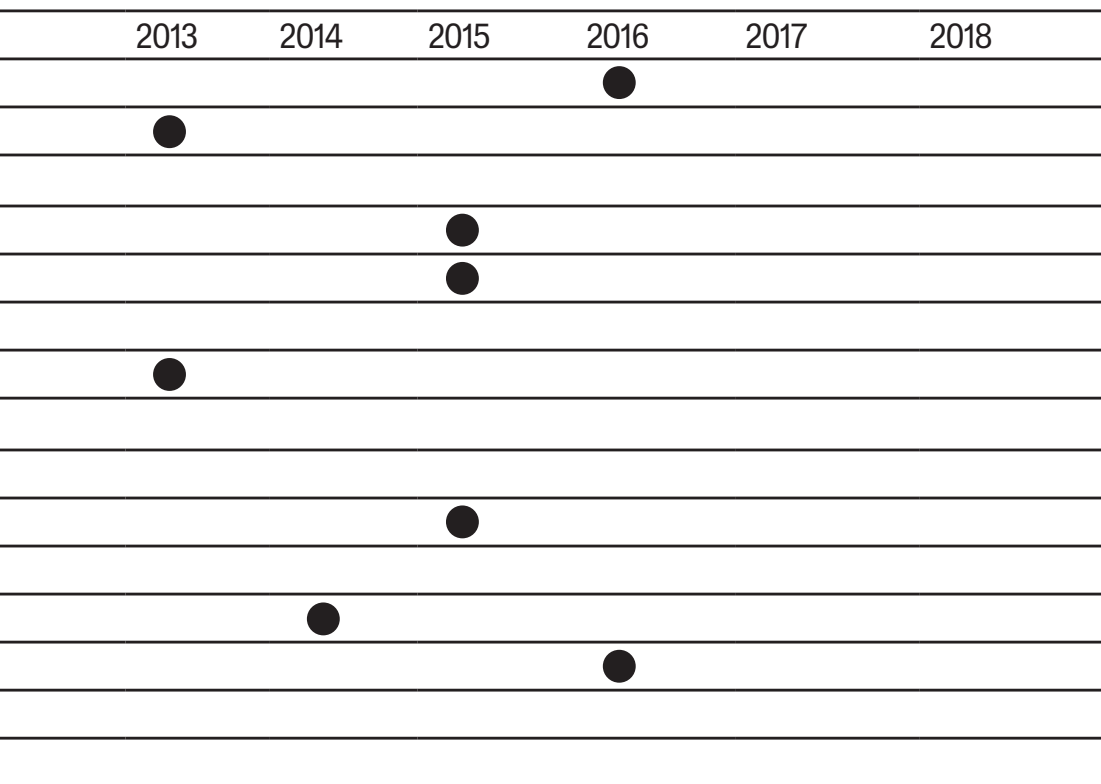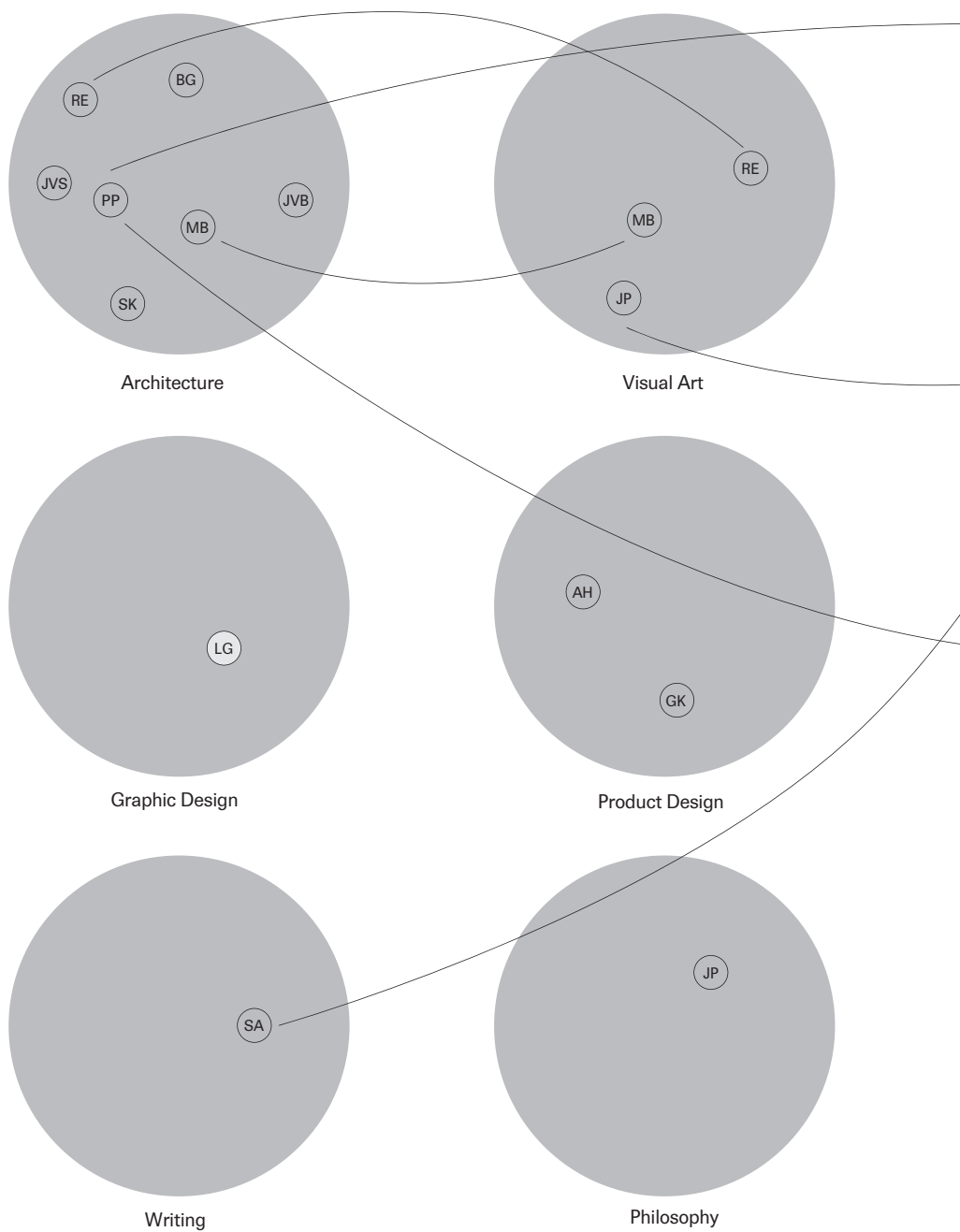
[Fig.8] Case Studies: Research Fields
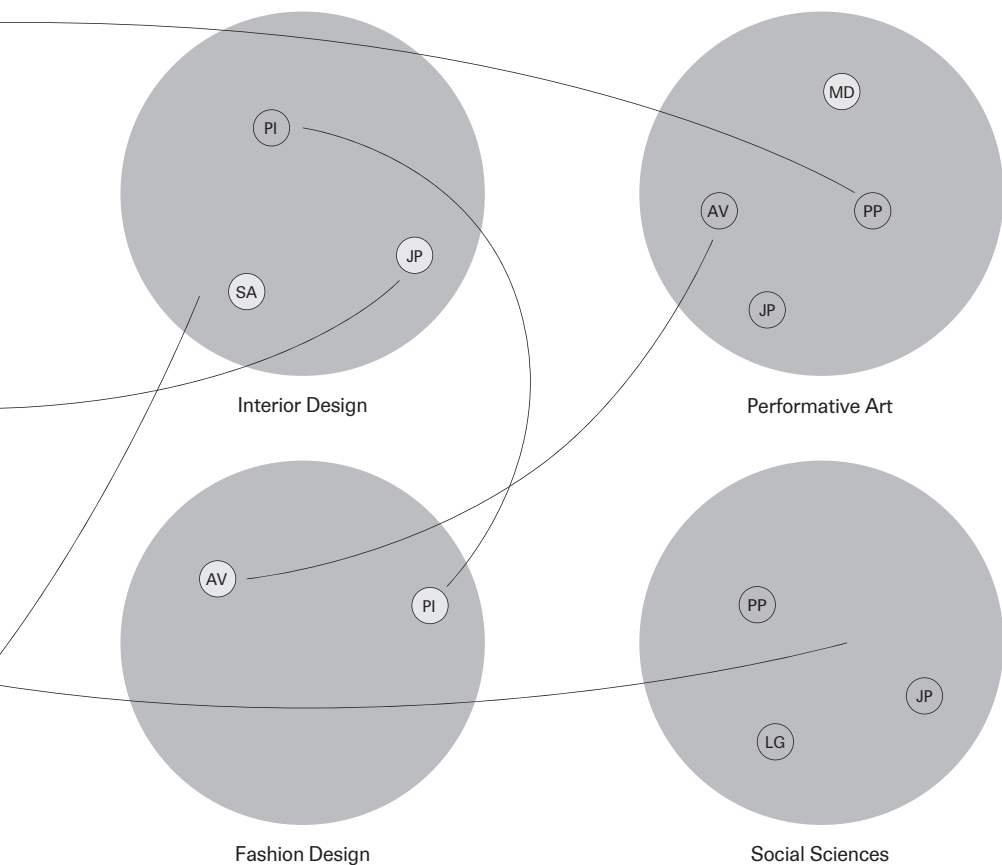
Interior Design

Performative Art

Fashion Design

Social Sciences

AV	Adele Varcoe
AH	Ashley Hall
BG	Beth George
GK	Guy Keulemans
JVS	Jan van Schaik
JVB	Jo Van Der Berghe
JP	Julieanna Preston
LG	Lisa Grocott
MB	Matthew Bird
PP	Petra Pferdmenges
PI	Pia Interlandi
RE	Riet Eeckhout
SK	Sam Kebbell
MD	Mick Douglas
SA	Suzie Attiwill

ACADEMIC
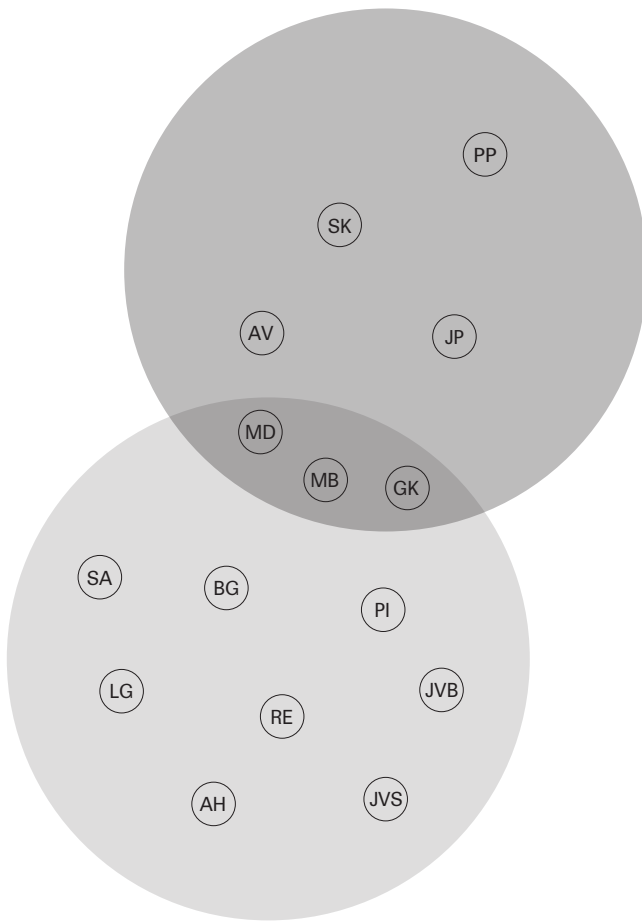
PRACTITIONER

[Fig.9] Case Studies: Role

[Fig.10] Collective discussion during the workshop

Trigger questions for discussion

- What is the meaning(s) of impact in Creative Practice Research?
- Where can we seek evidences of impact?
- Who are the beneficiaries of impact?
- What is the role of time in impact?
- What is the impact of doctoral training on professional practice?
- What is the impact of doctoral training on teaching practices?
- What evidences of impact can you see? (for completed PhDs)
- What expectations of impact do you have? (for PhD Candidates)

WORKSHOP OUTCOMES

1.   Defining Impact in Creative Practice Research (CPR)

Value and Contribution
The need to use other terms when defining and talking about *impact* in CPR emerged from the discussion. Two potential definitions included *value* and *contribution*.
Participants also noted the importance of articulating what *impact is* in CPR. They suggested avoiding the use of prescriptive frames and instead, build a narrative of *impact* within the specific context.

Articulating Outside
The discussion revealed a collective concern about the importance of clarifying how the practice-based doctoral training works (and its contribution), in order for the PhD to have an external impact.
Articulating the method of learning and the integrated modes of scholarship would enable practitioners to contribute outside of their discipline more easily, and see how they might play a role in an interdisciplinary sense.

The Role of Time
Participants mentioned the importance of considering the role of time when thinking about *impact* in CPR, particularly as it takes a long time to recognise the impact of research.

The Value of Creative Practice
Research Training
The value of the PhD lies in providing practitioners/
researchers with the capacity to critically engage in practice,
including the ability to conduct research. The focus is not on
content, but rather on methodology.

This allows a shift in focus from disciplinary
contribution to extra-disciplinary significance.

2. Impact Evidences

Discovery and Exploration
Participants advised that the PhD aided them in discovering
writing, appreciating other ways of doing things and
surfacing new interests and new modes of practice.

Articulating the Language
Impact is visible in a practitioner's ability to articulate
their practice before different audiences, in a more
conscious way. The ability to articulate arises from an
increased confidence and authority acquired through the
PhD. In relation to studio teaching, this increased capacity
to articulate their practice will make them better teachers,
to the benefit of future generations of practitioners. The
PhD also provides teachers with better listening skills, to
be able to provide a clear framework to students, thus
allowing them to construct their own path.

Sharing and Collaborating
Through the PhD, the practitioners/researchers may
become more aware of what they have been doing, their
position, and their 'voice'. This presents them with an
opportunity to share their knowledge with others in a
more impactful way through collaboration and teaching.

Contributing
Regarding the possible contribution to the discipline,
participants referred to an increased capacity for
articulation and collaboration that would lead to better
conversations with practitioners/researchers from other
disciplines.

This highlighted the need to have a valid position in
bigger and future research projects, and the importance

of being able to articulate how the PhD works to people outside the space.

Another contribution is the production of outputs like publications.

Recognising a Community

Participants recognised the value of the Community of Practice around the practice-based PhD, and informal meetings, such as the dinner party at the Practice Research Symposium (PRS).

Doubting

The topic of doubt emerged from the discussion. Though the PhD, practitioners receive training about how to form, construct, frame and investigate problems, they identified not knowing how to act in the face of doubt, as a concern.

Practice in Teaching

Participants referred to the importance of the foregrounding practice in studio teaching. They referred to Cameron Tonkinwise's idea of a new epistemology around Creative Practice Research and how this can change the idea of what knowledge is.

Social Impact

Participants discussed the ways in which Creative Practice Research is able to find innovative solutions to problems, and different approaches to social innovation and problem formation. They highlighted the importance of articulating the potential for social impact and communicating it to wider audiences and communities.

3.   Impact Expectations

Expanding

Participants' key impact expectation included the feeling of expansion: acquiring new knowledge and new ways of practice, making sense of things, developing collegial networks, and enriching the evolution of the practice.

Shifting

While imagining future impacts and discussing their expectations, participants suggested that if, hypothetically,

everyone who is practising goes through the process, this could mean a material shift for the industry, resulting in highly considered architecture.

Transforming
Participants noted an expectation for a broad transformation of the practice in relation to the teaching component.

4.   Expanding the Beneficiaries Ripple Diagram

Participants critiqued the Beneficiaries Ripple Diagram [Fig.11, pg.58] claiming that it referred to the traditional PhD that prepared the researcher to be an academic, as if teaching were the only consequence of the PhD. Whereas the creative practice-based PhD doesn't need to follow this structure, because the practice is itself, first, and there is knowledge to be gained there.

Participants thus suggested a more dynamic diagram:
[Fig.12, pg.59]

Another suggestion for improvement was adding more sections in the ripple, considering the impact on a series of levels including community, self, public, audience, the work itself, and potentially the environment.
Further, the need to open up the diagram to a sort of constellation, considering the multiple levels of impact and the circularity of effects.

5.   Negative Impact

A negative impact mentioned during the discussion was the idea that if everything becomes definable as research, everything is research, then research becomes meaningless.
On a personal level, participants mentioned how the process of doing the PhD can make them feel isolated and anxious.

Wall Posters / Impact Maps [Fig.13-15, pg.60-63]

PhD →

Practice Pedagogy World Community of Practice and Teaching
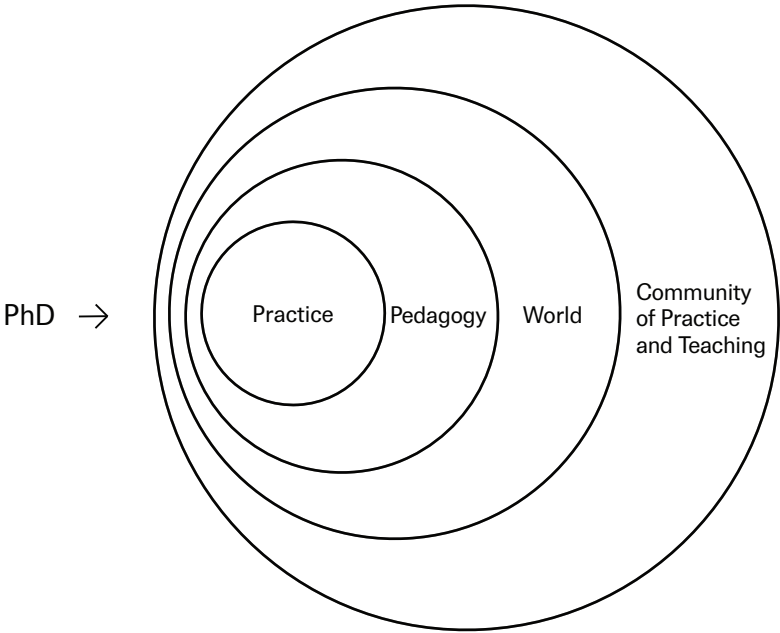
[Fig.11] Ripple Diagram presented at the workshop as a trigger for discussion

[Fig.12] Revisited Ripple: Self-Field-World/Teaching

[Fig.13] Poster Group 1: Laurene Vaughan, Melisa Duque, Romaine Logere, Magi Sarvimaki
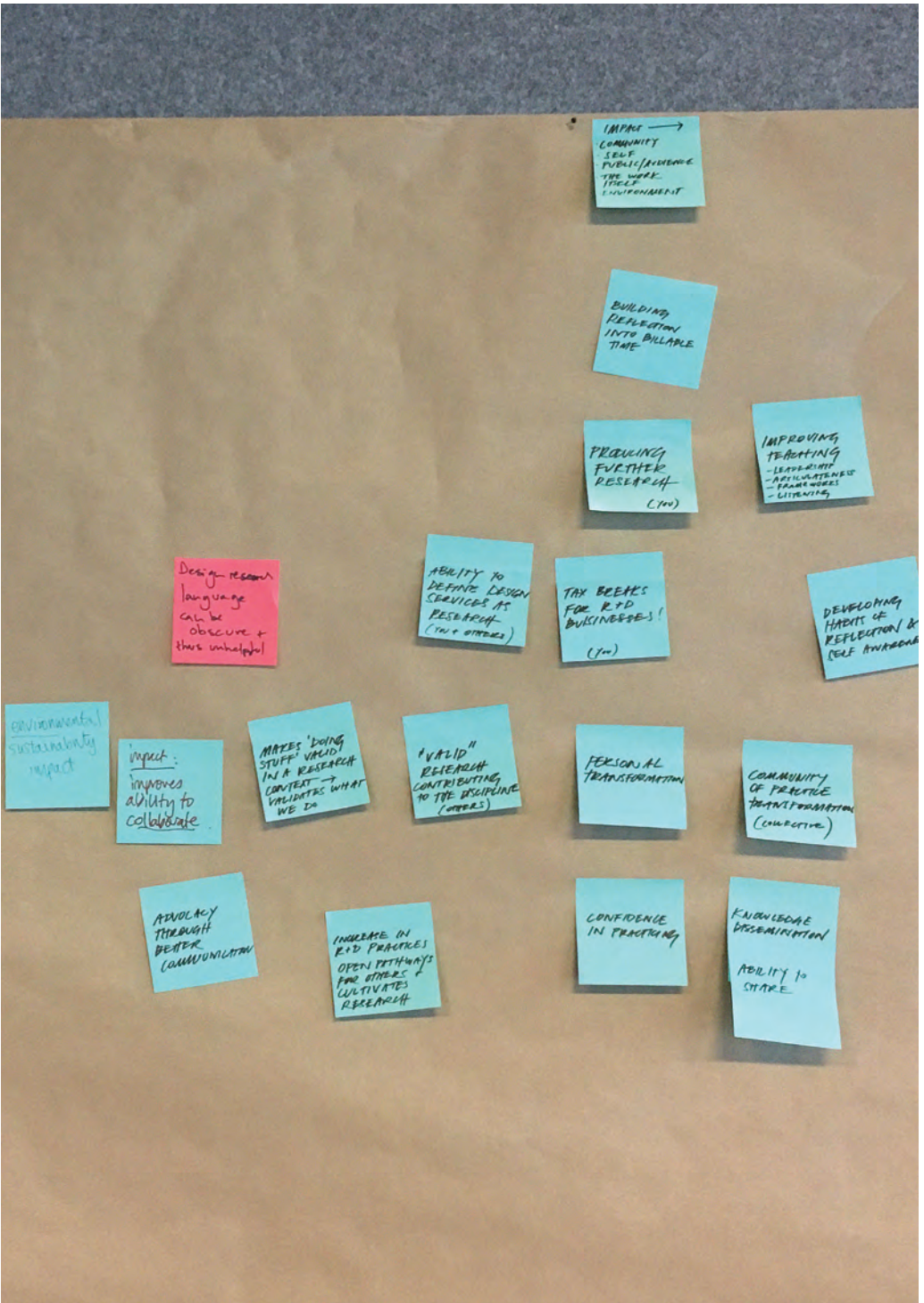
[Fig.14] Poster Group 2: Nigel Bertram, Beth George, Jan Van Schaik, Simon Spain, Jo Russell Clarke
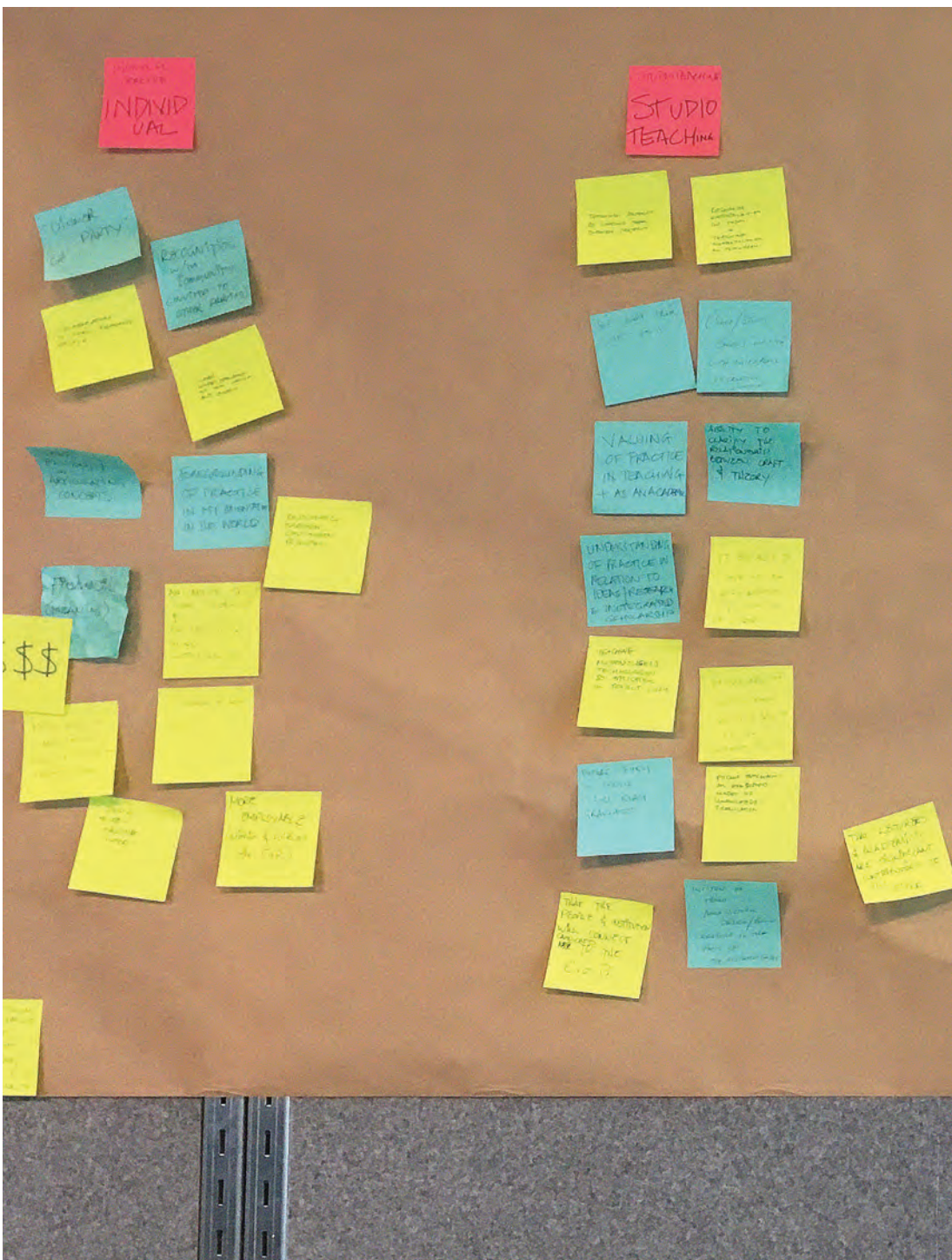
[Fig.15] Poster Group 3: Warren Reilly, Brad Haylock, Christopher Kaltenbach, Manuel Muehlbauer, Suzie Attiwill

1.3.4   Report: *Creative Practice Research?* Pop-up
         Interviews at the Practice Research Symposium
         (PRS), October 2017

An activity in collaboration with Eleanor Boydell, Pia
Ednie-Brown, and Laurene Vaughan.

        DESCRIPTION OF ACTIVITY

All the participants at the PRS were invited to participate
in a pop-up video interview project.
        The video project acted as an inquiry into the
nature and value of Creative Practice Research. It was
undertaken as part of the DAP_r project and intended to
capture thoughts, opinions and experiences from within the
Creative Practice Research community.
        Three questions were offered to the participants
to reflect upon:

   •   How does undertaking a creative practice-
       based PhD influence, change and
       transform practice?
   •   In your experience with Creative Practice Research,
       what has been most valuable? Most surprising?
   •   In what ways does Creative Practice Research
       need to mature and evolve?

Participants were asked to select one or more questions
from the above list and give a response of one to two
minutes in duration.
        Pop-up interviews were conducted individually or in
groups of two/three participants, generating a conversation
around the questions.
        A series of responses have been selected, edited and
reported below. The resulting video can be accessed via the
DAP_r website through the Practice Research Portal.

PARTICIPANTS

Adele Varcoe, Artist/Fashion Designer, PhD (Fashion and Textiles), RMIT University

Anthony Coupe, Director, Mulloway Studio Architects and PhD Candidate (Architecture), University of Adelaide

Anthony Parsons, PhD Candidate (Architecture), University of Newcastle

Jo Russell-Clarke, DAP_r Partner and Lecturer of Landscape Architecture, University of Adelaide

John de Manincor, Director, The Architecture Office, and PhD Candidate (Architecture and Design), RMIT University

Mauro Baracco, Associate Professor (Architecture and Urban Design) and Deputy Dean (International), RMIT School of Architecture and Design, Director, Barracco + Wright Architects

Milica Muminovic, DAP_r Partner & Assistant Professor of Architecture, University of Canberra

Mirair Morita, Lecturer and PhD Candidate (Architecture and Design), University of Adelaide

Nick Flatman, PhD Candidate (Architecture), University of Newcastle

Richard Le Messurier, PhD Candidate (Architecture), University of Adelaide

Simon Spain, PhD Candidate (Architecture and Design), RMIT University

Suzie Attiwill, DAP_r Partner, Associate Professor (Interior Design) and Deputy Dean (Learning and Teaching), RMIT School of Architecture and Design

Tania Splawa-Neyman, Fashion Lecturer and practitioner, PhD (Fashion and Textiles), RMIT University

Timothy Burke, PhD Candidate (Architecture), University of Newcastle

Urs Bette, DAP_r Partner and Senior Lecturer of Architecture, University of Adelaide

Vanessa Sooprayen, PhD Candidate (Architecture), University of Newcastle

EXTRACTS FROM POP-UP INTERVIEWS

Surprise and Serendipity

"The most surprising thing every time we do these project is how we don't know what is going to be the final outcome. It is a really unexpected journey that researchers take within this project, quite different from the traditional way of doing a PhD."
Milica Muminovic

"There are a lot of fantastic surprises that happen over the duration of candidature, things that emerge through doing the PhD. It is different to the idea of discovery; these surprises are wonderful and it is when things come together in a way that one had never expected."
Suzie Attiwill

"The spontaneity I had in my research, things happened along the way and just letting those things happen. / "It is a space where the research adapts, there is an inherent flexibility, it is really reactive to that and that is part of the process."
Adele Varcoe & Tania Splawa-Neyman

"One of the valuable things about this is that there is some level of excitement and enjoyment and reinvigoration of the work looking forward."
Anthony Coupe

"It is so surprising how many ideas there are that are beyond what I could fathom – to be part of that and to experience that, has been phenomenal"
Anthony Parsons

Time and Space

"The principle thing about the PhD is time on task and actually having that window to focus on something different, and that is where that transformation occurs, and it is a wonderful experience."
Jeremy Ham

"Buying into the program is the most valuable thing, having to make space and time for reflective thinking on your own work to become much more self-aware. I'm only 12 months into this thing and already I see changes in the way I talk about the work, think about the work, relate to other practitioners."
    Anthony Coupe

"The most valuable thing has been having the time and intensity to really work on my own work and explore that practice in a way I would not have had the time or commitment to do otherwise."
    Simon Spain

"In the work I have been doing for my PhD here at RMIT what has been surprising is to discover an angle of the work that is both productive for the practice itself and the creation of new work, but also being able to contextualise it in a greater body of theoretical practice, and combining those and thinking of a new way to produce work."
    John de Manincor

"Trying to find a space to step out of things I already do. This really pushed me to step out of that and to consider what are the effects, what is this doing and how is it informing my practice, what role is it doing in my practice. I don't think I would have questioned those things if I wasn't doing my PhD."
    Adele Varcoe

"That sort of interrogation, that reflection allows you this process to see value. When you practice, you don't see those things as being significant or valuable but in going through this it starts to reveal those things to yourself, it gives you a lot more confidence in your practice."
    Tania Splawa-Neyman

"Because I now understand what are the particular parameters or environments that enables me to do good projects. I can now be far more selective and clear about finding the types of circumstances that enable me to do the things I do best. Now I know

there are certain constellations that make things work for me, and now I know what those constellations are and how they relate to me. So now I can be far more strategic about laying out projects in such a way that they will work."
     Urs Bette

Confidence

"The creative practice PhD program is fabulous for practitioners to shape, rethink where they pitch themselves in terms of a theoretical, philosophical, and creative position on their work. Seeing colleagues go through the work it has allowed them to move their work in a new direction, give them confidence in what they are doing."
     John de Manincor

"One of the great benefits is that it gives confidence and seems to legitimise the efforts of practitioners that their work can be taken seriously, not just in academic context but also in broader discussions with communities, clients, and politicians."
     Jo Russell-Clarke

"As a starting practitioner it gives us a tool to place ourselves in a wider field and being able to explain ourselves better."
     Mirai Morita

"This PhD can contribute in making architects much more aware of the skills we have as architects and practitioners, and therefore, by default encouraging us to serve the social and the community. It is great to see our candidates and architects really be able to speak with much more confidence about what they are doing and why they are doing this."
     Mauro Baracco

"The most valuable and probably the most surprising thing was really the research culture and the Community of Practice. I never really expected that, and as an ongoing thing it is really valuable to have that connection with people and being able to share ideas."
Tania Splawa-Neyman

"It exposes you to a whole community of practitioners that you wouldn't otherwise be exposed to and starting to get an in-depth view of their approaches. Sometimes you see your own within that and sometimes you use that as a springboard."
Timothy Burke

"Most surprising is unexpected outcomes in terms of the research trajectory, coming across something, a conversation that you have with someone at a conference that sets up an entirely new direction."
Jeremy Ham

"It sets up a different dynamic for projects and practice that practitioners have, with encountering different people who feed back into the practice by presenting at these PRSs where they have peers who are responding to their projects and practice in ways that is quite different from what happens within practice. It's a different kind of encounter with ways of how practice is valued."
Suzie Attiwill

"Within university we often intellectualise things and we use quite enriched ideas but in practice we just have to get the products delivered as quickly as possible. Returning to Creative Practice PhD gives me a feeling that the intellectual labour will be received by some sort audience and that therefore this intellectual labour does have a worth."
Richard Le Messurieur

"Doing the PRS is helping to be open and to see what other people are doing. PhD can be very remote, you can just be within yourself, to be able to be exposed to other ideas and test your limits."
Vanessa Sooprayen

"I feel like people who are involved in this are very supportive of one another, I find that to be a very helpful environment" / "And essential for ideas, you need to have a community around you otherwise the ideas will not form."
Mirai Morita / Richard Le Messurieur

"I find the examinations incredibly exciting just to see the ways people are stepping up and really finding other ways to describe their practice and put their practice out there, and find creative means to do so. It is incredibly motivational, incredibly inspiring, and it really makes you reflect on what *you are doing."*
Timothy Burke

Growth and Evolution

"I hope that practice research will evolve in a way to have really a strong framework to be in a way open to development but at the same time to come to a unique, unifying framework that is going to work for more or less everyone."
Milica Muminovic

"Creative practice research does need to grow in its maturity, particularly when the work is often focused on the practitioner. There is a great importance on broadening that discussion to engage in what the research gives back to the discipline. How does this particular package of work not only benefit the individual but the discipline? That is going to be important in how this endeavour, that has been going on for nearly 30 years, continues to grow and grow up".
John de Manincor

"At the moment there is a fairly strong idea that practice is the antithesis of theory and history and that practice based research and the PhD done here are distinguished from theory and history theses. That distinction is important but what it maintains is a very particular idea of what theory and history is. It is starting to think about how practice is itself generating a philosophy. How do we start to manifest and talk about what philosophy of practice actually is?".
     Suzie Attiwill

"In the institution there are certain assumptions about what has value. I think we might need to find ways to be open to these different levels of achievement."
     Richard Le Messurieur

"With the DAP_r program and getting this methodology to other universities, our university is taking that on a finding a way that it does it in its own way. It is naturally evolving anyway. In five-year time, we will start to be able to look back on the candidates and the PhDs and to see how the agendas of those universities are starting to develop their own way of looking at practice."
     Timothy Burke

"One of the things about evolving is that it needs to hold its rigour. In maturing, it needs to ensure that the core values of what it stands remain and are strong, and that the quality of activity is good."
     Simon Spain

"There is something that might become embedded in maturity. I wonder whether we could become less mature, I would like to keep the fun in it." / "You may lose something of the playfulness of the design process along the way." / "The wonder, there is something that comes with precociousness that means you have to be able to feel more liberated making an idiot of yourself in order to find things" / "Yes, making an idiot of yourself is a good point: you put yourself under the spotlight, there is a lot of risk

in that, it can also scare a lot of people to not do it because they are afraid of opening up and showing tools, capabilities, capacities. If you allow for that to be hilarious, you never know what comes out of a risk, we need to take that risk".
> Urs Bette & Jo Russell-Clarke

1.3.5   Impact Readings

This section collects the case studies' answers in response to the question:

> How would you define impact in Creative Practice Research?

> "For me the moments that had impact were when something shifted – when I had an 'aha' moment. Sometimes they are little things, sometimes they were big things. They tended to reveal something in my practice that I hadn't understood or seen before.
> Impact on others came through the participatory situations. During the *Feeling of Undress* project an audience member undressed he said *"I succumbed to the situation, I couldn't not do it"*. For me when the project brings something about in someone where they think differently or do something they wouldn't otherwise do- this shows the impact of the research."
> Adele Varcoe

> "Impact in creative practice research should aim to deliver new ways of generating positive differences that ensure a sustainable social future for the world."
> Ashley Hall

> "I think the meaning of impact is different from industry's definition of impact – of how many people are affected and how many dollars have been made. I think impact in creative practice terms is deeply personal, but is also about the creation of a 'safe' space for conversation, critique, careful practice and debate. And this is incredibly important for the proliferation of high quality work in and around architecture.

With my group in the recent workshop, we imagined a scenario in which every single practitioner in the country has gone through the CPR process – when you think about not just the individual or group development, but consider the 'what-if' scenario of the discipline as a whole – then you can really wonder about the impact and speculate upon it in quite a wild way. For instance – would you change the clientele? An entire country's appetite for architecture? Would all the builders become better practitioners themselves? Would you change the standards for design? Would legislation shift? Would you create an entirely different architecture graduate? The answer to all of these hypotheticals would be yes."
Beth George

"While it is important to first influence peers and other creative practice researchers, I believe that the real impact of creative practice research will not happen until it leads to significant changes in industrial and normative design practice. In my field, this concerns changing the paradigms of environmentally damaging, planned obsolescent, mass consumer products. This is likely to only happen through a number of means, many indirect, that may include policy/regulation initiatives, professional influence, pedagogical influence and interdisciplinary influence – the last concerning better relations and knowledge exchange between fields of art and design positioned within HASS, and that of engineering positioned within STEM."
Guy Keulemans

"There are a number of dictionary definitions of the word 'impact'. To situate the word within the context of impact in Creative Practice Research I would refer to the definition outlined in the Merriam Webster Dictionary as 'to have a direct effect."
Jan van Schaik

"Impact for me is defined by two elements: (1) you have an impact when you reach people and (2) reaching people should be measured through the depth with which you reach them in the first place

(quality) and through the number of people you reach in the second place (quantity), and definitely in this sequence. Of course, the more people you can reach in the deepest way, the more effective the impact becomes.

Finally, impact is a thing that should be considered always in a long-term perspective. Impact is useless if seen in a short-term perspective."

Jo Van der Berghe

"Impact is being defined in very different ways around countries that do research assessment exercises. It is effectively a measurement factor. Usually quantified not quality. Impact in this way comes with a danger especially in creative practice/creative arts where impact is not often noticed for long periods of time."

Julieanna Preston

"I actually am interested in impact. I think that changes the way I think about it. I think if I tried to look at my practice-based research, if I think of who I was when I was doing my reflective practice PhD I would have not liked the word "impact" at all and I would have thought that that was a word that totally shouldn't be measured, that sounded too quantifiable. And then ironically now, working with all the STEM disciplines, people are horrified by the word "impact" because they're used to quantifying results in a lab and not looking at impact. And I feel like a design's claim is that it tries to future, to better tomorrows or go out into the world and actually make a difference compared to other disciplines. I feel like that is actually the claim that we can and should be able to make. I just think that we can't let the quantify of disciplines determine how we measure impact. So, we need to be creative about what we think impact looks like. (…)

We think that impact is measuring the quality or quantity of the output and we are forgetting that the impact is ideally even measured to drive our refinement to deeper impact. So, I think that if we choose to keep not measuring what we do or evaluating it in substantive ways, then how will we

ever get better at it, other than our own hubris and self-belief that we see that it's working?"
  Lisa Grocott

"Firstly I define the impact in Creative Practice Research upon a more inclusive approach of city making in Brussels through my practice as such. Secondly I define Impact through my teaching of how to design Lived Space to the future generation of architects. Finally I generate impact upon inclusive city-making through transmitting my knowledge to a larger network of practitioners and researchers through international exhibitions as well as my participation in conferences around the world."
  Petra Pferdmenges

"I think that when people are undertaking a PhD, they have to be careful about what is the contribution. Is it going to change people? Some people do PhDs that really few people will read and it does not have much of an impact. I think that you need to be able to see how it will lead into the next thing and the next thing and the next thing and so you can just do PhDs for the rest of your life but the impact is: how does it change people? Or how does it change the world? And it's huge to say, can you save the world? Can you change the world through your PhD?
  I think that ultimately that is your contribution. It is not just necessarily theoretical but applicable as well."
  Pia Interlandi

"I think about impact in this context as the effect on how we understand, teach, practice, and research Creative Practice."
  Sam Kebbell

SECTION 2 : IMPACT ON PRACTICE

The contribution of the practice-based doctoral training on professional practice.

2.1 Impact in Creative Practice Research

This chapter explores the meaning of *impact* within the context of Creative Practice Research and its training framework. Starting with an outline of definitions and interpretations of *impact* inside and outside the academic context, the study shifts the focus from *impact* towards the concepts of *value* and *contribution*. In explaining this shift, this chapter traces a path for investigating the contribution of the practice-based doctoral training to professional practice.

2.1.1   Impact: A Multi-layered Concept

Impact is a complex and multi-layered concept. It is therefore essential to define, describe and contextualise the understanding of *impact* as it applies to this research.

As pointed out by Methods Lab,[13] following an in-depth study on research impact, *"The way in which impact is framed has a significant influence on development processes and how programmes are designed, managed and evaluated"* (Hearn & Buffardi, 2016, p.8), suggesting the need for clarity when talking about *impact*, given the implications of its different interpretations.

The term *impact* is defined as *"the action of one object coming forcibly into contact with another; A marked effect or influence"* (Oxford Dictionaries, 2017). Such statements lead us to reflect upon the idea of *impact* as something new having an effect on the status quo, provoking a reaction and instigating change.

A series of definitions of *impact*, from a variety of international organisations, has been collected below to provide a broad overview of the concept within different frameworks:

> "Research impact is the demonstrable contribution that research makes to the economy, society, culture, national security, public policy or services, health, environment, quality of life, beyond contributions to academia" (Australian Research Council, 2015);

> "Impact is defined as an effect on, change of benefit to the economy, society, culture, public policy or services, health, the environment or quality of life,

beyond academia" (Higher Education Funding Council for England, 2012);

"In an impact assessment process, the term impact describes all the changes which are expected to happen due to the implementation and application of a given policy option/intervention. Such impacts may occur over different timescales, affect different actors and be relevant at different scales (local, regional, national and EU). In an evaluation context, impact refers to the changes associated with a particular intervention which occur over the longer term" (European Commission, 2015);

"Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended" (Organisation for Economic Co-operation and Development, 2002);

"Impact implies changes in people's lives. This might include changes in knowledge, skill, behaviour, health or living conditions for children, adults, families or communities. Such changes are positive or negative long-term effects on identifiable population groups produced by a development intervention, directly or indirectly, intended or unintended. These effects can be economic, socio-cultural, institutional, environmental, technological or of other types. Positive impacts should have some relationship to the Millennium Development Goals (MDGs), internationally-agreed development goals, national development goals (as well as human rights as enshrined in constitutions), and national commitments to international conventions and treaties" (United Nations Development Group, 2011);

"Academic impact: The demonstrable contribution that excellent research makes to academic advances, across and within disciplines, including significant advances in understanding, methods, theory and application. Economic and societal impacts: The demonstrable contribution that excellent research makes to society and the economy. Economic and

societal impacts embrace all the extremely diverse ways in which research-related knowledge and skills benefit individuals, organisations and nations" (Research Councils UK, 2014);

"Improved health outcomes achieved. The overall impact of the Organization sits at the highest level of the results chain, with eight impact goals. Outcomes can combine in different ways to contribute towards one or more impact" (World Health Organisation, 2017);

"How an intervention alters the state of the world. Impact evaluations typically focus on the effect of the intervention on the outcome for the beneficiary population" (3ie, 2012).

Therefore, the understanding of *impact* can be diverse, broad, or well-framed according to the specific context of reference. The crucial issue is then to trace the boundaries of a shared understanding, within the context of reference, respecting specificity and diversity.

2.1.2   Impact Layers

A series of *impact* layers have been identified and defined to better understand the concept within a specific context of reference. Such layers, described through the five W's formula, suggest coordinates to orient the exploration of *impact*, providing a simple tool for an initial understanding.

WHAT / APPLICATION
(What is the application of impact?)

This layer refers to the type of *impact* the evaluation is looking at – whether it refers to *impact* expectations, ongoing or post-completion effects, namely potential, desirable or observed effects (Hearn & Buffardi, 2016:12).

WHERE/CONTEXT OF REFERENCE
(What is the referential context of *impact*?)

This layer aims to define the people, groups, contexts, communities, sectors, fields, institutions, organisations the evaluation of *impact* refers to.

>WHY/AIM
>(What is the objective of looking at *impact*?)

This layer addresses the variables involved in *impact* evaluation, identifying whether there are predefined variables to evaluate or whether *impact* should be observed from an open perspective, looking at predetermined as well as unforeseen variables.

>WHO/BENEFICIARY
>(Who is the beneficiary of impact?)

This layer aims to clarify which people, groups, contexts, communities, sectors, fields, institutions, or organisations will benefit from *impact*, looking at primary and secondary beneficiaries.

>WHEN/TIME
>(What is the role of time in terms of distance, duration and variability in relation to *impact*?)

This layer aims to define short-term and long-term effects of *impact* and to understand whether it is static or variable.

2.1.3   *Impact* in the Specific Context of Creative Practice Research

The analysis of *impact* and its multiplicity suggests the need to define what the concept means in Creative Practice Research. A series of reflections have resulted from this research work, including:

>SPECIFICITY

As mentioned earlier, importance is given to the context *impact* refers to, respecting specificity and diversity. As Creative Practice Research is different to traditional academic research, evaluation methods borrowed from

other research contexts do not enable us to capture the complexity of such a unique context. A tailor-made evaluation method is required to appropriately measure the quality of effects.

It is therefore crucial to contextualise *impact* by tracing boundaries and defining implications and specificities, towards a common understanding of such a concept in the field of Creative Practice Research.

The model of the Impact Chain[14] diagram [Fig.16, opposite] has been used as a visual interpretation of the features and dimensions of the practice-based PhD and its path towards *impact*.

The Impact Chain outlines the path as a linear trajectory, through a series of steps – inputs, activities, outputs, and outcomes.

Inputs can be identified as the action of starting the PhD, and the existing knowledge the practitioner/researcher brings into the PhD framework. Activities can be identified as experimentations, collaborations, and PhD presentations. Outputs can be recognised as publications, including the PhD Catalogue, new design projects, and exhibitions. Outcomes and impact are the two steps of the path scrutinised in this research work.

THE PRACTICE-BASED PhD AS AN "INFRASTRUCTURE" TO IMPACT: EMBEDDED TRANSLATION OF RESEARCH IN PRACTICE

Research impact refers to the translation of research in practice, as the Australian Research Council suggests, "*Knowledge transfer is deliberately embedding knowledge for use in a context beyond the researcher's own sphere*" (Australian Research Council, 2015).

Translation of research from academia to industry is one of the main focuses in university strategies, implying that research outcomes need to be transferred to a real context to have an impact.

In the context of Creative Practice Research, the dichotomy between research and industry disappears, as they actually coincide. Translation of research outcomes in practice doesn't require *posteriori* action, as it is already embedded in the nature of the PhD training.

INPUTS

Undertaking the PhD
Existing knowledge

ACTIVITIES

Experimentations
Presentations
Collaborations

OUTPUTS

Publications
PhD catalogue
New design projects
Exhibitions

OUTCOMES

?

IMPACT

?
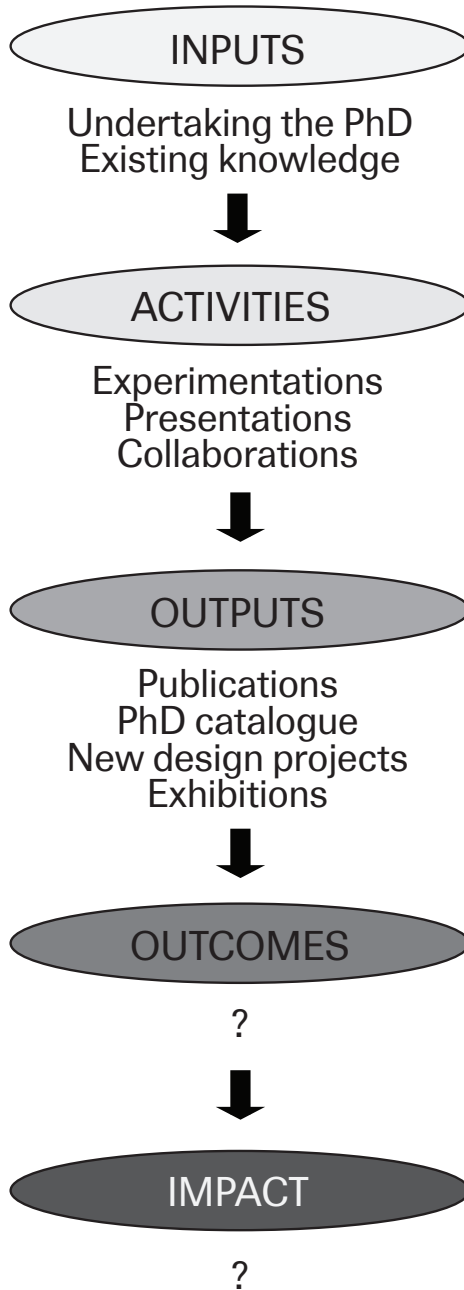
[Fig.16] Linear Chain Diagram: A Path Towards Impact

Unlike traditional researchers who have to go outside the boundaries of academia and look for industry partners for their research to have an impact within society – the practitioners undertaking a doctoral study are already embedded in industry.

Leon van Schaik, referring to the work of Boyer (1990), explains this intersection as:

> "(...) practitioners do not research or teach; they engage in four closely interrelated modes of scholarship: Discovery, or the uncovering of new knowledge. Integration, or the incorporating of new knowledge into the existing knowledge base of a field; Application, or the establishing of ways in which to apply new or newly integrated knowledge into practice; and Dissemination or the communicating of knowledge through publishing, lecturing and designing learning environments"
> (van Schaik & Johnson, 2012, p. 25).

The PhD works as a bridge between research and practice, revealing how creative practice and research cannot be considered as separate realms. This insight suggests a further understanding of the doctoral training as an *infrastructure* to *impact*. As Vaughan (2017, 13) suggests:

> "The development of a framework and capacity to participate in critical reflection about practice while being engaged in the practice is one of the transferable capacities of a graduate that bridges the expectations of the university with the professional world".

"ZERO DISTANCE" BETWEEN IMPACT BENEFICIARY AND IMPACT-MAKER

While in traditional academic research the beneficiaries of *research impact* are people, groups, communities, and institutions outside of academia, in Creative Practice Research the practitioner/researchers are simultaneously those who generate *impact* through their research, and who benefit from such *impact* outside the academic context.

This match between *impact beneficiary* and *impact-maker* strengthens the evidence of intersection or "zero distance" between practice and research. This insight can be represented through a new interpretation of the Impact Chain, shifting from a linear to a circular diagram. [Fig.17, pg.86]

MULTIPLE IMPACT BENEFICIARIES

The practitioners/researchers are therefore the primary beneficiaries of the *impact* of their research, including their professional and teaching practices. Beyond this, it is possible to identify beneficiaries within the field or discipline they operate in, and the world or society at large. A ripple diagram depicts the three levels of *impact* discussed, categorised by self, field, and world. [Fig.18, pg.87]

2.1.4   From Impact to Value and Contribution in Creative Practice Research

Along the research path, a collective understanding of the limits of the term *impact* has emerged, in relation to effects, benefits, and changes that the practice-based doctoral training can apply to professional and teaching practices.[15]
    The term *impact* is perceived as being limited to quantitative research, rather than being able to evaluate the qualitative aspects of its effects.
    A need to open up the concept of *impact* to gain a better understanding of the role the practice-based PhD, has brought to light the identification of a further two concepts – *contribution* and *value*. [Fig.19, pg.88]
    This discovery required a shift in the focus of the inquiry, expanding it beyond the idea of measuring quantity and effectiveness, towards the idea of observing quality and transformation.
    The term *contribution* suggests the intention of offering assistance in order to achieve something – of helping something advance. It provides for an observation of different fields and spaces where we can recognise the effects and the benefits of the practice-based doctoral training.
    The term *value* refers to importance, significance, meaning, worth, relevance, and evidence. Within this
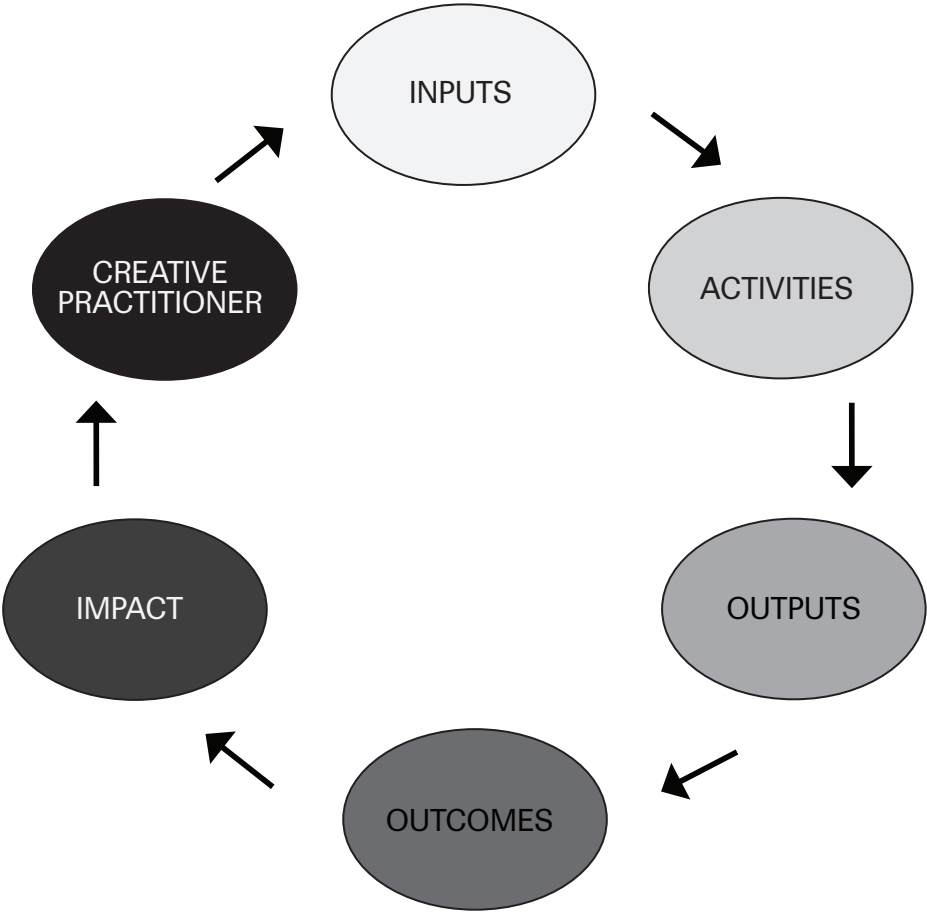
[Fig.17] Circular Chain Diagram: The Overlapping Between Impact Beneficiary
and Impact-Maker

PhD →

Self   Field   World
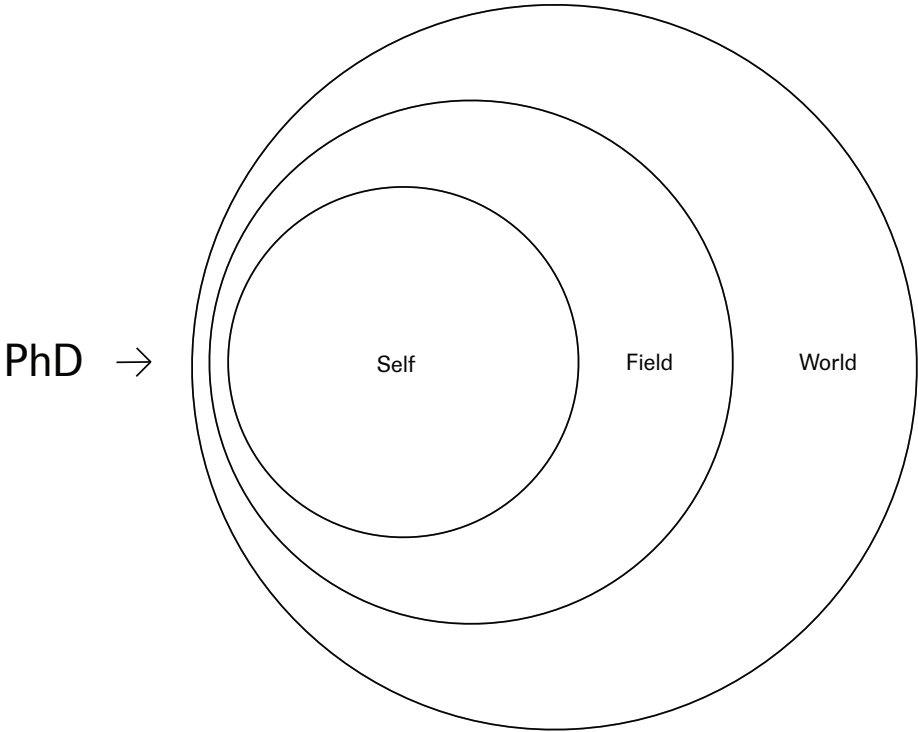
[Fig.18] Ripple Diagram: Impact Beneficiaries
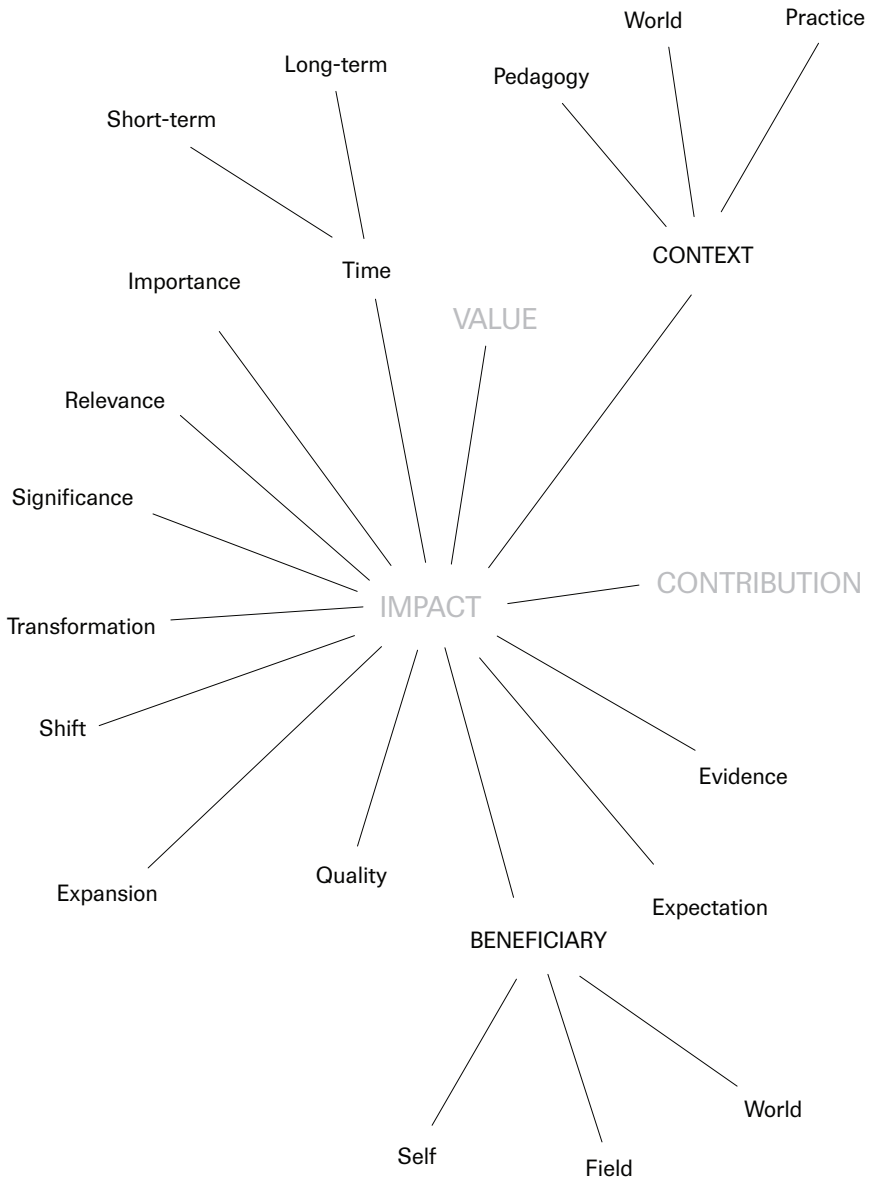
[Fig.19] Impact Constellation: Towards Value and Contribution

research, *value* can be found in clarifying the quality of the effects, and beyond the immediate impact, understanding the significance of the practice-based PhD for the future of practice and academia.

This research will therefore explore the *value* and *contribution* of the practice-based PhD, undertaken with a heuristic approach, open to multiple directions of observation, and focused on transformation and quality.

2.2   Findings: Individual Value and Contribution Narratives

The Individual *Value and Contribution* Narratives are the individual accounts of each participant, including details of the key topics that emerged from the study, observations, and the interview process undertaken throughout the research.

These narratives provide a description and interpretation of the case studies' perspectives in relation to the contribution the practice-based PhD makes to the professional and academic realms. The narratives interpret the work and words of each practitioner/researcher, summarising relevant topics through a series of key themes.

The analysis and interpretation are based on the data collected along the research path, through a series of research operations.[16]

This section will present the Individual *Value and Contribution* Narratives of the case studies, in the following order:

Adele Varcoe
Ashley Hall
Beth George
Guy Keulemans
Jan van Schaik
Jo Van Den Berghe
Julieanna Preston
Lisa Grocott
Matthew Bird
Petra Pferdmenges
Pia Interlandi
Riet Eeckhout
Sam Kebbell
Supervisor, Mick Douglas
Supervisor, Suzie Attiwill

"I went through a whole lot of words to find
 my voice" (Varcoe, Interview, October 2017).

Place:	Melbourne
Field:	Fashion Design
PhD Institution:	RMIT University
Time of PhD:	Completion 2016
Role:	Practitioner
Practice:	Adele Varcoe
Position	Lecturer in Fashion Design at RMIT University

USING THE SELF AS A RESEARCH TOOL

Adele Varcoe's research in fashion design was based on the use of *self* as a research tool. She wore a jumpsuit for the duration of her PhD journey and realised the importance of this mechanism along the research path. Varcoe claimed that it transformed her understanding of her research*:*

> "By employing an auto-ethnographic approach I have been able to demonstrate how my personal experiences can be drawn from and reflected upon to understand how fashion affects our social experience"
> (Varcoe, 2016:20).

> She made use of this tool to provoke interaction, curiosity, and raise questions about fashion design, with the aim to *"reveal, amplify and understand how fashion affects our social experience"*
> (Varcoe, 2016:20).

DISCOVERY WRITING

Varcoe told of how the PhD taught her to write. At the beginning of her PhD, she felt "*exposed and vulnerable*"[17] in showing her writing to others, but through the PhD process and through writing the PhD Dissertation, she found herself much more confident in her abilities.

She described writing as a tool for clarity, stating that in practice there can be *"grey areas"*[18] whereas with writing, everything needs to be explained and shown. Writing was for Varcoe a process that pushed her to dig deeper into her practice.

Another relevant aspect of her writing is the style she used, directly referring to the reader. This style depicts the core of her practice and investigation, which is focussed on the connection with others.

DISCOVERY DRAWING AS A REFLECTIVE TOOL

Through the PhD process, Varcoe also discovered drawing as a research tool. As previously mentioned, a key part of her research involved dressing in a jumpsuit for the duration of the PhD. During this time, she observed how others reacted to her attire, how they perceived her presence, and how they were affected by her way of dressing.

Drawing became a tool to represent those interactions in everyday life and the participatory performances she created.

It also became a way to reflect upon, analyse and simultaneously communicate her practice and research *"by re-enacting, reliving and drawing out feelings felt while interacting with another"* (Varcoe, 2016:20).

Furthermore, Varcoe pointed out the value of drawing as a method of capturing intangible things – a tool to *"re-perform, re-enact, and re-feel the moment through my body"* (Varcoe, 2016:32).

Through the course of the PhD, drawing became a performative action as well as a tool to communicate her research. [Fig.20–22, pg.93–95]

SHIFTING AND EXPANDING

During the PhD journey, Varcoe experienced a shift in the focus of her research. She moved her attention from the *act* of doing, to the *effect* her actions had on other people.

The shift happened through a series of participatory projects undertaken during the course of the PhD. During such projects, she discovered her fascination with how a garment or an action can influence human interaction.

She also experienced an expansion of her practice from fashion design to music, performance, dance, and

singing. Similarly, her Community of Practice grew, in line with the new disciplines and fields she was exploring.
Sources:

- DAP_r Interview, October 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions.
- Varcoe, A. (2016). Feeling fashion, Doctor of Philosophy (PhD), Fashion and Textiles, RMIT University.

http://adelevarcoe.com

[Fig.20–22] Drawing as a reflective tool

[Fig.21]

[Fig.22]

"The confidence of having completed a doctorate was noticeable almost more than the direct value of the content" (Hall, Interview, September 2017).

Place:	London
Field:	Objects/Product Design
PhD Institution:	UTS, Sydney
Time of PhD:	Completion 2013
Role:	Academic
Practice:	–
Position:	Professor of Design Innovation at the Royal College of Art, London

USING PRACTICE-BASED DESIGN SKILLS TO INVESTIGATE

Ashley Hall's doctoral research explored *"translocated making between different socio-spatial groups and how this could lead towards new understandings of how cultural material exchanges influence designed objects".*[19] [Fig.23–25, pg.98-99] Ashley used his design skills for research into cultural exchange aspects of designing.

IMPROVED WRITING

Hall identified his improved writing as one of the main contributions of his PhD, particularly during construction of a PhD Dissertation. He sees the PhD Exegesis as a *"complex piece of writing with multiple narratives and a more demanding structure",*[20] noting a big shift in his writing capability.

CONFIDENCE

The practitioner pointed out that his confidence in public speaking improved as a result of the PhD. Confidence is thus a pivotal acquisition for Hall, who stated that *"the confidence of having completed a doctorate was noticeable almost more than the direct value of the content".*[21]

SHIFTING THE COMMUNITY OF PRACTICE

The PhD also played a role in the shift of the Community of practice Hall works within. He can see how this change was a natural evolution of his career, but that the PhD helped the process.

ACADEMIC CAREER AND GRANTS

The PhD had a role in Hall's academic career, allowing him to win grants in which *"the length, ambition and scale of the projects are much greater"*.[22]

Sources:

- DAP_r Interview, September 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions.
- Hall, A. (2013) *Translocated making in experimental collaborative design projects*, Doctor of Philosophy (PhD), University of Technology Sydney, Faculty of Design Architecture and Building.

[Fig.23–25] Nirona stool, Luhar lamp, Ashram stool.

"The conclusion is happily inconclusive"
(George, 2009).

Place:	Perth
Field:	Architecture
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2009
Role:	Academic
Practice:	–
Position:	Assistant Professor at the University of Western Australia

NEW AVENUES FOR RESEARCH

The PhD opened up new directions for Beth George's research production, which continued to emerge many years after completing the program. The PhD has continued to have an impact on her academic career and the way she engages with research. She stated that *"(...) this criticality and explorative bent no doubt stems from my immersion in the PhD program and PRS process".*[23]
Considering her practice involves *"writing and exhibiting",*[24] George admits the PhD led to greater publishing opportunities, and generating exposure and research income within the university context.

ARTICULATING AND THE POWER OF THE PRACTICE RESEARCH SYMPOSIUM (PRS) MODEL

George recognises the Practice Research Symposium (PRS) format as pivotal in developing her ability to articulate her practice verbally. She pointed out the consistent practice required to maintain this skill, stating *"(...) the practice of speaking and writing better is embedded by the process, but like any tool, it can get rusty and has to be brought back out of the tool box and kept sharp through ongoing research and review".*[25] Accordingly, the PRS can be considered as a framework for practitioners/researchers to build and maintain their capacity to articulate their research and work.

CONTRIBUTING TO THE PUBLIC DEBATE

The PhD also contributed to George's public role as an academic, stating *"many invitations to speak, review, and write have come out of my research",*[26] as she became known as an expert within her field. She subsequently feels a level of responsibility towards the community as her voice is now louder and carries more weight.

SPECULATIVE RESEARCH

George's PhD research focused on an inquisitive reading of the city of Perth through the conceptualisation of a set of narrative threads. The research was concerned with a fictional reading of the city through mapping. [Fig.26, 27, pg.102-03] She thus used the speculative method to understand and interpret the city, using a narrative framework.
    The speculative thinking in her thesis was applied to a case study, rather than to her own practice, but it is possible to identify how the process is equally open – not giving answers but rather offering questions, she states:

> "the conclusion is happily inconclusive. What has been uncovered here is a series of possibilities for the city: possible readings, possible writings; an open and optimistic future. The research uncovers multiple rather than irrefutable speculations; and, for the thin city, multiplicity is a gratifying outcome"
> (George, 2009).

Sources:

- DAP_r Interview, June 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions.
- George, B. (2009). *Scouring the thin city: an investigation into Perth through the medium of mapping*. Doctor of Philosophy (PhD), Architecture and Design, RMIT University.

http://beth-george.com

[Fig.26, 27] Mapping Perth
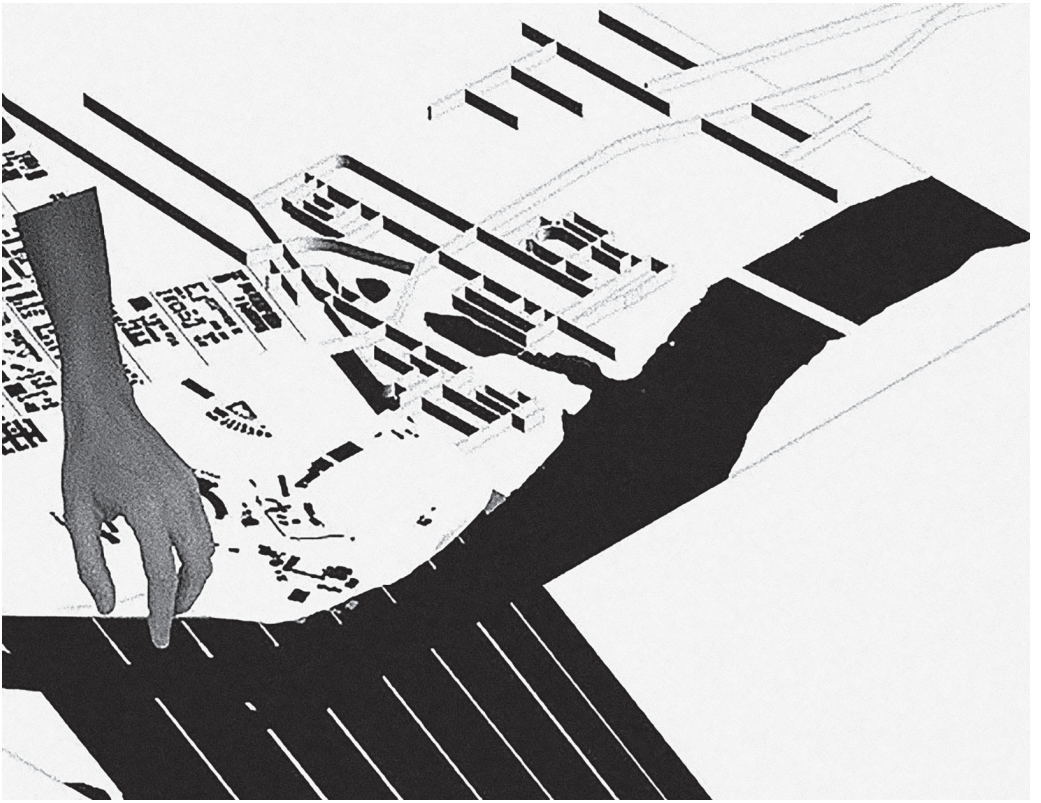
"My PhD study has impacted my practice by helping me to situate it within a broader academic discourse" (Keulemans, Interview, May 2017).

Place:	Sydney
Field:	Product design, graphics, installation
PhD Institution:	UNSW, Sydney
Time of PhD:	Completion 2015
Role:	Practitioner/Academic
Practice:	Guy Keulemans design and research
Position:	Lecturer at University of New South Wales, Sydney

PRACTICE PROJECTS AS INVESTIGATIVE TOOLS

Guy Keulemans' PhD research was concerned with the experimental design of furniture and homewares, and their relationship to issues of production, consumption and the environment. The research proposed that the process of "repair" can facilitate these relationships. Through the duration of his research he undertook a series of practice projects as investigative tools, in which he *"developed novel techniques for repairing domestic objects"* (Keulemans, 2015:11). Among others, Keulemans' work includes: *Marble and Steel Room Divider* (2013) (see fig.28), *Archaeologic* (2011-14) and *Copper Ice Cream Scoops* (2012). [Fig.28–30, pg.107–09]
    Throughout these projects, he investigated his research interests, giving materiality to them, as well as using them as explicative tools for the research dissertation. He used the practice projects to "*argue that by opening up a space for an affective encounter between damage and repair in the design of domestic products, it becomes possible to shift understanding of and relation to production and consumption and the effects of these industrial processes on our environment"* (Keulemans, 2015:103).

SITUATING THE PRACTICE IN THE ACADEMIC CONTEXT

Keulemans pointed out that the PhD contributed to his practice by helping him to situate it within a broader academic context. The PhD gave him a clearer understanding about his specific and original practice and its contribution to a wider context.

ARTICULATING THE LANGUAGE

The PhD also had an impact on his way of articulating the language of his practice. On one side, it improved his confidence regarding contents and being more engaged within the research field. On the other, it provided him with the ability to write using more precise language, specific to his practice, training him in *"how to be very precise with written language; to be more skilful with matters of truth and accuracy"*.[27] This new-found precision not only applied to the contents, but also to the audience he was talking to, stating that the PhD helped him to *"formulate the way I wrote about my work in ways that appeal to academic audiences e.g. peer reviewers, grant panels and other academic that review my practice and research"*.[28]

SELF-CONFIDENCE AND RESEARCH SKILLS

Keulemans mentioned how the PhD trained him as a researcher, providing him with the skills and confidence to engage with bigger projects *"with both the public and professional artists and designers in ways that replicate and expand the methods within my own studio practice via forms of action research"*.[29]

ACADEMIC CAREER

A clear impact that Kuelemans can see in his career, is that the PhD led to full-time employment as an academic. The PhD thus expanded his field of action and connected his practice to the academic context. Being part of the academy as a PhD before, and now as a Lecturer, expanded his practice and the potential for new opportunities.

Sources:

- DAP_r Interview, June 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions
- Kuelemans G. (2015). *Affect and the experimental design of domestic products*, University of New South Wales, Art & Design.

http://guykeulemans.com

[Fig.28] Archaeologic Project, Lit

[Fig.29] Copper Ice Cream Scoops Project

[Fig.30] Marble Steel Room Divider Project: Home Installation

"I still practice in a similar way, but am now aware of, and have greater control over, the tangled set of interrelated, yet often unrelated elements that make up my practice" (Schaik, Interview, April 2017).

Place:	Melbourne
Field:	Architecture
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2015
Role:	Practitioner
Practice:	MvS Architects
Position:	Lecturer at RMIT University

UNDERSTANDING THE PRACTICE

For Jan van Schaik, the PhD was a reflective practice – looking at his past work to make sense of it and to better define present and future paths. Through the PhD, he experienced a shift in understanding his practice, stating that he discovered:

"that the eclectic nature of my projects, the entangled nature of my design processes and the indistinct attribution of authorship inherent in collaborative practice are not inconsistencies to be ironed out, as I once thought, but rather unique strengths contributing directly to the relevance of my work and creative practice in general".[30]

The PhD allowed him to surface his modes of practice and identify their specificity and value. Van Schaik also defined the PhD as a structure for reflecting on and explicating his methods of practice, motivations, tendencies, and position in the broader context of the theory and practice of architecture (Schaik, J., 2009). Articulation, Clarity, Self-confidence

Talking about the contribution the PhD made to his practice, van Schaik acknowledges his ability to articulate a discourse around his practice, stating:

"Having this new confidence in my ability to articulate any design process after the fact, no matter how entangled and convoluted the processes may be, allows for any given design process to run its course independently of any obligation to articulate it".[31]

With a clearer picture of his modes of practice in mind, he states that he is now more self-confident and *"more comfortable acting intuitively, and more comfortable post-rationalising and reverse engineering my own processes".*[32] The PhD provided him with the ability to understand and articulate the multiple facets of his practice before diverse audiences.

Reflecting on his practice, van Schaik conducted research on his own projects. The interrogation of his past projects drew new knowledge and awareness to the surface. The first project he analysed was *OverLogo*, [Fig.31, pg.113] in which he discovered *"an interest in the re-use of everyday objects is evident at the point of ideation, and that the method of design relies on pursuing an interest or fascination amongst a family of collaborators"* (Schaik, J., 2009:73).

Another interesting example is *Wattle Avenue House*, [Fig.32, pg.114–15] designed while doing the PhD. He acknowledged its importance in the process of becoming aware of the design process, stating that:

"[It] provided me with the opportunity to examine: what I imagined would occur during the design process; the design process itself; the resulting design; the built outcome; and the telling of the story of that design afterwards"
(Schaik, J., 2009:128).

Over the course of his PhD, van Schaik also designed three tables, one at the beginning, one in the middle, and one close to the end. Designing and examining those tables helped him to give materiality to the process of change and gain insight into the shifts that had happened within his practice. [Fig.33, pg. 116–17]

ENGAGING IN CONVERSATION

Van Schaik described how an effect of the PhD has been the establishment and consolidation of his public role as a

researcher/practitioner in forums and discussions, both in person and online. He attributes this to his new ability to reflect critically on the professional environment and its contexts.

ONGOING EXPANSION OF THE COMMUNITY OF PRACTICE

The PhD contributed to expanding van Schaik's Community of Practice. The practitioner recognised the pivotal role of the Practice Research Symposia in such an expansion, as he continues to participate in the PRS *"as a peer, an audience member, a panel member and a supervisor"*.[33]

Van Schaik also mentioned *the "wireless community of practice"* (Schaik, J., 2009) as an important discovery in his PhD, recognising its role in creating a sense of belonging, pride, and protection:

> "This wireless community is one that I feel proud to be part of, and I feel a sense of learning and achievement and success through my association with it" (Schaik, J., 2009:308).

He also perceives this community as a platform for experimentation:

> "I can conduct experiments, making what is radical feel as if it were an expected norm. This makes experimentation more likely to occur, and less risky when it does" (Schaik, J., 2009:308).

Sources:

- DAP_r Interview, April 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions
- Jan van Schaik, P. 2009, *"Bruegelage. Interrogations into nine concurrent creative practice"* (PhD), Architecture and Design, RMIT University.

http://mvsarchitects.com.au/doku.php
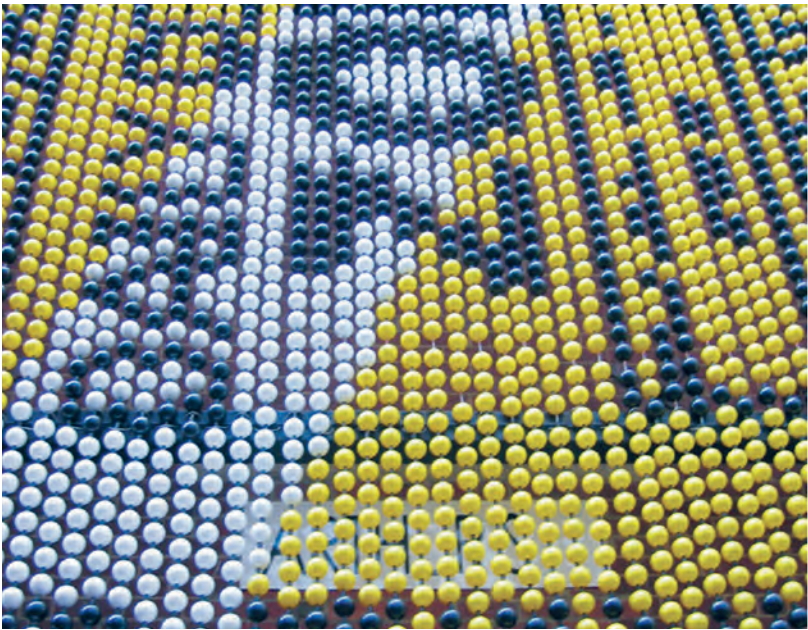
[Fig.31] Jan van Schaik & Lou Weis, 2003, OverLogo. Photos by Jan van Schaik
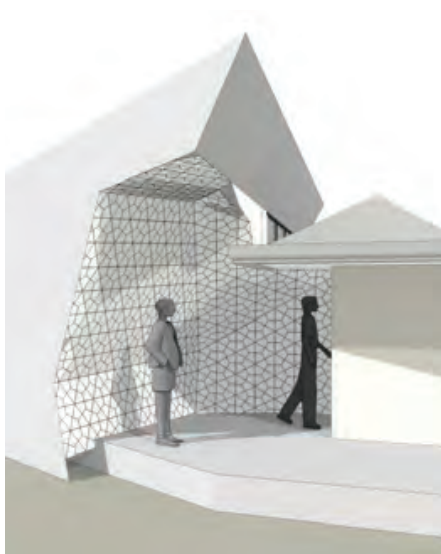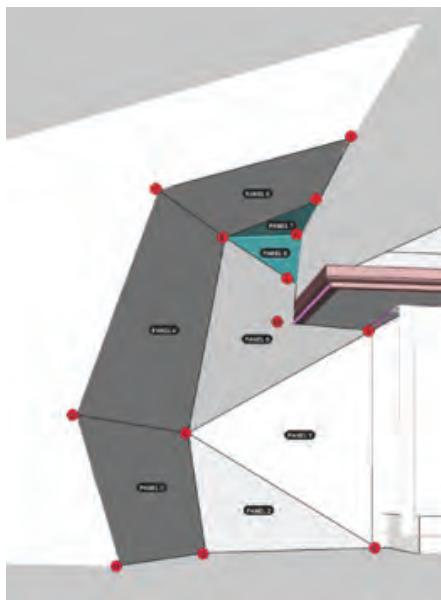
[Fig.32, and opposite] MvS Architects, Wattle Avenue House, 2011. Photos by
Jan van Schaik and Peter Bennett

[Fig.33] MvS Architects, 2014, Super Table. Photos by Peter Bennetts

"I have become more self-confident and self-aware in my public behaviours with clients and peers" (Van Den Berghe, Interview, April 2017).

Place	Brussels
Field	Architecture
PhD Institution	RMIT University, Melbourne
Time of PhD Completion 2012	
Role	Academic
Practice	Jo Van Den Berghe Architect
Position	Associate Professor part-time at School of Architecture, KU Leuven. Visiting Professor at Politecnicodi Milano

SELF-KNOWLEDGE/POSITIONING THE PRACTICE

Jo Van Den Berghe describes the main benefit of the PhD for him, as gaining a deeper understanding of the fundamentals of his practice, stating:

"I have come to a more accurate understanding of the driving forces behind my practice, and of the design themes I seem to embrace through and in my projects".[34]

His most important revelation was the essential role of his *Grandmother's House* [Fig.34–35, pg.121–22] in shaping his mental space and imagination, and in influencing his work as an architect (Van Den Berghe, 2012).

SHARING: CLARITY AND SELF-CONFIDENCE

The PhD research confronted Van Den Berghe with the necessity of sharing new findings with peers. Pushed to explain his research to others, he developed the ability to be more precise in his discourse about the *"underlying drivers"* of his work:

"[The PhD] has pushed me into a much more precise discourse at the service of sharing my new knowledge production and insights".[35]

The PhD trained him to become a more confident and self-aware practitioner, and a more effective communicator.
[Fig.36, pg.123]

BELONGING TO A COMMUNITY

Through the PhD, Van Den Berghe discovered his Community of Practice, acquiring a *"good sense of belonging to a community"*.[36] He described this as being helpful for his personal and professional growth, allowing him to share doubts and insights with likeminded professionals.

EXPANDING THE COMMUNITY OF PRACTICE/ OPENING UP BOUNDARIES AND OPPORTUNITIES

Reflecting on the meaning of Community of Practice, Van Den Berghe pointed out the expansion of his local and international networks. During and after his PhD, he participated in several Practice Research Symposia, and was invited by many European Institutions to international lectures and exhibitions. After his PhD, he accepted a position as Visiting Professor at Politecnico di Milano.
    The PhD opened up connections and opportunities that were previously thought unimaginable.

THE CIRCULAR PROCESS OF DREAMING-MAKING

Van Den Berghe stated that when he started the PhD, he was convinced that *"a creation process in architecture is a unidirectional process that starts with the poetic image, that subsequently is substantiated on the construction site"* (Van Den Berghe, 2012:223).
    Through the PhD research, he discovered and demonstrated that the creation process was not unidirectional, but negotiated and bidirectional, stating:

> "in my work, and in the work of my communities of practice, the poetic image is often triggered by construction practice. The dream is often triggered by the substance" (Van Den Berghe, 2012:223

Furthermore, he describes this bidirectional process as a *"simultaneous and equivalent transfer of design information from to dream to make and from to make to dream"* (Van Den Berghe, 2012:11).

He considers this shift to be the main contribution of his PhD, and that this insight informed his consequent practice, research, and teaching.

Sources:

- DAP_r Interview, April 2017 – Reported as edited transcription in Annex: 'DAP_r Interviews Transcriptions'
- Van Den Berghe, J. (2012) *Theatre of Operations, or: Construction Site as Architectural Design.* (PhD), Architecture and Design, RMIT University.

http://jovandenberghe.be

[Fig.34] The Grandmother's House

TECTONIKOS
OR:
CONSTRUCTION
SITE

AS ARCHITECTURAL DESIGN

"
– THE ARCHITECT BECOMES
THE SURGEON WHO CUTS
OPEN THE EARTH – "(SVERRE FEHN).

- "The landscape in the first
communing-period Pal Europe)
co-creators ("Pinssen, "
There is a landscape around you.
- The contemporising section ("order)
enables the plan & things in order
to show." (Reuse Göritz, 2010).

- "The architect becomes the surgeon
who cuts open the Earth."
(Sverre Fehn, 1985)
- "How the things become the things",
"how the rolled become the rolled."
(Martian Paly, 1964)

The landscape ┐
            └→ Concept of section + Emergence of Thickness
               to position my Things in the section
               (up built + Choosing).

            └→ in the excavation: thickness deptha substance
               in the unseen solid; thickness, depth, darkness

            └→ The contamination of my world so I see it= substance
               the contamination of my world as I make it.

            └→ substance + conform. = prism
                                      ↓
                                    thickness

            = method = my contribution to the field: drawing
              = the tangible section as thansferical drawing
              these make it understood thickness.
              Depth, substance, darkness
              = Substance of the soul.

my Contribution = I can learn how to see Ruins, people
through this makes, subsequently to make it through
                              this method:
→ and my resistance is aimed against everything that opposes this.

[Fig.35] The Grandmother's House

[Fig. 36] Diagramming and communicating

"I am prepared to embrace transdisciplinarity
with greater vigour" (Preston, 2013).

Place	Wellington, NZ
Field	Interior Design
PhD Institution	RMIT University, Melbourne
Time of PhD	Completion 2013
Role	Academic
Practice	–
Position	Professor at Massey University, Wellington, NZ

SHIFTING

Through the PhD, Julieanna Preston experienced a shift
in the intellectual and practical concerns of her practice,
evolving from *"a researcher who seeks to liberate interior
materials to one who engages with materials (and objects) as
like matter"* (Preston, 2013 – Part 2:2).
     Through a series of material projects, including among
others, *LUSH* (2008), *HUNG* (2008), and *SHALL* (2010), [Fig.37–39,
pg. 126–28] she investigated her practice, stating that through the
PhD she:

"exposed the use of an affirmative feminist agency
to emancipate seemingly inert interior finishing
materials from an oppression I attribute to building
construction systems, patriarchal paradigms and
political economies promulgating neutralization,
homogeneity and uniformity"
(Preston, 2013 – Part 0:6).

Throughout her critical reflection on these projects, she came
to the conclusion that *"they now feel like closed, symbolically-
laden, rarefied, dead things"* (Preston, 2013 – Part 0:6).
     During her project, *BALE* (2011), [Fig.40, pg.129] she
discovered a disciplinary shift from being an interior
designer/architect to a performance artist (Preston, 2013 –
Part 5:2).

EXPANSION OF THE PRACTICE AND THE FIELD OF ACTION

During the interview, Preston pointed out how the shift in her practice led her towards a more open- ended practice, beyond the material, saying now her practice *"does not look for completion, definition or resolution and as such resists any kind of objectification"*.[37]

      In explaining this feeling of expansion, she stated that her practice "*will not fit in a room any longer"*.[38]

      Coming from the field of interior design, spatial design and architecture, her practice migrated *"amongst other bodies of knowledge such as continental feminist philosophy, fine art practice, contemporary social science theory, building construction and material science as a means to disrespect, to cross out, or to cross over artificial divides separating theory and practice, interior and exterior, art and design, making and philosophy"* (Preston, 2013 – Part 0:1).

      The PhD transformed and expanded her practice beyond its limits, propelling her towards *"a far more proactive and transdisciplinary engagement that is pointed at the nexus of the practical and the conceptual"* (Preston, 2013 – Part 1:6).

COMMUNICATING

As a mature researcher at the time of starting her PhD, she already held the ability to speak and write about her practice within an academic context. Through the PhD, she learned instead how to communicate in more *"accessible ways"*[39] to engage with a broader audience.

Sources:

- DAP_r Interview, May 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions
- Preston, J. (2013). *Inertia: of interior, surface, matter,* Doctor of Philosophy (PhD), Architecture and Design, RMIT University

http://julieannapreston.space

[Fig.37] LUSH project, 2008

[Fig.38] HUNG project, 2008

[Fig.39] SHALL project, 2010

[Fig.40] BALE project, 2011

Lisa Grocott

"The PhD is simply a researcher's driver's licence" (Grocott, 2017).

Place:	Melbourne
Field:	Design Research
PhD Institution:	RMIT University
Time of PhD:	Completion 2010
Role:	Academic
Practice:	THRIVING co-designing learning futures
Position:	Head of Department (Design) at Monash University

A META-REFLECTION ON CREATIVE PRACTICE RESEARCH

Lisa Grocott's PhD research focused on understanding the contribution of design research to interdisciplinary collaboration. Through a reflective read of her own practice, she aimed *"to enhance a practitioner's understanding of his or her own expertise by investigating the affordances of design research"* (Grocott, 2017:165).

At the centre of her research, she exposed the practice of *"figuring"* which she defines as *"a designerly way of drawing, emphasising how the visualisations operate as performative research artefacts"* (Grocott, 2010:67). In her PhD, Grocott explored the specific features and contributions of design research through a series of diagrams – tangible expressions of her speculative reflection. [Fig.41–43, pg.134–36]

A NEW MODE OF THINKING: THE REFLECTION LAYER

Grocott pointed out how the PhD inspired within her a new habit of thinking, saying "[It] offered a space for amplified sense-making of my practice and in doing so an incessant habit was formed" (Grocott, 2017:169). Therefore, the PhD adds a layer of speculative reflection that lingers in the practitioner's mind.

Grocott considers the practice-based PhD as *"an investment in future potential"* (Grocott, 2017:172), having at its core, design, which she defined as being *"less about fixing solutions and more about crafting futures"* (Grocott, 2017:172). She also described the PhD as *"an experiential training into how you might find your purpose and keep reinventing your practice over a lifetime"* (Grocott, 2017:173) – suggesting that the PhD transforms the practitioner's mind-set, providing them with a new ability to reflect, imagine, and transform.

A CLOSE READING OF THE PRACTICE

Through the PhD, Grocott acquired a clearer understanding of what was going on in her own practice. The PhD provided her with a set of new skills that helped her to *"make sense of the contribution of design".*[40]

SHIFTING/TRANSFORMING

Grocott mentioned that the PhD changed her practice, inviting her to step outside of her comfort zone and question assumptions she considered to be true.

Only after completing her PhD did she experience a visible shift in her practice, *"from the dominant practice spaces of design towards a social design context"* (Grocott, 2017:169). The PhD led her to a new understanding of design as *"a discursive, social practice"* (Grocott, 2017:172).

She started the PhD as a Communication Designer and by the end, was able to see new ways of using her expertise. She stopped thinking in terms of outputs of products, rather in terms of open processes and collective figuring/visualising. Grocott used her design expertise *"with a community to generate ideas and critiques of where we were going rather than communicating where we had to be".*[41]

FINDING THE WORDS/A LANGUAGE TO ARTICULATE THE PRACTICE

Grocott sees the greatest contribution of the PhD as the language it gave her to describe what she was doing. She stated that: *"Finding new words changed my practice".*

She mentioned that the connection between designing, framing, and writing as a process, [Fig.44, pg.137] was her greatest insight. This new language gave her a

confidence *"by which to assert the role of design",*[43] when talking to non-designers.

She also recognised its value within an academic context, as the PhD gave her a *"ways of talking about design research"*,[44] which in turn benefited her leadership roles.

ACADEMIC CAREER

Another visible impact of the PhD was that it allowed Grocott to become a Full Professor – enhancing her ability to move forward in her academic career, and to work with researchers to win grants. She stated that the PhD was a process of *"disclosing and making visible my journey of becoming as a researcher"* (Grocott, 2017:165).

A CRITIQUE OF THE PRACTICE-BASED PhD

Grocott also provided an interesting critique of the practice-based PhD she undertook.

She critiqued the idea that reflective practice is not always the most useful way of understanding the practice. She felt she learned more about interdisciplinary collaboration after the PhD (working with cognitive psychologists), than in studying her own practice. But she also recognised having a strong sense of her practice was of great help during those collaborations.

After completing the PhD, Grocott had the feeling that she was arguing for one thing and against something else, rather than consciously navigating what it would mean to bring design thinking to other research methodologies to address complex problems together.

She critiqued the absence of actual interdisciplinarity in her PhD research, saying that she would have valued research training that contextualised *"what design could bring to qualitative or quantitative research"*[45] and more "*awareness of how design could adapt and adopt and transform other research methodologies to bring out the strengths of design".*[46]

Sources:

- DAP_r Interview, June 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions
- Grocott, L. (2010). *Design Research & Reflective Practice: the facility of design-oriented research to translate practitioner insights into new understandings of design*. Doctor of Philosophy (PhD), Architecture and Design, RMIT University.
- Grocott, L. (2017). Make happen: sense-making the affordances of a practice-based PhD in Design. In: Vaughan, L 2017, *Practice Based Design Research*, Bloomsbury Publishing PLC, p. 165–174.

SPECULATION
Design-led contemplation of a subject, undertaken by solution-oriented propositions that explore multiple possibilities.

REFLECTION
Thoughtful consideration of a subject, undertaken by critically framing the situation and conditions.

SPECULATION-LED
REFLECTION

Critical Reflection for Designers

This diagram illustrates how the critically reflective process of working on a proposition diagram can still be driven by the designerly impulse to speculate. The proposition diagram seeks to reconcile the opportunistic exploration of content still under consideration, with the need to critically examine the ideas that emerge. The centripetal pull of reflection harnesses design-led speculation, in turn allowing the integrity of the ideas to be examined.

[Fig.41] Speculation and Reflection. Source: Grocott, 2010

CENTRIFUGAL FORCE
The creative drive to explore
beyond what we know, to
further the potential of a design
brief or research project

CENTRIPETAL FORCE
The grounding drive to substantiate
what we know, to critically assess
the potential of a project in relation
to our current understandings
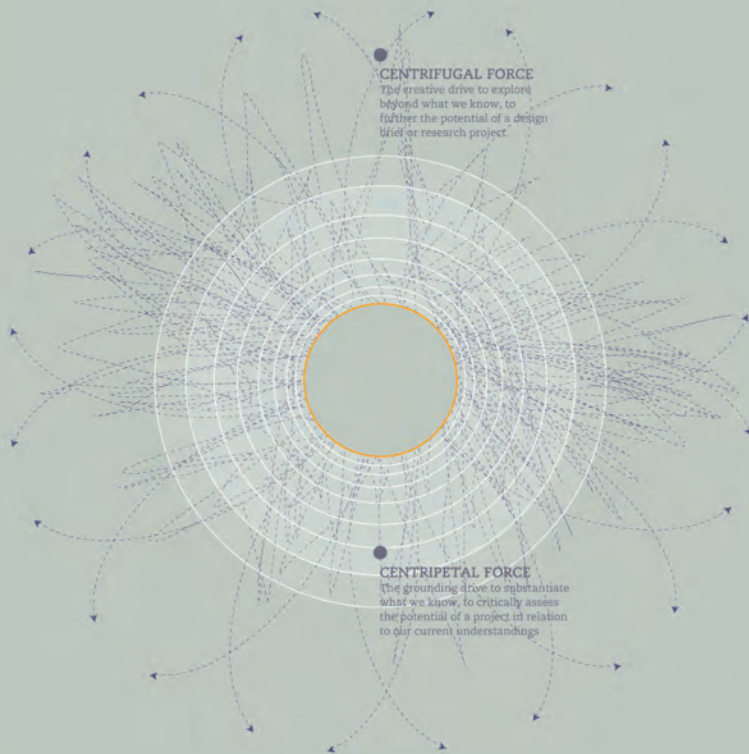
**THE PUSH AND PULL
OF CREATIVE PRACTICE**

Productive, Creative Tension

Representing the centrifugal/centripetal tension of creative practice this diagram captures
the push/pull dynamic that is at the heart of designing. The exploratory dotted lines repre-
sent the speculative push of designing, the impulse to explore new ways of seeing. The
vortex of concentric circles references the countering pull, the impulse to frame and make
sense of the design (or research) situation in relation to what is fixed or already known.

[Fig.42] Centrifugal Centripetal / Source: Grocott, 2010

VISUALISATION
CASE STUDY
With two different practice
spaces this research project
explores design praxis in a
research and professional
practice environment.

DESIGN-BASED
PROJECTS
Visual Essays
Visualisation Studies

PROPOSE

REFLECT   MAKE

DISCUSS

REFLECTION-BASED
INTERVENTIONS
Grounded Theory Exercises,
Blogging, Presentations,
Diagnostic Sketches,
and Academic Writing

THE VISUALISATION
CASE STUDY

Design-oriented Research

The design projects of the case study led the inquiry into design praxis, with the reflection-based interventions playing a critical role in translating the practice experience into research. The visualisation projects were generated in different practice spaces, creating two diverse contexts by which to propose and evaluate the potential of the research. The design-led research cycle of inquiry further provided an iterative approach to reflection and action.

[Fig.43] Propose-Make-Discuss-Reflect / Source: Grocott, 2010

DESIGNING
Practice-led investigations:
the propositional space of
the research, driving the
centrifugal force to explore
new possibilities.

FRAMING
Discursive interventions:
the negotiative space
of the research, moti-
vated to communicate
the research.

WRITING
Text-based interventions:
the analytical space of
the research, driving the
centripetal force to name
and explain.

FRAMING THE METHODS

A Multi-faceted Research Program

This big picture diagram presents the multi-modal, yet integrated research program of this
design-oriented research. The multiple method approach deploys a range of reflection-based
activities (concentric circles) to examine the design projects (exploratory lines) independently
and collectively. The targeted orange areas highlight the hybrid framing interventions that
further debate, shape and communicate the insights illuminated by the act of designing.

[Fig.44] Designing Framing Writing / Source: Grocott, 2010:219

"What the PhD really did was encapsulate my methods" (Bird, Interview, August 2017).

Place:	Melbourne
Field:	Architecture
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2012
Role:	Academic/Practitioner
Practice:	Studiobird
Position:	Senior Lecturer, Faculty of Art Design & Architecture, Monash University

UNDERSTANDING THE SPECIFICITY OF THE PRACTICE

The PhD was for Matthew Bird a journey of discovery in understanding his own practice. It opened up new ways of appreciating his way of thinking and his modes of practice, as he said:

"What the PhD process really did was develop and define my methods. The focus was not on project outcomes but more on the process of how I generate the outcomes".[47]

Bird's practice is art-based. The understanding of installation art as a component of his design process was a revelation that surfaced during the PhD. Bird defined the PhD as a threshold between his previous and future practice (Bird, 2012: 185), offering a significant contribution to his practice, through a comprehensive demonstration of his unique modes of design.

DISCOVERING RESEARCH AND DESIGN METHODS

In this process of discovery, Bird reflected upon a series of *"alchemical references, precedents, mentor approaches and practice methodologies"* (Bird, 2012: 185), as well as his growing awareness of his practice knowledge.

He discovered the predominant method embedded in his practice was the use of the internet to facilitate a project's initial research, design development, and realisation.

For example, during his project, *Domed*, [Fig.45, pg.141] Bird collaborated with an artist at the beginning of his PhD. The project allowed him to explore and discover key references, and the quality of installation in his design thinking.

Another relevant project completed in the later part of the PhD, was *Hotel Otherworldly* (2011-2012) [Fig.46, pg.142], which involved the transformation of a hotel room, in which Bird explored the installation and craft sides of his design practice.

BUILDING CAPABILITY FOR NON-TRADITIONAL RESEARCH

Bird pointed out how the PhD trained him to reflect on projects and methods in a new way, and to position himself in a "non-traditional research publication landscape"[48] as a practitioner/researcher.

A direct consequence of his PhD was successfully obtaining an academic job – a role that allowed him to continue exploring his *"non-traditional practice"*.[49] He sees this position as a valuable support mechanism, and a tool for bringing together practice, research and teaching.

EXPANDING THE PRACTICE

Through the course of the PhD, Bird's practice expanded beyond the boundaries of the architectural field towards collaborations with other disciplines. An example of such an expansion includes the installation project, *Dormitorium* [Fig.47, pg.143], a communal, spinning bed structure created in collaboration with sleep scientists. The project explored the topic of communal sleeping and insomnia, Bird said:

> "instead of it being a serious application study it was more about generating some questions around communal sleep"[50]

Another example is the project, *Brasilia* [Fig. 48, pg.144], that led Bird into the field of photography.

The PhD thus paved the way for new possibilities and inspired Bird to start *"building new threads into creating new things and thinking about new ways of practice"*.[51]

Sources:

- DAP_r Interview, August 2017 – Reported as edited transcription in Annex: *DAP_r Interviews Transcriptions.*
- Bird, M. (2012). *The House of Feathers: a design practice observed, documented and represented*, Doctor of Philosophy (PhD), Architecture and Design, RMIT University.

http://studiobird.com.au

[Fig.45] Domed. Source: Bird, 2012

[Fig.46] Hotel Otherworldly. Source: Bird, 2012

[Fig.47] Dormitorium. Source: Bird, 2012

[Fig.48] Brasilia. Source: Bird, 2012

> "I founded Alive Architecture through my PhD"
> (Pferdmenges, 2015).

Place:	Brussels
Field:	Architecture
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2015
Role:	Practitioner
Practice:	Alive Architecture
Position:	Teaching at Ku Leuven

ESTABLISHING A PRACTICE

Petra Pferdmenges used the PhD to establish her practice *Alive Architecture*. During the interview, she stated that throughout the PhD she was *"initiating, starting, building and grounding"*[52] her practice.

Through the course of her PhD Exegesis, Pferdmenges embarked on a path of discovery as she attempted to make sense of what *Alive Architecture* meant to her. The PhD helped Pferdmenges find her voice and position as a practitioner within the field and society. She explained:

> "During my first PhD presentation, I revealed my interest to connect space and society, today I am designing and putting into practice this connection of space and society".[53]

Learning From the Self Within the Phd Framework Pferdmenges said:

> "The doctoral training taught me to expand Architecture from designing built space to designing Lived Space".[54]

Reading this statement, it is possible to recognise how every practitioner undertaking a practice-based PhD learns different things within the same training framework.

EXPERIMENTING DURING THE PHD/BUILDING THE PATH OF THE PRACTICE

Pferdmenges began the PhD drawing on the knowledge she acquired through *Asica enters Europe* and *A-life,* saying that *"Both projects were the trigger for my research, on which I founded the spatial agency at the start of my PhD"* (Pferdmenges, 2015:30).

Observing these past projects, she recognised her interest in observing and producing "*Lived Space"*. She then undertook a process of experimentation through a series of self-commissioned projects that she used to test her fascinations, observations, engagement with locals, and actions.

Each project she developed through the PhD was a way of testing and clarifying the purpose of her practice, and refining her design strategies.

For example, in the project *Visible Invisible* [Fig.49,pg.149], she copy-pasted an image of a window of a brothel in Brussels onto a wall in a posh neighbourhood, to produce a reaction within the community. Referring to the project *Infrared* [Fig.50, pg.150], she says:

> "One of the multiple interventions within the Infrared project was to respond to the demand of sex-workers for better clients. I offered flowers to them so they could offer them to the women" (Pferdmenges, 2015:87).

So, in the latter project she experimented with engagement and her role within the process.

The last project she presented in her PhD Catalogue was *Farmtruck* [Fig.51, pg. 151]. *Farmtruck* was an evolution of the experimentation process, which aided in clarifying her earlier statements and offered an opportunity to engage with the community on a much larger scale.

DISCOVERING MULTIPLE ROLES/POSITIONING AS A PRACTITIONER

During the PhD, Pferdmenges discovered and successfully clarified within herself, her role as a practitioner. Through the projects she undertook, she recognised herself in

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multiple roles, such as the observer, artist, mediator, activist, client, and curator. She observed:

> "As a spatial agent, I not only act through different roles but also share those roles with others. Sharing multiple roles, I do not consider authorship as important but value shared authorship" (Pferdmenges, 2015:65).

By defining her roles as a practitioner within society, Pferdmenges was able to make community and government engagement more meaningful, and acting on ideas more achievable.

EXPANDING THE COMMUNITY OF PRACTICE

Through the PhD, Pferdmenges also experienced a shift in her relationship with professional networks. Rather than considering herself an architect among architects, she was able to see that her network had "*shifted towards social designers and artists interested in inclusive city making*".[55]
Her networks expanded beyond the boundaries of her field, connecting her with other disciplines and perspectives.

EXPANDING THE FIELD OF DESIGN/ INTERDISCIPLINARITY

Following the expansion of her Community of Practice, Pferdmenges felt the urge to also expand her field of action *"from build space to Lived Space within marginal neighbourhoods"*.[56] After completing the PhD, her aim became clearer, stating:

> "I am working hard to expand the culture of design research within my community of practitioners".[57]

REFINING THE LANGUAGE OF THE PRACTICE

For Pferdmenges, the PhD was also a catalyst for discovering the language of her practice, she said:

> "Only at the end of my PhD I did find the term Lived Space, which I use to express the appropriation of

space by people and the related change of space over time" (Pferdmenges, 2015:9).

Sources:

- DAP_r Interview, April 2017 – Reported as edited transcription in Annex: *DAP_r Interviews Transcriptions.*
- Pferdmenges, P. 2015, 'Founding Alive Architecture. From Drawing to Initiating Lived Space" (PhD), Architecture and Design, RMIT University.
- Presentation at Impact by Designing Conference 6th-7th April 2017, KU Leuven, Faculty of Architecture, Brussels.

http://alivearchitecture.eu

[Fig.49] Visible Invisible project. Source: Pferdmenges, 2015

[Fig.50] Infrared. Source: Pferdmenges, 2015

[Fig.51] Farmtruck. Source: Pferdmenges, 2015

"(...) authority is definitely something that the PhD gave me and is one of the reasons I did the PhD" (Pia Interlandi, Interview, July 2017).

Place:	Melbourne
Field:	Fashion Design
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2012
Role:	Academic
Practice:	Pia Interlandi
Position:	Lecturer in Fashion Design at RMIT University, Melbourne

EMERGING PRACTICE

Through the PhD, Pia Interlandi established her practice, *Garments for the Grave,* tracing the boundaries of her field of action as a practitioner. Through the course of the research trajectory, her position shifted from being a designer of clothing into the role of *"one who performs 'fashioning' of processes, and it was in this role that the research began to take shape"* (Interlandi, 2012:330).

Interlandi's practice was thus shaped through the PhD investigation, by developing an understanding of her interests, urges, and fascinations as a practitioner, and through a series of experimentations, including *Shrouds* [Fig.53, pg.155], the design of *Dissolving Clothes* [Fig.54,55, pg.156-57] which dealt with *"durability and longevity, as an act of speeding up the process of decomposition"* (Interlandi, 2012:137), and the *Pig Project* [Fig.56, pg.158], which explored the realities of dressing the dead body and "its unavoidable decomposition within the context of a natural burial" (Interlandi, 2012:73).

Her research ultimately explored *"the ways fashion design can directly approach the realities of the dead body, specifically, the moments between death and disintegration, and in doing so, seeks to contribute to the ways in which fashion design can play an important role in the way we approach the dead body and the rituals surrounding death"* (Interlandi, 2012:22).

EXPANSION: A BROADER FIELD OF ACTION

The PhD had a visible impact on the expansion of Interlandi's field of interest and action as a practitioner. Over the course of the PhD, she broadened her expertise to include interior and sensory design, stating:

> "I am now located in and I would classify that as being holistic death care".[58]

AUTHORITY AND RESONANCE

Interlandi pointed out that the PhD gave her authority to speak about her practice.

Through the PhD, she became aware that her research was *"carving out a new field or contributing in a way that no one has before".*[59]

After the PhD, Interlandi's practice generated interest from various artistic institutions and received attention on social media. She was commissioned to exhibit a garment at MOMA in New York and has shown her work across Europe and the United States. Interlandi was also invited to be interviewed on television and radio. She sees this exposure as a result of the authority and maturity acquired through the PhD, that provided her with *"the insight and the depth of research that went into it".*[60]

As a consequence of such authority, Interlandi has been invited to give lectures and consultations.

A COMPRESSION OF COMMUNITY OF PRACTICE

Different to most of the interviewed practitioners, Interlandi experienced a compression of her Community of Practice. It became much more specific, due to the establishment of her own practice within the field of design in death.

TAKING UP AN ACADEMIC CAREER

An immediate and visible consequence of the PhD in Interlandi's career, was the opportunity to obtain fulltime employment at university – providing her with an income that also supports experimentation in practice.

Sources:

- DAP_r Interview, July 2017 – Reported as edited transcription in Annex: "*DAP_r Interviews Transcriptions*".
- Interlandi, P. (2012). *[A]dressing Death: Fashioning Garments for the Grave*, Doctor of Philosophy (PhD), Architecture and Design, RMIT University.

http://piainterlandi.com

[Fig.53] Shrouds. 2011. Source: Interlandi, 2012

[Fig.54] Shrouds. 2011. Source: Interlandi, 2012

[Fig.55] Dissolvable Tailored Jacket - Remainder 2012. Source: Interlandi, 2012

[Fig.56] Dressing the Pigs. Source: Interlandi, 2012

"I speak about what I know; I draw what I
cannot speak about just yet"
(Eeckhout, 2014).

Place: Brussels
Field: Architecture
PhD Institution: RMIT University, Melbourne
Time of PhD: Completion 2014
Role: Academic
Practice: –
Position: Lecturer at KULeuven

TRANSFORMING THE PRACTICE

*"I speak about what I know; I draw what I cannot speak
about just yet".* Riet Eeckhout opened her PhD Catalogue
with this powerful sentence – defining the object and the
purpose of her research into the performative nature of
drawing. Eeckhout's research was conducted through
drawing, using it *"as a research tool to find something out,
a tool for reflection"* (Eeckhout, 2014:9).

Through the course of the PhD, she discovered
her specificity as a creative practitioner, and experienced
a shift in the nature of her practice. She transitioned her
focus from architectural to drawing practice, stating:

"For a long time during the practice I struggled
with understanding the nature of the architecture
practice I had built up over the years: was I a
building architect or rather a researcher who made
nice drawings. The process of the PhD allowed for
an insightful change to incur over time in how I
perceive the nature of the practice and how I can
support this practice towards growth".[61]

The PhD provided her with a supportive structure that
allowed her drawing practice to grow.

The process of drawing became clearer in her mind
during the PhD, which trained her how to *"think and speak
more insightfully about this process, contextualise the*

process with the work of peers, and gradually build on this new-found foundation".[62]

Through the PhD, she also discovered the interconnection between building, drawing, and teaching, particularly now that drawing was becoming the driver of the process (Eeckhout, 2014:173).

She used drawing as a basis for other aspects of her practice, stating:

> "The drawing practice reached a threshold moment where it shed its representational role and it could thrive as an autonomous medium".[63]

The PhD triggered a process in which drawing evolved *"from a representational mode to an autonomous mode in which it could be developed to be brought back not to serve but to drive the speculative aspects of the practice"* (Eeckhout, 2014:173). This discovery opened up new ways of practicing for Eeckhout. [Fig.57–59, pg.162–64]

ENGAGING IN WRITING

For Eeckout, a remarkable benefit the PhD was her new-found ability to write about the process of drawing.

A NEW COMMUNITY OF PRACTICE

Eeckhout mentioned the importance of the PRS model with regard to building a new Community of Practice. Throughout the PhD, her community changed and expanded, she said:

> "The corroborative nature of this particular PhD process and the research community it brought together at regular intervals allowed for an engaging and thriving environment and an audience to form itself".[64]

The network built during the PhD remained as a point of reference for her that has continued to provide opportunities for new collaborations with other former PhD Candidates.

Sources:

- DAP_r Interview, April 2017 – Reported as edited transcription in Annex: "DAP_r Interviews Transcriptions".
- Eeckhout, R. (2014). *Process Drawing*, Doctor of Philosophy (PhD), Architecture and Design, RMIT University.
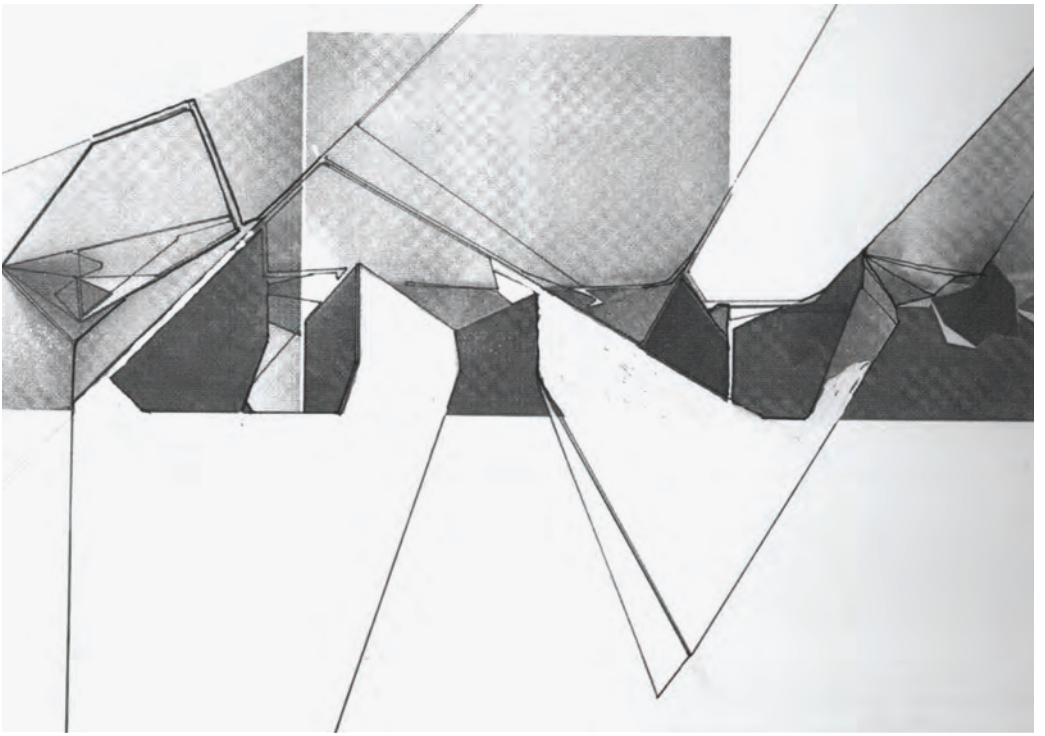
[Fig.57] Field drawing for 'On Long Call'
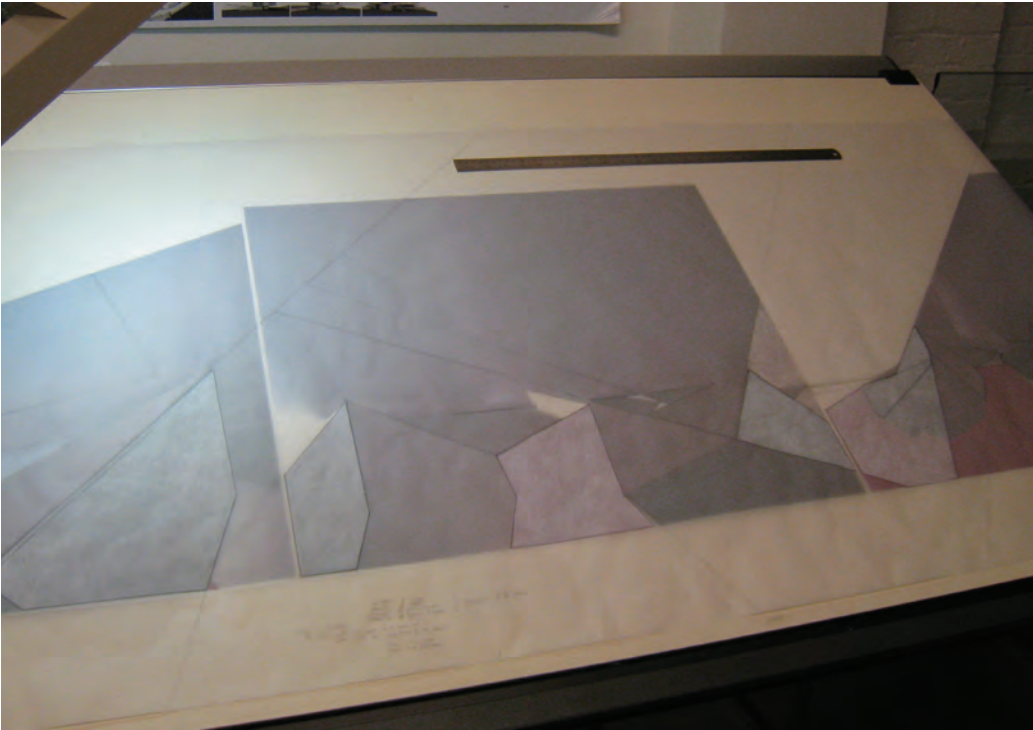
[Fig.58] On Long Call, 2009
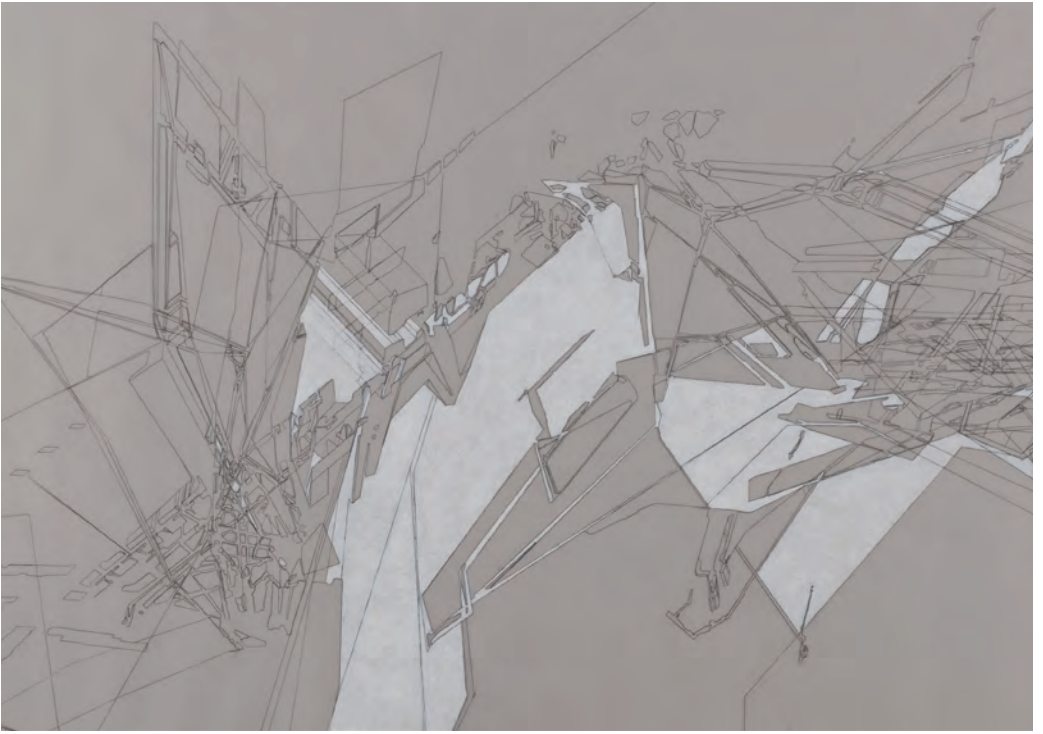
[Fig.59] The Gate Drawings, 2013, pencil and white china marker on film

"The PhD opened up new avenues for my own future research, particularly in approaches to conjecture and the public imagination"
(Sam Kebbell, 2016).

Place:	Wellington, NZ
Field:	Architecture
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2016
Role:	Practitioner
Practice:	Kebbell & Daish
Position:	Senior Lecturer at the School of Architecture, Victoria University of Wellington, NZ

STORYTELLING/POSITIONING AND COMMUNICATING THE PRACTICE

Throughout the PhD program, Kebbell became aware of his interest and fascination with storytelling as a way of communicating his practice. Such insight came to light through the process of extracting the tacit knowledge embedded in his practice, he said:

"I have become aware of the potential for framing this extractive process in the form of a story, and the potential for fiction and speculation in my public presentations" (Kebbell, 2016:17).

Storytelling emerged as a key concept in his PhD, and now Kebbell considers it a strength and a specificity of his practice. He pointed out how, through the PhD, he was able to recognise storytelling as a strength, as he became more self-confident in relation to his specificity and his position as a practitioner, noting that his *"own memories, experiences, and predispositions bring enormous depth of material to the research"* (Kebbell, 2016:206).

CLARITY

Kebbell mentioned how the PhD provided him with clarity in understanding and explaining the underlying drivers of his practice, his sensibility, and fascinations. He also stated that he is *"much clearer about the potential of my practice to contribute to the architectural community"*.[65]

Reflecting on the practice while practicing provides a framework that can reshape the mind of practitioners, giving them a new lens through which to look at themselves and their practice.

EXPANDING THE INQUIRY OF THE PRACTICE/EXPERIMENTING

Kebbell sees the PhD as a framework that expands the inquiry of practice, as it challenges practitioners to think about the limits of their practice and their position within society. At the end of his PhD, Kebbell presented a series of questions for further speculation, including:

> "Could the limits of public imagination be expanded through public presentations of speculative work rooted in built projects? How else might the built work and the speculative work come together in my future practice? Might this kind of public behaviour expand the scope of a small practice typically focussed on small buildings to one that contributes more systematically to a broader context without scaling up the practice?" (Kebbell, 2016:300).

The PhD allows space for expansion and provides tools to address the unforeseen – to go beyond the usual and known limits of the practice. It pushes and challenges practitioners to do so.

Kebbell also mentioned how experimenting became more prevalent in his practice after the PhD. Noting drawing as an experimental tool, he said:

> "My embrace of the wall as a key element in my projects has invited me to draw more elevations, for example, and draw them with more purpose".[66]
> [Fig.60–62, pg.169–71]

BUILDING A COMMUNITY OF PRACTICE
IN CONVERSATION

The PhD brought Kebbell into new communities of practice and new networks, and he considers the Practice Research Symposium (PRS) system a significant part of the community around the PhD.

He discovered the idea of the Community of Practice when entering the PhD and is now *"much more conscious of looking for other research groups that I can contribute to"*.[67]

The PRS is a framework for practitioners to become part of a community that is centred around trust, knowledge exchange and conversation. Kebbell sees conversation as the core of the PhD model. He values the concept of the PRS facilitating a formal structure for informal conversations with supervisors, peers, and critics. He acknowledges these conversations as being powerful tools in developing the research inquiry, stating:

> "Just as formal presentations and informal conversations help reveal different kinds of discoveries, writing and speaking to different audiences has helped different aspects of the research" (Kebbell, 2016:193).

Interestingly, Kebbell mentioned the void of not being part of the PRS after completing the PhD, and suggested the development of a *"post-doc forum where the conversations with peers can be continued and the ongoing research can be harvested"*.[68]

DISCOVERING WRITING

During the PhD, Kebbell experienced a shift in the way he wrote about his work. Before the PhD, he *"attempted to write about existing architectural theory that surrounded my projects, but discoveries were few and far between"*,[69] but afterwards, he found much more value in writing about the work itself, the design process and its implications, saying:

> "I understand the value of it much more in the production of theory, not the application of theory".[70]

SHARING AND SHOWING

Through the PhD, Kebbell gained a willingness to share his speculations with peers and his Communities of Practice. He discovered the value of sharing and showing his design process, affirming the significance of presentations and exhibitions as formats for engagement and discussion.

Sources:

- DAP_r Interview, May 2017 – Reported as edited transcription in Annex: "DAP_r Interviews Transcriptions".
- Kebbell, S. (2016). *Collapsing hierarchies: party walls, the rarefied, and the common*. Doctor of Philosophy (PhD), Architecture and Design, RMIT University.
- Presentation at DAP_r Symposium – m3architecture, Brisbane, 28th July 2017

http://kebbelldaish.co.nz
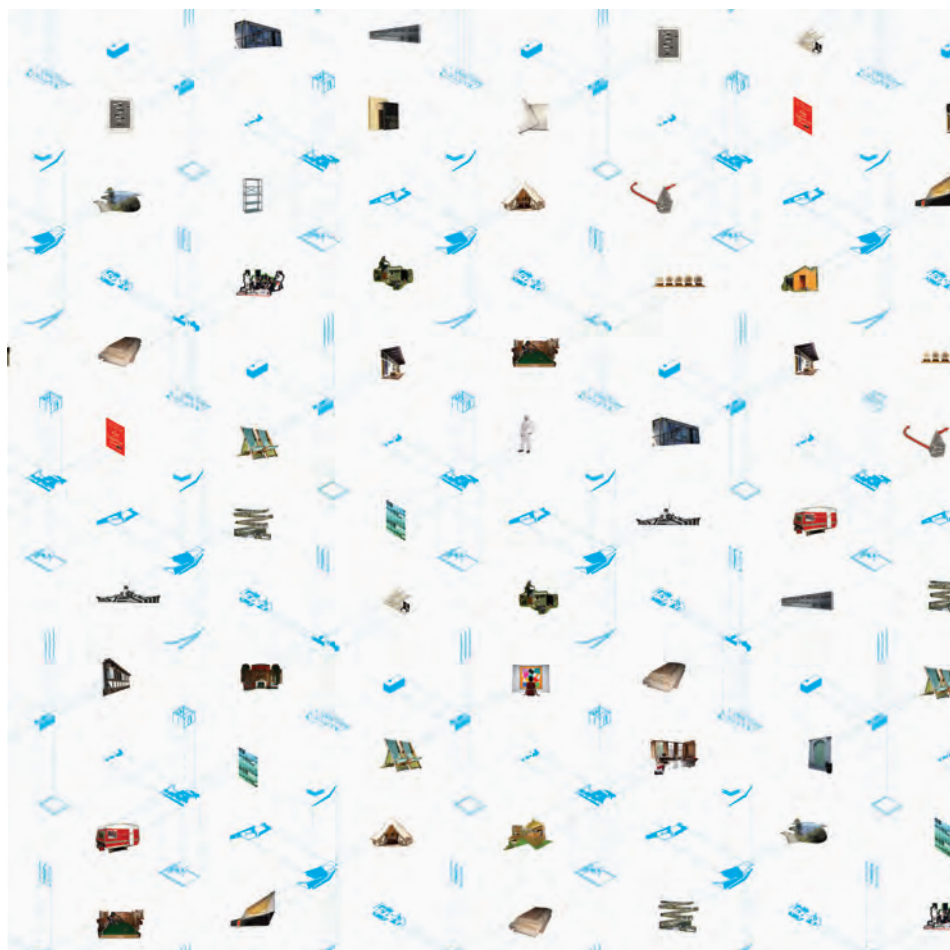
[Fig.60] Extract from the "Wall" at the PhD examination

[Fig.61–62] Humbug House, 2009

Supervisor, <u>Mick Douglas</u>

"The PhDs themselves become a support
mechanism for research"
(Douglas, 2010).

Place:	Melbourne
Field:	Performative art
PhD Institution:	RMIT University
Time of PhD:	Completion 2010
Role:	Practitioner/Academic
Practice:	Mick Douglas
Position:	Senior Lecturer at the School of Architecture & Design at RMIT University

CONSOLIDATING AN EMERGENT PRACTICE

Mick Douglas' PhD journey has been a long one. He has
"*conducted a collection of journey-based projects over the
last decade that enact an inter-play between their paths of
investigation and their ways of operating; between research
interest and method*" (Douglas, 2010:1).
Douglas investigated his own practice through a
series of arts projects, which eventually led to him becoming
clearer about the characteristics of his practice and his
ability to communicate them to others.

A PhD MODEL IN TRANSFORMATION

Douglas started his PhD on a part-time basis while working
full-time as a staff member at RMIT University. He pointed
out that he undertook the PhD in the formative years of
practice research. The long duration and the process of
being involved in a practice-based training program at the
beginning of its establishment, made his case unique.
Rather than progressing through the Reflective Model,
he instead used the PhD as a tool for defining the shape of
his practice. He said:

"I was able to self-determine a generative approach
more appropriate to my own transdisciplinary work

in socially engaged public art practice, leveraged by the fact of my also belong a staff member".[71]

He acknowledged that at that time, the PhD wasn't properly defined, saying it enabled him *"to develop self-legitimating structures for my work without feeling the need to comply within an established regime".*[72]

A new model of practice-based PhD was beginning to emerge during his research, which focused on hybrid generative activities. Douglas defined his PhD case as a way *"to generate and establish new modes of practice".*[73]

PhD AS A SUPPORT FOR PRACTICE

Douglas views the PhD as a support mechanism for research and practice. Through the course of his PhD, he observed an increase in his own capacity to operate as a practitioner/researcher in parallel with the rise of practice research and of the relationship between the academic and creative art sectors. He now sees himself as a *"an active participant in that international hybrid creative practice research way of operating in the world".*[74]

EVOLVING COMMUNITY OF PRACTICES

Douglas highlighted the shift in the way Communities of Practice are created and maintained, noting an emergence of networks around Creative Practice Research. He said:

> "We are aware of each other, supporting each other and creating the linkages and platforms that enable the kinds of work that we do. I'm active in international performance studies networks, and have been building an alliance of performative practice research in Australia and New Zealand."[75]

WRITING STYLE EMBODYING THE MODE OF PRACTICE

In his PhD Catalogue, Douglas spoke directly to the reader, inviting them to undertake a voyage through his research and practice. This writing style is representative of a *"creative collaborative relationship"* (Douglas, 2010:221) that formed a

core part of his work. The writing format is thus tailored to convey and embody his mode of practice.

Douglas used writing as a research tool and as a medium for communicating his research and practice. As he stated:

> "It certainly was not a process of doing the practice work and then writing it up! It was a non-linear process".[76]

Sources

- DAP_r Interview, September 2017 – Reported as edited transcription in Annex: "DAP_r Interviews Transcriptions".
- Douglas, M 2010, "*CARRIAGE. Cultural transports and transformations of a socially-engaged public art practice*", Doctor of Philosophy (PhD), Architecture and Design, RMIT University.

http://mickdouglas.net

Supervisor, <u>Suzie Attiwill</u>

"Another aspiration of this PhD was, and continues to be, to contribute to the emerging discourse of interior design and through this to encourage different ways of thinking and designing interiors" (Attiwill, 2012).

Place: Melbourne
Field: Interior Design
PhD Institution: RMIT University, Melbourne
Time of PhD: Completion 2012
Role: Academic
Practice: –
Position: Associate Professor in Interior Design, RMIT University

MAKING SPACE FOR RESEARCH TO REINVENT THE PRACTICE

In her PhD Catalogue, Attiwill stated that she undertook her PhD with the aim of "*making space for research to reinvent my practice*" (Attiwill, 2012:3).

She leveraged the PhD as a way of rethinking her practice, and to pursue different trajectories.

In the course of her research journey, she analysed a series of her own curatorial projects, stating that:

"the singularity of each project as a production of time, internal and external forces, constraints and chance is valued as research" (Attiwill, 2012:3).

She discussed the following projects: *SPACECRAFT 0701* (2001), *A matter of time* (2003-06), and *Making relations* (2006) as part of her PhD research, Attiwill also reflected on her writing projects.

To explain how the PhD contributed to the reinvention of her practice, and to the future of the discipline of interior design, she quoted Deleuze, saying that each project she presented involved thinking *"its own history (the past), but in order to free itself from what it thinks (the present) and be able finally to 'think otherwise (the future)".*[77]

Through the PhD, Attiwill could see her curatorial practice expanding into exhibition, writing, and teaching. Referring to her practice, she stated:

> "(…) it moved for a time into something that was more about writing projects rather than making exhibitions".[78]

The PhD also provided her with an opportunity to share and communicate her knowledge and expertise.

CONTRIBUTING TO AN EMERGING DISCOURSE

One of Attiwill's main aspirations following the PhD, was to contribute to the emerging discourse of interior design. She perceived two directions for the reinvention of her practice – one involved *"increasing challenges within gallery-based infrastructure and resources when doing exhibitions as experiments"* (Attiwill, 2012:3), and the other involved her appointment as an academic in the Interior Design Program. Her PhD is thus both an exploration of her own decade-long practice, and a theoretical contribution to the emerging discourse of interior design, aimed at encouraging different ways of thinking about, and designing interiors.

RESEARCH-DRIVEN TEACHING

Attiwill has had many years' experience in academic pedagogy, as she started teaching at RMIT University in 1992. She mentioned how research has always informed her teaching, as does her practice, she said:

> "Teaching is a research-informed practice or it is a creative practice for research".[79]

The connection between practice, research, and teaching is pivotal in her pedagogical approach.

Accordingly, the PhD acted as a space in which all of these ideas could be brought together. It also served as training for teaching, as it helped her to support students to understand the discipline.

Attiwill also pointed out, that the experience of learning about different PhDs as a supervisor has probably had more of an impact on the way she teaches than her own PhD.

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Sources

- DAP_r Interview, August 2017 – Reported as edited transcription in Annex: "DAP_r Interviews Transcriptions"
- Attiwill, S. (2012) *Interior, practices of interiorization, interior designs.* Doctor of Philosophy (PhD), Architecture and Design, RMIT University.

2.3 Findings: value and contribution cross narratives

The Cross *Value and Contribution* Narratives represent a further interpretative step, drawing on the comparison and interpretation of the Individual *Value and Contribution* Narratives.[80]
  The aim of this set of narratives is to explore a series of thematic clusters, which are transversal, shared, and relevant. The narratives show trends, similarities and differences among the case studies' responses, while summarising the prominent perspectives about how the practice-based PhD contributed to their professional practice.

Six interpretative categories were identified:

> Positioning
> Articulating
> Experimenting
> Expanding
> Shifting
> [Fig.63, pg.181]

2.3.1 Positioning

A recognisable contribution of the practice-based PhD, is the perceived acquisition of authority, and in helping practitioners understand and articulate their position within their discipline and Communities of Practice.
  Within the PhD framework, practitioners interrogate, investigate, and explore their practice, while reflecting upon their work, interests, urges, fascinations, procedures, methods, and approaches.
  The PhD is in itself a method of inquiry in the *"medium of practice"*[81] providing practitioners with a new avenue for reflection, a new ability to observe and understand their practice, and a new capacity to critically engage in practice. The PhD thus trains practitioners in methodological terms, teaching them *how* instead of *what* to investigate in a practice-based context.
  By investigating their past and present practice, practitioners become more aware of their position and their *voice* within their Communities of Practice and society.

Further, they become better able to trace and envision the future direction of the practice.

SELF-CONFIDENCE

The process provides PhD Candidates with increased self-confidence and clarity, derived from a deeper awareness of themselves as practitioners.

Many interviewees reported improved self-confidence as a result of completing the PhD, and the effect this had on different aspects of their practice. Guy Keulemans pinpointed how the PhD provided him with research skills that gave him the confidence to engage with bigger projects *"in ways that replicate and expand the methods within my own studio practice via forms of action research"*.[82]

Ashley Hall observed that the PhD gave him greater confidence in his public speaking abilities, also mentioning that the achievement of completing a PhD made a noticeable difference to his confidence – almost more than the direct value of the content.

Self-confidence also arises from a process of self-evaluation and learning. Practitioners were required to undertake a self-explorative journey throughout the PhD – a methodological framework for the learning process.

Clarity and awareness of their own practice gives practitioners insight into the boundaries and possibilities of their role, and new confidence in relation to their contribution to the field and society. This is evident in the case of Pia Interlandi, who received international exposure through exhibitions and social media, as a result of the authority and maturity she acquired through the PhD.

SITUATING THE PRACTICE

A major effect of undertaking a practice-based PhD is finding clarity in the position of the practice relative to others within the same community, and within different Communities of Practice.

Positioning the practice also means understanding the role (or roles) of the practice within society and the practitioner's capacity for action.

Petra Pferdmenges reflects on the multiple roles she performs as a practitioner, defining herself as an observer, artist, mediator, activist, client, and curator. This insight

gradually emerged through her PhD journey, in a dual process of observation and experimentation.

Pferdmenges established and built her practice, *Alive Architecture,* during her PhD, and then used the PhD framework to help refine the intentions, purposes and actions within her practice.

Similarly, Pia Interlandi established her practice, *Garments for the Grave,* during her PhD as she became clearer about her practice, and her contribution to the field of fashion design.

Jo Van Den Berghe offers an interesting reflection on *situating the practice*, acknowledging a comforting *"sense of belonging to a community"*[83] as a result of completing the PhD.

Situating the practice therefore works in terms of differences, but also similarities with other practitioners. Belonging to a community provides practitioners with a common ground to share ideas, values, and knowledge.

The position of the practitioner/researcher undertaking a PhD, becomes relevant within the broader academic context, as identified by Guy Keulemans. The PhD therefore provides practitioners with the capacity to situate themselves within Communities of Practice, and within new or extended contexts within academia.

UNDERSTANDING/DISCOVERING THE PRACTICE

The continuous process of interrogating the practice while practicing, through the course of the PhD, allows practitioners to achieve a clearer understanding of the knowledge embedded in their practice, a deeper awareness of their specificity, their interests, fascinations, modes of operating, design processes, and behaviours, namely their specific *modus operandi*.

Jan van Schaik described how the PhD experience changed his understanding of his practice, defining the PhD as a reflective process of exploring his modes of practice, motivations, and tendencies.[84]

Similarly, Lisa Grocott described how through the PhD, she became able to have a close reading of her practice, making sense of what was going on in it and understanding her specific contribution to design research.

Along the PhD journey, practitioners became more aware of self and practice – an awareness that is certainly
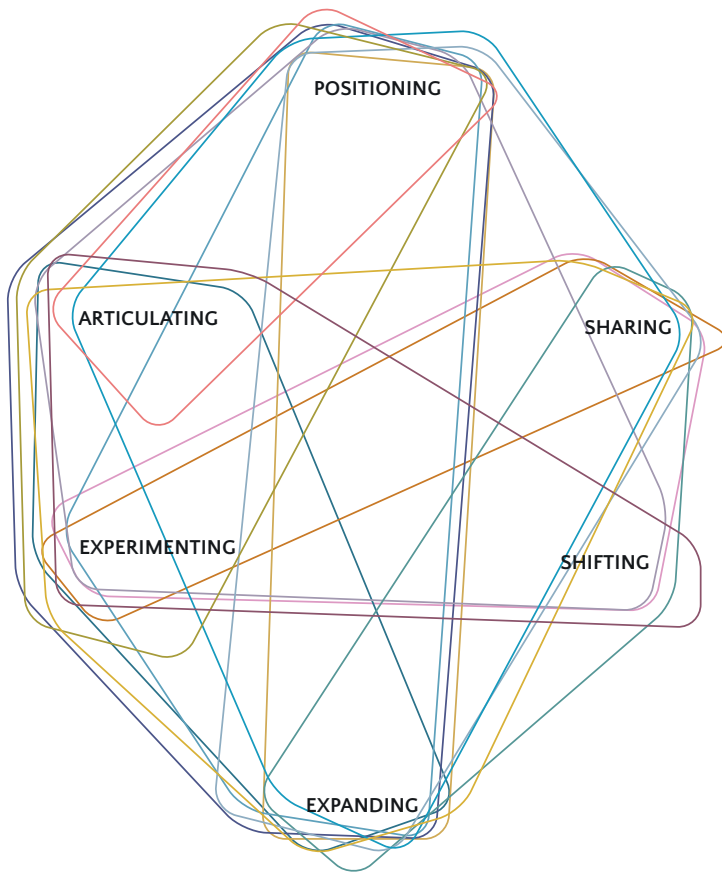
POSITIONING

ARTICULATING

SHARING

EXPERIMENTING

SHIFTING

EXPANDING

AV	Adele Varcoe	MB	Matthew Bird
AH	Ashley Hall	PP	Petra Pferdmenges
BG	Beth George	PI	Pia Interlandi
GK	Guy Keulemans	RE	Riet Eeckhout
JVS	Jan van Schaik	SK	Sam Kebbell
JVB	Jo Van Der Berghe	MD	Mick Douglas
JP	Julieanna Preston	SA	Suzie Attiwill
LG	Lisa Grocott		

[Fig.63] Cross Value and Contribution Narratives Diagram

attributable to their experience completing the practice-based PhD.

Jo Van Den Berghe explained how he came to a "*more accurate understanding of the driving forces behind my practice*",[85] whereas Matthew Bird described how, upon reflection of key projects, he discovered *"alchemical references, precedents, mentor approaches and practice methodologies"* (Bird, 2012: 185), and that the PhD really encapsulated his methods, revealing the unique nature of his practice.

Practitioners frequently use the term *discovery* when referring to the unveiling of their practice through the PhD, interpreting it as a journey of exploration towards an unknown territory, made of epiphanies, moments of break, and directional shifts.

2.3.2   Articulating

The PhD training provides practitioners with an improved capacity to articulate a conversation around their practice. This ability arises from an increased awareness of their practice (as a result of the PhD), which naturally leads to enhanced confidence and authority.[86]

The process of presenting and discussing their practice systematically over a period of three years (or more) represents in itself a form of training for articulation.

FINDING THE WORDS/A LANGUAGE TO ARTICULATE THE PRACTICE

Many practitioners mentioned the contribution of the PhD on their ability to articulate the language of their practice.

Jan van Schaik stated that the PhD provided him with a clearer picture of his modes of practice, which in turn allowed him to feel more self-confident and more comfortable in *"post-rationalising"*[87] his own processes.

Guy Keulemans also pointing out how the PhD provided him with the ability to talk and write about his practice using language which he defined as more precise, accurate and true. He attributes this to his new ability to articulate the contents of his practice, and also his ability to tailor his language to a specific audience, including academics.

A similar perspective comes from Lisa Grocott, who recognised the value of using more precise language within an academic context, saying that having a new language, a new vocabulary and a new way of talking about design benefited her leadership roles. She also mentioned that the shift in her practice happened in *"finding new words"*,[88] recognising this as the greatest insight and contribution of the PhD.

Petra Pferdmenges defined the PhD as being formative to the specific language of her practice, stating that through the PhD, she found precise terms to express her mode of operating within a space.

Similarly, Beth George recognised the value of the Practice Research Symposium format as an opportunity for improving her articulation of the practice language, as it requires consistent practice.

WRITING

An important aspect of the PhD is a practitioner's ability to articulate their practice in writing. Practitioners are required to write an Exegesis/Catalogue/Dissertation (of different length, depending on the type of PhD and the context of the institution), as a demonstration and explanation of their research work. The PhD may then be interpreted as a training tool for writing.

Ashley Hall pointed out that he perceived a big shift in his writing capabilities, thanks to his work constructing a PhD dissertation which required "*multiple narratives and a more demanding structure".*[89]

The same shift was experienced by Sam Kebbell, who recognised his newly acquired ability when writing about his work, rather than the architectural theory that surrounded his projects.

Another practitioner, Adele Varcoe, valued the role of writing throughout the PhD, saying that it became a tool for clarity and digging deeper into the practice, suggesting *"in practice there can be grey areas whereas with writing everything needs to be explained and shown".*[90]

Another interesting insight came from Mick Douglas, who, in his PhD Catalogue, spoke directly to the reader, using a writing style that represented a *"creative collaborative relationship"* (Douglas, 2010:221), and aligned with his mode of practice. Writing *style* is therefore another way to embody and express the fundamentals of the practice.

2.3.3   Experimenting

The experimental approach is critical in a practice-based doctoral framework. Through the PhD, practitioners receive training about how to form, construct, and frame problems before investigating them. The PhD is a process of learning how to act in the face of doubt and how to walk through unknown and unforeseen paths, to envision and construct the future of the practice.

The productive doubt is thus a tool that practitioners become more confident with, along the PhD path.

Facing the unknown is at the core of design thinking, as Ranulph Glanville (2015:154) stated, "*Design is like wandering in the countryside with some vague idea of going somewhere while not really knowing exactly where you are going, making repeated decisions over which path to follow (...)*".

The practitioner who wanders around knows they have arrived when they feel they have found something that makes sense of that wandering.

Experimenting and testing are key drivers for the design process, quoting Glanville (2012:50) again*:*

> "We test until we arrive at something satisfying our desires – for stability/recognisability/repeatability etc. thus we arrive at our understandings".

PhD AS A FRAMEWORK FOR EXPERIMENTATION

The PhD guides practitioners towards experimenting, testing and risk-taking, while giving them a *safe* space to do so.

During his PhD, Matthew Bird found space for exploring his practice, following different trajectories, and experimenting with disciplines outside of architecture. Through a series of experimental projects, he discovered installation art as a major component of his design process.

Similarly, Petra Pferdmenges journeyed through a series of experimental self-commissioned projects, in which she was able to test her interests, modes of operating, and ways of engaging with participatory processes. She considered each project as a way of testing and refining her strategies, taking the learnings from one project into the next.

The PhD challenges practitioners to think about the limits of their practices, going beyond the usual and known boundaries, and addressing the unforeseen. This is

something that Sam Kebbell experienced through his PhD, arriving at the end with a new set of questions for further post-doc speculation. He also pointed out how during the PhD he discovered drawing and diagramming as an experimental tool for investigating his practice. The PhD thus provides tools to address the unforeseen, and invites practitioners to find their way through experimentation and exploration.

A further insight in relation to the PhD as a space for experimentation, is provided by Mick Douglas, who said:

> "There has been an international rise in the inter-relationship of arts sectors and the academic sector, of which my own PhD and subsequent work is a part of. This has produced hybrid practitioners who work at the interface of these sectors, operating as creative practice researchers both inside and outside the academic sector, but significantly supported by the economic base of the academy".[91]

> SPECULATIVE REFLECTION: A NEW METHOD OF THINKING

The PhD provides practitioners with a new method of thinking, through speculative reflection.
Throughout the PhD, they progressively learn this technique, transforming the way they think about their practice. Eventually, this new way of thinking becomes a habit – an additional tool for the inquiry and meta-reflection, thus transforming the practitioners' mind-set.
Lisa Grocott perceives the PhD as a *"experiential training into how you might find your purpose and keep reinventing your practice over a lifetime"* (Grocott, 2017:173), more related to *"crafting futures"* than to finding solutions.
Beth George continued this notion, describing the speculative process of her PhD as an open one, not giving answers but rather offering questions. She stated:

> "The research uncovers multiple rather than irrefutable speculations" (George, 2009:311).

PRACTICE PROJECTS AS INVESTIGATIVE TOOLS/ KNOWLEDGE AS PRODUCTION

The majority of practitioners addressed their PhD by undertaking a series of practice projects and using them to explore, understand, and make sense of their practice.

Guy Keulemans confirmed that he used practice projects as investigative tools to develop new design techniques. Giving materiality to ideas, interests, and strategies allows the practitioner to also explicate their research and practice, beyond words.

Adele Varcoe expanded on this perspective, encouraging the use of performance as an investigative tool. Varco personally *became* her project performances a way of exploring her research topics and understanding her role as a practitioner. Materiality in this sense is intended to be the temporary presence of the body in the space.

Suzie Attiwill offered an interesting perspective on the idea of materiality as a tool for generating new knowledge. Attiwill positions herself in the philosophical space of knowledge as practice and production, where knowledge is produced through the doing of things.

2.3.4   Expanding

Many practitioners mentioned a feeling of expansion as a consequence of the PhD. Expansion is perceived as acquiring new knowledge, experimenting with new design strategies and processes, making sense of things in a different way, having new perspectives, and reading more broadly, as well as developing new collegial networks and being open to new fields of inquiry, disciplines, and communities. All these layers enrich and guide the evolution of the practice.

EXPANDING THE PRACTICE

The PhD provides a fertile terrain for the practice to grow, beyond the known boundaries and territories the practitioner was previously confined by.

Julieanna Preston described this feeling of expansion as a shift in her established practice towards an open-ended one, a practice that *"does not look for completion, definition or resolution"*.[92] She opened up her field of interest,

previously confined to the field of interior and architecture design, and migrated towards other bodies of knowledge, including "*continental feminist philosophy, fine art practice, contemporary social science theory, building construction and material science"* (Preston, 2013, Part 0:1). The PhD thus transformed her practice into a transdisciplinary engagement.

A similar experience was described by Matthew Bird, who, through his PhD, ventured beyond the boundaries of his architectural practice into other fields and disciplines, including installation art, performance, photography, and medicine. The PhD is hence a space for exploring new possibilities, allowing for the creation of new objects, paths, and connections.

Pia Interlandi followed a similar path, opening up her field of action, from fashion design to interior and sensory design.

Another level of amplification is manifest in the discovery of the multiple roles a practitioner performs in his/her practice. Such was the case for Petra Pferdmenges, who progressed from having an understanding of herself as an architect to recognising her manifold roles as an observer, artist, mediator, activist, client, and curator, in engaging with community design.

The PhD also provides exposure for the practitioners, and can assist in the advancement of their academic careers. This perspective was shared by Beth George, who pointed out how the PhD opened up new directions for her practice, which she defined as *"writing and exhibiting".*[93] The PhD also provided her with new possibilities for publishing and generating resonance for her work in the academic context.

EXPANDING THE COMMUNITY

The practitioners perceive another level of expansion lies within the Communities of Practice they belong to. They amplify their networks by entering a new community of PhD candidates and supervisors, who are also navigating around the practice-based PhD framework. By stepping into the design research community, practitioners can find space for establishing new collegial networks, collaborations and conversations.

Jan van Schaik recognised the pivotal role of the Practice Research Symposia at RMIT University as a tool for

broadening his community of practice. The regular gathering of practitioners who would present their research to panels, made it possible to share knowledge, engage in discussions and establish new connections.

Van Schaik also mentioned the key role of the *"wireless community of practice"* (Schaik, J., 2009) – a platform for experimentation, where he found a sense of belonging, pride, and protection.

A pleasant sense of belonging was also reported by Jo Van Den Berghe, who had the opportunity to build and expand upon his international network, through the PhD. This provided him new opportunities and connections previously unimagined, including invitations to lecture, exhibit and participate in different institutions around the world.

The same perspective was shared by Riet Eeckhout, who saw the PhD as a way to build her international networks and instigate new collaborations. She also highlighted the value of the Practice Research Symposia model as a method of bringing together like-minded people in a format that allowed for an *"engaging and thriving environment and an audience to form itself"*.[94]

Petra Pferdmenges provided a slightly different perspective on the expansion of her community. She observed that the shift she experienced during the PhD, in understanding her role beyond the boundaries of an architectural practice, led her towards new networks within the disciplines of social design and art.

Finally, an interesting interpretation of Creative Practice Research communities was offered by Mick Douglas, who noticed how these communities are in a continuous evolution, transformation and expansion. He saw this as a consequence of the growing practice-based model, and the fact that *"There has been an increased network of people working in this transdisciplinary way, in a hybrid space of performative arts practice and the academy"*.[95]

2.3.5 Shifting

Many practitioners experienced a significant shift in their practice during the PhD. The shift occurred as they became clearer about their practice, fields of action, disciplines of interest, and Communities of Practice.

An interesting example is the case of Julieanna Preston, whose transition involved formerly identifying herself as an Interior Designer/Architect to later seeing herself as an Art Performer. Reflecting on her past projects, she came to the conclusion that they belonged to a closed era of her practice, recognising the beginning of a new direction of practice that incorporated performance art.

Lisa Grocott experienced a similar shift, acknowledging that the PhD changed her practice *"from the dominant practice spaces of design towards a social design context"* (Grocott, 2017:169). She discovered new ways of using her expertise to focus less on physical outputs or products, and instead focus on leading *"how to engage others in the process of designing something to help collectively work out where we wanted to go"*.[96]

Such a transition became visible only after the completion of the PhD but Grocott recognised the seeds of this transformation during the PhD path.

Similarly, Riet Eeckhout started the PhD focused on architectural practice and finished it with a focus on drawing. Her drawing evolved *"from a representational mode to an autonomous mode in which it could be developed to be brought back not to serve but to drive the speculative aspects of the practice"* (Eeckhout, 2014:173). The revelation of the autonomy of drawing presented new directions for Eeckhout's practice.

Adele Varcoe experienced an interesting shift during her PhD, changing her research focus from the act of *doing* to the *effects* of her doing, on other people – inspiring a deeper understanding of the fundamentals of the practice.

Suzie Attiwill derived from her experience, a compelling perspective of the PhD as a way of "*making space for research to reinvent my practice"* (Attiwill, 2012:3). Through the PhD, she rethought, reinvented, and transformed her practice. Her curatorial practice extended into exhibition, writing and teaching, as she pursued different trajectories.

To explain the contribution of the PhD to her practice, and to the future of interior design, Attiwill quoted Deleuze, saying that each project she presented involved *"its own history (the past), but in order to free itself from*

what it thinks (the present) and be able finally to think otherwise (the future)".[97]

ENVISIONING A SHIFT FOR SOCIETY

Finally, during the workshop, *Mapping Impact in Creative Practice Research,*[98] held at RMIT University during the Practice Research Symposium in June 2017, a scenario for the future of Design Research emerged from the collective discussion.

Participants envisioned the future contributions of the PhD on the field, imagining that every practitioner could undertake a practice-based PhD – potentially producing a material shift for the whole industry, the built environment, and for society at large.

Further, during the workshop participants pointed out a possible and desirable shift within Practice Research, from focusing on the disciplinary contribution to the extra-disciplinary significance.

2.3.6 Sharing

Through the PhD process, practitioners increase their awareness about their practice: who they are as practitioners, and what their modes of operating are. They thus become more aware of their position[99] and their *voice* in articulating[100] their design thinking.

These new skills provide practitioners with an increased capacity to share their knowledge and expertise, collaborate with others, and fruitfully engage in disciplinary and interdisciplinary conversations.

The practice-based PhD framework can be interpreted as a conversational system, providing space for collective discussion, and inviting practitioners to regularly share their work and knowledge with a community of peers and supervisors.

The PhD also provides for the practitioner to contribute to the discourse about Practice Research inside and beyond discipline boundaries. The Practice Research Symposium model at RMIT University embodies such a *"conversational approach"* (Schaik, 2014), allowing for public and private, formal and informal conversations to occur in a regular, biannual forum.

Conversation is, therefore, a pivotal element within the PhD framework and a driver for the learning process.

Conversation also contributes to the production of new knowledge. Learning and improving this mechanism through the PhD journey, practitioners are then able to apply this ability to other contexts.

Jan Van Schaik describes the consolidation of his public role in forums and collective discussions as a benefit of the PhD. He stated that the ability to critically reflect on the profession gave him greater confidence to engage in conversation within professional contexts, expressing his position and offering his contribution.

Jo Van Den Berghe experienced something similar, mentioning that the PhD research confronted him with the requirement of sharing new findings with peers. Such a requirement taught him to be more effective in communicating and describing his design with both peers and clients, as he stated:

> "All this has pushed me into a much more precise discourse at the service of sharing my new knowledge production and insights".[101]

An interesting perspective on engaging in conversation comes from Julieanna Preston, who at the time of starting her PhD already had a solid capacity to speak and write about her practice in an academic context, due to her already established academic career. Through the PhD, she sharpened her existing abilities, by learning how to speak in an *accessible way* to engage with a broader audience.

Reflecting on the value of the Practice Research Symposium model, Sam Kebbell pointed out its capacity to provide a formal structure to informal conversations with supervisors, peers, and critics. He considers those conversations powerful tools in developing the research inquiry, and highlights the importance of continuing these conversations, even after the completion of the PhD.

A series of fascinating reflections over the role of the collegial system underpinning the practice-based PhD, emerged from the project, *Creative Practice Research? Pop-up Interviews,*[102] undertaken at the Practice Research Symposium, October 2017.

Participants highlighted the importance of the collective discussion and the informal meet-ups. Jeremy Ham mentioned the *"unexpected outcomes in terms of the research trajectory"*[103] coming from informal conversations during the conference.

Timothy Burke observed how the collective encounters around the PhD offer exposure to the practitioner and act as a "springboard"[104] for other collaborative opportunities.

He also mentioned the importance of the examination as training for PhD Candidates. Practitioners are able to see how their peers are *"finding other ways to describe their practice and put their practice out there, and find creative ways to do so",*[105] which is motivational, inspiring, and helpful for understanding your own practice.

CONTRIBUTING TO A BROADER DISCOURSE

Through their PhD research, practitioners have the chance to contribute to both their disciplinary discourse and to interdisciplinary discussions.

The PhD provides practitioners with the skills and knowledge to make their *voice* louder, while simultaneously becoming aware of their responsibility of having a public *voice.*

In this regard, Suzie Attiwill pointed out that one of the main aspirations of her PhD research was to contribute to the emerging discourse of interior design. Her research was an exploration of her practice but also a theoretical contribution to her discipline, aimed at encouraging different ways of thinking and designing.

After her PhD and in her role as a supervisor, Attiwill contributes to the wider discourse around Practice Research, encouraging discussion around the value of undertaking a practice-based PhD within the field of interior design.

An analogous perspective comes from Beth George, who mentioned that the PhD contributed to the definition of her role as an academic. She also recognised a new level of responsibility towards the community.

The practice-based PhD contributes to the production of outcomes. The PhD Catalogue/Exegesis/Dissertation embodies the contribution that practitioners make to a specific discipline, as well as to the field of Creative Practice Research.

SECTION 3 : IMPACT ON PEDAGOGY

The contribution of the practice-based doctoral training on pedagogical approaches to studio teaching.

3.1 Studio teaching and the Practice-Based PhD

This chapter addresses the nature of studio teaching in creative disciplines and its role within the practice-based PhD model – tracing a path for investigating the value and contribution of this type of doctoral training to pedagogical approaches.

3.1.1 Studio Teaching in Design Disciplines: Evolution and Values

The origins of the studio model are traceable to the medieval system of apprenticeships within the system of the guilds (Schön, 1985), in which the apprentice regularly went to the master's studio in order to learn the craft.

For a long time, artistic practice has been taught by the artist, master, craftsman or architect within a studio setting. The apprentice learned by studio immersion – observing, listening, copying, and repeating.

Later, in the late nineteenth and early twentieth centuries, the Ecole de Beaux Arts marked the birth of the studio as a place for collective learn-by-doing education. Under the guidance of a master, the learning environment moved from the creative practitioner's studio to a place specifically intended for the purpose of learning by practice.

Over time, the studio model evolved to become the core framework for the most important references of learning models, such as the Bauhaus in the 1930's and the Massachusetts Institute of Technology in the 1980's. Studio teaching can be seen as a model in continuous transformation, as its evolution follows the evolution of practice itself.

As Maitland (1991) claims: *"studio teaching is not just a space marked 'studio'. It is a way of thinking and learning"*. The Studio is essential to creative practice. It has a high pedagogical value due to the way this type of learning environment brings students into a deep understanding of the practice. The design studio mirrors the professional studio and as such, it prepares students to be practitioners themselves.

When discussing the role of studio teaching in architecture in *The Design Studio. Exploration of its Traditions and Potential,* Schön suggested that it opens up a window

to the practice, stating that in such a place *"(...) we have a chance to observe, in a peculiarly accessible form, the process of architectural designing; here, more than in any other context, architects need to make clear to one another what it is they do when they design"* (Schön, 1985: 32).

The studio is hence a space for challenging both students and teachers, requiring each to articulate what they actually do when they design, and communicate this through different mediums.

Studio teaching is a process of learning-by-doing and by observing others, it is indeed *"a unique and distinct mode of cognition"* (Bates, 2015). It enables people to gather in a collective space to learn to think as designers, through practice.

The Studio is where design skills are developed and passed on, where students develop as designers, and reflect upon their skills and those of others.

The studio experience can be seen as a self-explorative journey, where students are invited to find their own way, through learning tools rather than notions. The process involves many elements of self-awareness, including memory, imagination, repetition of actions, attempts, experiments, observations, and reflections on the outcomes and the process itself.

The studio model reveals the paradox that is embedded in the process of teaching and learning new practical skills and competencies. Such a paradox is explained by Socrates through the question:

> "(...) how will you inquire into a thing when you are wholly ignorant of what it is? Even if you happen to bump right into it, how will you know it is the thing you didn't know?" (Plato, Anastaplo, G., & Berns, L., 2004).

The process of learning within the studio is thus a transformative one – the students will go through such a transformation as they discover their abilities as designers. As Solnit (2006) suggests:

> "The things we want are transformative, and we don't know or only think we know what is on the other side of that transformation".

3.1.2   The Studio as the Mirror of the Practice

The pedagogic mechanisms at the core of studio teaching are similar to the processes at play in a creative practice. The studio can thus be seen as a "mirror of the practice", given its main features: the embedded spirit of open inquiry, the focus on creativity, the action of drawing, the attitude towards problem solving, the "Fast Thinking" (Kahneman, 2011), the reiteration, and the physical process of working with material by hand. All of these elements contribute to building new knowledge and to reaching an understanding of how design thinking works.

Openness and uncertainty are also conditions shared between the studio and the practice. Those attitudes are in fact tools for the design process itself, allowing for it to happen.

The same approach to inquiry can be found in both the studio environment and the realm of professional practice. Methods, standards, and procedures at play within the practice can also be applied to the studio environment.

Furthermore, the physical characteristics of the studio environment reflect the space of the practice office, as well as the modes of acquiring and sharing knowledge through collaboration and conversation. There is also a similarity in the use of time, as intensive design sessions are often experienced and required for the design process to happen.

Therefore, practice informs both the teaching and the content of the studio learning environment. This informative process can be seen as a bi-directional one, as it is not only the practice influencing the studio, but also the studio acting as a research space to positively inform the practice. It is a mutual exchange, in which students and teachers learn from each other, and from the environment itself.

3.1.3   The Studio Teacher

Richard Blythe (2015: 111) describes the studio as*:*

> "(…) fecund, slightly unpredictable, and both subject to and responsive to environmental fluctuation. Like the Mad Hatter's party, though, it also requires a host and a guest list for it to work well".

The role of the "*host*", namely the teacher in the studio, is a key and challenging one. In this space, it is not only students who are challenged, but teachers and their skills and abilities too. The studio is indeed a place for discussion and development, arising from the continuous dialogue between student and teacher.

As a studio teacher, one assumes the role of *guide*, which requires responsibility and trust. As suggested by Schön, the teacher formulates an initial contract with the student *"(...) on which the effectiveness of design education depends, requires that the student makes a willing suspension of disbelief, in spite of its perceived risk, and that the studio master invites him to do so"* (Schön, 1985:59).

The student must trust the teacher in order to proceed through the learning process. Trust is indeed the common ground for the relationship to grow, as it creates the mental space for students to learn. Time is crucial in the development of such a relationship, as learning can only happen through reiteration.

An interesting element for the teacher to consider, is the need for clarity and explicit communication, as suggested by Schön:

> "(...) some instructors have learned to become not only master practitioners but master coaches. They have learned to respond to the imperative, present in the studio as it is often not in the practice, to make design assumptions, strategies and values explicit" (Schön, 1985:6).

Moreover, the learning process occurs not only through words but through observation and repetition. The teacher, therefore, needs to possess the ability to communicate using other techniques, to be able to demonstrate actions, processes, and methods of design.

Hence, being a teacher requires a series of attributes, such as openness, curiosity, listening, and the ability to challenge others. Teaching is in itself a process of learning-by-doing as they acquire new knowledge through their dialogue with students.

3.1.4 The Studio Model in Relation to the Practice-based PhD Model

This research work specifically explored the ways in which studio teaching is interfaced with doctoral training, observing the mutually beneficial relationship between practice, research, and teaching. A series of key similarities between the PhD training framework and the studio teaching model emerged during this exploration.

Firstly, the process of learning-by-doing is fully embedded in the two training models:

PhD candidates are invited to engage with their practice by investigating their role as practitioners and exploring their fascinations, urges, methods, procedures, and specificities.

Practitioners in the role of teachers, invite students to do so within the studio environment, namely exploring their own interests, learning-by-doing, and observing themselves.

Furthermore, practitioners undertaking a practice-based PhD relive the feeling of being on the side of the learner. This allows them to put themselves in their students' shoes and empathise with their vulnerable position.

Another similarity lies in the process of collaboration and engagement in conversation – key features of creative practice itself. The two models are structured through a *conversational approach* in which the learning process occurs by observing others, sharing knowledge, and dialoguing.

New knowledge is shared through conversation, and subsequently informs the design process.

Creative practitioners constantly work *"with people for people"* (Lynas, Budge & Beale, 2013) and the opinion of others informs the direction in which design takes. This process is also experienced within the studio, where the environment *"allows students room to explore, evaluate, compare and contrast themselves against their peers"* (Lynas, Budge & Beale, 2013:132).

The practice-based PhD thus trains practitioners in how to make explicit assumptions, devise strategies, and develop their ability to engage and communicate with others. It is a process of "knowing-in-action" (Schön, 1985) and a translation of knowledge from tacit to explicit. This may provide teachers with new skills, and influence the way they act within the studio environment – encouraging them to

teach students using a learning process they themselves have experienced.

3.2   Findings: Individual Value and Contribution Narratives

The individual *value and contribution* narratives are individual accounts of the case studies that highlight the topics that emerged from the study, observations, and the interview process undertaken as part of this research work.

The narratives provide a description and interpretation of each practitioner/researcher's perspective, in relation to the contribution the practice-based PhD makes to pedagogical approaches to studio teaching. The narratives interpret the work and words of each practitioner/ researcher – summarising relevant topics through a series of key themes.

The analysis and interpretation are based on the data collected along the research path, through a series of operations.[106]

This section will present the individual *value and contribution* narratives in the following order:

> Adele Varcoe
> Ashley Hall
> Beth George
> Guy Keulemans
> Jan van Schaik
> Jo Van Den Berghe
> Julieanna Preston
> Lisa Grocott
> Matthew Bird
> Mick Douglas
> Petra Pferdmenges
> Pia Interlandi
> Riet Eeckhout
> Supervisor, Sam Kebbell
> Supervisor, Suzie Attiwill

"I am interested in asking the students to look inwards" (Varcoe, Interview, October 2017).

Place: Melbourne
Field: Fashion Design
PhD Institution: RMIT University
Time of PhD: Completion 2016
Role: Practitioner
Practice: Adele Varcoe
Position: Lecturer in Fashion Design at
                    RMIT University

RESEARCH-LED STUDIOS

Varcoe pointed out that after completing the PhD, she began questioning the students about the role they play, asking them to look inwards. She also uses her personal experiences as a practitioner to engage with students.

Varcoe also mentioned that during the PhD, she began bringing her research questions to the studio to develop them in dialogue with students. This allowed her to broaden her perspective and expand the direction of the research, hence, Varcoe engaged in a mutual learning-teaching process with her students.

CONFIDENCE AND SHARING

Varcoe acknowledged the confidence she acquired through the PhD process as beneficial to her studio teaching. She now approaches the teaching practice in a looser and more spontaneous way, leaving space for students to share their experiences.

This new confidence also enabled her to better connect with students and create *"an open, non-judgemental space where students feel comfortable to share"*.[107] Thus, showing confidence gives students confidence to express themselves.

Sources

- DAP_r Interview, October 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions.
- Varcoe, A. (2016). Feeling fashion, Doctor of Philosophy (PhD), Fashion and Textiles, RMIT University.

https://adelevarcoe.com

"I employ more frameworks and explanatory concepts now in my teaching"
(Hall, Interview, September 2017).

Place: London
Field: Objects/Product Design
PhD Institution: UTS, Sydney
Time of PhD: Completion 2013
Role: Academic
Practice: –
Position: Professor of Design Innovation at the Royal College of Art, London

MORE STRUCTURED TEACHING

Ashley Hall pointed out how the PhD process contributed to his current teaching practice, which became more structured. He stated that after completing the PhD, he employed *"more framework and explanatory concepts"*.[108]
     The PhD framework trains practitioners in articulating and explaining their research/practice and at the same time, gives them a structure for thinking.

RESEARCH-LED TEACHING

Hall was already an academic when he undertook his PhD, so was already used to teaching within the studio environment. However, he recognised that the PhD contributed to his teaching by altering his mind-set, due to *"being in a more research led environment"*.[109]
     Through the PhD, research became a way of thinking for the practitioner – embedded in his way of addressing different roles and activities.

THE PRODUCTIVE CONNECTION BETWEEN RESEARCH AND TEACHING

In 2016, Hall ran a combined research project with six other researchers, including a studio module with 32 students. This experience made him realise that *"studio*

teaching and research could be combined into a unified project servicing both successfully."[110] Therefore, using research methodology to run a studio can lead to a productive combination of research and teaching.

Sources

- DAP_r Interview, September 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions.
- Hall, A. (2013) *Translocated making in experimental collaborative design projects*, Doctor of Philosophy (PhD), University of Technology Sydney, Faculty of Design Architecture and Building.

"The impact is theoretical, structural, and methodological" (George, Interview, June 2017).

Place:	Perth
Field:	Architecture
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2009
Role:	Academic
Practice:	–
Position:	Assistant Professor at the University of Western Australia

PRACTICE-BASED PhD AS A NEW PEDAGOGY

George describes the PhD as pivotal to her teaching, recognising the substantial benefits it has had on her approach. Learning from the PhD process, she has utilised her own PhD framework [Fig.64, 65, pg.191] in the creation of Masters Studios, observing how the PhD has helped her to develop theoretical, structural, and methodological terms.

The PhD thus offers a model and a framework for design thinking that can be applied at different levels of design pedagogy.

ARTICULATING AND COMMUNICATING

George identified learning to articulate her practice as the greatest improvement to her teaching, post PhD. She states:

"When you know your research territory and have a deeply founded comprehension of a topic area, there tend to be more ways you can explain it, arrive at it, and invite someone else into it."[111]

The ability to articulate design thinking gives clarity to the discourse and therefore improves communication with others.

Another improvement George was able to see was her ability to relinquish control over students, *"encouraging them down their own path"*[112] instead. A skill she attributes to the process of self-enquiry, learned through the PhD.

By undertaking a practice-based PhD, the practitioner learns how to listen to their own design process and in turn, becomes more able to listen to students' design process and way of thinking.

Sources

- DAP_r Interview, June 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions.
- George, B. (2009). *Scouring the thin city: an investigation into Perth through the medium of mapping*. Doctor of Philosophy (PhD), Architecture and Design, RMIT University.

http://beth-george.com

84
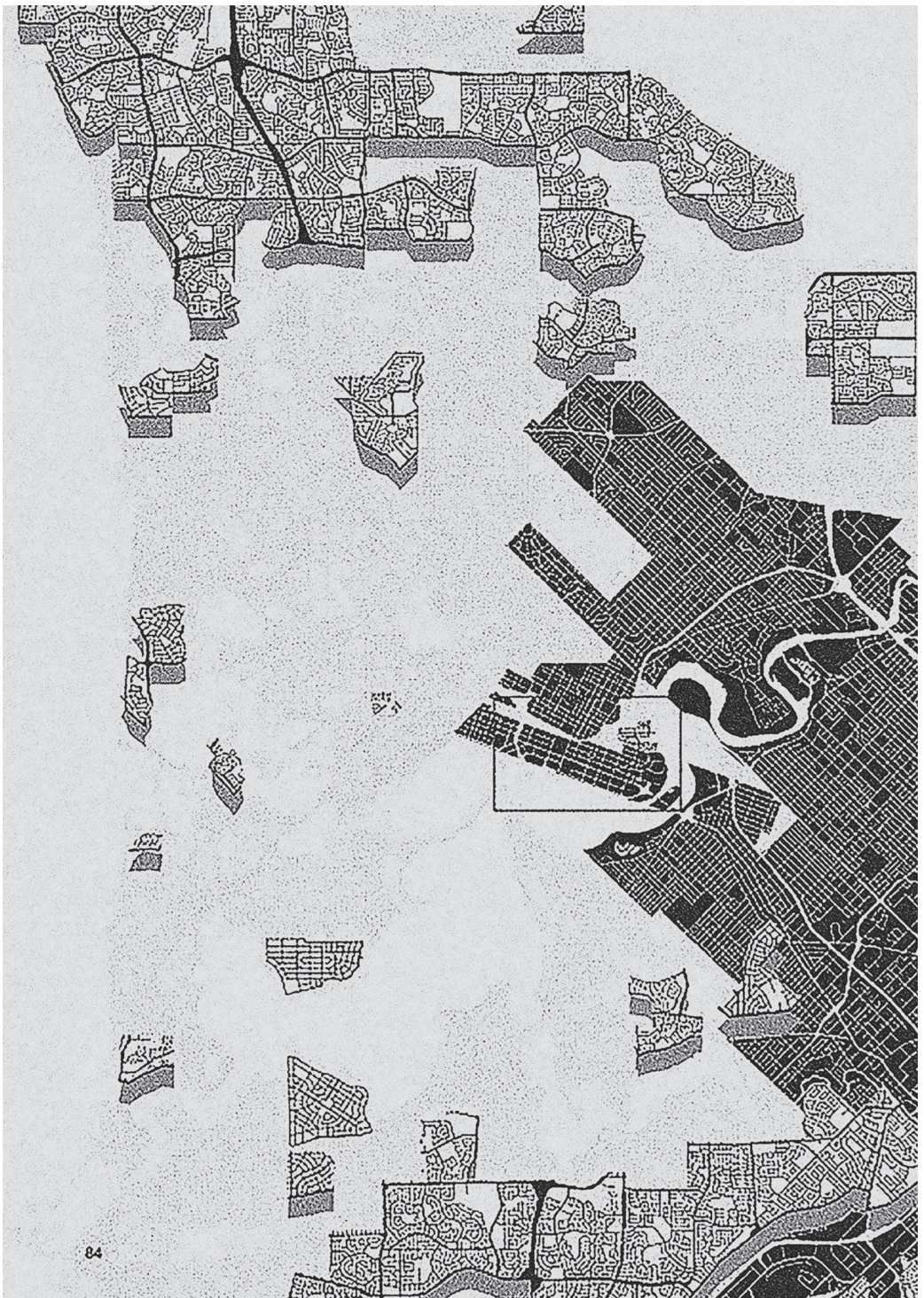
[Fig.64, 65] Mapping Perth
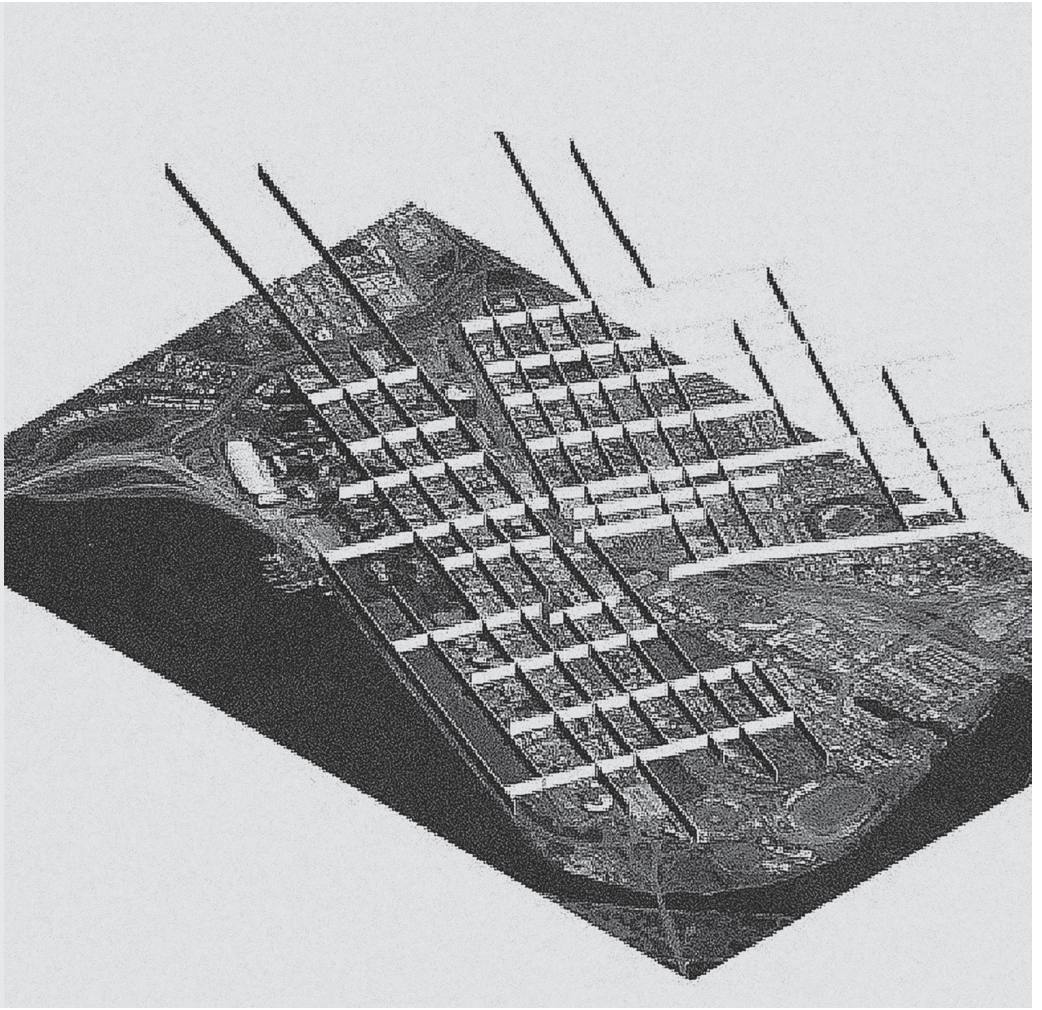
"The PhD study has helped me create lectures that deliver much more content to my students" (Keulemans, Interview, May 2017).

Place:	Sydney
Field:	Product design, graphics, installation
PhD Institution:	UNSW, Sydney
Time of PhD:	Completion 2015
Role:	Practitioner/Academic
Practice:	Guy Keulemans design and research
Position:	Lecturer at University of New South Wales, Sydney

PRECISION AND CLARITY

Keulemans pointed out that the PhD process contributed to the way he talks to students and builds his lectures. He can see how after the PhD he became able to *"create lectures that deliver much more content to my students".*[113] Keulemans' language became more precise and specific, due to the effort he made through the PhD to clarify and explain his own research path.

MERGING RESEARCH, TEACHING, AND PRACTICE

Keulemans also described bringing aspects of the PhD and his current research, into the course he teaches. He sees this connection as an improvement to his teaching, as he is now able to make his courses *"unique and distinguished"*[114] from design courses elsewhere. He also identifies in the alignment of the three areas, an increased efficiency and focus for the researcher. Finally, such an alignment makes his teaching *"more future focussed and charged with the same kind of critical and ethical urgency that compels my research and studio practice".*[115]

Sources

- DAP_r Interview, June 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions
- Kuelemans G. (2015). *Affect and the experimental design of domestic products*, University of New South Wales, Art & Design.

http://guykeulemans.com

> "The design studio is a space where communication about design is practised within a common pedagogy" (Schaik, Interview, April 2017).

Place: Melbourne
Field: Architecture
PhD Institution: RMIT University, Melbourne
Time of PhD: Completion 2015
Role: Practitioner
Practice: MvS Architects
Position: Lecturer at RMIT University

A PEDAGOGY OF "REFLECTION AND RESEARCH"

After doing his PhD, van Schaik recognised a shift in his approach to studio teaching *"to include methods of reflective practice"*.[116] He could see how in architectural education "a pedagogy of skills & training" is often prioritised over a pedagogy of "reflection & research".

The practitioner pointed out the value of the "reflection & research" model for studio teaching, in that it allows students to develop skills in objectively by assessing their own work.

Furthermore, the practitioner recognised a shift in his communication methods, noting that they became less prescriptive and more open towards students.

TEACHING THE COMMUNITY OF PRACTICE

The PhD also inspired him to share and promote the idea of the Community of Practice in his teaching, saying that:

> "[It] is often a starting point for them to become aware of their own peer groups and also of the larger set of things that implicitly and explicitly influence the design decisions in their work".[117]

The connection between teaching and practice is an immediate consequence of undertaking the PhD. Van Schaik is used to running design studios and recognised how "*(...) in some instances the studio operates as a platform from which to speculatively approach clients*".[118]

Van Schaik also acknowledged the value of the design studio in fostering collaboration and communication: *"[it] is a space where communication about design is practised within a common pedagogy."*[119] He considers that teaching, studying, and working with people who share a common pedagogical lineage is highly productive and efficient – especially when it comes to collaborative design or delegating design.

An example of including practice in teaching is a series of design studios van Schaik ran in Mildura during the course of the PhD, while developing a design project for Mildura called *The Key to Mildura* [Fig.66, pg.212]. These experimental design workshops were held in the town and involved students in the design process.

Sources

- DAP_r Interview, April 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions
- Jan van Schaik, P. 2009, *"Bruegelage. Interrogations into nine concurrent creative practice"* (PhD), Architecture and Design, RMIT University.

http://mvsarchitects.com.au/doku.php
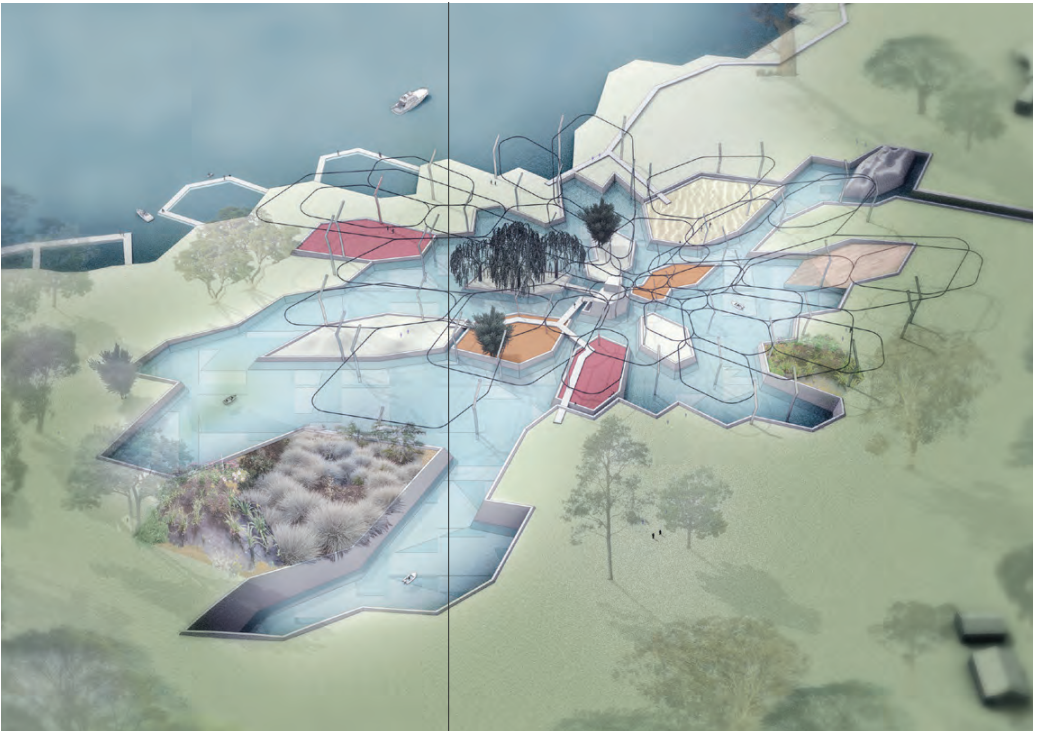
[Fig.66] Project: The Key to Mildura. Source: (Schaik, 2009)

"(…) a more clearly defined explanation of design methods" (Van Den Berghe, Interview, April 2017).

Place:	Brussels
Field:	Architecture
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2012
Role:	Academic
Practice:	Jo Van Den Berghe Architect
Position:	Associate Professor part-time at School of Architecture, KU Leuven / Visiting Professor at Politecnico di Milano

CLARITY AND COMMUNICATION

Van Den Berghe stated that the PhD changed his approach to teaching, giving him the ability to be more precise when talking about the design process. Becoming clearer about his fascinations and design processes, and about his mental space and what drives his design thinking, made him a better teacher because he was able to talk to students in a clearer, more precise, and better structured way.

He believes this new approach has positively affected his students as they seem to *"have a better understanding of their own design processes through the application of a (my) more refined architectural discourse and a more clearly defined explanation of design methods based on a better understanding of urges and fascinations that drive (their) design processes"*.[120]

MERGING PRACTICE RESEARCH AND TEACHING

The practitioner described how the relationship between practice, research, and teaching has become *"much more intense and interwoven, to the point that there is no clear distinction anymore between these components of my 'architectural behaviour'"*.[121] He sees how the three components positively invigorate each other, and how knowledge is transferred between them in a fluid way.

SHARING WITHIN THE ACADEMIC COMMUNITY

Van Den Berghe pointed out how the PhD had a big impact on the way he shares his insights within his community. After participating in the Practice Research Symposia, he reflected on the responsibility of his role as a supervisor and the potential for making an impact through his Community of Practice. Furthermore, taking part in the academic discourse about design research and giving lectures, is another way for him to share and build collective knowledge.

ACADEMIC IMPACT THROUGH PUBLICATIONS

As a researcher, he is able to see his contribution to the field of Creative Practice Research through a growing list of publications: *"from written publications to other publication forms like projects and exhibitions"*.[122]

Sources

- DAP_r Interview, April 2017 – Reported as edited transcription in Annex: 'DAP_r Interviews Transcriptions'
- Van Den Berghe, J. (2012) *Theatre of Operations, or: Construction Site as Architectural Design.* (PhD), Architecture and Design, RMIT University.

http://jovandenberghe.be

"I ask students to set their own level of risk in the research" (Preston, Interview, May 2017).

Place:	Wellington, NZ
Field:	Interior Design
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2013
Role:	Academic
Practice:	–
Position:	Professor at Massey University, Wellington, NZ

RISK

Julieanna Preston has taught for the last 37 years, thus has a long history of experience. Regardless, the PhD still had an impact on her teaching strategies – they became more focused on listening and figuring out what the students actually needed, *"nudging them towards their own awareness."*[123]

She describes her teaching as being much less directed and judgemental, asking students *"to set their own level of risk in the research".*[124]

The PhD process encourages practitioners to take risks throughout the research journey – to be open to the unknown and to discovering new things and new knowledge. This helps form a new mind-set within the practitioner, who can then apply the same strategies when acting as a teacher.

INCORPORATING PRACTICE INTO RESEARCH

Preston mentioned that she often uses her projects within the teaching environment to demonstrate the process of critical self-reflection. She pushes students to take responsibility for their research path and to reflect on their work. She also recognises now when students are motivated rather than simply receiving information.

The PhD strengthened her position on not separating research, practice and teaching, although she recognises that university life doesn't always allow for such a connection when asking teachers to *"simply deliver a unit of knowledge even if it is outside of one's research expertise."*[125]

Sources

- DAP_r Interview, May 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions
- Preston, J. (2013). *Inertia: of interior, surface, matter,* Doctor of Philosophy (PhD), Architecture and Design, RMIT University

http://julieannapreston.space

Lisa Grocott

> "I don't know if it made me a better teacher, but it made me enjoy teaching more" (Grocott, Interview, June 2017).

Place:	Melbourne
Field:	Design Research
PhD Institution:	RMIT University
Time of PhD:	Completion 2010
Role:	Academic
Practice:	THRIVING co-designing learning futures
Position:	Head of Department (Design) at Monash University

SELF-AWARENESS, LANGUAGE, AND CONFIDENCE

Lisa Grocott pointed out how the PhD contributed to her teaching on many levels.

Having greater self-awareness, and a new language and vocabulary acquired through the PhD, gave her more confidence in her teaching, and stronger engagement with it, she said: *"I enjoyed teaching more as I found ways to shape my teaching around research questions".*[126]

COMMUNICATION WITH STUDENTS

The most visible change Grocott could see following the PhD, was the language she used in communicating with students. She could see that the change happened not necessarily in the way she acted but rather from a position of confidence and mind-set.

She also found herself modelling the *idea* of doing a PhD. Which she perceived to be a more valuable contribution than the research itself:

> "I am sure no one read my PhD! I taught design research which helped make the case that it could be something other than book learning".[127]

TRANSFORMING THE APPROACH TO TEACHING: THE REFLECTIVE MODEL

Grocott experienced a transformation in her way of teaching. She recognised that the inclusion of the Reflective Model in her strategies encouraged students to undertake that kind of reflection in their own design paths. She said:

> "As learning is a process of observing and doing, the explicit conversation tends to focus on issues of utility and form-making, masking the hidden curricular learning about the design process and practice" (Grocott, 2010:29).

She claimed that designers need to be more articulate about how design thinking is distinct from other disciplines and interrogate themselves about *"the more tacitly understood, yet transferable qualities that make for an expert designer"* (Grocott, 2010:29).

RESEARCH AND TEACHING

Incorporating her research into her teaching was another transformation that occurred throughout the course of the PhD.

While in New York at the Parsons School of Design, she ran a research-based studio that involved students participating in a research ARC grant – she considered this experience to be the most enjoyable class she had ever taught.

DISSEMINATING KNOWLEDGE

Because of the expertise she acquired through the PhD, Grocott has been invited to participate in research panels and conferences on practice-based research, as an expert in the field who is willing to disseminate and share her knowledge. So, the contribution she is able to see from the PhD is also in the leadership role she can play in the academic context.

Sources

- DAP_r Interview, June 2017 – Reported as edited transcription in Annex: DAP_r Interviews Transcriptions
- Grocott, L. (2010). *Design Research & Reflective Practice: the facility of design-oriented research to translate practitioner insights into new understandings of design*. Doctor of Philosophy (PhD), Architecture and Design, RMIT University.
- Grocott, L. (2017). Make happen: sense-making the affordances of a practice-based PhD in Design. In: Vaughan, L 2017, *Practice Based Design Research*, Bloomsbury Publishing PLC, p.165-174.

"It is really worthwhile to put your practice into the teaching context" (Bird, Interview, August 2017).

Place:	Melbourne
Field:	Architecture
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2012
Role:	Academic/Practitioner
Practice:	Studiobird
Position:	Senior Lecturer, Faculty of Art Design & Architecture, Monash University

INCORPORATING PRACTICE INTO TEACHING

A key discovery made by Bird during the PhD, was his way of including components of his practice into teaching. This became clear to him through the PhD path and led him to define a new teaching strategy. Today, Bird's studio topics are always connected to a project going on in his practice, allowing students to become involved in all stages the process.

An example of this applied strategy is the project *Dance House* [Fig.67, 68, pg.222] that Bird developed in collaboration with a choreographer and performance artist. Bird brought all his students to the location and they built the roof structure together, providing an opportunity for students to get involved in the actual making of the project.

PRACTICE RESEARCH AND TEACHING AS A WHOLE

During the PhD, Bird explored his different roles as an academic, a teacher and a practitioner, saying that before the PhD he used to separate them. Through the PhD, he became aware of the intertwined nature of these roles, saying *"The teaching and the research that I do here definitely come from Studiobird. The PhD gave me the confidence to just carry it all at once"*.[128]

Sources

- DAP_r Interview, August 2017 – Reported as edited transcription in Annex: *DAP_r Interviews Transcriptions.*
- Bird, M. (2012). *The House of Feathers: a design practice observed, documented and represented*, Doctor of Philosophy (PhD), Architecture and Design, RMIT University.

http://studiobird.com.au

[Fig.67, 68] The Tracey Thredbo Project

"I am expanding the discipline of Architecture through my way of teaching" (Petra Pferdmenges, Interview, April 2017).

Place: Brussels
Field: Architecture
PhD Institution: RMIT University, Melbourne
Time of PhD: Completion 2015
Role: Practitioner
Practice: Alive Architecture
Position: Teaching at Ku Leuven

PRECISION AND CLARITY

After completing the PhD, Petra Pferdmenges was able to see how her behaviour towards students had changed, in the context of the Studio. She said: *"I became much more precise on what my expertise is and how to transmit it"*.[129]
       Acquiring clarity in her position and her specific 'voice' as a practitioner, enabled her to communicate her knowledge to students.
       Being aware of the boundaries of her practice allows her to know exactly what she can teach and what is outside of her expertise, resulting in better engagement with her students.

MERGING TEACHING AND PRACTICE

After the PhD, Pferdmenges started using the projects she developed through her practice, to build up her design studios. She is now aware of how what she teaches is learned in her everyday practice, considering her practice, *Alive Architecture,* as *"an entity of teaching"*.[130]

RESPONSIBILITY

Pferdmenges recognises her role as a teacher in generating *"impact upon the future generation of Architects, expanding the discipline from built space to Lived Space"*.[131] Thus, the responsibility she feels towards students is at the core

of her teaching, and at the core of her socially engaged practice within local communities.

EXPANDING ARCHITECTURE IN PEDAGOGY

Her urge to expand the field of architecture *"from designing built space to designing Lived Space"*[132] [Fig.69, opposite] is something that also drives her way of teaching, and in doing so, she aims to challenge students.

SHARING IN THE ACADEMIC CONTEXT

Following the PhD, Pferdmenges now defines herself as an *"academic practitioner"* and explains how she values participation in conferences and in the academic context as a way *"to get feedback from others to advance the research"*.[133]

Sources

- DAP_r Interview, April 2017 – Reported as edited transcription in Annex: *DAP_r Interviews Transcriptions.*
- Pferdmenges, P. 2015, 'Founding Alive Architecture. From Drawing to Initiating Lived Space" (PhD), Architecture and Design, RMIT University.
- Presentation at Impact by Designing Conference 6th-7th April 2017, KU Leuven, Faculty of Architecture, Brussels.

http://alivearchitecture.eu

[Fig.69] Project Parckdesign 2014

Pia Interlandi

"I am much more candid with my students"
(Pia Interlandi, Interview, July 2017).

Place:	Melbourne
Field:	Fashion Design
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2012
Role:	Academic
Practice:	Pia Interlandi
Position:	Lecturer in Fashion Design at RMIT University, Melbourne

EMPATHY TOWARDS STUDENTS

Pia Interlandi pointed out how after the PhD she found herself more open, humane and empathetic towards students. She defines this new way of approaching teaching, as caring for students.

A RESEARCH NARRATIVE INTO TEACHING

Through the PhD, Interlandi acquired the ability to talk about her practice which, in turn, influenced her teaching. She now uses her own practice as an example of how to respond to the considerations and restraints of different briefs.

She observes how students engage with her narrative as she shows them the expansion of the field of fashion design, beyond the boundaries they have experienced so far. She then uses her practice to demonstrate what fashion design can be.

Sources

- DAP_r Interview, July 2017 – Reported as edited transcription in Annex: "*DAP_r Interviews Transcriptions*".
- Interlandi, P. (2012). *[A]dressing Death: Fashioning Garments for the Grave*, Doctor of Philosophy (PhD), Architecture and Design, RMIT University.

http://piainterlandi.com

"That kind of mutual support between teaching, practice, and research is not common enough" (Sam Kebbell, Interview, May 2017).

Place:	Wellington, NZ
Field:	Architecture
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2016
Role:	Practitioner
Practice:	Kebbell & Daish
Position:	Senior Lecturer at the School of Architecture, Victoria University of Wellington, NZ

TEACHING CONNECTED WITH PRACTICE

Immediately after completing his PhD, Sam Kebbell started running an architectural studio at the Victoria University of Wellington. He made a decision to organise the studio as an extension of one of his projects, *The Washing House* [Fig. 70, pg.221], as a method of merging practice and teaching, and using design speculations as a premise for the studio. The studio then became a collective design exploration for both the teacher and his students, which Kebbell describes as the *"students and I working alongside each other on visions of the neighbourhood around that house".*[134]

Kebbell sees the potential for a collapse in teaching, practice and research, and is now convinced that "*That kind of mutual support between teaching, practice, and research is not common enough".*[135]

PRACTICE AND ACADEMY

Kebbell considers the exchange between academia and the professional world, fundamental. He sees the power of the ongoing conversations between public, professional, and academic audiences, saying:

"it has been important to the way the Ph.D. is developed, but also how the projects in practice

and the conversations around them develop"
(Kebbell, 2016:193).

LEARNING FROM PhD PEDAGOGICAL TECHNIQUES AND APPLYING THEM WITH STUDENTS

After completing the PhD, Kebbell found himself more articulate and able to understand students' design process. He found he could read their tendencies and guide them in finding "*their own creative voice*".[136] He attributes this ability to the learning process of the PhD, specifically, his discussions with supervisors who provided support, generosity, and understanding. So, pedagogical techniques observed and received during the PhD, can become a tool that the practitioner adopts as pedagogical approaches to studio teaching.

Sources

- DAP_r Interview, May 2017 – Reported as edited transcription in Annex: "DAP_r Interviews Transcriptions".
- Kebbell, S. (2016). *Collapsing hierarchies: party walls, the rarefied, and the common*. Doctor of Philosophy (PhD), Architecture and Design, RMIT University.
- Presentation at DAP_r Symposium – m3architecture, Brisbane, 28th July 2017

http://kebbelldaish.co.nz

[Fig.70] The Washing House, 2015

Supervisor, <u>Mick Douglas</u>

"The PhDs themselves become a support mechanism for research" (Douglas, 2010).

Place:	Melbourne
Field:	Performative art
PhD Institution:	RMIT University
Time of PhD:	Completion 2010
Role:	Practitioner/Academic
Practice:	Mick Douglas
Position:	Senior Lecturer at the School of Architecture & Design at RMIT University

PARTICIPATORY TEACHING

During the course of his PhD, Douglas incorporated teaching into group project work. Participatory processes were a focus of Douglas' research and practice, who included students in his projects so they could develop participatory design capabilities though action-learning (Douglas, 2010:137).
    The research-led approach to teaching is a way to intertwine research, practice, and pedagogy within a *whole* system, allowing researchers/practitioners to develop their own interests and transfer their experiential knowledge.

SUPERVISOR'S PERSPECTIVE: CLUSTERS OF PhD

Douglas sees how at the School of Architecture and Design at RMIT University, it is now possible to identify clusters of PhDs among candidates, grouping them in relation to the orientation taken by both supervisors and candidates. He recognises a wide spectrum of orientations that have been brought to the PhD model, both by supervisors and candidates.

SUPERVISOR'S PERSPECTIVE: THE REFLECTIVE MODEL AND THE GENERATIVE APPROACH

Douglas recognises two main forces or approaches to the practice-based PhD at the School of Architecture:

on one side is the Reflective Model and on the other, the Generative Approach.

He describes the orientation towards the Reflective Model as an activity undertaken by invited practitioners that "*characterises much of the activity of the invited practitioners who reflect upon their existing body of practice knowing, heighten their awareness of the critical dimensions of that practice, and look for ways to leverage from their critical insights of their practice to guide the future development of that practice".*[137] It is therefore a reflection that looks into the past in order to define future directions of pursuit.

The reflective practice mode that, it seems to me, characterises much of the activity of the invited practitioners who reflect upon their existing body of practice knowing, heighten their awareness of the critical dimensions of that practice, and look for ways to leverage from their critical insights of their practice to guide the future development of that practice

In the Generative Approach, he includes those candidates who are undertaking *"generative creative practice research",* utilising the PhD framework to generate new works and practices that *"might be significantly informed by prior works, but the emphasis is really looking to generate something in and through* practice".[138]

Thus, the emphasis is placed more so on the generative process than the reflection on the work.

This approach reflects an understanding of knowledge as production.

SUPERVISOR'S PERSPECTIVE: USES OF THE PhD

Douglas noted that candidates make use of the PhD in different ways: by either maintaining continuity in their practice and consolidating their position, or looking for a significant shift in their practice through other disciplinary practices. He suggests the latter type of candidates are *"looking for new ways to configure a more trans-disciplinary practice influenced and informed by other disciplines or contemporary hybrid enquiries operating beyond prior disciplinary organisation".*[139] It seems then, that there are two main orientations: one aiming to consolidate and the other aiming to change or expand into hybrid creative practices.

Sources

- DAP_r Interview, September 2017 – Reported as edited transcription in Annex: "DAP_r Interviews Transcriptions".
- Douglas, M 2010, "*CARRIAGE. Cultural transports and transformations of a socially-engaged public art practice*", Doctor of Philosophy (PhD), Architecture and Design, RMIT University.

http://mickdouglas.net

Supervisor, <u>Suzie Attiwill</u>

> "Another aspiration of this PhD was, and continues to be, to contribute to the emerging discourse of interior design and through this, encourage different ways of thinking and designing interiors"
> (Attiwill, 2012).

Place:	Melbourne
Field:	Interior Design
PhD Institution:	RMIT University, Melbourne
Time of PhD:	Completion 2012
Role:	Academic
Practice:	–
Position:	Associate Professor in Interior Design, RMIT University

TEACHING AS A CURATORIAL PRACTICE

Attiwill sees her teaching as a curatorial practice. She has been teaching for a long time at RMIT, and always includes her practice and research in her pedagogical approach.

SUPERVISOR'S PERSPECTIVE: PhD DISSEMINATION

In her role as an academic, Attiwill encourages discussion about the value of doing a PhD in the field of interior design. She is of the opinion that the PhD would contribute greatly to the field, if more interior designers undertook such training. Having more practitioners involved in the process would expand the discourse around interior design, which she believes will be the next phase.

SUPERVISOR'S PERSPECTIVE: EMERGING PRACTICES IN INTERIOR DESIGN

As a supervisor, Attiwill primarily supervises PhD candidates who have emerging practices in interior design. She sees this as an effect of interior design being a fairly new discipline in itself.

She envisions the possibility of established practitioners reflecting upon their practice, while also

acknowledging the specificity of the discipline that is more ephemeral than others, such as architecture, in which there is a strong culture of practice-based PhD.

Having established practitioners involved in a practice-based PhD in interior design would strengthen the discourse around the discipline and develop the theory around it.

SUPERVISOR'S PERSPECTIVE: PUSHING THE DISCIPLINE

From her experience, Attiwill sees emerging practitioners in interior design as being keen to push the discipline and address broader concerns "*with social, cultural, historical, political contributions through practice*".[140]

Accordingly, the PhD is an opportunity for Candidates to spend time thinking and testing projects that they couldn't in their commercial practice, as well as reading and exploring Communities of Practice.

As Attiwill stated, the PhD is "*often very much about a learning process*".[141] Through the PhD, emerging practitioners can be experimental and acquire the confidence and expertise necessary to become leaders in their field. Therefore, the PhD contributes not only to their professional practice but to the field of interior design.

SUPERVISOR'S PERSPECTIVE: PhD IN ART

Following her experience supervising PhD Candidates in the discipline of art, Attiwill raised an interesting issue about the contribution of the practice-based PhD to art, given that "*It is not necessarily productive for them to explain their practice through the PhD because once they have explained their practice then it is finished, it is not creative any more*".[142] She suggests that a PhD in art may be *"about activating and experimenting",*[143] exploring ideas and techniques.

SUPERVISOR'S PERSPECTIVE: KNOWLEDGE AS PRACTICE AND PRODUCTION

Attiwill positions herself as a supervisor in the philosophical space of knowledge as practice and production. She disagrees with the idea of preexisting knowledge being uncovered through research, nor the idea of knowledge

being embodied in objects. She is interested in "*how knowledge is produced through the doing of things and that the reflection happens after the doing back on to something*".[144] It is a reflection that aligns with the reflective-based model but is not a reflection that is "*looking for an essence*", rather a reflection as a product of the present that has value for the future.

Sources

- DAP_r Interview, August 2017 – Reported as edited transcription in Annex: "DAP_r Interviews Transcriptions"
- Attiwill, S. (2012) *Interior, practices of interiorization, interior designs.* Doctor of Philosophy (PhD), Architecture and Design, RMIT University.

3.3 Findings: Value and Contribution Cross Narratives

The *cross value and contribution narratives* represent a further interpretative step, drawing on the compared reading and interpretation of the *individual value and contribution narratives*.[146]

The aim of this set of narratives is to explore a series of thematic clusters, which are transversal, shared, and relevant among the case studies. They show trends, similarities and differences, summaries and explanations of the main directions, perspectives, and interpretations of the participants, regarding the contribution of the practice-based PhD to pedagogical approaches to studio teaching. They highlight areas where practitioners/researchers identified such a contribution.

Four interpretative categories have been identified, highlighting the main trajectories in relation to the contribution to pedagogy:

Articulating
Experimenting
Translating
Merging
[Fig.71, opposite]

3.3.1 Articulating

A major contribution of the PhD to studio teaching and to academic pedagogy, relates to an increased ability for candidates to articulate their practice. Through the PhD, practitioners learn how to better articulate the discourse around their practice, their modes of practicing, and their design strategies and processes.

This positively informs their way of teaching, as they become better able to explain the 'forces' behind design acts, namely: motivations, intentions, and values. As suggested by Schön:

"some instructors have learned to become not only master practitioners but master coaches. They have learned to respond to the imperative, present in the studio as it is often not in the practice, to make design assumptions, strategies and values explicit" (Schön, 1985:6).

4
MERGING

3
TRANSLATING

1
ARTICULATING

2
EXPERIMENTING
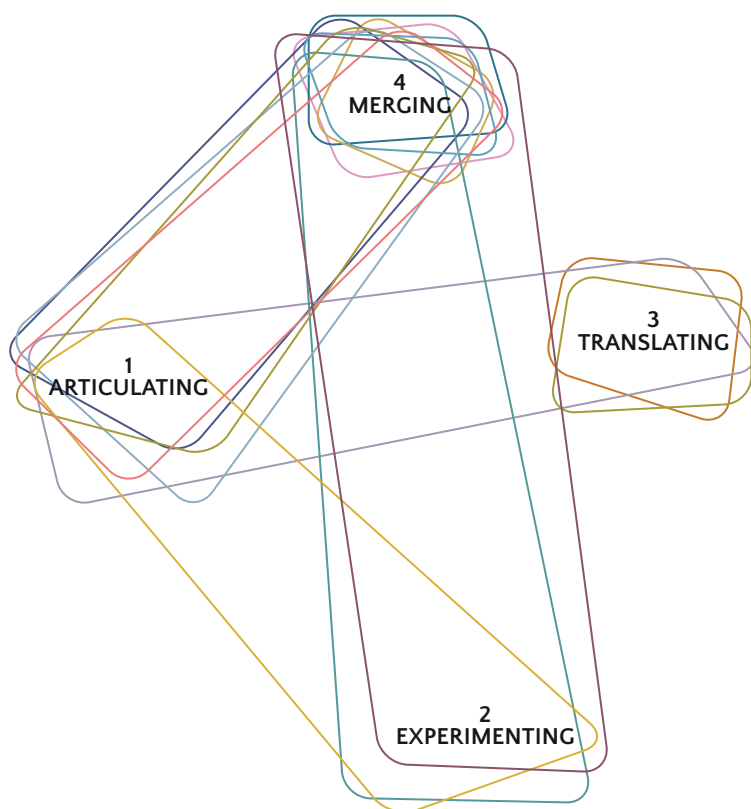
AV   Adele Varcoe
AH   Ashley Hall
BG   Beth George
GK   Guy Keulemans
JVS   Jan van Schaik
JVB   Jo Van Der Berghe
JP   Julieanna Preston
LG   Lisa Grocott

MB   Matthew Bird
PP   Petra Pferdmenges
PI   Pia Interlandi
RE   Riet Eeckhout
SK   Sam Kebbell
MD   Mick Douglas
SA   Suzie Attiwill

[Fig.71] Cross value and contribution narratives diagram

Greater articulation also enables practitioners to provide a clearer framework to students, thus allowing them to construct their own path.

Practitioners noted that their discourse has become less prescriptive, favouring a pedagogy of reflection and research. They also report being more precise when talking about the drivers and fascinations that carry design processes forwards. Openness and precision are indeed two relevant elements of the learning process, allowing teachers to share their knowledge with students in a meaningful way.

Further, the ability to explain and adapt their language to students, gives practitioners greater authority in their leading roles as teachers.

CLARITY, PRECISION AND STRUCTURE

Beth George identified finding *clarity* as a main contribution of the PhD. This allowed her to deliver an informed discourse about design thinking, and improved her communication with students. She suggested that:

> "When you know your research territory and have a deeply founded comprehension of a topic area, there tend to be more ways you can explain it, arrive at it, and invite someone else into it".[147]

A perception of clarity was also mentioned by Guy Keulemans, who emphasised that his language became more precise and specific as a result of regularly explaining his own research path to others, along the PhD journey.

Similarly, Jo Van Den Berghe pointed out that the PhD transformed his way of teaching, as he became clearer, more precise and structured when talking about his design process and thinking. He mentioned how this positively affected his students, who emulated his behaviour when discussing their own work.

Structured is an adjective also used by Ashley Hall when referring to his teaching and its transformation after the PhD. He observed that he now employs *"more framework and explanatory concepts"*[148] in his teaching practice.

Petra Pferdmenges also recognised clarity as one of the main contributions of the PhD to her teaching practice. She pointed out that the PhD helped her to gain clarity around her position, voice as a practitioner, and the boundaries of

her practice, which then enabled her to be clear about her teaching capabilities, to the benefit of students.

LANGUAGE AND CONFIDENCE

A new language, vocabulary and way of talking about design is what Lisa Grocott perceived as a major contribution of the PhD to her teaching. This provided her with more confidence and inspired stronger engagement, she said:

> "the language gave me a confidence by which to assert the role of design in talking to non-designers".[149]

In Grocott's case, the change was not necessarily identifiable in the way she acts within the studio, but rather from the perspective of mind-set and confidence.

She also mentioned enjoying teaching more after completing the PhD, because of her ability to drive teaching around research questions.

3.3.2   Experimenting

The pedagogy of the design studio is similar to the pedagogy of a practice-based PhD, as both are based on the process of learning-by-doing. Therefore, an experimental approach is essential for the learning process to occur in both contexts.

The practice-based PhD trains practitioners to confidently engage with experimentation, openness, and uncertainty. Practitioners learn how to deal with doubt, as a productive thinking tool, including how to get lost and trust the path even if the final destination is not yet clear.

Practitioners are keen and able to bring this approach/mode of thinking to their design studios, incorporating the modes and methods they have learned within the PhD into useful tools for students.

A number of practitioners mentioned the idea of including the concept of *risk* in studio teaching, after completing their PhD training. The ability to embrace the unknown and relinquish control are abilities that creative practitioners acquire through the PhD process.

Some practitioners mentioned becoming better at encouraging students to undertake their own path instead

of following their teachers' rules and procedures. Indeed, the PhD process trains practitioners to be better listeners. Others recognised that design processes are non-linear, disorganised and messy, and being able to communicate this to students is empowering.

RELINQUISHING CONTROL

When referring to the studio environments she generated after her PhD, Adele Varcoe described her teaching approach as being much looser and spontaneous, leaving space for students to share their experiences.

A similar observation was made by Beth George, who mentioned after completing her PhD, her teaching strategies changed – particularly in relation to relinquishing control over students by *"encouraging them down their own path"*[150] instead.

The openness to uncertainty and self-enquiry provided by the PhD, as well as the ability to listen to their own design processes, trains practitioners on how to listen to their students' design processes without controlling or strictly guiding their path. Instead, practitioners learn how to teach students to walk their own paths, while providing them with the tools they need to undertake their own design journeys.

LISTENING AND LEAVING SPACE FOR RISK

Julieanna Preston stated that her teaching strategies have changed since completing the PhD. She now places greater emphasis on listening and figuring out what students need, so she can nudge them towards their own awareness, in a less directed or judgemental way. She asks students *"to set their own level of risk in the research"*. Experiencing risk across the PhD journey, trains practitioners how to use it as a learning tool.

The approach to risk as learned during the PhD, is something that practitioners can incorporate into their teaching strategies. They are keen to pass this new mind-set on to students.

3.3.3 Translating

Practitioners expressed interest in translating and applying the teaching techniques learned through the PhD, into their studios. Through the PhD framework, practitioners experienced a collective/conversational system of learning and a series of pedagogical strategies to apply to their teaching practice.

Through the research journey, they also become more aware of their role as mentors within the studio environment and their responsibility towards students. They gained this awareness through observation and the experience of working with supervisors. As a result of this relationship, the practitioners' engagement with their students' changed. Practitioners therefore apply the Reflective Model to translate the behaviours, strategies, and approaches they have experienced during the PhD, into actions within the studio.

Practitioners translate the Reflective Model learned and tested in the PhD, into their teaching environment, shaping their teaching strategies grounded on the methodological expertise gained through the PhD process.

TRANSLATING THE REFLECTIVE MODEL

Jan van Schaik describes the shift in his interpretation of pedagogy, as a move from a pedagogy of *skills and training* to one of *reflection and research.* He highlighted the value of the latter model in enabling students to develop skills in reflection, and objectively assessing their own work.

Lisa Grocott experienced a similar transformation in her way of teaching. She now includes the Reflective Model in her strategies, inviting students to reflect upon their own design paths.

TRANSLATING THE SUPERVISORY PROCESS

The conversation with supervisors works as pedagogical training, teaching practitioners how to act as Studio Masters. Observing the way supervisors guide and support the practitioners/researchers along their paths, gives them a new set of strategies to translate to their roles as teachers, mentors, and supervisors of students.

Sam Kebbell pointed out that pedagogical techniques observed and received during the PhD can become tools that can be adopted as new pedagogical approaches to studio teaching.

3.3.4   Merging

A remarkable contribution of the PhD to academic pedagogy is the alignment between practice, research, and teaching. Through the PhD process, practitioners become aware of the importance of bringing components of their practice and research into teaching – for students and for themselves.

The interconnection between practice, research, and teaching triggers a process of mutual nourishment, generating more engagement from the teacher within the studio while simultaneously expanding the boundaries of the research.

PRACTICE, RESEARCH AND TEACHING AS A WHOLE

The three elements (practice, research, and teaching) are often seen by practitioners as a whole, dynamic system. As Matthew Bird pointed out, the PhD surfaced the interconnected nature of his three roles as practitioner, researcher, and teacher, saying that it gave him the confidence to carry it all out at once.

An analogous perspective was given by Petra Pferdmenges, who along the course of her PhD, started using practice projects to build her design studios. She observed that she was able to teach what she indeed learns in the everyday practice, defining her practice as an *"entity of teaching"*[151] itself.

In Guy Keulemans' opinion, bringing aspects of the practice and research into teaching seems to increase efficiency and improve focus for the practitioner/ researcher. Bringing "*the same kind of critical and ethical urgency that compels my research and studio practice*"[152] into teaching, generates stronger engagement and a continuous learning process.

The three elements influence, nourish, and reinforce each other in a mutual and perpetual process.

The connection between practice research and teaching was pivotal to Suzie Attiwill's pedagogical approach. She observed how the PhD provided a space where all three elements were brought together, and how useful the PhD was as a training tool for teaching.

USING PRACTICE AS AN EXAMPLE

Practitioners mentioned applying a new strategy to their teaching – using their practice as a method of explaining and demonstrating how critical self-reflection works.

Julieanna Preston makes use of this technique to expose and simplify self-reflection. She uses her experience as an illustration and invites students to emulate this process, asking them to take responsibility for their own research paths, and reflect upon their work.

The same strategy was applied by Pia Interlandi, who also uses her own practice as a narrative for showing students possible responses to design questions. She thus makes use of her practice as a tool to show students what fashion design can be.

RESEARCH-LED APPROACH TO TEACHING

Using research questions as a starting point for studio teaching, is a strategy that practitioners discover along the path of their PhD. Such an approach encourages a stronger engagement between teachers and their students, and produces a new mechanism for generating knowledge.

Ashley Hall noticed how using research methodology to run a studio seemed a fruitful mode of teaching, leading to a productive combination of research and teaching.

Similarly, Adele Varcoe brought her research questions to her studios and invited students to answer the questions with her. This broadened her perspective and expanded the research direction, making her think about it differently.

Mick Douglas also supports the research-led approach to teaching as a way of intertwining research, practice, and pedagogy within a whole system. He pointed out how this strategy allows practitioners/ researchers to develop their own interests and transfer their experiential knowledge.

Another strategy practitioners apply to studio teaching is the incorporation of students in their practice projects. Here, students experience the real world of the practice and are immersed in a real context for learning, by making them feel part of the process.

Mick Douglas started using this strategy while doing his PhD. He included students in his participatory art projects, enabling them to develop participatory design capability though action-learning.

The same strategy was applied by Matthew Bird in his studio teaching. During his PhD, he started including components of his practice in his teaching by involving students in his projects and in certain cases, bringing them to the project site to participate in physical construction.

SECTION 4 : CONCLUSIONS

A cross-reading of the contribution of the practice-based doctoral training on professional practice, and pedagogical approaches to studio teaching.

4.1 Value and Contribution to Whom? Narratives

The value and contribution to whom? Narratives aim to answer to the question:

> What does the practice-based PhD offer to practitioners at different stages/moments of their practices?

These narratives try to outline the series of contributions that the PhD can make in the path and development of a practice, at different moments in time.

The narratives are built through reading and interpreting the experience, work and words of the practitioners/researchers involved in this research project as case studies.

The *value and contribution to whom narratives* are shared between the two trajectories of this research: one focusing on the contribution of the PhD to professional practice, and the other to pedagogy, highlighting the connections and intersections between the two.

Four interpretative categories have been identified:

> Establishing
> Transforming
> Consolidating
> Integrating
> [Fig.72, opposite, 72a, pg.248-49]

4.1.1 Establishing

> What does the PhD offer to practitioners who intend to establish their practice?

Practitioners can utilise the PhD process as a tool for establishing their emerging practices. The doctoral framework works as a support in structural, economical, and methodological terms, towards the constitution and definition of a new professional practice.

The doctoral training offers those emerging practitioners a framework – an infrastructure enabling them to find their own methods of investigation and exploration
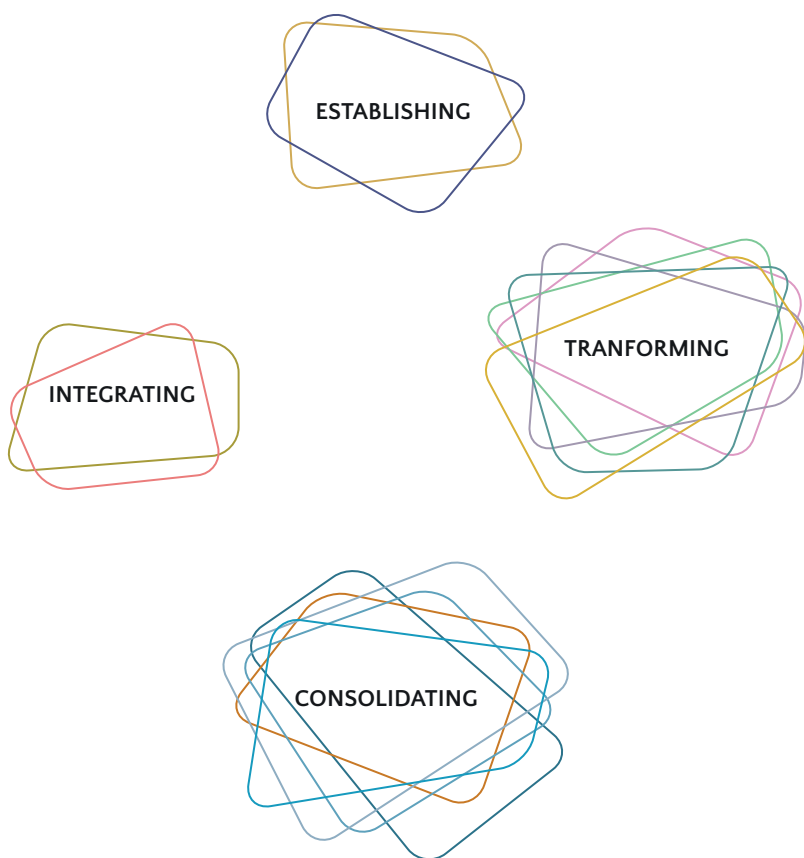
ESTABLISHING

INTEGRATING

TRANFORMING

CONSOLIDATING

AV	Adele Varcoe	MB	Matthew Bird
AH	Ashley Hall	PP	Petra Pferdmenges
BG	Beth George	PI	Pia Interlandi
GK	Guy Keulemans	RE	Riet Eeckhout
JVS	Jan van Schaik	SK	Sam Kebbell
JVB	Jo Van Der Berghe	MD	Mick Douglas
JP	Julieanna Preston	SA	Suzie Attiwill
LG	Lisa Grocott		

[Fig.72] Cross value and contribution narratives diagram

	ESTABLISHING	TRANSFORMING
Adele Varcoe		●
Ashley Hall		
Beth George		●
Guy Kuelemans		
Jan van Schaik		
Jo Van Der Berghe		
Julianna Preston		●
Lisa Grocott		●
Matthew Bird		
Petra Pferdmenges	●	
Pia Interlandi	●	
Riet Eeckhout		●
Sam Kebbell		
Mick Douglas		
Suzie Attiwill		●

[Fig.72a] Contribution to Whom Diagram

CONSOLIDATING	INTEGRATING
	●
	●
●	
●	
●	
●	
●	

along the research path, and providing them with access to a new community – a starting point for developing their professional networks.

Through the PhD journey, emerging practitioners are able to experiment, test, define and refine their *voice* as practitioners. By generating new knowledge, they can contribute to the expansion of their specific disciplines.

This is evident in the case of Petra Pferdmenges, who used the PhD as a means to establish, build and ground her practice, *Alive Architecture*. For Pferdmenges, the PhD has been a path of clarification – a process of discovering and defining the boundaries, the position, and the future trajectories of her practice. Her PhD started with a series of intentions and purposes, and arrived at a series of actions for her practice.

During the PhD, Pferdmenges undertook a series of participatory projects in the city of Brussels, during which she both discovered and refined the matter of her practice. After the PhD, she found herself in an established and recognised professional practice, working in collaboration with inhabitants and the local administration.

An analogous process has been followed by Pia Interlandi, who established her practice, *Garments for the Grave,* through the PhD. Along her research journey, she discovered and defined her position as a designer, as *"one who performs 'fashioning' of processes"* (Interlandi, 2012: 330).

Interlandi started the PhD defining herself as a fashion designer, then opened up her field of action towards sensory and interior design. Through a series of experimental projects, she explored *"the ways fashion design can directly approach the realities of the dead body, specifically, the moments between death and disintegration, and in doing so, seeks to contribute to the ways in which fashion design can play an important role in the way we approach the dead body and the rituals surrounding death"* (Interlandi, 2012: 72). Such projects provided her with a space for experimentation where she could construct her PhD journey, and subsequently clarify her practice by the end of the process.

These two examples demonstrate how the PhD can be a process of discovery and generation of new knowledge though making and practicing. More than surfacing knowledge from reflection on past projects and practices, the process works generatively – a process of production.

Mick Douglas defines this mode of research as *"generative creative practice research"*[153] undertaken by practitioners who utilise the PhD for the generation of new work.

In her role as a supervisor, Suzie Attiwill offers an interesting perspective on the use of the PhD as a tool for building a practice in the field of interior design. She supervised PhD Candidates with emerging practices who used the PhD to establish themselves as practitioners, and to push the emerging discipline to have broader concerns "*with social, cultural, historical, political contributions through practice*".[154]

Accordingly, she sees the doctoral training as an opportunity to devote time to experimenting with projects that would not be possible in a commercial practice, as well a chance to increase the practitioners' theoretical knowledge and exploration of their Community of Practice.

Through the PhD, emerging practitioners can be experimental, while acquiring the confidence and expertise to become leaders in their field. Therefore, the PhD contributes not only to their professional practice but to the field of interior design.

4.1.2   Transforming

What does the PhD offer to practitioners who intend to reinvent their practice?

Practitioners undertake a practice-based PhD seeking a significant shift or new ways of configuring their practice. They use the PhD as a tool for transformation and reinvention.

Such a reinvention occurs through a journey of attempts, experiments, and explications. It can take different shapes, it can lead practitioners from one discipline to another, and it can expand their practice to an interdisciplinary approach.

The PhD thus offers practitioners an opportunity for growth within a safe environment.

An example of using the PhD as a tool for transformation is clear in the case of Julieanna Preston, who experienced a shift in the intellectual and practical concerns of her practice. Preston changed from *"a*

researcher who seeks to liberate interior materials to one who engages with materials (and objects) as like matter" (Preston, 2013, Part 5:2).

She experienced a migration of her practice from her role as an interior designer/architect to a performance artist.

Her practice also moved from the field of interior design, spatial design and architecture, towards an interdisciplinary approach that included feminist philosophy, fine art practice, social science, and material science. Through this process of reinvention, her practice expanded beyond earlier limitations.

The PhD also radically transformed Lisa Grocott's practice. Grocott started the PhD as a communication designer and then began using her expertise in different ways – changing her focus from outputs and products towards processes. This shift only became visible after the end of the PhD, when she expanded her field of interest from communication design to social design.

Grocott established a research lab that engages in co-designing with researchers, teachers and students to explore the future of learning. She defined the PhD as experiential training into finding your purpose and the continual reinvention of your practice over a lifetime.

Suzie Attiwill represents a compelling example of how the PhD transformed her practice, as she explicitly declared this intention in her PhD. She interpreted the doctoral training as a means for rethinking and reinventing her practice, and the future of the discipline of interior design.

Along the course of the PhD path, she undertook a series of experiments that explored her practice and encouraged different ways of thinking and designing interiors. Through this path, she experienced an expansion of her practice, from curatorial practice to exhibiting writing and teaching, which can be seen as a whole system working in an intertwined way.

Riet Eeckhout experienced a transformation in terms of clarification and specification of her practice, through the PhD. She shifted her focus from architectural practice to drawing practice, as both a tool for reflection and research, and a performative medium. Drawing was already a core element of her practice, however, when using it as a tool for the PhD investigation, it moved from a representational mode to an autonomous mode, not just serving but driving the speculative process of design.

The PhD also works as training for teaching, enabling the transformation of practitioners' teaching strategies. As mentioned by Jan van Schaik, learning through a pedagogy of *"research and reflection",* practitioners feel impelled to bring that approach to their studio environments, applying the pedagogical strategies observed and learned through their research path.

Similarly, Beth George mentioned the pivotal role the PhD played in shaping her pedagogical approach to studio teaching, applying the methodological structure learned through the PhD. She suggested that it could be applied at different levels of design pedagogy.

4.1.3   Consolidating

What does the PhD offer to practitioners who intend to consolidate their practice?

Another approach to undertaking a practice-based PhD consists of consolidating an established practice, maintaining a continuity in the practice, and strengthening a professional position.

This approach to doctoral training can be defined as a Reflective Model. Established practitioners use the PhD as a way of reflecting upon their existing body of work, their modes of practice, and design strategies, with the aim surfacing their "*critical points of current leverage,"*[155] specificities and strengths. This enables them to have a guide for the future of their practice.

The PhD provides established practitioners with a methodological framework to make sense of their practice by training them in new methods and strategies, and positioning them in an expanded Community of Practice and research, where new possibilities for collaboration can emerge.

Through the PhD, practitioners acquire authority and clarity around their position as practitioners within their discipline or disciplines of reference, their Communities of Practice, and society at large.

The experience of Jan van Schaik reveals the relevance of undertaking a practice-based PhD to make sense of an established practice. Through the PhD, he became aware of his methods of practice, motivations, tendencies, and values of his practice. As a way of refining

his position, he interrogated a series of past projects, and started a series of new projects to apply and test the knowledge that emerged through the PhD.

Sam Kebbell followed a similar path. Through the PhD, the practitioner became fully aware of his fascinations, and the methods and knowledge embedded in his practice. He discovered the strengths and specificity of his practice, and became more self-confident in his position as a practitioner.

A slightly different experience was offered by Matthew Bird, who started the PhD as an emerging practitioner and used it as a way to consolidate his practice and make statements about future trajectories. The PhD clarified the focus of his practice, encapsulated his methods and processes, and surfaced his unicity and multiple other components of his practice that he was not completely aware of. He defined the PhD as a threshold between his previous and future practice.

Another interesting example of consolidating the practice throughout the PhD is the case of Mick Douglas, who investigated his already established practice through a series of art projects. Such projects helped Douglas to understand and communicate the characteristics of his research and practice.

Further, the PhD enabled him to develop self-legitimating structures for his work.

He doesn't consider his PhD as one of a Reflective Model, but rather a generative process. Douglas defines his PhD as a way "*to generate and establish new modes of practice*".[156]

The PhD process also contributes to consolidating teaching paths: practitioners who are also established academic teachers, mentioned the contribution of the PhD in reinforcing their position as studio teachers, giving them more self-confidence and making their already defined teaching trajectory, clearer.

This was the experience of Julieanna Preston. Although an academic teacher of almost 40 years, she saw how the PhD clarified her pedagogical approach, training her how to use her own research and practice to demonstrate to students how critical self-reflection works.

4.1.4   Integrating

> What does the PhD offer to practitioners who intend to integrate their practice with an academic career?

Practitioners make use of the PhD process as a way of integrating their practice with an academic career. The PhD acts as a bridge between the two realms, connecting the professional and academic paths, and bringing them together on the same track.

Through the PhD process, practitioners discover the potential for bringing their practice and research into the context of teaching. Practitioners utilise their experiential knowledge within an academic context, and the PhD provides them with a support structure for developing their practice, research, and teaching practice as a whole. The PhD also connects them with new networks and Communities of Practice, opening up new possibilities for collaboration.

Through the doctoral training, practitioners learn (and shape) academic language and procedures. They acquire a research methodology for their inquiry and new skills for teaching. The PhD also works as a tool for resonance, giving practitioners space to share their knowledge and to make their voices heard.

The PhD is also a formal tool that allows researchers/practitioners to progress in their academic paths. This is a direct and demonstrable consequence of the PhD on practitioners' careers.

Lisa Grocott identified this as a major impact of the PhD on her career. The PhD allowed her to become a Full Professor, where she now works with other researchers and is able to secure research grants as part of an academic institution. She stated that the PhD was a process of *"disclosing and making visible my journey of becoming as a researcher"* (Grocott, 2017:165).

She also acknowledged the PhD as training for her leadership role in the field of Creative Practice Research, within the academic context. Due to the expertise gained through the PhD, she has been invited to universities to disseminate her knowledge about practice-based research.

Similarly, Pia Interlandi stated that an immediate and visible consequence of her PhD was the opportunity to obtain full-time employment as a teacher at university. She values

this opportunity as a way of enabling experimentation in practice while maintaining financial security.

  The same perspective was offered by Matthew Bird, who, after the PhD, was able to secure an academic job. He sees the PhD as a training tool for research capability as well as a formal step along the academic path.

  Bird's current academic role allows him to continue exploring his *"non-traditional practice"*[157] which he recognises as a valuable support mechanism.

  Through the PhD, he also understood the value of non-traditional research outputs beyond the traditional academic publications, realising how he, as a researcher/practitioner, can contribute to the academic context.

  Similarly, Guy Keulemans recognised that academic employment was a direct and powerful impact of the PhD on his career, allowing him to bring his practice to the academic context and extend this practice to new possibilities.

4.2 Epilogue

Insights on the contribution of design research training to professional practice and pedagogical approaches to studio teaching.

> "Can design research redefine the role of scientific practice in between the established boundaries? Can it create a fresh look on methodological approaches? And can the research practice through design unfold views on possible futures for our society?"
> (Joost, 2016:7).

The debate over the role and contribution of design knowledge has been developed and directed towards a more ambitious path through Ranulph Glanville's thinking that considers research as a subset of design, and design itself as a mode of thinking and understanding the world, as the design researcher stated:

> "(…) not all design is researched (although perhaps it should be): but all research is designed"
> (Glanville, 2016:154).

The contemporary debate draws on Glanville's ideas, recognising the potential to innovate research and address future challenges "*by bridging gaps between theory and practice as well as between disciplines*" (Joost, 2016:8).

This research positions itself within the debate over the value and contribution of design research training to both the professional and academic realms. Starting from an overview of design research and the role of doctoral training in design,[158] and subsequently undertaking an analysis of data collected from practitioners/researchers involved in the debate.

Through the course of this research journey, a series of insights have emerged in relation to the contribution of research training, arriving at the identification of four main areas where such a contribution is considered as critical and effective, these areas are: *methodology, interdisciplinary, projecting the unforeseen, and pedagogy.*

4.2.1 Contribution to Methodology

The first insight emerging from this research work is the idea that the contribution of design research and design research training is mainly methodological.

As Glanville (2012) suggests, design offers to research a way of approaching the inquiry, an open methodology, a way to design research itself, hence a methodology that is an approach for looking at the world. Methodology refers to the scaffolding or framework on which practitioners/researchers can base their procedures and strategies.

The methodology offers a way of addressing problems, a *"designerly way of knowing"* (Cross, 2007), looking for value and relevance over rigour (Findeli, 2016; Huppatz, 2015), with openness towards the unforeseen, and methods not yet defined or tested.

Such a methodology is not a collection of strategies and methods to apply to a problem, but rather a different way of approaching research questions, as "*(...) there are nearly as many design methods as there are design problems*" (Hoadley & Cox 2005:20) and "*in design it is appropriate to apply any research methods appropriate*" (Cooper, 2016:135).

The boundaries of the inquiry are therefore removed. There is no need for discipline-specific research methods or domains but rather a clear definition of shared values and relevance for the discipline:

"What is important is that the criteria by which methods are chosen and applied are transparent, relevant and appropriate to the research topic/challenge/question" (Cooper, 2016:135).

Relevance and appropriateness are therefore pivotal in design research, as they relate to a specific context of reference.

Thus, there is a *"sense of freedom"* (Cooper, 2016*)* in the design approach to research, due to its openness to the appropriation of different knowledge sources and methods, in favour of the research inquiry. Ideas are then evaluated in relation to their relevance to the community of reference (Koh, Chai, Wong, Hong, 2015).

Moreover, the specificity of design research also lies in the visual and material components of the process. The ability to construct artefacts representing rigorous inquiry and thought (Cooper, 2016:135) and the value of such artefacts and interfaces (Grand, 2012) in the creative/research process, represents methodological tools to address the research inquiry, that can be transferred to other research and professional contexts.

Design practices and processes are a methodological apparatus that can be translated to other contexts, such as scientific research, cross-discipline and interdisciplinary collaborations, to name a few. Accordingly, the practice-based PhD trains practitioners/researchers how to apply the methodological apparatus to address the inquiry.

The PhD helps develops a new mind-set within practitioners/researchers – a specific way of thinking and looking at the world.

The value of the PhD lies in providing practitioners/researchers with the capacity to critically engage in practice, to conduct research, and reflect upon the two. The focus of the training is therefore on "how" to investigate rather than "what", placing more importance on processes and methodology than on topics and outcomes.

The practice-based PhD works as a methodological framework for the process of research, practice, and teaching, as well as the generation of new knowledge in the academic context.

4.2.2 Contribution to Interdisciplinary Discussion and Collaboration

Consequently, the specific framework of design research, including its approach to problems, methodological structure and integrated modes of scholarship, can have relevance and significance outside the boundaries of a specific discipline, thereby offering an opportunity for researchers to contribute to interdisciplinary discussions and collaborations.

As suggested by Jonas (2012:30), *"Design epistemology develops towards methodological patterns that show a resemblance to basic structures in transdisciplinary studies, which strive for an integration of system knowledge, target knowledge, and transformation knowledge"*.

Design Research offers a methodological approach that goes beyond disciplinary boundaries, taking an extra-disciplinary significance, and generating a "common language" for collaboration among disciplines. It provides a collective platform for discussion, for sharing values, intentions, methods, and knowledge. Every discipline can draw on design epistemology to achieve *an "expansion of the mother-tongue"*.[159]

The practice-based PhD thus offers training in cross-disciplinary collaborations, teaching practitioners/researchers how to communicate and collaborate with professionals outside their disciplinary boundaries.

4.2.3 Contribution to Projecting the Unforeseen

The PhD as a Framework for Envisioning the Future of the Practice.

A further contribution of design research and its training model, is its inherent projection towards change and the unforeseen.

Design epistemology fosters an alternative approach to academic research, in that it relates to a specific methodology that requires researchers to understand and clarify the relevance and appropriateness of change.

The practice-based PhD hence offers a methodological framework for imagining and anticipating the future of practice and research, and for envisioning

new paths for world change. It provides space for experimentation, exploration, trial and error, offering the conditions and the tools to investigate unknown territory. The practice-based doctoral training thus works as a support mechanism for research and practice.

Design epistemology simultaneously combines knowledge as a product of past experience with knowledge as an anticipatory product of the future:

> "Knowing things involves feedforward as well as feedback, anticipating how things may be used, manipulated or acted in the future"
> (Friedman, 2000).

Furthermore, doctoral training in design works as a mechanism for pushing the boundaries of a specific discipline to be experimental and produce new knowledge.

4.2.4   Contribution to a New Pedagogy

In a moment of change for the academic environment, in which the role of university has been questioned in relation to higher professional development (Barnett, 1999), and an approach towards *"lifelong learning"* (Watson, 2000) has increased, design research and its specific training model can play a crucial role in shaping the future of academic pedagogical approaches and structures.

The inclusion of a *"designerly way of knowing"* (Cross, 2007) in academic pedagogy and learning, can expand and enrich the potential for new educational landscapes.

A new way of approaching pedagogy is already emerging in the context of design research, as we envision the possibility of restructuring academic teaching in design fields, especially studio teaching at Bachelor and Master levels, to follow the methodology of the practice-based doctoral training.

Learning experiences can be shaped through research questions, by solving real problems and developing capacity for self-reflection and research.

The practice-based PhD model is then regarded as a new pedagogical framework for universities, offering a model and structure for the application of design thinking at different levels of design pedagogy.

Endnotes

1 ADAPT-r (2013-2016) was an Initial Training Network funded by the European Union 7th Framework Program investigating the main features of Creative Practice Research and PhD training and the immediate effects of connecting practice with academia. The project involved seven partner institutions: KU Leuven, RMIT University, University of Westminster, Aarhus School of Architecture, University of Ljubljana, Estonian Academy of Arts, Glasgow School of Art. Website: www.adapt-r.eu.

2 Original translation from Italian by the author

3 Quote from Urs Bette's presentation at Conference "Practice in Research <> Research in Practice", Bond University (Gold Coast) 27th July 2017. Urs Bette is Senior Lecturer at the University of Adelaide and partner of the DAP_r program.

4 This is the case of the PhD model established at RMIT University.

5 The author of this research work.

6 Cfr. Chapter 3, Paragraph 3.1

7 Cfr. Section 2, Chapter 2.1

8 Cfr. Section 1, Chapter 1.3

9 Cfr. Section 2, Chapters 2.2, 2.3; Section 3, Chapters 3.2, 3.2; Section 4, Chapters 4.1, 4.2

10 Cfr. Section 2, Chapter 2.2; Section 3, Chapter 3.2

11 Cfr. Section 1, Chapter 1.2

12 Cfr. Section 2, Chapter 2.3; Section 3, Chapter 3.3; Section 4, Chapter 4.1

13 Methods Lab an action learning collaboration between the UK Overseas Development Institute, BetterEvaluation and the Australian Department for Foreign Affairs and Trade

14 Reference, what is impact chain bibliography

15 The shift emerged from the collective discussion during the workshop *"Mapping Impact in Creative Practice Research Training"* @ Practice Research Symposium, June 2017.

16 Cfr. Section 1, Chapter 1.3.

17 Interview with Adele Varcoe, October 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.

18 Ibidem.

19 Interview with Ashley Hall, September 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.

20 Ibidem.

21 Ibid.

22 Ibid.

23 Interview with Beth George, June 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.

24 Ibidem.

25 Ibid.

26 Ibid.

27 Interview with Guy Keulemans, June 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.

28 Ibidem.

29 Ibid.

30 Interview with Jan van Schaik, April 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.

31 Ibidem.

32 Ibid.

33 Ibid.

34 Interview with Jo Van Den Berghe, April 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.

35 Ibidem.

36 Ibid.

37 Interview with Julieanna Preston, May 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.

38 Ibidem.

39 Ibid.

40 Interview with Lisa Grocott, June 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.

41 Ibidem.

42 Ibid.

43 Ibid.

44 Ibid.

45 Ibid.

46 Ibid.

47 Interview with Matthew Bird, August 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.

48 Ibidem.

49 Ibid.

50 Ibid.

51 Ibid.

52 Ibid.
53 Interview with Petra Pferdmenges, April 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
54 Ibid.
55 Ibid.
56 Ibid.
57 Ibid.
58 Interview with Pia Interlandi, July 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
59 Ibidem.
60 Ibid.
61 Interview with Riet Eeckhout, April 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
62 Ibidem.
63 Ibid.
64 Ibid.
65 Interview with Sam Kebbell, May 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
66 Ibidem.
67 Ibid.
68 Ibid.
69 Ibid.
70 Ibid.
71 Interview with Mick Douglas, September 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
72 Ibidem.
73 Ibid.
74 Ibidem.
75 Ibid.
76 Ibid.
77 Gilles Deleuze, "Foldings, or the Inside of Thought (Subjectivation)" in *Foucault*, trans. Sean Hand (New York, London: Continuum, 2010).
78 Interview with Suzie Attiwill, August 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
79 Ibidem.
80 Cfr. Section 2, Chapter 2.2.
81 Interview with Guy Keulemans, June 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
82 Ibidem.
83 Interview with Jo Van Den Berghe, April 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
84 Interview with Jan van Schaik, April 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
85 Interview with Jo Van Den Berghe, April 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
86 Cfr. Narrative *"Positioning"*
87 Interview with Jan van Schaik, April 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
88 Interview with Lisa Grocott, June 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
89 Interview with Ashley Hall, September 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
90 Interview with Adele Varcoe, October 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
91 Interview with Mick Douglas, September 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
92 Interview with Julieanna Preston, May 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
93 Interview with Beth George, June 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
94 Interview with Riet Eeckhout, April 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
95 Interview with Mick Douglas, September 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
96 Interview with Lisa Grocott, June 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
97 Gilles Deleuze, 'Foldings, or the Inside of Thought (Subjectivation)' in *Foucault*, trans. Sean Hand (New York, London: Continuum, 2010). 98.
98 Cfr. Chapter 4, Paragraph 3
99 Cfr. Narrative *"Positioning"*

100 Cfr. Narrative *"Articulating"*
101 Interview with Jo Van Den Berghe, April 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
102 Cfr. Chapter 4, Paragraph 4.
103 "Creative Practice Research?" Pop-up Interviews @ the Practice Research Symposium, October 2017 - Reported as edited transcription in Chapter 4, Paragraph 4.
104 Ibidem.
105 Ibidem.
106 Cfr. Chapter 3
107 Interview with Adele Varcoe, October 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
108 Interview with Ashley Hall, September 2017 - Reported as edited transcription in Annex: *"DAP_r Interviews Transcriptions"*.
109 Ibidem.
110 Ibid.
111 Interview with Beth George, June 2017 - Reported as edited transcription in Annex: "DAP_r Interviews Transcriptions".

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ANNEX 1 : DAP_r Interviews Transcriptions

Adele Varcoe

Could you please provide a short description of your practice through words and/or drawings/images?

IMPACT ON PRACTICE

What has been the impact of the Creative Practice PhD on your understanding of your practice?

> Learning the impact I have on my practice has been a big one. Using myself as a tool and understanding the value of that led to a deeper understanding of the participatory performances I developed and the role I play in my research.

What has been the impact on your design process?

> Drawing helped me to draw out my everyday life and the participatory performances/situations I created. I started drawing myself and then I started drawing others. My whole dissertation was hand drawn. I would bounce between writing and drawing during the write up phase of my PhD. It worked well because

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I was using different parts of the brain to understand what the f*** I was doing.

Using the self in research is an invaluable weapon. By directly using myself as a research tool I came to understand that situations/projects came about through things I experienced. I don't think this PhD would exist if I wasn't wearing this jumpsuit and using myself. I realised that if I'm going to ask others to do it I need to be up for doing it myself. Understanding from another's perspective became part of my design process and a way of feeling my research.

What has been the impact on your ability to articulate your practice in spoken and written language?

At the start of my PhD I went through a whole lot of words to find my voice. I wanted it to be an easy read as I think clothes and fashion is something we all participate in everyday – I wanted anyone who wears clothes to read it. I remember the first piece of writing I sent to my supervisor, I was so nervous! I felt so exposed and vulnerable. It took time to feel brave and really own it. I think writing really helped with that. With practice there can be grey areas but with writing you have to say it and put it out there. Writing pushed me to dig deeper, to be brave and vulnerable. There's also writing in the drawing. Drawings were just as valuable and the drawing and writing spoke to each other. I think it's important to find creative ways of articulating through text... Script writing and song writing have become other ways to articulate through written and spoken language.

What has been the impact on your public behaviours with clients and peers?

Since finishing I've been invited to open events and give keynote presentations.

Has your community of practice changed and/or expanded?

Yes. It expanded. Introducing drawing, claymation and music opened up new spaces to show my work and new people to engage with it.

Has your business changed in economic or dimensional terms?

>I've found I'm now working with bigger budgets since completing my PhD.

IMPACT ON PEDAGOGICAL APPROACHES

What has been the impact of the Creative Practice PhD on your studio teaching strategies? Have you changed your approach?

>I have been questioning students a lot more about the role they play – who do you dress for? I'm interested in asking the students to look inwards – to start with looking to themselves. This brings closeness with the group where they share personal experiences. Personal experiences are what I used as a key method in my research and it really helped me to find my key motivations. The workshops I run invite students to explore how the clothes they wear might affect their day. I'm also interested in exploring how drawing can be used to communicate the impact clothes have on the way we relate and engage with each other.

What has been the impact on your public behaviours and the effectiveness of your communication within the studio environment?

>My confidence has developed. The studios I teach have become much looser and more spontaneous which leaves space for students to share their experiences. The lectures I present are also interactive as I believe it's important for people to feel and experience, to further make a point. I also talk a lot about my personal experiences and things that have happened in my practice. I find this helps students to share and open up too.

Are you able to see changes in the way students react to your teaching?

Yes. Inviting students to tell their stories and reflect on the role clothes play in their lives brings the group together and creates an open, non-judgemental space where students feel comfortable to share. This gives them confidence to make the work they want to create and say what they want to say.

What relation do you see between your studio teaching, practice and research?

> When I ask students to respond to questions similar to my research questions this broadens my perspective and expands the research for me. Sometimes they say things that make me think and see my research differently.

IMPACT OUTLINE

What impact do you think your doctoral research has had on the field of Creative Practice Research?

> The methodology – drawing, selfing (using the self in my research) and scoring (working with an open score to create participatory situations that explore how fashion, clothes and dress affect the way we relate to each other) has had impact on the field of creative practice research by offering a new method to explore fashion as feeling.

How would you briefly define the meaning of "Impact" in Creative Practice Research?

> For me, the moments that had impact were when something shifted – when I had an 'aha' moment. Sometimes they were little things, sometimes big things. They tended to reveal something in my practice that I hadn't understood or seen before.
>
> Impact on others came through participatory situations. During the Feeling of Undress project, as an audience member undressed he said, "I succumbed to the situation, I couldn't not do it". For me, when a project brings something about in someone where they think differently or do something they wouldn't otherwise do – this shows the impact of the research.

Could you please provide a short description of your practice through words and/or drawings/images?

> My current research practice is focused on cultural transfer and globalisation, experimental design, design for safety, design led innovation methods, and design pedagogy. My research is funded by RKO councils, foundations and commercial partners. All of these research areas combine writing with designing and making; or facilitating design and making through teaching or education.

IMPACT ON PRACTICE

What has been the impact of the Creative Practice PhD on your understanding of your practice?

> My PhD used my practice based design skills to explore translocated making between different socio-spatial groups, and ask how this could lead to new understanding of how cultural material exchanges influence designed objects. In this respect my practice aided the research but the research was not specifically about my practice. I did learn about the cultural exchange aspects of designing, an asset which was one of the aims of doing a PhD.

What has been the impact on your design process?

> I would say doing a PhD had little direct impact on my creative process, but it did encourage greater reflection on the results and a lot more strategic thinking and focus on the purpose of my design activities.

What has been the impact on your ability to articulate your practice in spoken and written language?

> Constructing a PhD dissertation had a strong impact on written ability. Beforehand I had written more

than half a dozen papers but a PhD is a much more complex piece of writing with multiple narratives and a more demanding structure, and this was a big shift in capability. I was teaching alongside my PhD so it's harder to say what the spoken ability impact was, though I would say confidence in public speaking improved.

What has been the impact on your public behaviours with clients and peers?

Again, I would say that the confidence of having completed a doctorate was almost more notable than the direct value of the content. Amongst peers and students, there is a subtle shift when people know you have a doctorate.

Has your community of practice changed and/or expanded?

Yes, I research now with a different group of people and the intellectual quality and subjects we research is more ambitious. I would say that some of this is evolutionary but the doctorate has helped this process as well.

Has your practice changed in economic or dimensional terms?

Yes, the grants and commercial partners I am now winning are about 10 times the size, and the length, ambition and scale of the projects are much greater.

IMPACT ON IMPACT ON PEDAGOGICAL APPROACHES

What has been the impact of the Creative Practice PhD on your studio teaching strategies? Have you changed your approach?

Yes, I employ more frameworks and explanatory concepts now in my teaching, and it's more structured. My teaching has also moved from Masters to Masters of Research and Doctoral students in the four years since I completed my PhD.

What has been the impact on your public behaviours and the effectiveness of your communication within the studio environment?

>I am a relatively mature academic so I have already had a lot of exposure to public behaviours within studio environments. There is without doubt a change but it's probably confidence and a change of mindset from being in a more research led environment.

Are you able to see changes in the way students react to your teaching?

>After I completed my doctorate my teaching shifted from masters to Masters of Research and Doctoral students so it's harder to see that change above natural improvements.

What relation do you see between your studio teaching, practice and research?

>Last year I ran a combined research project with six researchers and a studio module with 32 students from across the college. It was the first time we had taught and researched in this way and it was a very successful result which we published. The most important aspect was how both studio teaching and research could be combined into a unified project. Understanding research methodologies was very helpful in doing this. The project was funded by a foundation, we had four exhibitions, three publications and four conference presentations, and it has led onto another funded project.

IMPACT OUTLINE

What impact do you think your doctoral research has had on the field of Creative Practice Research?

>It's very hard to measure the direct impact of any piece of doctoral research on a design field. There is difference to the researcher and potentially the institution. People often talk about research making

an impact in their field but design research and commercial design practice have few overlaps where this could be seen. I see doctoral work that impacts researchers and thinking in a research field but much less that changes thinking in commercial design.

How would you briefly define the meaning of "Impact" in Creative Practice Research?

Impact in creative practice research should aim to deliver new ways of generating positive differences that ensure a sustainable social future for the world.

PREAMBLE

> When I undertook my PhD at RMIT, I did not have a body of built work behind me, so I was not conducting a PhD of a reflective-practice nature. I was conducting research through mapping, writing and speculative design, which may mean the impact on my 'practice' is a little atypical, as I am only starting to build things now. For my own purposes, in order to best answer the below questions, I will be thinking about how the PRS (as both candidate and examiner) is now affecting my practice, some years after going through the process myself, in a manner that is only loosely connected to built work. The teaching section would be more straightforward...

Could you please provide a short description of your practice through words and/or drawings/images?

> I am primarily an academic. I teach in design and communication, urbanism and regional design. I teach in the undergraduate and post-graduate courses of architecture, as well as supervising PhDs. I conduct research both creatively – through exhibitions, competitions and built work – and traditionally – through writing chapters, articles and papers. I do some practice, mainly in the residential field, alongside my teaching and research.

IMPACT ON PRACTICE

What has been the impact of the Creative Practice PhD on your understanding of your practice?

> In terms of making creative (built) work, the impact on my understanding is to seek better understanding! Overall, having undertaken the PhD, I have come to interrogate what I do and why on a much more significant level. While I have not done a PhD based in my own practice, now that I am doing more built work

I find myself applying lessons I learned from others in the programme, having witnessing discussions from so many other practitioners.

In terms of my writing practice, the PhD has opened up avenues for research production that continue to emerge even eight years later. My understanding within this field continues to sharpen and change with each new piece of work, and this criticality and explorative bent no doubt stems from my immersion in the PhD program and PRS process.

What has been the impact on your design process?

To think much more closely about the motives that lie behind what I do, and to demand from myself deep investigation into whatever I do. It has given me a commitment to locating surety in my ideas and to reading (or researching or simply searching) as deeply as I can around any topic before I contribute to it.

What has been the impact on your ability to articulate your practice in spoken and written language your practice?

Enormous. This is a really significant aspect, and one that I think you have to maintain! When you are in the PRS format and are used to having to articulate things in a certain way, doing so becomes natural to you. I find now that it takes work to sustain that level of articulation. Regardless, the practice of speaking and writing better is embedded by the process, but like any tool, it can get rusty and has to be brought back out of the tool box and kept sharp through ongoing research and review!

The notion of improved articulation I think impacts my clients, but interestingly it can have negative impacts on others – such as builders. My builder has told me in the past to keep my language simple around his tradies so that they don't get confused and hike up their prices!

Has your community of practice changed and/or expanded?

Expanded, I believe. As more practitioners from my own city go through the process, it helps to build a

stronger community locally. Through participating in the PRS in an ongoing fashion – now as a reviewer and examiner – I constantly find more practitioners I align myself with.

Has your practice changed in economic or dimensional terms?

Again, if my business is writing and exhibiting then it has certainly created more avenues for me to publish. Writing at my level pays very little, but it does generate exposure and research income through the university. As to practice, there is no perceptible growth as I have never done work for anyone other than family and friends.

IMPACT ON IMPACT ON PEDAGOGICAL APPROACHES

What has been the impact of the Creative Practice PhD on your studio teaching strategies? Have you changed your approach?

I have utilised the framework of my own PhD in the creation of Masters studios for a number of years. This undoubtedly yields more thoughtful, ambitious and theoretically sound results than an ordinary brief would. Even in undergraduate course material, there is much that underpins my units now that would not have existed without my doctoral studies – the impact is theoretical, structural, and methodological. The process has been of substantial benefit to my teaching practice and approach.

I think it also makes me a better teacher in the sense of relinquishing control. I rarely 'steer' students too hard these days – I think I have become better at encouraging them down their own path. As someone said in the recent workshop, the process makes you a better listener.

What has been the impact on your public behaviours and the effectiveness of your communication within the studio environment?

I think there is a pedagogical benefit that comes with articulation – being able to re-phrase things in multiple and helpful ways. When you know your research territory and have a deeply founded comprehension of a topic area, there tend to be more ways you can explain it, arrive at it, and invite someone else into it. I think research can force you to be more exploratory and less dogged in your ideas, and this improves communication with others.

Are you able to see changes in the way students react to your teaching?

I'm not sure about this one! But I do know that the studios I run based in my doctoral research have come with a workload warning, have attracted only hard-working students, and that these students have said the studios have been their most challenging learning experiences, but also the most rewarding.

What relation do you see between your studio teaching, practice and research?

An ability to relate them! It gives you the ability to find threads through seemingly disparate material. Even if you can't always find the threads, looking for them becomes second nature.
　　These things aren't always connected for me, and I don't necessarily need them to be relational – I like having different interests and research areas. But I do think being exposed, through my own work and through the PRS, to an investigative process means I have a keen understanding that any area can constitute research, and that you can take any exercise to, potentially, boundless depths.

IMPACT OUTLINE

What impact do you think your doctoral research has had on the field of Creative Practice Research?

I'm not sure how impactful the original work is, but I think the greater impact has been the fora, chapters

and drawings that came out of it, as well as the ongoing reviewing, which certainly has a great impact on me, and hopefully also on those I review! Feeling the support of the PRS community is very meaningful to me and something I take great pride and pleasure in. I feel like it is a mechanism for my ongoing learning that I would hate to lose. I hope that when there is a critical mass of candidates and supervisors in my own town, it will have far greater effects.

How would you briefly define the meaning of "Impact" in Creative Practice Research?

I think the meaning of impact is different from industry's definition of impact – of how many people are affected and how many dollars have been made. I think impact in creative practice terms is deeply personal, but is also about the creation of a 'safe' space for conversation, critique, careful practice and debate. And this is incredibly important for the proliferation of high quality work in and around architecture.

With my group in the recent workshop, we imagined a scenario in which every single practitioner in the country has gone through the CPR process. When you think about not just the individual or group development, but consider the 'what-if' scenario of the discipline as a whole, then you can really wonder about the impact and speculate upon it in quite a wild way. For instance – would you change the clientele? An entire country's appetite for architecture? Would all the builders become better practitioners themselves? Would you change the standards for design? Would legislation shift? Would you create an entirely different architecture graduate? The answer to all of these hypotheticals would be yes. While this wouldn't ever be the case – and I don't think you would want it to be – it does lend weight to what we are engaged in and the meaning of having a growing cohort of people in the community.

Could you please provide a short description of your practice through words and/or drawings/images?

> My practice concerns the design of critical objects that interrogate the relationships of design, production and consumption to issues of socio-environmental importance, specifically repair, durability, obsolescence and waste. Research outputs are mainly works for exhibition and sale though the gallery system. My practice is integrated with theoretical and human research into production and consumption– currently concerning repair and in particular new forms of creative repair practiced by visual art and craft professionals, including designers. Increasingly, I see my human research as action research, and through the design of field studies and curation it is its own form of critical design practice.
>   Images of my work can be found on my website guykeulemans.com.

IMPACT ON PRACTICE

What has been the impact of the Creative Practice PhD on your understanding of your practice?

> My PhD study has impacted my practice by helping me to situate it within a broader academic discourse. This specifically is good in two ways. First, it has helped my figure out ways to particularise my practice and research so I'm doing something original. Secondly, it has helped me write about my work in ways that appeal to academic audiences – peer reviewers, grant panels and other academics who review my practice and research.

What has been the impact on your design process?

> In terms of the design process for producing objects, and compared to the impact academically situating my practice, relatively little. My design process

was already fairly well formulated, especially after completing a masters degree overseas. However, after completing the PhD I began community research, which I see as a designed process, and this was greatly impacted by the scholarly training from the PhD (details below).

What has been the impact on your ability to articulate your practice in spoken and written language?

A great deal. I was always a natural and confident writer, but PhD study helped me understand how to be precise with written language; to be more skilful with matters of truth and accuracy. It has not impacted my speaking ability that much, but five years of concentrated study has certainly improved my confidence in regards to content; provided I am speaking within my field of knowledge, I am more engaged and forthright, and this has made me a better teacher and public speaker.

What has been the impact on your public behaviours with clients and peers?

I've learnt to be more precise with language, but otherwise probably not so much.

Has your community of practice changed and/or expanded?

Yes. Not during the PhD, but afterwards, I had the opportunity to work at a much broader scale, engaging with both the public and professional artists and designers in ways that replicate and expand the methods within my own studio practice via forms of action research. I might not have had the confidence or research skills to do this successfully without PhD training. Indirectly, the PhD also helped this process by leading to a faculty position at a university, giving me credibility to lead such projects in the eyes of others.

Has your practice changed in economic or dimensional terms?

The PhD led to full time employment as an academic, so I apply myself less to the commercial aspects of my studio practice. This may change in future, depending on how well I can leverage my studio works as non-traditional research outputs. My PhD and/or academic position seems to have led to exhibition and acquisition opportunities from higher level institutions.

IMPACT ON PEDAGOGICAL APPROACHES

What has been the impact of the Creative Practice PhD on your studio teaching strategies? Have you changed your approach?

> Not in terms of criticality, which was more informed by my masters study in the Netherlands, but yes in terms of content delivery. The PhD study has helped me create lectures that deliver much more content to my students, though this is also the result of transitioning from being a sessional teacher to faculty member, which happened prior to conferral (on the assumption of conferral).

What has been the impact on your public behaviours and the effectiveness of your communication within the studio environment?

> I'm more precise with language, but because I now have greater recognition of how natural language is often imprecise, I try to be tolerant of the imprecisions of natural language in general.

Are you able to see changes in the way students react to your teaching?

> I think they are responding well to the denser, richer content that derives from my PhD research, and on the encouragement of colleagues I am increasingly bringing aspects of that research, and my current research, into the courses I teach and convene.

What relation do you see between your studio teaching, practice and research?

It is increasing important for me to have strong links between my teaching, practice and research. I believe this has several advantages. First, it makes my teaching unique and distinguishes the courses I convene from design courses elsewhere. Secondly, aligning content increases efficiency and focus in all three areas. Finally, it makes teaching more future focussed and charged with the same kind of critical and ethical urgency that compels my research and studio practice.

IMPACT OUTLINE

What do you think has been the impact of your doctoral research on the field of Creative Practice Research?

> The abstract of my thesis was selected by peer review for the journal Leonardo's top-ranked thesis abstracts of 2016. However, I have no evidence at this time that it has made direct impact in the field of creative practice research.
> It seems to have had impact for general academic and public audiences, judging by discussion in news and design media, especially in regard to an article I wrote for The Conversation that leveraged the theoretical framework I developed from my PhD thesis.
> I believe and hope my current research, informed by my PhD research will make significant impact in the near future, and I am factoring the assessment of that impact into my current research planning.

How would you briefly define the meaning of "Impact" in Creative Practice Research?

> While it is important to first influence peers and other creative practice researchers, I believe that the real impact of creative practice research will not happen until it leads to significant changes in industrial and normative design practice. In my field, this concerns changing the paradigms of environmentally damaging, planned obsolescent, mass consumer

products. This is likely to only happen through a number of means, many indirect, that may include policy/regulation initiatives, professional influence, pedagogical influence and interdisciplinary influence – the last concerning better relations and knowledge exchange between fields of art and design positioned within HASS, and that of engineering positioned within STEM.

<u>Jan Van Schaik</u>

Could you please provide a short description of your practice through words and/or drawings/images?

>I am a director of MvS Architects, a lecturer and researcher at RMIT Architecture and Urban Design, the producer of the WRITING & CONCEPTS public lecture series and publications, and an arts strategy adviser. My practice consists of a range of projects conducted in a myriad of modes, and includes the design of private and public buildings. My research areas include urban identity, construction innovation and creative practice. My teaching involves higher degree research PhD supervision and the teaching of Professional Practice, Bachelor-level Portfolio Review, Group Design Studios and thesis supervision at a Masters level. I advise arts organisations and arts units of local governments in strategy, branding, communications governance, fund raising, business management and project delivery.

IMPACT ON PRACTICE

What has been the impact of the Creative Practice PhD on your understanding of your practice?

>Through the reflective practice PhD process I have a grown to understand that the eclectic nature of my projects, the entangled nature of my design processes, and the indistinct attribution of authorship – inherent in collaborative practice – are not inconsistencies to be ironed out, as I once thought, but rather unique strengths contributing directly to the relevance of my work and creative practice in general.

What has been the impact on your design process?

>With a newfound ability to understand and articulate what I do, as I do it, I have come to embrace the entangled, referential, opportunistic, impulsive and

intuitive manner in which I design. Having this new confidence in my ability to articulate any design process after the fact, no matter how entangled and convoluted the processes may be, allows for any given design process to run its course independently of obligation to articulate it. I am thus more comfortable acting intuitively, and more comfortable post-rationalising and reverse engineering my own processes.

What has been the impact on your ability to articulate your practice in spoken and written language?

> Prior to completing the reflective practice PhD I was unable to jointly understand or articulate the many facets of my practice, relying on compartmentalisation to describe myself to various audiences. One day I was an architect, then next a researcher, the next a teacher and so on. Because of my opportunistic manner of operating, almost every new project brought with it a new facet of professional being. Keeping all these different facets discrete proved unmanageable from both a branding point of view and the point of view of available headspace. The language I developed to articulate what it is I do now means I am less reliant on compartmentalisation to practice and to tell the story of my practice.

What has been the impact on your public behaviours with clients and peers?

> I am regularly approached to contribute to formal and informal forums and discussions in person, online and in print not as a result of any knowledge that I have, or purport to have, but as a result of my ability to reflect critically on my professional environments and its contexts – which are many and varied, and include audiences of clients or peers or both.

Has your community of practice changed and/or expanded?

> My community of practice has expanded, but it is always expanding. An increase in the rate of expansion can be apportioned to the reflective practice PhD given my increased enthusiasm for

operating opportunistically. Also, involvement in the Practice Research Symposiums (the weekends where all reflective PhD candidates present their work to each other and the public) has expanded my community of practice to people, and disciplines, I might not have previously considered engaging with. This change is an ongoing one, as I remain involved in the symposiums post completion as a peer, an audience member, a panel member and a supervisor.

Has your practice changed in economic or dimensional terms?

Yes: I have started three new businesses since completing the PhD, while still maintaining co-directorship of MvS Architects and teaching, research and administrative roles at a university.

IMPACT ON PEDAGOGICAL APPROACHES

What has been the impact of the Creative Practice PhD on your studio teaching strategies? Have you changed your approach?

As outlined in my PhD, all of my teaching has changed to include methods of reflective practice, often through writing. Reflective practice is particularly critical in architectural education where a large portion of what is taught is defined by any given school's obligation to teach curriculum aligned with accreditation criteria, meaning that a pedagogy of 'skills and training' is often prioritised over a pedagogy of 'reflection and research'.

What has been the impact on your public behaviours and the effectiveness of your communication within the studio environment?

My communication methods within the studio environment have become less prescriptive, favouring the pedagogies of reflection and research and increasing the relevance of studio based projects to potential research clients.

Are you able to see changes in the way students react to your teaching?

> Students are highly responsive to methods that allow them to develop skills in objectively assessing their own work. Many students are empowered as a direct result of being disabused of the importance of personal authorship. Similarly, the idea that design processes are necessarily non-linear, disorganised and messy is empowering to students. Architecture students respond well to the idea of a community of practice, and this is often a starting point for them to become aware of their own peer groups and the larger set of things that implicitly and explicitly influence the design decisions in their work.

What relation do you see between your studio teaching, practice and research?

> All of the design studios I run are based around real-world briefs with actual clients. In some instances the studios are client initiated, and in some instances the studio operates as a platform from which to speculatively approach clients. Work undertaken by Bachelor and Masters students in a coursework environment cannot be defined as research. Similarly, work undertaken in a learning environment cannot be expected to service a client's expectations. However, the studios often open up discussion which lead to commissions for architecture or research.
> In addition to this, the design studio is a space where communication about design is practised within a common pedagogy. Teaching, studying, and working with people who share a common pedagogical lineage is highly productive and efficient – especially when it comes to collaborative design or to delegating design. For example, when working as a group to make a series of design decisions I have observed that grunts, shrugs and other subtle gestures are often employed to indicated if something is moving in the right direction or not. This almost primal communication is only possible between people who have been working together for a long time – for which the design studio is the perfect starting point.

IMPACT OUTLINE

What impact do you think your doctoral research has had on the field of Creative Practice Research?

> I speculate that the impact of my doctoral research is to promote a broader definition of creative practice and to promote an understanding of authorship beyond the singular. Similarly, my research seeks to expand the list of things that can be included in the domain of any community of practice. My doctoral research makes a case for high levels of client involvement in the design process, thus amplifying the usefulness of architectural design processes outside the architectural profession.

How would you briefly define the meaning of "Impact" in Creative Practice Research?

> There are a number of dictionary definitions of the word 'impact'. To situate the word within the context of impact in Creative Practice Research I would refer to the definition outlined in the Merriam Webster Dictionary as 'to have a direct effect'.

Jo Van Den Berghe

Could you please provide a short description of your practice through words and/or drawings/images?

> My practice started as an architectural practice in 1986. Gradually my practice shifted into a more 'cultural' architectural practice around 2000. Since the start of my Design and Architecture Practice Research in 2006 (PhD November 2012), my practice has turned into a critical reflective architectural practice, and recently (2013) even into an investigative architectural practice.

IMPACT ON PRACTICE

What has been the impact of the Creative Practice PhD on your understanding of your practice?

> I have come to a more accurate understanding of the driving forces behind my practice, and of the design themes I seem to embrace through and in my projects.

What has been the impact on your design process?

> Due to the aforementioned understanding, I have come to more 'efficient' design procedures in (my) design processes, because I can now more clearly see my themes and fascinations, and the design methods that take me more quickly to them.

What has been the impact on your ability to articulate your practice in spoken and written language?

> My research confronted me with the necessity to share new findings with peers, hence I had to develop a more precise discourse about the underlying drivers of my work. All this pushed me into a much more precise discourse at the service of sharing new knowledge production and insights.

What has been the impact on your public behaviours with clients and peers?

> Connecting with the above question, I have become more effective in communicating the content I intend to deal with, talk about and design with. I have become more self-confident and self-aware in my public behaviours with clients and peers.

Has your community of practice changed and/or expanded?

> It definitely has! Where I used to work alone in the past, I now have a good sense of belonging to a community. This comforting feeling is very helpful for the growth of my general wellbeing and 'happiness'. I try to communicate this with peers, so as to share this general feeling of wellbeing.
> Also, this research has substantially enlarged my horizons and my international network. As a consequence of my research and its dissemination through PRS', international lectures and exhibitions, I am invited to other institutions and universities like RMIT Barcelona (where I supervise PhDs), Queen's University Belfast, School of Architecture Tallinn, EPFL Lausanne and recently as a visiting professor at Politecnico di Milano.

Has your practice changed in economic or dimensional terms?

> Paradoxically, my business has been reduced in size dimensionally and economically, but only due to my own choices and decisions. Since I have chosen to more deeply investigate my own work, the work of my communities of practice and architecture in general, I can now do more 'fundamental research' in and through the medium of architecture, and merge my critical investigative architectural practice with architectural education (as a professor of architecture) and architectural research (through PRS' and other research related conferences and seminars).

IMPACT ON PEDAGOGICAL APPROACHES

What has been the impact of the Creative Practice PhD on your studio teaching strategies? Have you changed your approach?

> It has changed my approach in that I more precisely talk about drivers and fascinations that carry (my) design processes and move them forward. My discourse has become much more precise and better structured to the benefit of my teaching practice and my students.

What has been the impact on your public behaviours and the effectiveness of your communication within the studio environment?

> See above.

Are you able to see changes in the way students react to your teaching?

> Yes. They understand me better, have a better understanding of their own design processes through the application of (my) more refined architectural discourse, and have a more clearly defined explanation of design methods based on a better understanding of urges and fascinations that drive (their) design processes.

What relation do you see between your studio teaching, practice and research?

> For me this relation has become much more intense and interwoven, to the point that there is no clear distinction anymore between components of my 'architectural behaviour'. Each of the three components is positively invigorating the other two. There is a smooth and easy knowledge transfer between them.

IMPACT OUTLINE

What impact do you think your doctoral research has had on the field of Creative Practice Research?

> I believe the impact is quite substantial. First of all, supervising four PhDs at RMIT, and three PhDs at KU Leuven, has a big impact. Secondly, I can experience the impact of my insights and the way I share these through intense participation in the Practice Research Symposia. Thirdly, I am invited regularly by universities all over Europe to give lectures about my research and practice, to participate in their studios as a visiting critic and to teach there as a visiting professor. Finally, an ever-growing list of publications (from written publications to other forms like projects and exhibitions) impacts the field of Creative Practice Research on a very broad level worldwide.

How would you briefly define the meaning of "Impact" in Creative Practice Research?

> Impact for me is defined by two elements: one, you have an impact when you reach people, and two, reaching people should be measured by the depth at which you reach them (quality) and by the number of people you reach (quantity), in that order. Of course, the more people you reach in the deepest way, the more effective the impact becomes.
> Finally, impact is a thing that should always be considered with a long-term perspective. Impact is useless if seen with a short-term perspective.

Julieanna Preston

Could you please provide a short description of your practice through words and/or drawings/images?

> My practice includes performance/live art, spatial encounters and scholarly writing including performance writing.

IMPACT ON PRACTICE

What has been the impact of the Creative Practice PhD on your understanding of your practice?

> Previous to PhD study my practice was very much design/architecture of objects, material development centric. It is now much more open ended; it does not look for completion, definition or resolution and as such resists objectification.

What has been the impact on your ability to articulate your practice in spoken and written language?

> As a mature researcher at the time of being a PhD student, my ability to speak and write about my practice has been expanded exponentially. The PhD disciplines a student to adopt academic speak, unfortunately. I have learned subsequently to speak and write in accessible ways.

What has been the impact on your public behaviours with clients and peers?

> Prior to my PhD I would present publically relying on a script, carefully crafted, dense and geared for an academic audience. Since then, I have let go of those habits and found ways to communicate that present the research in simple ways to engage a wider audience.

Has your community of practice changed and/or expanded?

Yes, prior to the PhD my practice was as an interior designer/architect, and it has now shifted into performance art because it allows me to engage in actual space and time without representation and to engage contingency.

Has your business changed in economic or dimensional terms?

I do not have a business so I will address this question in terms of practice as a researcher. My practice changed such that I did not need a studio, many materials, or storage for materials or projects. That economic saving is countered because my new practice needs me to be out in the world; it will not fit in a room any longer.

IMPACT ON PEDAGOGICAL APPROACHES

What has been the impact of the Creative Practice PhD on your studio teaching strategies? Have you changed your approach?

I have been teaching for 37 years and since 2007 I have only taught Masters or PhD level. My teaching strategies emphasise listening and figuring out what they need themselves, nudging students towards their own awareness, much less directed or judgemental. I ask students to set their own level of risk in the research.

What has been the impact on your public behaviours and the effectiveness of your communication within the studio environment?

That has not changed very much; I often use one of my own projects to demonstrate critical self-reflection.

Are you able to see changes in the way students react to your teaching?

No, not really. How does one notice this kind of change? My awareness changed, not my students'.

I am much more aware when someone is motivated rather than simply receiving information.

What relation do you see between your studio teaching, practice and research?

I do not separate practice and research; they are one and the same. An ideal world would find one always teaching what your practice is. But university life often asks one to simply deliver a unit of knowledge even if it is outside of one's research expertise.

IMPACT OUTLINE

What impact do you think your doctoral research has had on the field of Creative Practice Research?

Though there has been much done to advance creative practice research around the world, there is still a lot of work to do. I am recognised in certain sectors as an advocate for creative practice research where creative work is recognised on its own terms rather than as an illustration of theory; where the creative work does not need explanation that exhausts it.

How would you briefly define the meaning of "Impact" in Creative Practice Research?

This question needs to be put upfront in this survey because it changes how one understands the questions. Impact is being defined in very different ways in countries that do research assessment exercises. It is effectively a measurement factor, usually quantified not qualified. Impact in this way comes with a danger especially in creative practice/ creative arts where impact is not often noticed for long periods of time.

Lisa Grocott

Could you provide a short description of your practice?

> I don't have a professional practice, as an academic
> I now have research practice. I design learning
> experiences for teachers, researchers and students.
> Most of my research is designing workshops and
> the material prompts and interactions to make those
> creative spaces. It is largely bringing groups of people
> together around behaviour change or transforming
> mind-sets. It's about finding ways for people to move
> beyond their limiting beliefs or ways of making sense
> of the world, and introducing new research or new
> information or a new context that might help them
> shift that mental model, change their behaviour. I
> think what I am doing is helping scaffold the often-
> times challenging experience of negotiating change.

Do you do this in different disciplines and fields?

> I largely do it in the field of learning. I am on an ARC
> with colleagues at the University of Melbourne around
> learning environments and teacher change – in that
> context, workshops were with school teachers. As
> Head of Design at Monash I put this into practice into
> my leadership role, whether by shifting a research
> culture or introducing new pedagogical practices.
> This week I was talking with an epidemiologist about
> women's postpartum diets, so yes, it is applicable in
> multiple contexts. Still, most of my work is in learning
> which is perfect because the learning sciences
> draw on education, psychology, neuroscience, etc.
> I love that education research tends to be already a
> transdisciplinary field.

What was the impact of the PhD on your understanding of
your practice?

> Essentially my research was about better
> understanding the contribution of design in
> interdisciplinary collaboration. In hindsight, I became
> critical of my very reflective PHD looking at an

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internalised understanding of my own practice rather than going and working with other disciplines. I felt the insights I gained post-PhD working with other disciplines were sharpened, more pronounced. My initial sense was I learned more in a couple of months working with cognitive psychologists than I did in years of trying to study my own practice to understand the contribution of design. I critiqued the idea that reflective practice is not always the most useful way to find out. But then you've got to ask, how would those collaborations have gone if I didn't have a strong sense of my own practice to begin with? I circled back from that to say the PhD gave me a vocabulary and a close reading of what was going on in my own practice. It was probably what allowed me to surface the insights that came from collaborations with others. I still think it would have been better collaborating with other disciplines earlier but the reflective orientation of the PhD helped me make sense of the contribution of design in context.

Were these collaborations with people from different disciplines?

> Yes, they were not part of my community practice. They were psychologists, education researchers, neuroscientists and behaviourists.

It is interesting hearing your critical perspective of the PhD.

> Yes, I still think I could have gone about my PhD very differently. I don't know if I came to fully embrace the introspective focus as the best research orientation. I always knew I wanted to do interdisciplinary research, so in hindsight I can see that starting from a place of understanding design more explicitly in relation to other dominant research paradigms might have been better. Instead I had taken a more defensive position which seemed more about championing design research than a humble assessment of its contribution.

What has been the impact of the PhD on your understanding of your practice?

By the end of my PhD I thought to use my communication design knowing in very different ways than I did at the outset. Prior to the PhD I thought communication design was often an output or product. Even though I was very process-driven as a designer, I still thought that the process was something I was doing as a designer to navigate whatever needs the client had. My PhD became about how to engage others in the process of designing something to help collectively work out where we wanted to go. I called it a practice of figuring. Instead of figure 1 and figure 2 – something we'd figured out, fixed already – I saw the verb of designing as central. Figuring was a conscious act of visualising to figure something out. It was liberating to think there might be no end visualised product.

The PhD empowered me to use my expertise in this new way. The context of my PhD was organisational change. I think the biggest contribution was that I stopped thinking in a client-designer way and started using design expertise with a community to generate ideas and critiques of where we were going rather than communicating where we had to be.

This shift had a significant impact on my process. I was a highly reflective designer before I went into my PhD, so I became torturously reflective which probably tripped me up more than it helped me move forward. I was not someone who wanted to go to the library, I never wanted to read academic papers and doing a practice-based PhD didn't change that. I still hated academic writing by the end of my PhD so my experience didn't lead me to engage me in new methodologies or new literature. I now see that as a lost opportunity, given that I now pore over science of learning books. That said, I still would never read a psychology journal paper, so maybe nothing can change how I loathe academic writing. But I enjoyed reflecting on my practice and using figuring to theorise design research. It was a very seductive way to make sense of my tacit practice. I particularly enjoyed extrapolating from my experiences to question what they might mean for design, and enjoyed the act of theorising from a place of practice. If I thought of it like a grounded theory approach, I

was using my own practice as a way to make sense of what was really going on.

What has been the impact of the PhD on your design process?

The PhD changed the way I navigate doing work. My work is very co-design-based, but during my PhD I was still showing the work to people to engage them in decision-making. In a leadership role, I was interested in showing ambiguous, generative diagrams of what the design school could become, creating a different conversation than a strategic white paper. Yet it never crossed my mind to sit down and actually design it with my colleagues. The diagrams were intentionally beautiful, tentatively fixed propositions that needed the reader to interpret them for themselves. Yet because they weren't napkin sketches there was a kind of authorial control playing out. People were not encouraged to jump in and add to them. The critique I would now make of the process is that while it was open-ended, it wasn't inclusive. The diagrams felt precious in a way aligned with previous notions of the designer/client relationship and formal expertise. Doing a practice-based PhD changed how I understood these images: I didn't need to show a finished thing.

What has been the impact of the PhD on your ability to articulate your practice in spoken and written language?

My PhD gave me a language for describing what I was already doing. In my PhD, I described how the triangulation between the acts of writing, making and presenting was what drove deeper insights. Designing was my comfort zone. Yet the discussions with people or the writing was always where the significant shifts in thinking happened. I hated the writing part, so it was an interesting concession for me to acknowledge that the writing of things, finding words to name them, was where the greatest insights came. Finding new words changed my practice.

What has been the impact on your public behaviours with clients and peers?

I think the public behaviour that most changed was the language. I think the language gave me a confidence by which to assert the role of design in talking to non-designers. It changed confidence and mindset more than the way I acted. I believed in the value of what I was doing and that changed my ability to make the case for design.

Has your community of practice changed and/or expanded?

I did a PhD in the School of Architecture even though I was a graphic designer, so it took me outside of my previous community of practice. In the last 15 years, my career has moved further and further away from communication design and there is no doubt the PhD was part of that. My community of practice is now transdisciplinary designers, or people who don't see themselves only in the field of design practice. I don't spend time with communication designers but I also don't spend any time with architects. My non-design community of practice is learning scientists, in a completely new field. I don't think the PhD really contributed to that, because I wasn't introduced to work with other disciplines in the context of my PhD, but I do think that some of the theorising and framing went on to help me broker research partnerships with other disciplines.

Has your practice changed in economic or dimensional terms?

If I hadn't got a PhD I wouldn't have been able to be a full professor and sit at the table with the researchers I work with now, and economically I wouldn't have got grants with them either. I could never quite understand why in America, where I lived for the last 12 years, there is a big political argument about whether designers should have PhDs. They have the MFA as the terminal degree in art and design so you don't need a PhD to teach. I would often be standing in conferences where people would question, "Are you advocating for the end of the master's as a terminal degree?" and I'd say, "No, I'm advocating that design has research questions it wants to ask that go beyond a coursework master's degree."

I did a research master's degree and don't think that made me feel like a researcher at all, whereas because of the parity of a PhD to other disciplines, and the substance of having to write that document, it felt far more like I understood research. From an experiential perspective, I got to embody being a researcher. I stayed in academia so I don't know how that might have helped me if I'd gone into professional practice, but in an academic context it gave me ways of talking about design research that undoubtedly helped me in leadership roles.

Do you think the PhD gave you new capacity for research?

Yes and no. I wanted to do interdisciplinary research and I see now that the largely defensive position of advocating for why design research was not like social science research was counterproductive to collaborating with other disciplines. A less adversarial, more humble approach might have led to a greater awareness of how and where disciplinary methodologies come together and where they complement each other. I thought my role was to argue for something against something else, rather than consciously navigating how design thinking could be brought into other research methodologies to collectively address large-scale, important, complex problems. Some of that could have been my insecurity as I remember supervisors pointing out how scientific research wasn't so different to what I was doing. Yet it also felt like part of the culture of the place.

I think Leon Van Schaik's fight for a practice-based PhD is historically ground-breaking. At the time it was developed, the positioning as other to other modes of research made sense. I just wonder in today's interdisciplinary climate whether it is more interesting to have more awareness of how design could adapt and adopt and transform other research methodologies to bring out the strengths of design.

When I was first in rooms with people who spoke in an evidence-based way, I was totally lost. I couldn't understand it. I am sure the program has changed radically so I'm speaking from a historical situated perspective, specifically from when I enrolled

around 2003. I feel like it's a maturing of what the design PhD needs. If the RMIT degree is aimed at architects who aim to keep practising architecture then it probably still works. But for the type of research I wanted to do, I would have valued research training that contextualised what design could bring to qualitative or quantitative research. I think it's possible to have practice-based research that is still evidence-based. So my critique is not of the practice-based part, but the over-emphasis on reflective practice.

What has been the impact on your studio teaching strategies? Have you changed your approach?

In terms of teaching, I had a depth of vocabulary, self-awareness and theoretical frameworks compared to people without a PhD. There was an enquiry and a focus that came from doing the PhD. I enjoyed teaching more as I found ways to shape my teaching around research questions. I don't know if it made me a better teacher, but it made me enjoy teaching more.

Are you able to see changes in the way students react to your teaching?

In the States there are no practice-based PhDs in design, so we modelled the possibility of doing one. But I am sure no one read my PhD! I taught design research which helped make the case that it could be something other than book learning.

What relation do you see between your studio teaching, practice and research?

I taught design research for years and the last year I was in New York, I added little bits of my research to the course. Because my research was about learning, I could play with it. It was so much fun bringing learning scientists into the studio and doing work with the students. Students did work on the ARC research grant, actually getting to be researchers.

Do you think your PhD has impacted your current practice, the learning lab?

I wrote a book chapter last year describing how I thought in my PhD and how I think now. What I described is how experiences in the PhD allowed me to make a shift in my practice. In the context of the book, I was saying that you can't measure the impact of a PhD by looking at where you were at the beginning and end of a PhD, but that looking at five years after the PhD I could see how it had kicked momentum into my research. In the PhD I did self-infographic sketches that were still all about communication design. Now I don't design anything other than convening people and co-design workshops, and I work with learning scientists. The practices look on paper like completely from even where I was at the end of my PhD, and yet I can trace still this connection through it.

What impact do you think your doctoral research has had on the field of Creative Practice Research?

I don't think it made much of a contribution to knowledge, but doing a practice-based PhD, particularly in the States where other people don't do it, had an impact. I hosted conferences on practice-based research. I was asked to convene or be on research panels because of the PhD. I think it made a contribution in the leadership role that I could play.

So a contribution on a meta-level?

Yes, I think my PhD topic — which was about design research itself — worked at a meta level more than the actual case study of my practice.

How would you briefly define the meaning of "impact" in Creative Practice Research?

If I look at my practice-based research, if I think of who I was when doing my reflective practice PhD, I would have not liked the word "impact", would have thought it was a word that shouldn't be measured, that sounded too quantifiable. Ironically now, working with STEM disciplines, people are horrified by the word "impact" because they're used to quantifying results in a lab and not looking at impact. I feel like the

claim design can and should make is that it tries to future, to go out into the world and make a difference, compared to other disciplines. We can't let quant disciplines determine how we measure impact; we need to be creative about what impact looks like.

I was talking to colleagues the other day who were saying within architecture it's easy for people to hate the term "impact" or "evidence" because it's hard to capture, it's inherently reductive. Yet there is a different kind of hubris attached to deciding not to measure at all, as if we can be that confident that the positive impact was consistent with the assumptions we made. So I am wary of avoiding measuring impact because it seems too hard. I am also fascinated by the creative ways other disciplines come up with measures that work for them. If worry that if we don't know how to do qualitative or quantitative research, then we will keep undermining our own capacity to speak to the impact of what we do. It is an interesting challenge to name the impact of inherently complex research. For now I think the answer is simply that there can never be one measure. What if we bring a healthy scepticism to our singular disciplinary perspectives?

My research works with playful prompts, material artefacts and designed experiences to get people to see and name tacit belief systems, so they can potentially change. If I can't measure whether that's happening, then the whole endeavour seems phoney. So, do I bring in a discourse analysis expert to code how and what people share? Could we better understand if there is a change in the way people talk because of the prompts we give them that is different from a focus group or therapy conversation? Do I measure it as it's happening so I can say, "Well, they are using this language, which literature shows us suggests a level of trust"? Or do I try to measure how their beliefs have changed six months after the experience? Do I try to account for their actual shift in behaviour? Do I get them to self-report "I didn't see this about myself and now I do", even at the beginning and the end of a workshop? There are multiple ways I can do it but if I simply argue that I intuitively see something is going on in these workshops and you

should trust me, it will be not easy to get grants, and without the grants I couldn't do the projects.

I now believe to a certain extent that there are multiple mixed-method ways of surfacing what's really going on in those workshops, that will help me design better workshops and have greater impact. We think impact is measuring the quality or quantity of the output, and we forget that impact is ideally measured to drive our refinement to deeper impact. If we choose not to measure or evaluate in substantive ways, then how will we get better?

The first workshop I ran with this ARC grant, I thought was a total failure. I looked at all the ways it wasn't working. It was about 100 people and I was looking at the inexperienced facilitators, the people ignoring the instructions, participants discontent. All I saw was what went wrong. Yet the education researchers had a different perspective, they had these weird to us ways of reading the room, stating that about 82% of the people were totally engaged and focused and participating. And I asked *"Is that good?"* And they said, *"Yes, normally, you would get about 20%."* So, they were looking at the room in a different way and were blown away by how engaged people were. Then they did evaluation forms at the end, created data from these workshops that we never would have thought to create. It was fascinating because they had such a different relationship to data. Sure my critique was still valid but what was interesting was how our different disciplinary values helped surface a more complex picture of the event. This is what I am curious about right now. How multi-disciplinary crumbs of data can help to collectively surface a meaningful, nuanced understanding of impact?

Could you please provide a short description of your practice through words and/or drawings/images?

> In 2005 I graduated from the five-year architecture program at RMIT University. During this undergraduate I worked with architectural firms ARM Architecture and Cassandra Complex (Cassandra Fahey's office). I was exposed to the avant-garde and ideas-led architecture community of Melbourne.
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> In 2008 whilst working at ARM I received a random email asking me to design someone's house. Until then I hadn't thought about starting my own practice and at that point I realised it was a really great opportunity. I looked at the proposed fee and it was enough to start my own business. So, I took that opportunity, resigned (in good spirits) from ARM and started my own practice. I started sessional teaching at RMIT Architecture and Interior Design to further support two part-time employees and myself. The teaching experience was incredible and I learnt more than I did as an undergraduate, delivering project tasks that were creative, asking bold questions. On reflection the teaching process helped shape my capacity to research. In that moment, I started thinking about practice research and training students to research to help justify and support architectural ideas. I'm still teaching and enjoying it today.

STARTING THE PhD AS AN EMERGING PRACTITIONER

> In 2011 Professor Leon Van Schaik came across my work. We were in the Melbourne Recital Centre and he gave me his business card and before I knew it we met formally to discuss my emerging portfolio of work. In late 2011 Leon invited me to undertake a PhD in the invitational program. On reflection I suspect Leon understood I had a sensibility toward research through practice acquired through my previous working and teaching experience.

During my four PhD years I reflected upon practice methodologies of my completed and in development projects, in particular an apartment fit-out I completed in Little Collins Street in Melbourne titled Alphaomega Apartment. I transformed the existing space in the pursuit of an immersive experiential space to live. My research journey took me to Carlo Mollino's home in Turin, following the idea of a house as a museum or the collection of all one's worldly possessions to create an afterlife space as a domestic portrait. With this project Leon understood there was depth to my ideas and research process.

UNDERSTANDING THE PRACTICE THROUGH THE PhD

I jumped deeply into the PhD program at RMIT. Leon was my supervisor and he and amazing reviewers opened new ways for me to appreciate my existing methods of practice whilst developing new research-based approaches. The PhD process developed and defined my methods. The focus was not on project outcomes but on the process of how I generate the outcomes.

My practice is art-based, there is an installation quality. Before the PhD I didn't really understand that installation art was a component of my design process. The PhD allowed me to examine references and think about how I generate these ideas.

An example is my project "Domed" in East Melbourne in which I collaborated with artist Michelle Hamer. In that occasion my motivated was the incredible experiential quality of ornate domes. I could see a reference to the Alhambra in Granada, which I had just visited. A reference to experiential ornamentation. I thought about what would happen if you intersected an existing prosaic home with an ornate dome, using the debris of manufacturing materials. I put all these ideas into "Domed" and found a system to array on to the walls, created chandeliers to fill the space, created orientation points like the oculus or the chandelier in a dome. I completed this project early in the PhD which allowed me to explore key references such as the Penrose pattern, from Abu

Dhabi's terminal in UAE to Verner Panton's work to my old boss Cassandra Fahey's work.

At the same time I started a collaborative dialogue with choreographer and performance artist Phillip Adams. The first project we completed was titled the The Tracey Thredbo Project, presented at Dancehouse in Carlton. Together with RMIT architecture students, Phillip and I created an undulating roof installation that simulated a natural disaster such as a landslide or hurricane. It was crafted from archive boxes, ropes and pulleys – offering the ability to physically undulate the installation and subsequently creating a dramatic spatial tension.

TEACHING AND PRACTICING: DISCOVERING A STRONG CONNECTION

Typically I incorporate a teaching component into my practice with design studio topics connected to on-going projects. Students attend onsite journeys, meet clients and become secondary researchers. It's a lot more inspiring for students to work on live projects.

RESEARCH AND DESIGN METHODS

In 2010 I was invited to design a scenography experience, 'Aviary Pardis' a jungle scene that referenced the bowerbird. The bowerbird is a wonderfully strange avian creature that collects urban materials to create courtship nests. I created a human scale version, with dancers enacting abstract rituals of hedonistic birds. The project toured extensively, premiering at the Melbourne Festival, presented in MONA in Tasmania and more recently Dusseldorf and New York, affording incredible exposure to my practice.

Architect Bruce Goff is referenced in this project as he has a similar methodology of collecting urban materials or waste materials and transforming them into spatial experiences. My methodology is not only displaying the ordinary materials but also by altering them and rearranging them into something other... I thoroughly explored this process and skill in my PhD.

Another project completed in the later part of the PhD was 'Hotel Otherworldly' (2012) in which I transformed a generic hotel room in Melbourne. The hotel room before my intervention was so banal – it could have been anywhere in the world. My project reference was hotelier Conrad Hilton. I fell in love with Hilton's earlier works in Istanbul and in Tel Aviv with incredible almost alien modernist blocks with lush context driven interiors transformed by local artisans. I wondered how to achieve an Australian reference into the Hilton Hotel in Melbourne, and I applied here my process of collecting ideas via an anachronistic lens transforming the space into a rich golden green flush with many other references, in an otherworldly space.

RESEARCH AND DESIGN METHODS

In my PhD I investigated my practice methods within the section 'Behind The Scenes: Practice Methodologies' and analysed twelve methods, asking myself what I was doing that nobody else was really doing.

One method is collecting ordinary, prosaic materials and transforming them using my own idiosyncratic process. Another element that was worthwhile reflecting upon was this idea of the 'trigger images' and 'trigger words'. We all go on Google images and spending time in that digital landscape you realise that you are typing in trigger words based on trigger images so your instinct starts to guide you through the labyrinth of the Internet, visually. I realised I was always creating this repository of images based on the trigger words I was typing in. Instead of typing in an architect's name, I would be typing in the word "blue" and then looking through thousands of images before I landed on a blue hydraulic piece of material I would use in a later project. I started to chart my movement and realised that this was a liminal behaviour of my practice. This is something that you couldn't have done 50 years ago; this is a contemporary capacity that we now have available to us as idea developers. This exposes one's practice to everything – instead of just being

inspired by other artists or architect work, it opens to infinite possibilities. I demonstrate this process to my students even today.

THE PhD EXAMINATION

At the conclusion of my PhD I was keen to present my practice research in an experiential way and so built an experimental pavilion called the "Forever Gazebo" made of reimagined prosaic materials. The pavilion physically opened and transformed into an amphitheatre set. During my PhD Examination presentation, I stood in the middle and with a large interactive touch screen presented my research to my examiners as an 'interactive platform', demonstrating a multidimensional mode of operation with multiple possibilities to navigate complex territories and trajectories.

EXPANDING THE PRACTICE

A recent project to explain my practice is titled Dormitorium, a communal and interactive sleep structure in which I collaborated with insomnia researchers and clinicians. Exhibited at McClelland Gallery, the project gently rocks participants into sleep states. Dormitorium is an example of where my research practice has taken me, into an expanded field, where instead of collaborating necessarily with other artists I'm keen to collaborate with other disciplines.

Do you think the PhD helped expand your practice?

Through the PhD, I started building new threads, creating new things and thinking about new ways of practice. It definitely accelerated my experimental approaches. Instead of going down the route of designing houses, the PhD built my confidence to ask speculative 'what-if' questions with my practice.
Before the PhD I separated my practice from what I do at Monash, but then I realised everything I do with the practice folds back into my Monash work.

The teaching and the research I do here definitely comes from Studiobird. The PhD gave me the confidence to carry it all at once.

Also, now instead of waiting for projects I go out and get them myself. I'm in a great position where I'm setting up new projects myself, but also clients are coming directly to me for exhibition or for sculpture. A couple of years ago I designed a reading snug for children at the Geelong library. The clients asked me to design a nest and were open to the possibilities of what a nest could be. Now I am able to filter clients instead of trying to design something for somebody else. This is really indulgent but you have to design it for yourself first. I have become a non-traditional architect. I think I would have stayed in a traditional lens if I hadn't done the PhD. It allowed for new possibilities.

If you had to define yourself as a practitioner or academic, which word would you use more? Or do you need both?

I would say both now. It really depends on who I'm talking with. If I were talking with a taxi driver I would say I'm an architect, to give a simple answer. If I were talking with a new client or with someone at an exhibition opening, where you have time and they'll probably understand the different contexts, I would say I'm a researcher and a spatial practitioner. I drop architect now because some of my projects demonstrate I am a visual artist. I have now started calling myself a visual artist in order to write grant applications. It depends on what application I am doing and on my audience, for example with my students I will always introduce myself as a practitioner first. And then I'll slip in researcher, and start to expand and explain the role of design practice research.

I'm an example of someone who through the PhD and discovered something new about his practice, thanks to Leon who supported me to become an academic in a non-traditional research publication landscape. Before starting the PhD I was building my practice in a traditional way and Leon realised before me that I would have never survived in that world.

When I was offered this tenured role at Monash it really just justified everything, it allows me to continue exploring my non-traditional practice and at the same time ticks the boxes of research and education. Last year I was invited to exhibit my Sarcophagus project in Venice, and Monash helped financially support that project. There are things I could not have done without a big institution supporting me.

Could you please provide a short description of your practice?

> I have a transdisciplinary practice across performance, art, design and social engagement, with a particular interest in performative approaches. In the 2000s I made large-scale socially engaged public projects, all of which explored cultures of movement, such as 'W-11 Tram: an art of journeys' for the Melbourne 2006 Commonwealth Games, and the ongoing 'tramjatra: imagining Melbourne and Kolkata by tramways'. I've more recently made a series of solo durational performance projects presented at Festivals and museums like MONA. Collaboration and collective creative processes are a core quality of my projects, like 'Shuttle', a mobile performance laboratory through North American deserts and 'PPPPP practice' experiments in material intra-action. My work blurs into curating, like 'Performing Mobilities', the Australian contribution to the PSI#21 Performance Studies international globally distributed 2015 project 'Fluid States'. Recently I developed a serial performance installation project called 'Circulations' to contribute to that Fluid States events in Croatia, The Bahamas, Rarotonga, Japan, Melbourne, and the Philippines, directing attention to the range of human negotiations with natural systems and resources through the medium of salt. In my more traditionally academic role, I have written with a ficto-critical approach for journals Performance Research, JAR Journal of Artistic Research and Architectural Theory Review. I currently coordinate the creative practice research PhD program in the School of Architecture and Design at RMIT University, Melbourne, where I supervise candidates exploring performative approaches to creative practice research.

What is your opinion on the contribution of the practice-based PhD to practice, as a practitioner who went through the PhD program and also as a supervisor to PhD candidates?

I undertook my PhD on a part-time basis over 10 years in the 2000's whilst working as full-time staff in the same School, during the formative years of practice-based models of creative research. There were very few transdisciplinary precedents for creative practice research. In this School at RMIT, a model was being championed that focused on the so-called senior invited practitioner reflecting on their established practice. In parallel to this model, I was able to self-determine a generative approach more appropriate to my own transdisciplinary work in socially engaged public art practice, leveraged also being a staff member. I straddled both the academy and my independent creative practice, enabling me to develop self-legitimating structures for my work without feeling the need to comply with an established regime. Whilst the celebrated senior practitioner reflective model for practice research was critical and prominent in building the program, there was still space for different orientations to be pursued, and I am grateful for having had the challenge and opportunity to develop my own performative approach toward building robust practices. A wider range of approaches to practice research is now more evident, with current candidates clustered into different groupings, making a more heterogenous set of practice research models more evident, and capable of contesting one another. I regard this as healthy for the social ecology we co-construct through practice research.

What do these clusters of PhD Candidates look like?

A wide spectrum of orientations have been brought to the PhD model, both by supervisors and candidates. The reflective practice mode characterises much of the activity of invited practitioners who reflect upon their existing body of practice, heighten their awareness of the critical dimensions of that practice, and look for ways to leverage critical insights to guide the future development of that practice.
       A distinctly different orientation is where the PhD framework enables the generation of new works and practices. These might be significantly

informed by prior works, but the emphasis is looking
to generate something in and through practice.
I supervise PhD candidates who are orientated
towards this path, which can be further qualified
by the degree of transformation the candidate
seeks through their generative practice. It might
be that a progressive developmental continuity
is desired through practice research, or that a
significant rupture is sought to transform existing
practice through engaging with less familiar
knowledges, or that the practitioner who comes
from one disciplinary training is looking for new
ways to configure a more trans-disciplinary practice
influenced and informed by other disciplines or
contemporary hybrid enquiries operating beyond
prior disciplinary organisation. My own career
trajectory and my practice orientation have made
me open to the relations between disciplines and the
creative affordances offered through new generative
practices. And so I supervise practitioners with
generative and experimental interests.

What impact/contribution did PhD have on your practice and
your academic career?

The decade-long duration of my PhD had a
significant impact upon the way I dwelled in practice
learning and transformation. Cooking something fast
and slow cooking have different consequences and
nuances! My slow PhD became an embodied and
enduring way to develop multiple modes of practice
in robust ways, not always in parallel, but over
time interfolding these multiple modes of practice
into different complementary and intra-dependant
relationships. It was not a process of doing the
practice work and then writing it up – it was a non-
linear process. Also, I came to incorporate teaching
into my public projects. Working in socially-engaged
ways became a focus of my practice research both
outside the University and as part of University
teaching and learning activities. In that sense, it was
easy to practice the Boyer integrated scholarship
model of mutually reinforcing teaching and research
and dissemination. My PhD research enabled me

to affirm, embody and create experiences that transmit the value of explorative process-orientated approaches to creative practice.

What stage was your practice at when you started your PhD? How would you define the contribution of the PhD to your practice, for instance, establishing, reinventing, transforming or consolidating the practice?

In my case the PhD enabled me to generate and establish new modes of practice.

What has been the impact of the PhD to your practice in dimensional/economical terms?

There has been an international rise in the relationship of arts and academic sector, and my own PhD and subsequent work is part of this. The relationship has produced hybrid practitioners who work at the interface of these sectors, operating as creative practice researchers both inside and outside the academy, but significantly supported by the economic base of the academy. Of course, the rise of practice PhD's programs has in itself contributed to making hybrid practice research possible. I am now an active participant in international hybrid creative practice research.

Has your community of practice changed or expanded?

It has certainly expanded. There is an increased network of people working in this transdisciplinary way, in a hybrid space of performative arts practice and the academy. We are aware of each other, supporting each other and creating the linkages and platforms that enable the kinds of work that we do. I'm active in international performance studies networks, and have been building an alliance of performative practice research in Australia and New Zealand.

What has been the impact of the PhD on your teaching?

> The integration of my creative practice research and teaching is such that it's hard to extract the influence of the PhD, but it certainly increased my capacity to build socially integrated and challenging learning experiences into my teaching.

What relation do you see between your studio teaching, practice and research?

> They always inform one another.

What impact do you think your doctoral research has had on the field of Creative Practice Research?

> My doctoral research became one of the early precedents of practice research in the field of socially engaged art. The dissertation and durable record component has had thousands of downloads, and I've published in numerous journals and books. It also demonstrated a shift toward performative ways of working that do what they say, opening up a transdisciplinary space that conforms to neither the disciplinary protocols of design research, art research or theatre research, but enacts hybrid ways of constructing and transmitting its value. The most direct impact is my work with current candidates who come from a broad range of disciplinary backgrounds and are seeking to pursue performative approaches to practice research. This is building a stream of practice research that enacts direct, live, demonstrative prototyping capacities to test as early as possible and right throughout a research development process, always alive to that which is emerging in process.

Could you please provide a short description of your practice through words and/or drawings?

Alive Architecture is a research-based practice that challenges the architect's role in city-making. Expanding the discipline from built space to Lived Space, projects generate a public realm that is appreciated by everyone and appropriated by its daily users.

By observing, using and transforming the existing spatial and social situation, Alive Architecture reinforces and enhances the values of a location's unique identity. Through onsite mappings, transitional workshops and co-construction of the built space, Alive Architecture considers the process of each project as essential to its outcome, stimulating Lived Space in the public realm.

Alive Architecture is also mindful of the need to share the knowledge it develops with students and colleagues, locally and internationally. As such, the agency's results are regularly disseminated through publications, exhibitions, conferences and workshops. By associating projects with teaching activities, future generations of students are given a practical insight into how to design Lived Space.

IMPACT ON PRACTICE

What have been the effects of doctoral training in your understanding of your practice?

The title of my PhD is 'Founding Alive Architecture'. Through the PhD I was initiating, starting, building and grounding my practice Alive Architecture. Multiple shifts happened.

In the projects in the first chapter I reveal how I initiated the research into Lived Space through the projects 'Asica enters Europe' and 'Alife'. I was first observing and drawing Lived Space produced by immigrants and later designing and drawing urban

interventions for encounter among immigrants and locals to produce Lived Space (images 1 & 2).

In the projects in the second chapter I tested the production of Lived Space in the public realm through urban interventions. Among others, I was copy-pasting a window of prostitution in Brussels into a posh neighbourhood (images 3 & 4).

In the projects in the third chapter I co-produced Lived Space together with local actors. One of the multiple interventions within the Infrared project was to respond to the demand of sex-workers for better clients. I offered flowers to them so they could offer them to the women (images 5 & 6).

In the 'Parckdesign 2014 – Parckfarm' project in the final chapter I curated Lived Space in the public realm. Besides offering artists the opportunity to intervene through urban installations, I empowered locals to get actively involved in making a new park in Brussels, following the example of Abdel initiating the Bread oven that became wa great success. Up to today locals and people from the region and from Belgium celebrate birthdays around this 'four à pain' (images 7- 11). Spending most of my energy on empowering the locals, I initiated the Farmtruck to disseminate the project in the public realm of Brussels (images 12 & 13).

The 'Parckdesign 2014 – Parckfarm' project was recognised internationally for the inclusion of locals, empowering bottom-up initiatives within a top-down project. The project won a prize for public space in 2015, and was nomination for the Pyblik Prize and exhibited at the International Architecture Biennale Rotterdam in 2016.

Since then Alive Architecture has been recognised internationally for its innovative approach to inclusive city-making. Alive Architecture won the competition for the transitional Masterplan of a 13 hectare site in Molenbeek, Brussels in collaboration with Taktyk & 51n4e. Alive Architecture will design the change of space over time through use, based on an inclusive approach within this marginal neighbourhood of Molenbeek. The project will be developed from today up to 2040 and is currently the most important ongoing urban project in Brussels.

Within this framework we are initiating a platform for transitional practice.

What have been the effects of doctoral training on your ability to articulate your practice in spoken and written language?

Both became more delightful for me.

What have been the effects of doctoral training in your design process?

Doctoral training taught me to expand Architecture from designing built space to designing Lived Space. Today I am designing urban transformation, based on existing spatial and social capital in marginal neighbourhoods in Brussels. During my first PhD presentation I revealed my interest in connecting space and society, today I am designing and putting into practice this connection.

What have been the effects of doctoral training on your public behaviours with clients, students and peers?

When beginning my PhD I did not yet have clients as such (locals were my clients). By the end of the PhD I started to access public tenders and as such clients. Struggling with the challenge of having a client, over the last two years I had access to several public projects. Today I am valuing the expertise of the client as I value the expertise of locals as well as the multiple stakeholders involved.
My behavior towards students changed in a sense that I became much more precise about my expertise and how to transmit it.

What have been the effects of doctoral training on your network/community of practice? Has your network/community of practice changed?

In the beginning, I considered my network and community to be 'architects', even though they might have been acting on the edge of the profession. Today my network shifted towards social designers and artists interested in inclusive city making.

Has your business changed in economic or dimensional terms, due to your doctoral training?

> I founded Alive Architecture through my PhD. The projects in the beginning of the PhD, small urban interventions, were self-financed. The concluding project Parckdesign 2014 - Parckfarm I received for the first time an income for my contribution. Today the practice counts three people and shares a former art gallery with an artist and an architect on in the center of Brussels (image 0).

IMPACT ON PEDAGOGICAL APPROACHES

What do you think are the most relevant features of studio teaching?

> To expand my way of teaching Architecture from designing built space to designing Lived Space.

What relation do you see between studio teaching and practice?

> I use the projects of my practice to build up the design studio. The student's work on the same site and their projects is based on what we are developing within the practice. As such they are learning about Lived Space through being involved in ongoing projects. Besides my role as a teacher at KU Leuven I consider Alive Architecture in itself an entity of teaching. Through both ways of teaching I am intending to generate impact on future generations of Architects, expanding the discipline from built space to Lived Space.

What have been the effects of doctoral training in your way of studio teaching? Have you changed your approach?

> I teach Lived Space design through organising in-situ studios. Students observe, use and twist the existing spatial and social situation. They design how to reuse and transform existing buildings and reveal and include local expertise in the urban development

to strengthen the existing value of a site. In their design they empower the local to welcome the guest to generate inclusive gentrification in Molenbeek. To reveal the importance of change over time through use, students design the change of space, dating from today up to 2040.

Are you able to see changes in the way the students react to your teaching, due to the doctoral training?

I recognise that they are challenged by my expansion of the discipline of Architecture through my way of teaching.

IMPACT OUTLINE

What has been the contribution to knowledge of your practice-based research?

It's contribution to knowledge is to expand architecture from built space to Lived Space within marginal neighbourhoods. While the case studies during the PhD were realised in the red-light district, trailer-parks or immigration camps, the 'Parckdesign 2014 – Parckfarm' project D as well as the ongoing project 'Beekkant-West' are situated in Molenbeek, Brussels.

What impact has your research had on the culture of design research (intangible effects)?

I am working hard to expand the culture of design research within my community of practitioners.

What is the main change you experienced in your practice/ teaching, due to the doctoral training?

Recognition for my practice.

How would you define "Impact" in Creative Practice Research?

Firstly I define the impact in Creative Practice Research upon a more inclusive approach of city making in Brussels through my practice as such.

Secondly I define Impact through my teaching of how to design Lived Space to future generations of architects. Finally I generate impact on inclusive city-making through transmitting my knowledge to a larger network of practitioners and researchers through international exhibitions and participation in conferences.

Pia Interlandi

What has been the impact of the Creative Practice PhD on your understanding of your practice?

> My understanding of my practice is that it's putting a whole lot in order. From pre PhD to post PhD and going forward into the future, it's much broader than I ever anticipated. It becomes more specialised and so you are constantly changing the notion of what your practice can be.

What has been the impact on your design process?

> I wouldn't say I design collaboratively with my clients, but you have to be receptive.
> I have designed philosophies that come with my practice. My practice is garments for the grave, very much an echo in terms of materiality that has to be biodegradable but then it comes down to what the client wants. If they say, I want to incorporate my favourite garment, and that garment happens to be polyester, I have to put aside some of my design philosophies to cater for my true goal which is getting a garment they want to be buried in. I have clients who anecdotally say, "This is the best part about dying, I'll get to wear it now".
> And there are clients who won't ever wear the garment until they die. They don't put it on while they're alive. They'll hang it at home or on a wall. I've got a couple of clients who have their shroud up on their wall as a momento mori but won't wear it, because it is a special occasion, they will keep it for then and then only. That's what they tell me anyway. I don't know if they are putting it on at home. So, you have to be fluid with the design process. Once I start making it, it's a Singer sewing machine but I've added all these other tools into the making. So the making is the design process. I don't do a pattern and have a full technical sketch before I go into making. It's much more about the fabric, but when I construct the garment I use things like perfume, so that it smells like them. But then I have to also design the space in

which we are going to dress someone. It becomes interior designer, sensory design. It becomes all these things that weren't in my original skill set, when I started the PhD. You've got to be kind of intelligent with your empathy, and you can't teach that. You can learn skills around empathy but there is an emotional intelligence that some people have or don't have.

More people are trying to get into the field I am now located in which I would classify as holistic death care...where you're looking at what's legal, what's possible and what's beautiful. The logistics of what needs to be done with the body but also the emotional and spiritual aspects of the individual and their family. You have to be able to pull lot of ideas together and listen to people. I'm lucky I've been able to facilitate what I can for my clients.

What has been the impact on your ability to articulate your practice in spoken and written language?

I can speak about my practice. I'm very happy to speak about my practice. I was crippled by the writing in my PhD and I think that's one of the biggest impacts. You don't go into a PhD being a writer. You go into a PhD because you particularly want to a practice PhD, because you're a designer or you make things or you respond to things, and I find it incredibly difficult to do academic writing. A couple of years out of the PhD this is now a road block. I get so much anxiety around writing, it's crippling and the writing up of the actual thesis was horrific.

I think I've got a hangover fear of writing from having done the PhD. That's probably the most negative aspect of being an academic post-doc, particularly in creative practice where as an academic you're meant to be doing writing but as a creative practitioner you should also be doing exhibitions and making. At the end of the day, there is still an emphasis on writing and I find it very difficult to sit down and write in an academic tone because my PhD was never written in an academic tone – because I wrote it for a particular audience, so more people would be able to understand it, but also because that was the way that I could write.

What has been the impact on your public behaviours with clients and peers?

> I'm split in my public behaviours in terms of my professional conduct because at university I teach a very different subject. I started externally, however, a not-for-profit based on holistic death care, and I do a lot of public presentations with that. I don't know that my behaviour necessarily changed pre and post, but doing a PhD, you have to grow. To finish a PhD is bloody hard work and not everyone makes it. So you hope you mature and you hope that you are able to speak publicly with humility but also intelligence and authority. And the authority is definitely something that the PhD gave me and is one of the reasons I did the PhD, so I could go into fields outside of fashion with the weightiness of having serious learning and study behind me or as part of me, that carries an authority when you're speaking. And so it should. You've carved out, your PhD is carving out, a new field or contributing in a way no one has before so I do get asked to do a lot of lectures and consultation which is a privilege that has come from doing the PhD.

How do you behave with your clients now and what has been the impact of the PhD in this sense? I read that you also dressed someone of your family.

> I've now dressed about 50 people. Not always in my garments but...for those fulltime in the funeral industry they see three bodies everyday and they dress lots and lots of bodies. I'm not fulltime. I get brought in by specific clients. So 50 is not a lot, but it is enough for me to have some expectations and to be able to know what has previously worked with a family into that situation. To tell them what to expect.
>
> That was something that did come up in the PhD when I dressed my auntie. She was 94 years old and her daughters were also in their 70's. They were frail as well. There are things that came up about how we should lift and move and roll that I would now pre-empt before going in to a dressing, because sometimes families are dressing at home on their own. I would say, "okay, before you go in, you may

encounter these things", because I believe very much that there shouldn't be anything shocking. Seeing someone that you love who has died will of course have some shock but it shouldn't be traumatising. So if a client has their eyes open or if we haven't closed their mouth or if they need to be shaved or if they are very jaundiced you tell your clients before they go in. You make it very clear that if they've got any questions, ask. So that you yourself are an open book in terms of what information you can give them that's not clinical and scientific.

Sometimes, depending on the client, it's poetic or you're talking about it with a much more spiritual edge. You mirror their behaviour. I don't go in with a stern face, very clinical. I refuse to do that. If the clients are really upset and they need you to hold their hand, you've got to be able to read body language but also emotional state. It's intuitive. I wouldn't say it's perfect. I wouldn't say I know what to do with every client because everyone's situation is completely different but there are things that so far have worked and things that didn't work that I no longer do.

Has your community of practice changed and/or expanded?

My community of practice has not dramatically expanded. I was previously situating myself amongst other fashion designers. It is now much more specific, mainly the people who are working specifically as designers within the death field. There are specific projects that emerge, like Capsula Mundi which is an Italian project where they build a big cocoon shape and you've got the mushroom and infinity burial suit. Most of the time I'd say my community of practice is much more specific in terms of those who are dealing with the body post death, in all its weird transitions that it goes through but dealing with objects to conceal, protect. That's much more of my direct community of practice.

They are not my competitors but what I find interesting is the difference between a designer who is thinking about death and designing for death versus someone who comes from the funeral field and is responding with design. They say they will do all this

amazing stuff and they will charge a huge amount of money for these products and they won't actually do what they say they were going to do. I've become sort of an authority in some regards. Well why would you do that? And how are you going to carry that to the grave? And how are you going to lower it? And how much is it going to be? And you're making this amazing new echo but it involves 3 trees and you're proposing to plant 1 tree? The way you respond to your community of practice is quite ... you can see through. Because I'm doing both, because I actually do the dressing of dead people and I do speak to people who are dying. It's very different from going, "imagine if this person...", and you're just making up what they might actually want and imagining what a body's going to do. There's not many people who are crossing over in that regard. Having a PhD, being an academic and a practitioner means that I can politely call people out when it's something that isn't going to do what it says it does, when it's false marketing and there's no regulation.

There's a lot of videos on the internet saying that it's amazing and it will do this and it will turn your loved one into a tress. It's not going to turn them into a tree because once you've cremated someone it's phosphorous and all you're going to do is kill the tree you're going to try to grow. So I don't tend to write a lot of comments on videos online or anything like that but occasionally I'll do a rant on my personal Facebook page where I'm saying look it's a great idea. I don't want to stop any of the discussion about death and this product but this point, this point, this point, this point, this point, this point and generally those comments will get picked up and shared by other people. I feel bad because I don't want to be shutting down my community of practice because it's so important that people are still doing things but...one day I would like to turn that into an academic article.

About the washing or the false marketing, if you know the funeral products but also the community of practice in terms of other practitioners working with families who are grieving and working with funeral planning. My community of practice is no longer...well it wasn't ever just designers and

theorists but now its non-academics and it's people working in the field and so that's my tribe. There's this notion of when you're doing funeral practice you find your right tribe. You find people who have the same philosophies. This is my community of practice. It's your network that you've created and people that you would call up on the phone.

Has your practice changed in economic or dimensional terms?

My practice is not my financial business. It does have some financial elements to it but by no means is it something I can financially rely on. I would like to be able to turn it into a viable business that I can live by but doing a PhD didn't help with business skills. Doing my undergrad in fashion design helped me design but it is not a business skill, so in terms of economic I wouldn't say it's significantly changed. It did mean I could get fulltime employment at the university for teaching, which is my income. But I will do the occasional commission. I would like to expand but at the moment the teaching is fulltime. And your practice becomes your outside hobby. Which is not so fun, it's the negative aspect.

But, did it grow in terms of dimension?

Yes. One of the things that has happened recently is that I have been commissioned to do a garment for MOMA in New York, and there is a design fee with that. They will pay some money and they will be like, "Oh, we apologise that it's a real small design fee" and you're like "Wow! That's more money than I've ever seen before!" It's not enough to live on but in terms of the scope or exposure it's huge, so dimensionally that's taken me well out of Australia into one of the best museums in the world and if I hadn't done the PhD, if hadn't have had the authority of the PhD, if I hadn't had the academy and the insight and the depth of research that went into it, they wouldn't know about my practice. When they look me up they find that I am a designer who does these sorts of things and that there is a wealth of information and weight that goes with that. I may not be super economic

in terms of business but certainly the practice has grown. I've shown in Rotterdam, in Poland, in the UK and I'm showing in the States. The irony is that I get more attention from my practice internationally, than I do in Australia.

Why do you think this is happening?

Because everyone has got MONA in Tasmania which is colloquially called the sex in death museum. And I went to them to pitch an idea around sort of some stuff I had left over from the PhD and they weren't particularly interested. But MOMA in New York calls me up and commissions something. Until you've gone overseas, no one in Australia is interested. And hopefully they will call me up. Australia is a difficult place for a practice PhD. If you do really really well and you grow above everyone else then they want to cut you down and there are certainly aspects of that, locally and internationally. So you've got to make it overseas before you can come back.

What has been the impact on your studio teaching strategies? Have you changed your approach?

I teach studio but I also I coordinate one of our streams, material studies. I teach our fashion design students about cotton, linen, silk, wool, polyester, weave knits, printing techniques, finishing techniques, etc. So I have a very technical subject and I try to get some poetics involved, but for the most part my practice doesn't really inform that aspect of teaching. I drop hints about my practice, not as a shock tactic but if I'm talking about biodegradability of a fibre or recycling a fibre, trying to get my students to think. We do a care labelling subject and I'm trying to include not just how you maintain it but also how you dispose of it. It's really small aspects that come.
    In studio it's much more depending on the studio that I'm doing. It's much more relevant because we will go to the cemetery and we will go to the anatomy museum and they'll have to draw parts of bodies and it's very much about death. The studio is called "Transients" and it's about getting the students

to define what transients is to them. A lot of it does come down to death and transformation and you get lots of students talking about deaths they've been involved in and for some students it's really transformative in terms of their way of thinking about not just design but they say: "This has changed my life in the way I think about things". It's a pretty nice thing for them to say.

The only other little thing I use is this is when I introduce myself to my students. I say, if I'm ever not here, if I ever have to suddenly cancel a class, it's likely because one of my clients has died and I have to go and dress them, not just because my practice is more important, but because someone has died. In terms of getting your priorities straight, don't turn around and say, Oh, my teacher isn't here today because she's hung-over. No your teacher isn't here today because someone has died. It's a little bit of a trump card – if they say, Ah, you haven't replied to my e-mail? I say, I've been dressing a 23 year old suicide victim. I usually don't give them that much detail but it makes them suddenly step back. From that perspective it does keep me level headed when I get stressed about my teaching – I have a whole lot of things to put perspective on.

What has been the impact on your public behaviours and communication effectiveness within the studio environment?

I'm much more candid with my students. I can say to them: "I am really tired today because someone died not because I went out and partied." I am much more human about it and much more compassionate with my students. It is about putting perspective onto things, so when they get really stressed about University you just remind them it's just one subject in one semester, in one university course. So, if you're going to lose 5% because you're handing it in late, well do it and then just move on. That is not so much my teaching pedagogy, that is my care of the student. My biggest problem with the university system at the moment is it quite mechanical and there are rules, and they're there for a reason but sometimes you have to actually just be human. I think it's both an advantage

and a disadvantage for myself as an academic within a university, particularly dealing with something that is still as sensitive as death. You say death and the university basically shuts down on you.

I do have a student who died. And that was awful because we didn't know what we were meant to do and it turned into a mechanical exercise. That was very hard for me as someone who works in this area knowing I couldn't get students involved. It was like: "Don't get students involved, send them to the Counsellor." But I'm not a psychologist, I'm their studio or subject teacher and whilst my practice is embedded within that field it's not what I'm meant to bringing in to my teaching here. So, I am sometimes a little bit conflicted about how my level of expertise can contribute and where it can't contribute.

Are you able to see changes in the way students react to your teaching?

It is not so much my teaching style; it is my narrative that they respond to. When I introduce myself or when I'm talking to them and using my own practice as an example of how I've responded to different kind of considerations and restraints from different briefs. The narrative they find very engaging because as fashion designers a lot of them imagine their career is going to take them into clothing and design and it is going to be catwalk. For some of them it gives them a lot of hope about the pathways that they can take. But there are a lot of teachers who have PhDs who have done similar things. If given the time to have a casual conversation where you talk about your own narrative and your own practice, the students tend to respect more, but there is a flip side to it. If you are too casual about your practice they don't care. They then will take your work and plagiarise because they don't think you actually do anything other than teach. There are a lot of different issues in what relation you see between your studio teacher in practice and research. This is huge because I can see how my practice informs my research.

When you find your community of practice they become examples that you can use for your

students but I haven't found the sweet spot in how to bring them all together and I think that is the moment where they all work in perfect harmony and I think that is something that is a post doc practitioner. Finding the balance and being able to develop your practice further because you've got a research allocation within your work plan but that is to produce journal articles. That is not sit at home and make new garments. So, you're making time and that time where you just need your brain to kind of think through things is not something where you have time allocated to you with work. And certainly, thinking of a magic way to integrate that into your teaching, is very difficult, particularly because I don't have a conventional fashion practice. If I was manufacturing garments overseas and stocking them in stores, that might be seen as more valuable in terms of how does that turn into your teaching but when it's working with clients and working with dead bodies, the ethics is required. We've talked a lot about designing a studio around fashioning or about dressing people and that is the dream studio that we'd want to run.

What impact do you think your doctoral research has had on the field of Creative Practice Research?

I've been very lucky that my PhD didn't start the way it finished. It changed so much in the first year, but I know I have a very strong impact in terms of what a creative practitioner can do on a very real level. In terms of really obscure transdisciplinary practice I speak on and consult with these huge Government Cemetery Trusts and Law Commissions about dead bodies and burial practice and I'm a fashion designer. But I'm a fashion designer who has experience on those fields through having a PhD and through doing the research and part of my PhD was forensics investigation where I looked at how clothes decompose within a natural burial scenario using dead pigs. So it was animal ethics and then it was digging up dead pigs… so there was all this stuff about disgusting, you're really get in there and do this disgusting work and so that got me a lot of respect from the funeral industry but it also meant

I know what happens in those situations. When Environmental Boards and Cemetery Trust want to know what it looks like, I can tell them because I've done it. And I think that this is part of the magic of expanding a field or contributing to a field, particularly if it's transdisciplinary – you're able to change policy and influence and get people to look at their own stance on something and with research and evidence change the way that they think. It's the last line of the PhD that clearly you don't know the power of fashion.

So I started the PhD not wanting to use fashion as a word at all to ultimately come in to say, fashion is influence and it's broader than just the frocks you're wearing. So I have huge impact. I've had a television show made about me, an episode seen by 300,000 people. I have newspaper articles. I do radio interviews. I occasionally get asked to do things that have very wide readership. So I may not be producing general articles but I've certainly got a platform to talk to a lot of people about things that are significant and that's part luck and part having a topic that's engaging, and speaking about it in a language that isn't just academic and has a narrative. I can't emphasise enough the importance of the individual story that comes with each of my clients, but then I've got ethics to worry about that I can't talk about some without ethics applications and things like that so that's the next stage.

How would you briefly describe the meaning of "impact" in creative practice research?

When people are undertaking a PhD, you've got to be careful about what's the contribution? Is it going to change people? Some people do PhDs that only three people will read and it doesn't have much impact. I think you need to be able to see how it will lead into the next thing and the next thing and the next thing. You can just do PhDs for the rest of your life but the impact is how does it change people? Or how does it change the world? And it's huge to say, can you save the world? Can you change the world through your PhD? I think that ultimately that's your contribution. It's not just necessarily theoretical but it's applicable as well.

Could you please provide a short description of your practice through words and/or drawings/images?

> I have a teaching and research practice at the Faculty of Architecture, Catholic University of Leuven, Belgium (KU Leuven). Although I have a background in architecture building practice (15 years), I am currently a full time academic (50 % research/ 50% teaching).
> I conduct my research though drawing and writing. I teach using my knowledge of the performativity of representation, thinking through the drawing. My PhD mainly focussed on the process I engage with when drawing, consisting of photographs of drawings annotated with text.

IMPACT ON PRACTICE

What has been the impact of the Creative Practice PhD on your understanding of your practice?

> The PhD allowed me the time and space to consider where quality was produced in the different layers of practice and where/how, over years of practice, tacit knowledge had matured. Through the process of the PhD, my practice became more focused and critical and outcomes and views on the practice sharpened, to the point where I have now built up a supporting structure that allows the drawing practice to grow.
> When I started the PhD, we were going through the second year of recession in London. Our small client-driven office had already gone through a drastic change with many projects on hold. I had started to do more personal, drawing-based work in collaboration/ conversation with other practitioners and artists. By the time the PhD started, I was in search of a particular audience for this new work and was grateful this opportunity came along.
> For a long time I struggled to understand the nature of the architecture practice I had built over

the years: was I a building architect or a researcher who make nice drawings? The PhD allowed insightful change to occur over time in how I perceived the nature of the practice and how I can support this practice towards growth.

What has been the impact on your design process?

My design process has become more particular and critical. Process has always been very much a focus, where the outcome is considered as a natural result of the process. Before the PhD, this process was mainly intuitive. Going through the PhD meant I was able to think and speak more insightfully about this process, contextualise the process with the work of peers and gradually build on this new found foundation.

What has been the impact on your ability to articulate your practice in spoken and written language?

There has been a drastic change, mainly in writing about the work. Considering writing is a way of bringing forth the work, I could sense – especially near the end of the PhD, when writing became a more prominent part of the process – the benefit of writing about the process I engage in when drawing. In particular, the drawing functions for me as a medium for thought – thinking through drawing. The work (the project, the content) already exists within the drawing, before it is conceptualised and verbalised. ("I speak about what I know, I draw the things I don't know just yet'.") The explicit understanding of this duality between what is present in the drawing and how one articulates the drawing – "stepping in and out of the drawing" – reinforced both these positions, and clarified the syncopating nature of this process.
		I recognised and wrote about this position, and it had a profound effect on the way I conceived/structured the PhD. The document exists as a body of dominant drawings, annotated with the written text.

What has been the impact on your public behaviours with clients and peers?

>I have become more confident and outspoken about the quality of the drawings.

Has your community of practice changed and/or expanded?

>My community of practice has changed drastically. The corroborative nature of this PhD process (PRS every six months) and the research community brought together at regular intervals allowed for an engaging and thriving environment and an audience to form itself. So much so, that near the end the PhD I actively sought a similar community of practice to continue the research. The network of people involved in the PhD remain a present and active critical reference. I am organising an exhibition with former PhD student Nicholas Boyarsky and just opened an exhibition of my own drawings at the gallery of Denis Bryne, also a fellow PhD student. I continue my research in collaboration with Jo Van Den Berghe and Arnaud Hendrickx, both former RMIT PhD students.

Has your practice changed in economic or dimensional terms?

>No.

IMPACT ON PEDAGOGICAL APPROACHES

What has been the impact of the Creative Practice PhD on your studio teaching strategies? Have you changed your approach?

>No change of approach. I teach what I do, and always have, but I do it more insightfully. The confidence I gained transfers to my students. Having a more analytical understanding of the processes that take place while drawing/designing, I am in a better position to understand how I can support individual students with their own particular ambitions and struggles.

What has been the impact on your public behaviours and communication effectiveness within the studio environment?

> I can explain ways of working better and the reasons why they are of value.

What relation do you see between your studio teaching, practice and research?

> The practice and research have become one.

Could you please provide a short description of your practice through words and/or drawings/images?

> I am interested in how ordinary aspects of architecture and everyday life meet rarefied architectural types and cultural ideas: like washing lines and places of worship, or deck chairs and conventions of abstract painting. I'm a sole practitioner who collaborates with others. I combine professional practice with a part-time academic role at Victoria University of Wellington teaching into architecture, interior, and landscape architecture programs.

IMPACT ON PRACTICE

What has been the impact of the Creative Practice PhD on your understanding of your practice?

> I am far better able to explain the underlying drivers of my practice: my sensibility for combining the rarefied and the common, the way I use conversation to do that, and my fascination with walls or the edges of a project.
> I am much clearer about the potential of my practice to contribute to the architectural community. Particularly the way that I use speculation as part of the design process, and how that might be put into the public realm.
> I also understand my practice much more specifically in terms of the local community out of which it emerged. I very much suppressed this before the PhD, but embracing the local architectural community has given me a more exciting perspective on Wellington, the city where I practice.

What has been the impact on your design process?

> The biggest impact is on where I put the design effort into a project. I am quicker at shaping the project around my core strengths, and more articulate about

them. I am also experimenting more with kinds of drawing. My embrace of the wall as key element in my projects has invited me to draw more elevations, for example, and draw them with more purpose.

What has been the impact on your ability to articulate your practice in spoken and written language?

> My writing in the PhD was launched from the work itself in a way I struggled to do before. I covered this in the written component of the PhD. Before the PhD, I attempted to write about existing architectural theory that surrounded my projects, but discoveries were few and far between. Now, I see more value in writing about the work itself, the process, and the implications of it. I understand the value of it much more in the production of theory, not the application of theory.

What has been the impact on your public behaviours with clients and peers?

> Again, this is a lot about clarity of thinking. I am much clearer about my objectives. I am much more determined to share the speculation which is important to my design process with peers and affected communities. I am also much more interested in exhibition as a format for these discussions, which was so central to the PhD process.

Has your community of practice changed and/or expanded?

> I have always enjoyed collaborating, but I am more conscious of the nature of my collaborations and what I bring to them. Because I can explain my practice more specifically, my collaborators can more easily understand what I bring to a team.
> I also found the RMIT / ADAPT-r community a thoroughly invigorating group to be part of and I am much more conscious of looking for other research groups that I can contribute to after the PhD. I look at 'calls for papers', for example, with a real interest in understanding the community making the call. I am excited about using conference or exhibition

proposals as a way into communities.

It could also be said that the structure of the PRS is unique and having finished the PhD there is a noticeable void in the calendar. I hope some of us who have come through the PhD program can develop some kind of post-doc forum where conversations with peers can be continued and ongoing research can be harvested.

Has your practice changed in economic or dimensional terms?

Peter Adsett and I are working on a project that will, if it works, extend the work we did at Humbug and could affect the way I practice. So it might change my business, it's too early to say!

IMPACT ON PEDAGOGICAL APPROACHES

What has been the impact of the Creative Practice PhD on your studio teaching strategies? Have you changed your approach?

This trimester is the first studio with the PhD behind me, and I have organised the studio as an extension of the Wash House I presented as an ongoing project in my PhD exam. The speculations I made as part of the design process have become the premise for the studio, so students and I are working alongside each other on visions of the neighbourhood around that house. I've never used my own work as a launch pad for studio before, and it's great fun.

What has been the impact on your public behaviours and communication effectiveness within the studio environment?

My teaching practice evolved during PhD. I am more inclined to talk about my own buildings in studio, not just descriptions but real insights from the design process that are utterly relevant to students.

I am also more articulate about student design processes, more understanding of their individual tendencies, and more enthusiastic about helping them find their own creative 'voice' etc. This is something I

learned from the extraordinary generosity of my own supervisors in the PhD. This goes for the Masters theses I supervise too, but because those students are also obliged to write, I am more demanding of them to write clearly and directly about their design processes and motivations – rather than attempt to illustrate existing theories in a design proposition.

Are you able to see changes in the way students react to your teaching?

It's tricky to remember previous reactions. I think student reactions have always been pretty good, but I guess there is more student interest in my practice work.

What relation do you see between your studio teaching, practice and research?

Like the current studio I described that began with the Wash House, I think that studios which emerge from practice projects, and exist alongside them within a speculative idea (about a region, neighbourhood, cultural practice, etc.) are enormously beneficial to everybody involved. They collapse teaching, practice, and research into each other so that they are all mutually supportive. That kind of mutual support between teaching, practice, and research is not common enough.

IMPACT OUTLINE

What impact do you think your doctoral research has had on the field of Creative Practice Research?

I hope my contribution to Creative Practice Research is in the techniques I have developed around conversation: the minor conversations and exchanges that ultimately connect to rarefied ideas.
    I also struggled, before the PhD, to find compelling ways to explain the context of a project, and how the connections I describe above are made. I spent a long time experimenting with diagrams during

the PhD and I hope the discoveries I made there are also a useful contribution.

How would you briefly define the meaning of "Impact" in Creative Practice Research?

I think about impact in this context as the effect on how we understand, teach, practice, and research Creative Practice.

What is your perspective as a supervisor on the role of the practice-based PhD in establishing, transforming, reinventing, consolidating, or integrating a practice?

I tend to supervise candidates who are in my discipline area – interior – but I also supervise candidates in art. With both they tend to be people who have emerging practices. These are different candidates from the reflective based mode, where people are often reflecting on 15 years or more of practice. That relates to the discipline of interior design, an emerging profession. It is probably only now that there might be some practitioners interested in doing a PhD. Previously there was not a lot of interest internationally or nationally, unlike in architecture and landscape architecture, and that is just because of the nature of the practice it's more ephemeral. Inviting established interior design practitioners to reflect on their practice will be the next stage.

Projects are very fast, as distinct from projects such as buildings which take an extended time to realise and then exist for a long period. There is not yet a robust culture of discourse or theory around interior. If you go in to a bookshop, the publications about interior design tend to be 'coffee-table' books, which reflects the nature of the discipline. I have candidates in interior design who are really keen to push the discipline and to articulate it in relation to broader concerns to do with social, cultural, historical, political contributions through practice. As emerging practitioners, they are keen to think about how and what they are doing. There are also people who have a practice that might be in sculpture and art and interior and in a PhD just want to concentrate on that practice, think about how it is distinctive and what it has to offer up, try out projects they couldn't do in their commercial practice, have a look at other community of practice and so on.

For these candidates it is often a learning process, looking at other people working in interesting ways and thinking through these methods in relation to their practice. The PhD is a space to do that, because it is very hard to do when you have an emerging

practice or when working for somebody else. I have a candidate whose new commercial practice is the site for the PhD. She is using the PhD to think about the experimental techniques of the practice. I can imagine in 10 or 15 years', because she has done this PhD, she will have enormous confidence in these otherwise experimental techniques, and probably be at the forefront of her practice, enable activity in a commercial realm. It is important that there is confidence on her part as a practitioner because in the commercial realm people aren't confident if something is not proven. They are reluctant to invest money and time if it is just an experiment! So, the PhD pushes the discipline profession and creates new leaders in practice.

I find this also with candidates I have supervised in art. Art is an interesting discipline area because it is always about the production of the new and unknown. Practitioners are interested in how the PhD can do that for their practice. The art PhD is not necessarily productive for candidates to explain their practice, because once they have explained their practice then it is finished, it is not creative any more. A PhD is instead about activating and experimenting with ideas and techniques, going into the space like a laboratory and doing things that couldn't necessarily be done with other projects or exhibitions.

This aligns with my philosophical position regarding knowledge, as something produced rather than uncovered. The idea of the object as an artefact that embodies knowledge is not something I concur with. It is a particular theoretical model that considers knowledge pre-existing. I am interested in how knowledge is produced through the doing of things, and the reflection which happens after the doing. It is a retrospective act. It is aligned with the reflective-based mode, but it is not a reflection that is looking for an essence. It is a sort of reflection that is a product of the present. It has to be done in a particular way, so it has value for the future.

In my own practice before I started the PhD, I used to do a lot of exhibition and curatorial work, and at that time I felt it was very difficult working in exhibition environments because there is not a lot

of money for resources. The exhibitions I was doing were always driven more as projects and as research vehicles, testing out ideas. It was a lot of work and you weren't necessarily getting support. The exhibition would open and couldn't be supported by marketing. They would want to know two years in advance what you were going to do. So, I felt it was time to re-think my practice, and I was always interested in the question of interior. The PhD in that way opened up the space to engage with the practice, to think about key concerns, to pursue different trajectories. Probably because I was situated in architecture and design, it was in a practice based mode, so the exhibitions kept coming through and they were actually bigger, much bigger, and so I accepted them and they became part of the PhD.

Nevertheless, about half way through and not necessarily consciously, my practice started to change.

In which ways did this change happen?

I hesitate because I'm not sure if the practice actually changed. One's practice is a process of engaging in the world to work through ideas and problematics; there is something that is consistent all the way though. But it now deals with a whole different range of context and things. It moved into something that was more about writing projects rather than making exhibitions. Curatorial work always, because way a curatorial practice is in exhibition, in writing and in teaching.

Being in the PhD space has its own kind of impact. Doing the PRS presentations and receiving different responses. I did one really disastrous PRS presentation and it was a point of decision. It could have taken different directions. Now I see that the other direction would have been pretty interesting too. The way it went was more situated and more resonant within the context of the practice-based mode in the School; a transformation or reinvention of one's practice, because I was doing a lot of writing and was interested in philosophical and theoretical issues around interior. At one stage, close to the end, I was deciding this was going to be my thesis and I

remember speaking with Leon who advised me to do it by project and for it to be examined by exhibition and presentation.

Experiencing the by-project mode I understand fully what it means to undertake a PhD by project. I wanted to supervise people who do PhD by project, not a thesis where one has to do a literature review and cover off all the knowledge in a particular area; this comes back to my idea of knowledge as production and so of a thesis as a production, a practice. I am very keen on knowledge as practice and production. The practice mode is good for me, and for the students I am supervising.

Before doing your PhD, were you teaching?

Yes, I have been teaching sessionally for a long time.

Do you think that doing the PhD changed your teaching?

My teaching couldn't help but change. Teaching is a research-informed practice, or it is a creative practice for research. In that way it's always been critical to my practice. I did a Masters before and I have a degree in Art History, so working with ideas and research in that particular kind of way informed my teaching all along. It has also helped me help students understand the discipline more. I am helping to focus them learn how to be interior designers. But in terms of running a class or teaching a class, I don't know if I saw any changes there.

Some people start putting their practice into teaching, or start looking at the relationship between teaching and practice that before they couldn't see. This is something you were already doing?

Yes, I see my curatorial practice as a teaching practice. Our School's pedagogy is very much about idea-led and research-informed teaching. People bring their projects and their practice to teach.

Yes, and so students can probably understand better what practice is, what research is.

The other thing I am trying to do is persuade the interior profession about the value of doing a PhD. In 2013, there was a big conference in Amsterdam organised by the professional body of Dutch interior architects. I was invited to speak about doing a PhD by practice; it would be so fantastic if more interior practitioners did it, perhaps through Leon's model, the invitational mode.

Because what happens then, and I can see this in architecture, is that the broader professional discourse is engaging and engaged. It is not always just about the client and the project. It is about the civic nature of cities and socio-cultural issues. The practice of interior design contributes to broader social and cultural conditions – and it would be great to have this articulated.

So for interior design it is still not clear what the PhD can do? It is interesting how differently the industry react to.

Yes, with landscape and architecture it is clearer. I think with industrial, like interior, it is probably not very clear.

The PhD is probably also starting to create a community, which would be helpful for anyone starting a practice.

Yes, it is good working with the younger practitioners – they are keen to challenge a whole discipline, to situate it within a larger social and cultural context through the specificity of practice, i.e. materials, spatial and temporal relations, programs. This is a kind of critical practice.

Does it happen that emerging practitioners starting a PhD in interior design then move to other disciplines?

There have only been a few completions and they stay with their practice because interior design is very broad. They are interested in interior and their practice may be situated in exhibition, film, etc. as well as in commercial practice. I am keen now to advocate the value of PhD to established practitioners.