

ARCHITECTURAL DESIGN

2014

RESEARCH SYMPOSIUM

20 - 21 NOVEMBER



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Introduction

As articulated in recent publications, and on the evidence of postgraduate activity around the globe, design as the primary vehicle for research innovation in architecture has entered a confident and mature stage. It is our pleasure to host a symposium that brings together many of those who have shaped this discourse and activity. The genesis of the symposium came about through an opportunity too good to miss. The New Zealand Institute of Architects secured a palazzo to stage the first national exhibition at the 2014 Venice Biennale. Quite a large palazzo as it turned out, and the first floor was available to stage events. Would we be interested? A phone call to our research office revealed there was a small amount of seed funding available and the planning began. Our preparation has been underpinned by the selfless work of colleagues and a network of academics around the globe. Their generosity in helping to shape the content of the symposium is hugely appreciated. A rigorous double blind review process of 60 submissions has led to the tabling of 25 presentations, prefaced with six invited presentations. The quality and range of all the presentations, provide a small but significant contribution to the evolution of design-led research for architecture and allied disciplines.

One outcome is this book. The work though, is not yet complete, as this pre-symposium edition is conceived primarily as a stimulus for conversation. To this end the program is designed to enable deliberation on the issues to hand, to put dialogue to the fore. By lunch we will have heard condensed versions of the six invited papers, interweaved with pechakucha snapshots of the contributions from all other presenters. These set the scene for round table sessions where each presenter is invited to engage in dialogue and in the process, extend understanding of what underpins current research - why it is of value and what are the ways, means and tactics are by which these agendas can be progressed. Three round table sessions - What matters? Who cares? How? - operate throughout the afternoon, with the session chairs reconvening in a final session to conclude the formal program.

What Matters?

What might a historical perspective reveal for design research? Where are the gaps in knowledge? What matters? These themes underpins two sessions that collate contributions from theorists, historians and a range of presenters who are working within local contexts. The opening session for this table is led by Jonathan Hill, who locates the autobiographical, the tradition of the novel and the dual role of drawings:

The term 'design' derives from the Italian disegno, meaning drawing and suggesting both the drawing of a line and the drawing forth of an idea.

Historically, drawings as the medium for the projection of ideas, are interwoven with the complimentary role of the architectural text. Hill posits that the genre of the novel, grounded in fictional autobiography and diary writing, can be aligned with the spatial

WHAT MATTERS?

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diary of the designer: Are designs inherently autobiographical? Such rhetoric allows a slippage into Ross Jenner's presentation, which addresses head on 'the question of the question' for architectural design research. His observation is that the apriori articulation of a question, central to the norms of research, would appear to be at odds with the state of perplexity/ wonder desirable for artistic invention. Does research through design need to progress from a question? Extending Jenner's parallel with the norms of research, does the question need to address a gap in knowledge?

Hill's alignment of design, the autobiographical and the issue of authorship, might be explored in relation to the contribution by Sophia Psarra. Her examples from history – Calvino's *Invisible Cities* and Le Corbusier's design for the Venice hospital – are used to explore the interaction between authorship and self-organizing systems. In a similar vein Hannah Lewi looks to historical precedent, citing the Smithsonian's tactic of conceiving the architectural book as a form of building, in order to propose alternate tactics for the creative remapping of history and theory. While Jan Smitheram, through the lens of ethnography, also finds that pre-conscious and self-organizing patterns are prevalent in the design process.

What matters in the subsequent session is guided by session chair Murray Fraser, who after an all-encompassing definition of design research, articulates in his presentation where activity might be productively engaged:

Design research can best engender speculative thinking and experimentation through engagement with the normative practices of everyday life in the contemporary city.

The locus of design, according to this line of thinking, shifts from the individual and the monumental to the collective, commonplace activity of everyday life. In the context of urban design, Fraser sees globalization as crucial to 21st century research, albeit this is best conceived he argues, as a productive void akin to the Deleuzian assemblage, rather than the binary oppositions of the local and the global.

Fraser's articulation of the productive void of local needs, intertwined with global forces, is found within four presentations in this session: Penny Allan and Huhana Smith have worked within the bi-cultural context of New Zealand to establish a third space where the productive transgression of cultural boundaries can evolve, such as the merging of the Māori tradition of hīkoi and the situationist tactics of Richard Long; Helen Norrie describes research that explores urbanism in the regional context of Tasmania where collaborative, locally situated projects reconceptualise what matters for small cities, using approaches that include historical lineages of modernism and play theory; for Pedro Mendes et al, the focus is the Portuguese diaspora and the identification of projects that will enable social entrepreneurship to flourish; while Filipe Oliveira presents an architectural project that celebrates the aspirations of critical modernism and the local, through the symbolic intertwining of the Portuguese freedom singer José Afonso.

Who Cares?

Who is the audience for architectural research? Why is this agenda significant? Who cares? The second round table brings together presenters who address these questions in the context of practice and academia. The first session is chaired by Richard Blythe who articulates three tiers of knowledge, crossing project, practice and practice community to set a rigorous framework to analyse how knowledge is created. In this view, the inherently non-linear, tacit and multiple aspects of practice become important agents, identifiable through a mapping of fascinations and urges:

What is the urge that drives the practice? or, in other words, 'What is the exedra to the specifics of individual projects that orients the designing and defines its intent, acknowledging that this intent may well remain tacit?

Tacit conditions surface in the four session papers. Simon Twose discusses tacit understandings in drawing and building and argues for practice as a particular lens, providing an aesthetically imbued understanding of cities. Understanding cities through design is also addressed by Mahanz Shah and Karina Moraes Zarzar, who highlight a vexed approach to historicity in contemporary design practices. They describe how an uncritical approach to urban conservation suppresses the contingent way it came about; design sensibilities from the seventeenth century becoming urban design canons in the twenty-first. Political implications of practice are addressed by Michael Holt and Marissa Looby, who ask whether design research can resist capitalist models of production/ distribution/ consumption. They question architectures' fixation with a financially driven end result and call for architecture and discourse to be realigned as culturally significant. The significance of design to solve problems of urban sprawl is addressed by Markus Jung, Maud Cassaignau & Mathew Xue who propose design strategies that engage risk and speculation to inform the future of cities.

Many questions orbit this session: who cares about the internal practices of designing? Do clients care? Stakeholders? Governing bodies? And, if it is the aesthetic practices of the architect that provide the key to new knowledge, how can these be articulated and disseminated?

The second session discusses how education intersects with these arguments, with chair Vivian Mitsogianni framing the design studio as a productive site for architectural ideas. Her paper on 'uncertain conditions' maps out connections between design research, education and wider contexts. She cites the pursuit of ideas as primary to design research in the academy, and argues that this speculative freedom gives the academy the power to challenge orthodoxy:

The role of the academy is to facilitate experimentation in ways that challenge the apparent self-evident certainties and accepted orthodoxies of the discipline, the underlying assumptions about what architecture is and can contain and point to what it should do next.

This focus on the effectiveness of the academy is questioned by Don Bates, who critiques the assumption that masters students conduct design research. He discusses the conflict between student research and the acquisition of professional competency and argues for severing the linkage between the two – if student work is to be considered research. Michael Jasper considers related themes and wonders how universities can be both sites for training as well as knowledge production. He expands on this through a case study, the Venice studio, and argues for autonomy as the research value of the studio. Martin Bryant locates the value of the design studio in creativity and inter-disciplinarity, and goes on to discuss how exposure to thinking is peripheral to students' focus, enabling them to diverge to more lateral and creative designing and hence more valuable design research. Marcus White also takes a trans-disciplinary approach and proposes a 'three way' between research, teaching and practice.

So, what are the constituent parts of conducting research in architecture? Is the consistent thread an ever present will to form? A unique ability to bring multiple, messy criteria to aesthetic synthesis? In the end are we arguing that we are artists who conduct significant research? And, if so, who cares?

How?

Recurrent within the presentations aligned with 'what matters' and 'who cares', is a deceptively simpler question. How? What are the ways, means and tactics for undertaking research through the medium of design? With the wholesale take up of digital design tools at the turn of the century, the 'how' question has developed a momentum of its own that continues to drive experimentation with both digital and analogue drawing. This

HOW?

table opens with session chair Nat Chard, who raises a number of questions in relation to tacit knowledge and the relationship between drawing and the projected space of occupation.

Beyond the didactic condition of the studio in architectural schools, how can the architect undertake research in a way that develops tacit knowledge? When the issue is uncertainty, how can a drawing process or medium be developed to relate to the content with precision?

Chard addresses such questions in his own practice through the invention of unique drawing instruments, which problematize the picture plane with equal measure of rigor and uncertainty. Five presenters around the table provide complimentary takes on the sensibilities and tacit knowledge that underpin design research. Christopher French argues that what is unique to architectural design research is the dual role of drawing as a site of 'understanding and emergence'. The presentation by Tuba Kocaturk, Michael Biggs and Richard Koeck who widen the discussion by, in effect, substituting the term 'making' and relating this to the more general context of design intelligence. Katrina Simon in her presentations extends the agenda of drawing and making to that of cartography. Through a series of case studies, she tactically extends cartographic techniques to produce images that 'oscillate between picture, territory and map'. The theme of cartography continues with the presentation by Alfredo Ramirez and Clara Oloriz, where the scale shifts to that of the territorial assemblage. Concluding the session is the presentation by Jules Moloney, who examines the question of 'how' in the context of preparing Masters students to undertake a 12 month design thesis. If the research emphasis is on designing, how might critical knowledge and skills on the ways and means available and tactics for their deployment be developed?

In the second session, the focus research shifts from the design studio to that of the performative context of curation and exhibition. Chaired by Dorita Hannah, her presentation sets the scene for the discussion:

Through my own collaborative practice of designing performative spatial exhibitions, I take on the role of curatorial provocateur in order to challenge the mimetic nature of exhibits and explore an interplay between the presentational, representational and re-presentational.

Threads of the collaborative practice of provocative curation are traced within four presenters, who have tabled projects that align to varying degrees with the agenda of curation and performance: Michael Jemtrud positions an ongoing project 'Mobile Urban Stage' in relation to the agency of design research, in order to challenge academic norms and foster interdisciplinary research; Bree Trevena describes how the 'Testing Grounds' project enabled the curation of multiple arts installations on a vacant public site, in order to challenge normative use of public space; Ivana Wingham locates how art, representation and technology come together through a 'particular scenographic encounter'; Anthony Burke describes how the competition 'Open Agenda' supports early career architects to translate design speculation to the public space of exhibition.

Next?

The symposium programme concludes with a combined session, where each of the session chairs is invited to reflect on the conversations and to project what might be 'next' for the agenda of research through the medium of design.

Each of the sessions will be recorded, transcribed and made available after the symposium to participants. Edited versions of the dialogue will be included in an extended version of this initial book, which we trust will stimulate further conversations in other venues. What matters, who cares and how we develop research through the medium of design are central questions that will continue beyond Venice 2014.

NEXT?

CHAIRS

Imagine a room, shabby, glass roof, leaks in the rain, bitterly cold in winter, hot in summer. Plenty of space, you can make a mess, links to an outside space for work involving fumes, cheap, the small artefacts of your work glowing around the edges of the space as reminders of small successes and future opportunities. It could be a studio, not of a business oriented practice but of a studio intent on discoveries that lie as yet trapped in some gut-felt future. Let's begin by defining the venturesome practitioner as one who, being dissatisfied with the disciplinary realm in which he or she practises, seeks to shift, in topological terms, the boundary of the discipline and thereby to extend it in some substantial way. That is to say, the venturesome practitioner contributes to knowledge through a certain kind of practice that is oriented in a specific, yet indeterminate, direction, is motivated by a driving intent, and proceeds according to a systematic and grounded process.

These qualities of dissatisfaction along with intentionality and grounding differentiate the venturesome practitioner from professional practice. These qualities, however, do not in any way preclude professional practice from venturesome practice when that professional practice also demonstrates these qualities. In other words, the venturesome practitioner, whether or not he or she is involved in professional practice, is engaged in research. The purpose of this paper is to give some dimensions to the methods and techniques used to extract and document practice based research and to identify three orders of knowledge common to practice based research.

If you will grant me the liberty I will begin by taking a brief look at the reporting of a seminal 20thC research moment in a discipline field for which I have little or no natural aptitude (according to my high school teachers) as a way of reflecting on what might be important in research in practice based disciplines such as architecture. Marie Curie's paper 'On a New Strongly Radio-Active Substance Contained in Pitchblende' describing the discovery of radium (Ra 88) is an important research moment (Curie et al., 1970 [1898]). Her paper has the following dimensions. It contains approximately 1000 words, three references (two of them to her own former papers and one note of thanks) and refers explicitly only to the research work of those directly involved in the experiments being described. The language is personal: 'two of us have shown', 'we believe' providing accounts of the steps taken and what they did...description of the activities (grounding). The paper identifies that the purpose of the experimentation and of the laboratory is to search out radioactive substances (intentionality). Through comparison and differentiation with existing and known substances (more grounding) the paper in one paragraph describes the qualities of what has been discovered in this experiment. Three reasons, each covered in a single paragraph, are given to distinguish the new element from barium: one new characteristic – radioactivity of the element - not common to barium; the results of testing – a series of fractionations that result in significant increases in radioactivity - that further demonstrate this; and consultation with a colleague in an aligned field who uses another technique – a spectrogram - to evidence the findings.

The paper then discusses other forms of evidence including fluorescence and impacts on photographic plates again using comparison and differentiation with known element such as uranium and again covered in one or two sentences only. The paper



Fig. 1. Kebbell, S. (2010) Humbug House, a fascination with common objects (striped deck chairs), architectural details and the specific lives of clients manifests in this house as a play of depth in the façade. (© Photography by Sonia Mangiapane).

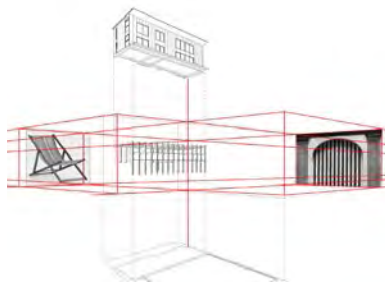


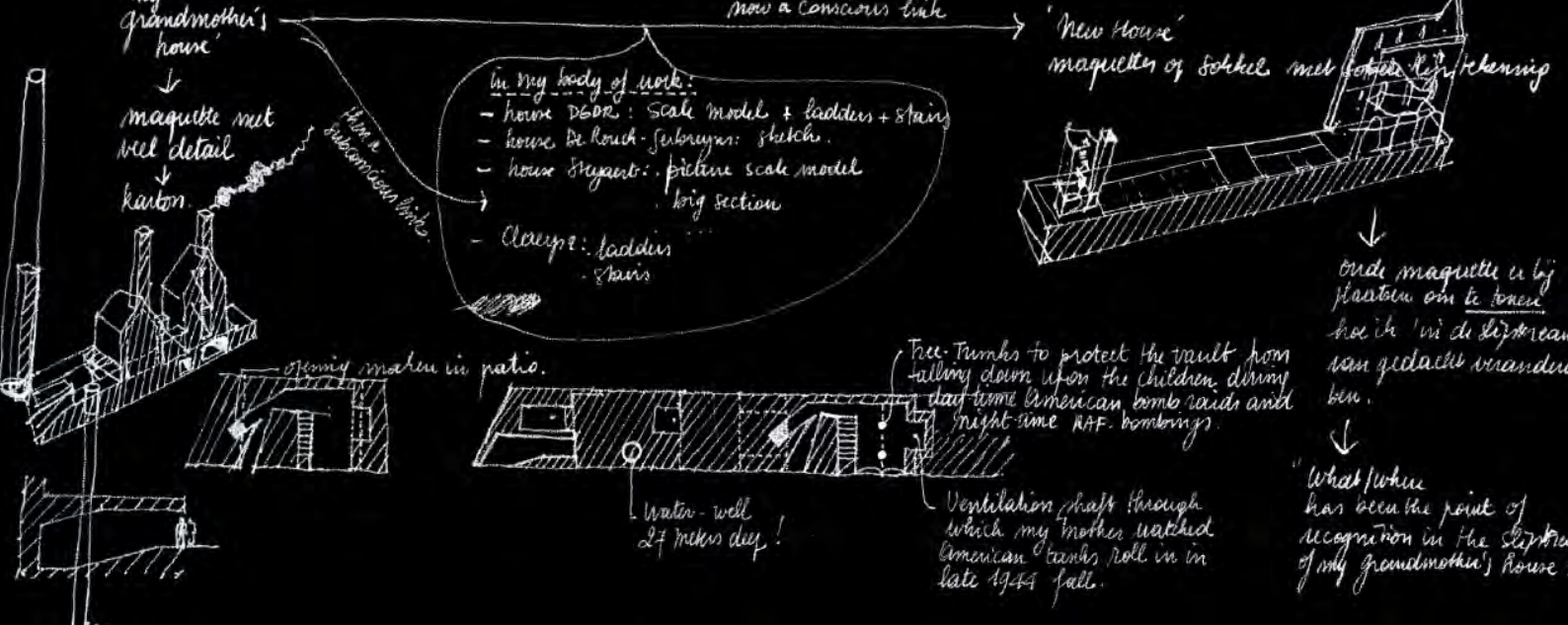
Fig. 2. Kebbell, S. (2014) Urge, Fascination and Reference: in this simple diagram Sam Kebbell illustrates the relation of a deck chair, architectural detail and artwork as they played out in a client conversation that proved the formative moment in this design.

concludes with a speculation 'The radio-activity of radium then must be enormous' and ends with identifying an implication for science beyond the immediate experimentation 'In this manner a source of light is obtained, which is very feeble to tell the truth, but which operates without a source of energy. Here is at least an apparent contradiction to Carnot's Principle'. Telling it like it is, in simple language, referring only to directly relevant and immediate associated material and being very clear about what was undertaken and what was achieved.

To the extent that Marie Curie might be understood as a venturesome practitioner in chemistry, these observations may provide some useful signposts for how we might understand appropriate forms of experimentation and reporting in design practice research. My point is to illustrate that in this seminal scientific moment Marie Curie keeps things simple. The reporting is short and straightforward, even though the science is complex and the experimentation laborious and at times physically exhausting. Philosophy does not come in to it and history only so far as it is directly relevant and then only with the most efficient mention. Theory is ever present, but as an extraction from the experimentation and speculation as to the possible implications for related science. The Curie paper is a summary of one experiment that is in reality one project in a series of similarly oriented projects. The paper itself is an overview description of key findings and conclusions - it is not the research as such. I think we could learn from the simple density of this kind of reporting of research. It is also worth reflecting on where this research was conducted.

The studio I described in my opening remarks is in fact the space in which Marie Curie's work was carried out and one she described as:

...an abandoned shed which had been in service as a dissecting room of the School of Medicine. Its glass roof did not afford complete shelter against rain; the heat was



suffocating in summer, and the bitter cold of winter was only a little lessened by the iron stove, except in its immediate vicinity.

— (http://www.aip.org/history/curie/brief/06_quotes/quotes_08.htm).

I've observed many cases through the RMIT PhD program in which developments in architecture and related fields take place in similarly borrowed, unsatisfactory, non-university spaces. We can feel confident from this account I think, that the transient non-institutional, and in many cases sub-standard nature of the studios that venturesome practitioners carry out their early investigations in is in no way a limit on what might be discovered in them. There is a rather urgent need in architecture, art and design disciplines to extract and share those discoveries in a richly simple manner that holds to the conventions of research, if not to those of art theory.

I will begin by distinguishing between project-based and practice-based research. The RMIT design practice PhD examines an already existing body of work, a series of projects that have been recognised by peers (other practitioners) through awards and publications as contributing to the discipline. The practitioner PhD candidate is invited to begin by making an account of the collection of projects that make up his or her practice and this account provides the backbone of a case study of the practice.

Another approach is to examine the field of urges and fascinations of the studio; to ask, 'What is the urge that drives the practice?' or, in other words, 'What is the exedra to the specifics of individual projects that orients the designing and defines its intent, acknowledging that this intent may well remain tacit?' The urge, then, is what drives the designer; and this urge defines, to some extent, the emerging line of inquiry that runs through the practice.

Coupled with this notion of an urge that drives the designer is a corresponding notion of the fascinations that draw him.

New Zealand architect Sam Kobbell is fascinated by the particular narratives of his clients and uses a technique to draw out those narratives, searching for a design 'hook' that locates the design intent of a project. In his work on the Humbug House on the Mornington Peninsula for artist Peter Adsett, Kobbell explains how the conversation between architect and client unfolded in relation to the front façade in which Kobbell's fascination with revealing the extraordinary qualities of the ordinary overlapped with

Fig. 3. Van Den Berghe, J. (2012) Fascination with His Grandmother's House: a series of notes and diagrams of the spaces of Jo Van Den Berghe's grandmother's house as he could recall them many years after the house was demolished.

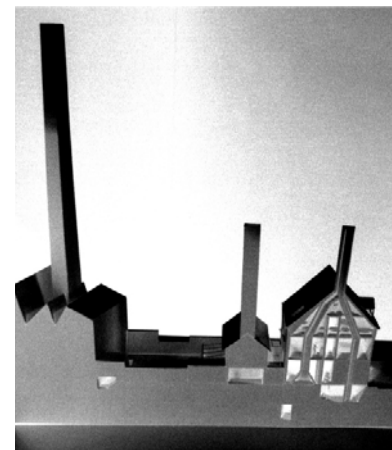


Fig. 4. Van Den Berghe, J. (2012) Grandmother's House Model: a model of the recollected spaces of Jo Van Den Berghe's grandmother's house.

a discussion of the work of Daniel Buren in resolving a balustrade detail. The detail provides also a practical outcome for the artist to sit on the veranda looking back at his work on the studio wall. The vertical black and white lines are then further developed as a technical/constructional detail for resolving the cladding with a shadow joint and cover strip offset in order to create a play of depth in which both the shadow joint and the cover strip (because of its dark colour on a light surface) appear to recede into the background. For Kebbell, then, a fascination with the (extra) ordinary constellates with an urge to materialise in some way an aspect of the narrative that develops between architect and client.

Jo Van Den Berghe discovered in his research an inner and previously hidden fascination with memories of the spatial qualities of his grandmother's long demolished house and the Belgian landscape that demarcated his regular movement between this and his mother's house. Van Den Berghe completed a series of study notes and sketches that evolved into a series of exquisite models that described as accurately as possible those spaces he could recall in detail and leaving blocked out those he could not. These discoveries, even at the time he was producing this series of drawings and models, directly played out in projects on the drawing board, including the restoration of a seventeenth-century boarding school stair in Belgium. Van Den Berghe's PhD exhibition was arranged around a six-metre-long model of a transverse section through the Belgian landscape including his grandmother's house. Key texts and diagrams were then located as sections within this model (Berghe, 2012).

The work of a practice does not take place in isolation, which is to say in the hermetic world of its author; even the simple engagement with a client demonstrates this. A practice is rarely a single person so the author of the PhD who creates a case study of a practice is not involved in autobiography any more than Marie Curie was in describing what she did in her experiments. In research terms, it is necessary to describe what is done and to place the work of the practice within the context of the discipline. It is possible to achieve this in-place contextualisation through referral to the community of practice of the designer; understanding this 'community of practice' in the sense of Etienne Wenger's concept of an actively engaged group of social learners who become also self-regulating (Wenger; 1998). The community of practice concept as it is applied in the RMIT model also expands to include key references to other seminal works – built, drawn, acted, written – that are impactful in terms of the practice under investigation.

My own understanding of the community of practice concept is informed also by the work of Lev Vygotsky (Vygotsky, 1978). In observing the work of practitioners engaged in the PhD through a Vygotskian lens my own conclusion is that development in a design sense is linked to continual shifts in the kinds of intelligence being used for example shifting between a social, material, narrative position. The studio in this sense becomes an apparatus (or, as I have described it elsewhere, an ardent garden) for enabling such shifts.

In addition to the community of practice, the field of fascinations of the designer establishes a broader referential framework for the practice and together the field of fascinations and the community of practice provide a ground in which the practice can be appropriately located and contextualised. It is important to describe these fascinations as a 'field' because the research that has been completed demonstrates that design practice often depends on a diversity of fascinations or what might be described as a knowledge that comes from moving between particular fascinations in response to the specificity of the immanent design. An important aspect is then to ground the work of the practice within the community of practice of the practitioner and to explicate the field of fascinations which draw the designer; as it were, toward a particular strand of investigation.

For Irish architect Steve Larkin, the lyrical and narrative aspects of Irish music provide a field of fascinations, an immersive aural culture that provides an ongoing well-spring for architectural creation. Larkin describes the way in which Irish fiddle playing around the kitchen table works as a dialogue between players rather than as a performance; conversations held in intimate emotive and to some extent indeterminate interiors. The purpose of Larkin's architecture is to create and work with these spatial qualities. The terms 'fascination' and 'indeterminacy' are not referring to any lack of precision but are used very carefully here to explain how one can point definitely toward something that remains to a certain extent inexplicable. It is this choric idea that is at the core of the potency of a field of fascinations for any designer; and that works in a similar way to powerful emblems like the rainbow that, through their indeterminacy, are capable of sustaining ongoing inquiry or, as Philip Fischer described it, wonder (1998).

The notion of an 'urge' refers therefore to a force that is to some extent beyond language, or is at least beyond expression in words. An 'urge' is compelling meaning that it is urgent: it grips us with temporal importance, forcing itself upon us as immediately important. Like an itch, an urge also requires action. Tom Holbrook has demonstrated a deep belief in the social good of the project and an urge to transform infrastructure into habitable and, in that sense, valuable places (Holbrook, 2014). Holbrook's thesis points to the greater social value of architecture beyond the concerns of an immediate commission.

Belgian architect Harold Fallon is fascinated with the poetic texts of Francis Ponge and in particular with his text on soap, in which the text itself works itself into increasingly lathered states as if it, too, were soap (Fallon, 2012). Fallon's fascination with this text has motivated an urge to find architectural ways of working that operate in the same productive way.

The Irish practice TAKA describe the concept of immersive space or, more particularly, of immersive rooms, that drives their work. At the April 2014 Practice Research Symposium, Cian Deegan and Alice Casey (directors of TAKA) described how travel in Asia had been transformative and continues to inform their current practice. Deegan and Casey describe intimate moments, architectural details that fascinated them in their ability to evoke rich associations with the cultures that produced them, each detail operating as a kind of *wunderkammer*.

To conclude then three orders of knowledge can be identified in practice based research: knowledge of the constitution of individual projects; of the practice; and collectively of practices (for a full description please see (Blythe, forthcoming)). These orders, coupled with the concepts of 'urge' and 'fascination' can be useful tools in articulating design practice research.

Clarification: The concepts of 'urge' and 'fascination' in relation to design practice research were developed as a lecture by Richard Blythe, 'The Ticklish Subject of Architecture' delivered at IAAC Barcelona 2013, INDA Bangkok 2013, and VUW Wellington 2014. The lecture was built around a PRS panel conversation between Jo Van Den Berghe and Richard Blythe in which Van Den Berghe added to the concept of 'urge' the idea of 'fascinations'.

Maire Curie in Her Own Words: the struggle to isolate radium. American Institute of Physics. [Online] Available from: http://www.aip.org/history/curie/brief/06_quotes/quotes_08.html [Accessed 2014].

Berghe, J.V.D. (2012) *Theatre of Operations, or: Construction Site as Architectural Design*. Melbourne, RMIT University.

Blythe, R. (forthcoming) An epistemology of design practice research. In: Squeira, J. (ed.) *Architectural research by design*. London, Cambridge Scholars Publishing.

Curie, M. P., Curie, P. & Bemont, G. (1970 [1898]). On a new, strongly radio-active substance contained in pitchblende. In: Romer, A. (ed.) *Radiochemistry and the discovery of isotopes*. New York, Dover.

Fallon, H. (2012) *Metarbitrariness? Doctor of Philosophy*, Melbourne, RMIT University.

Fisher, P. (1998) *Wonder, the Rainbow, and the Aesthetics of Rare Experiences*. Cambridge, Massachusetts, Harvard University Press.

Holbrook, T. (2014) *Between Furniture and Infrastructure: Expanding Disciplinarity*. Doctor of Philosophy, Melbourne, RMIT University.

Vygotsky, L. S. (1978) *Mind in Society: The Development of Higher Psychological Processes*. New York, Harvard University Press.

Wenger, E. (1998) *Communities of Practice: Learning, Meaning and Identity*. Cambridge, Cambridge University Press.

The practice of architecture assembles parts from many disciplines and these can be isolated and studied using conventional research methods. In isolation, however, these disciplines are not architecture, which at its core is the practice of gathering and assembling these disparate parts. While some of these assemblies can be made based on logical decisions, the occupation of architecture is typically unreliable and often unrepeatable, conditions that are a bad fit for conventional research practices. Architects therefore concentrate on the types of occupation that are more predictable (for architecture is made in anticipation of its future occupation) and formalised in what is commonly known as a program. In providing for the activities that those who commission the building wish to take place, there is a danger that such a provision might become prescriptive – that by making some form of occupation possible that activity becomes at least encouraged, if not determined.

There are clear mitigations of such prescriptions. One is the free will of the occupant, who might decline the spatial encouragement to behave in a certain manner or to undertake a particular task. Another is the very unreliability of architecture as an instrument, so that whatever the client or architect's intentions, the translation into material space might discuss something other than what they have hoped. A third is the sensibility of the architect to orchestrate space in such a way that there are multiple possibilities for occupation, including the forms of occupation that are desired. This sensibility is similar to that which is employed to make architectural sense of the assembly of disparate disciplines, except that there are fewer conventions to support such a practice.

How do architects develop and study these sensibilities of assembly and occupation? It is a form of knowledge that is too unreliable to depend on scientific methods (or even those of the social sciences) and as a consequence cannot be taught as a sequence of instructions, for instance as might be the case in mathematics. Instead it is a form of tacit knowledge, which Michael Polanyi describes as 'knowledge that we might not be able to tell' (Polanyi, 2009:p.10). In architecture schools the core of the curriculum is typically the studio, where such knowledge is developed through practice and experience. Yet outside of the studio, this curious capacity is hardly discussed other than in broad terms of creativity, especially in an era obsessed with targets and establishing value by what can be measured. As an aside, the programme of the studio, in its fullness of a space where immeasurable things take place, is one in which architects seem most assured at resolving. Despite the intensely subjective nature of the occupation, the tacit understanding and experience of the sorts of activity that take place in the studio make it accessible to the designer.

Beyond the didactic condition of the studio in architectural schools, how can the architect undertake research in a way that develops tacit knowledge? This question becomes more acute when the research is asking about the sorts of occupation that are



Fig. 1. Author, (2010) Two of four versions of Instrument Five set up ready to throw paint at each other.



Fig. 2. Author, (2010) Instrument Five, high speed flash photograph of paint flying through drawing pieces. The drawing pieces represent the architecture and the flying paint plays out a moment of occupation.

outside of the partial certainty of the programme – the uncertain and indeterminate activities that are so significant in our daily lives. The media through which the architect thinks and tries to resolve the assembly of disciplines are drawing and making (which they rehearsed in the studio in architecture school). The long history of relating technique to content in a range of creative disciplines encourages a speculation in the possibility that while the content might be unreliable, there is a possibility that intellectual precision might be found in the method of studying such content.

To research questions of how architecture might nurture an uncertain engagement with its occupants it would be helpful if the drawing could rehearse a similar sort of liaison where the observer, as with the occupant's relationship with the architecture, is implicated in the drawing's content. Normally when we observe a drawing our part in the content comes through interpretation. Architectural drawings have evolved to convey explicit knowledge so that all the parties involved interpret them in exactly the same way as the drawing's author. To make drawings that lubricate the process of developing tacit knowledge about uncertain engagements we therefore need to develop methods of drawing that are outside of architectural conventions.

When the issue is uncertainty, how can a drawing process or medium be developed to relate to the content with precision? The site of potential rigour would appear to lie not so much with uncertainty but with engagement. Absolute architectural drawings (such as plans and sections) provide opportunities for us to engage with them as we imagine into the delineated territory, but finding rigour in methods of imagination in an already ungraspable territory might stretch plausibility. Relative drawings (such as the perspective) have an established discipline, structure and rigour both in and outside of architectural drawing. One might argue that the relative drawing is also more open to interpretation, but to build on the earlier observations about architectural drawings and to rehearse the sort of open engagement that the research questions require, the other way that drawings can resonate with us is through a spatial relationship. This is harder with normal pictorial perspective, for we are so familiar with such things that

we compensate for our deviation from the normal viewing position. More developed variations of perspective such as anamorphic projection implicate the observer in terms of their particular position in space. Perspective's twin, sciagraphy (drawing the projection of shadows) also offers a realm where the incomplete description might offer opportunities for the observer to engage.

The mechanism of perspective reception and projection that mediates both the author and the observer's engagement with the image is the picture plane, a mysterious surface that only exists as an invisible negotiator. My research asks questions about how drawings might be active in the process of understanding and proposing the more indeterminate dimensions of architecture while at the same time helping to develop methods of creating tacit knowledge. My practice has developed into one of building drawing instruments that, at least in the later versions, provide a phenomenal experience for me during the process of drawing that resonates with the indeterminate aspects that they are representing through their drawings. The picture plane is a continuous site of investigation in these instruments, even though the means of projection varies as they develop.

When talking with the critic David Sylvester in 1960, the American painter Philip Guston stated that 'We were talking yesterday at the studio about the picture plane, and to me there's some mysterious element about the plane. I can't rationalize it, I can't talk about it, but I know there's an existence on this imaginary plane, which holds almost all the fascination of painting for me' (Sylvester, 2001:p.87). As a matter of fact, I think the true image only comes out when it exists on this imaginary plane'. Guston's 'mysterious element' resonates with some of my indeterminate content yet at the same time the nature of the ideal picture plane has been a matter of conjecture since at least Leonardo with a sequence of theories which are debated with proofs and counter proofs. The picture plane has a mysterious potential as it is something we rarely see directly and yet it is apparent through symptoms in the image. At the same time it can be precisely defined in geometry in a way that provides a reassuring locator among all the variables inherent in indeterminacy. The artistic developments that have argued about how much the picture plane should be curved or folded have concentrated on a perceptual accuracy – making the image more true to life. If folding the picture plane has such a capacity, it can also have a critical agency.

My first experiments that studied this potential worked with optical projection of perspective and shadows in Instruments One to Three. These confirmed the discursive nature of the picture plane and ultimately achieved everything I had hoped for through their development, but while working with them it was apparent that there was an unnerving separation between the condition they were trying to discuss and my engagement with them while making the drawings. Light is so unwavering in its reliability that the instruments were helping to develop explicit knowledge (especially about the potential of folding the picture plane as a means of taking possession of content) but less helpful with the tacit. I could discuss what I knew about uncertain conditions but the instruments were not engaged with uncertainty.

Instruments Four, Five, Seven and Eight project latex paint instead of light. They have paint catapults that can throw paint with a reasonable degree of accuracy and repeatability in terms of hitting a specific target, but the nature of each throw of paint while in the air is completely different. This provides a balance of control (these are not random content generators) and uncertainty. I had not previously designed a paint catapult and they turned out to be more accurate than I had imagined, but to a degree that turned out to be helpful. All of these instruments throw paint at a model, called a drawing piece. These represent the architecture and the flying paint takes the place of occupation. The drawing pieces balance figurative representation with an operational



Fig. 3. Author, (2010) Instrument Six, which is able to separate a shadow from the surface on which it would normally land, so that it hovers in mid-air. The instrument works in two modes – through stereoscopic photography and for direct viewing (as shown here).

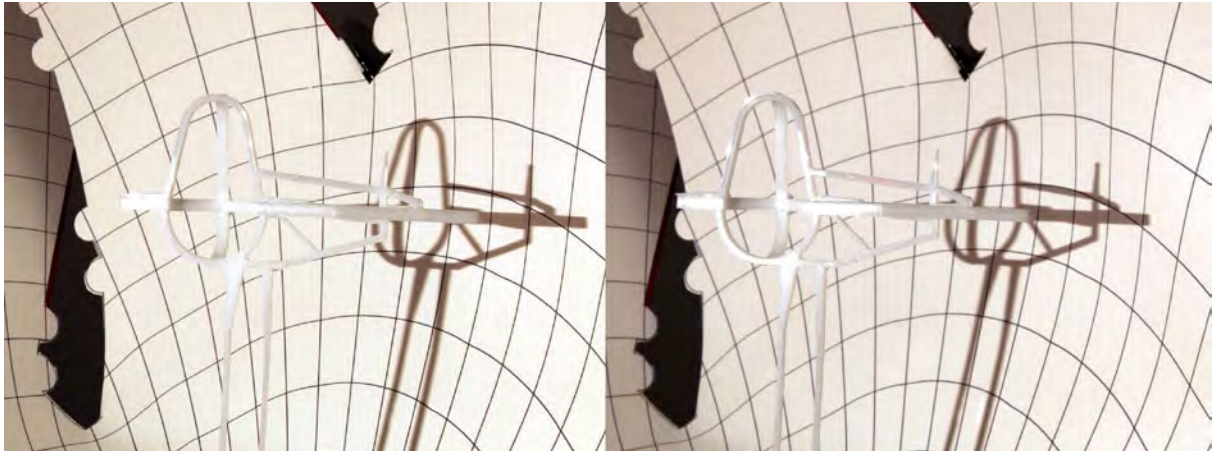


Fig. 4. Author, (2010) Stereoscopic view of floating shadow produced by instrument six. Go cross-eyed until the shadows in the two images register one over the other. You should see three images- concentrate on the middle one. Once you have registered the images, try to relax and the stereoscopic depth should appear and then improve.

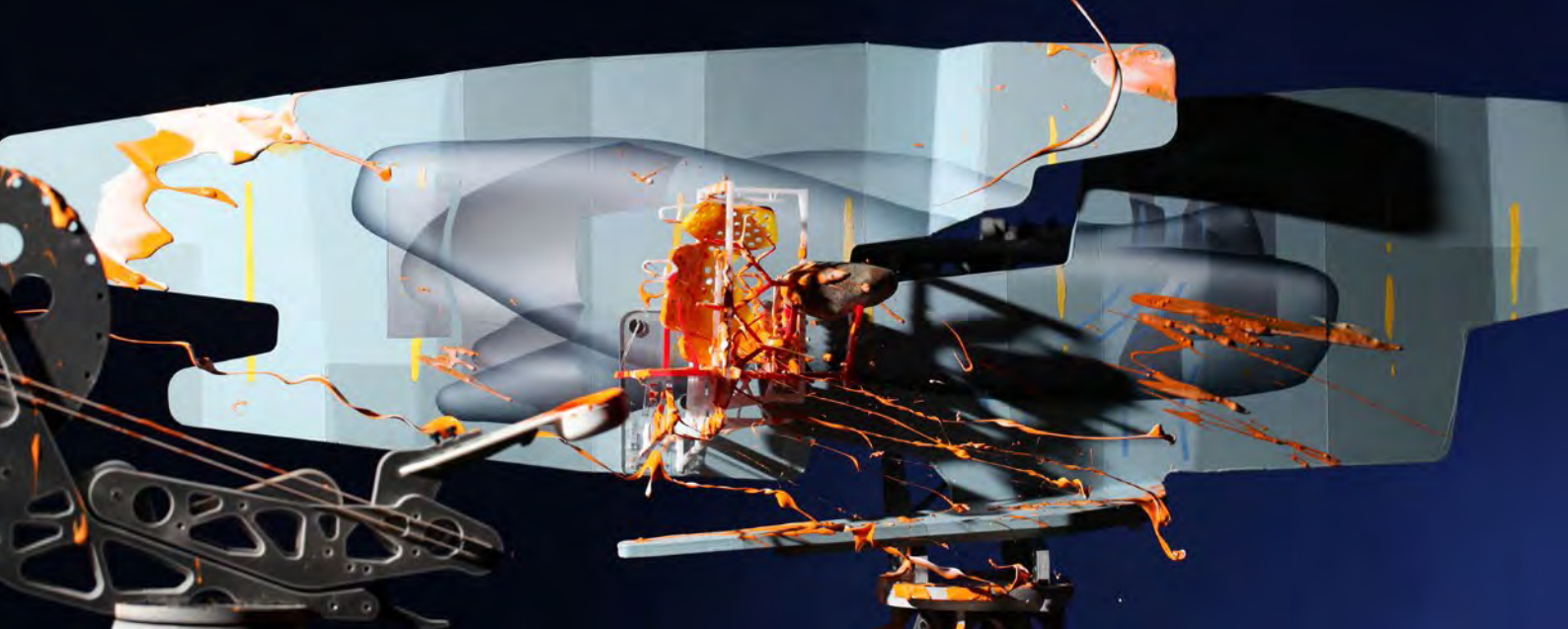


Fig. 5. Author with Kulper, P. (2013) Instrument Eight. Here you see the two instruments set up after throwing paint at each other. You can see the scenes under glass domes that remind those drawing of the content they are discussing.

understanding that they will be occupied with paint rather than scale people, so they have elements that engage the paint, such as comb-like components that, if hit by the throw, hold onto the paint in the way that developed pasta profiles try to hold onto a source, and this might provide a delay in the paint dripping onto the picture plane. While the figure of the optical shadow is always tied to its object and the surface on which it lands (something I challenge by floating shadows in mid-air in Instruments Six and Nine), the splatter that is the consequence of the collision of the paint and the drawing pieces discusses the nature of the coming together more than the figure of the object. Latex paint is thrown because it is a non-Newtonian fluid, like blood. Forensic scientists have algorithms to help them divide narratives out of blood splatter at a crime scene, providing the potential do the same from the latex paint splatter on the folding picture plane behind (Instruments Four and Five) or beside (Instruments Five and Seven) the drawing pieces.

The instruments provides a means of playing out an indeterminate occupation of architecture and the drawings they produce document the consequence of such an occurrence. The flight of paint happens so quickly, however, that the occupation is not seen, which makes it harder to understand the relationship between the occurrence and the drawing as well as to register and reflect on how well the instrument is working. Historically splash and splatter has been researched through high-speed flash photography (pioneered by Arthur Worthington and popularised by Harold Edgerton). When I started to use high-speed flash photography to capture an instant of the occupation (where the paint is flying through the drawing pieces) it not only provided a means of inspecting such a moment, but also added to my indeterminate engagement with the content.

The process of drawing starts with setting up the picture plane in relation to the position of the catapult (on another instrument). By folding the plane in different ways it is possible to provide a critical reception of the splatter; as discussed earlier. Then the paint catapult is aimed, with an idea of the occupation that is imagined but in the knowledge that only part of this is in your control. As with conventional drawing processes, at this stage there is a sense of what is to be drawn and how it might turn out. The biting point of the catapult trigger is uncertain, which increases the anxiety of the moment of drawing as the high-speed flash is triggered manually a split second



after the catapult makes its throw. The anticipation of what will be drawn (and what the photograph will show) is mixed with the excitement that comes from hoping that the uncertainty embodied in the throw of paint might produce something beyond what is hoped for and the realism that comes from the reality that the camera captures only about one in three throws. When the catapult makes the throw there is therefore the question of whether the drawing tells anything but also does the photograph capture the flying paint and if so, does it tell anything beyond what is expected. For the person who draws with the instrument this combination of desires and anxieties can evoke the sort of sensations of the sublime that the drawings are trying to discuss – the rehearsal of content is both through representation and experience.

So that the person who is drawing might retain their concentration on the content during all this excitement there are figurative models of the scenes under discussion protected from the flying paint by glass domes.

The drawings require a level of commitment from the observer to engage with their possibility. The instruments have a straightforward instrumental agency to make such drawings. This is for the person who draws. The instruments also have a role for the observer. As didactic instruments they appear to be about something and provide an intellectual seduction to imagine into what that might be and an assurance that the splattered drawings are about something that deserves indulgence from that person's imagination. Early on in this work I studied precedents where three dimensional picture planes were active in a discussion where a drawing wanted to become space. Among these, didactic instruments such as natural history dioramas and planetarium projectors and screens also revealed the capacity to discuss their specified content but also to do so in such a way that each observer would construct that knowledge as personal knowledge – they are instruments that help the observer to construct tacit knowledge. As constructions they are also captivating and provoke one to imagine into them beyond their academic prescriptions. My instruments aspire to such a performance – they are made with a degree of precision that might inspire confidence that they are about something and therefore help one value the drawings but also help the observer and author to construct tacit knowledge. They do not worry if they are reliable or repeatable in either respect.

Fig. 6. Author, (2013) Nat's drawing from Instrument Eight with flying paint. The drawing piece the that paint strikes to produce splatter is an early model for a house and is made partly as a spatial representation and partly to engage the paint with respect to the content.

Polanyi, M. (2009 [1966]) *The Tacit Dimension*. Chicago and London, University of Chicago Press.

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Design Research in
a Globalised Age

What is the role of design research in the types of insight and knowledge that architects create? That is the question posed in my recent edited book on *Design Research in Architecture* (Ashgate, 2013; see fig. 1). It is a huge subject, not least because of philosophical doubts about the concept of knowledge itself (see Steup & Sosa, 2005). What does knowledge actually consist of? How can we prove that it is new? What is it able to do in the world? How does it relate to our brains and our bodies and our feelings? How does it operate as a collective social process? Yet it is clear that architects have produced, are producing, and will continue to produce a wide spectrum of new insight and knowledge through their design ideas and design practices. As such, architecture forms a genuine discourse *and* field of practice, even if there are a myriad of opinions, not least about how to define what architecture is.

As a working definition, architectural design research can be described as the processes and outcomes of inquiries and investigations in which architects use the creation of projects, built or unbuilt, or else broader contributions towards design thinking, as the central constituent in a process which also involves the more generalised research activities of thinking, writing, testing, verifying, debating, disseminating, performing, validating, etc. Adrian Forty has shown eloquently that architects have deployed a combination of these modes of expression for a long time (2000:pp.11-16). Likewise, design research can blend into other more established research methodologies in the arts, humanities and science, with no intrinsic antagonism. It is vital that the design element and these other modes of research activity and research methodology operate in an interactive and symbiotic manner; with each feeding into the others throughout the whole process from start to finish.

Design research in architecture cannot however be conceived as synonymous with the broader subject of architecture, or indeed of architectural practice; rather, it is a significant seam running through design work with a particular focus on the creation of new insight and knowledge. Here there is a useful parallel with practice-led research in the fine arts, as Jane Rendell (2004) has pointed out. She notes that compartmentalising the four main disciplinary approaches within architecture (building science, social science, humanities and art/design) works against what we realise is the multi-disciplinary nature of architecture generally. Instead, Rendell believes design research offers a means to bring these disciplinary strands together and also - importantly - for them to be able to critique their own methodological assumptions. In this regard, architecture can learn much from the development of PhDs by Practice in other artistic fields. There are many types of design research, just as there are many types of research in physical science or social science or history or fine art.

What, then, can architectural design research offer to our understanding of globalisation? The first point is its importance in revealing the ways that cities are conceived and formed. Design research can best engender speculative thinking and experimentation through engagement with the normative practices of everyday life in the contemporary city. The lineage of thinking about design research I am interested in is deeply embedded in urban analysis, being interested in understanding the commonplace, quotidian elements that comprise cities - rather than the official, privileged, monumental



Fig. 1. Ashgate book on design research, edited by Murray Fraser (2013) (Image courtesy of Ashgate).



Fig. 2. Cruz, E. T. (2001 onwards) Casa Familiar: Living Rooms at the Border, San Ysidro in southern California (Image courtesy of Estudio Teddy Cruz).

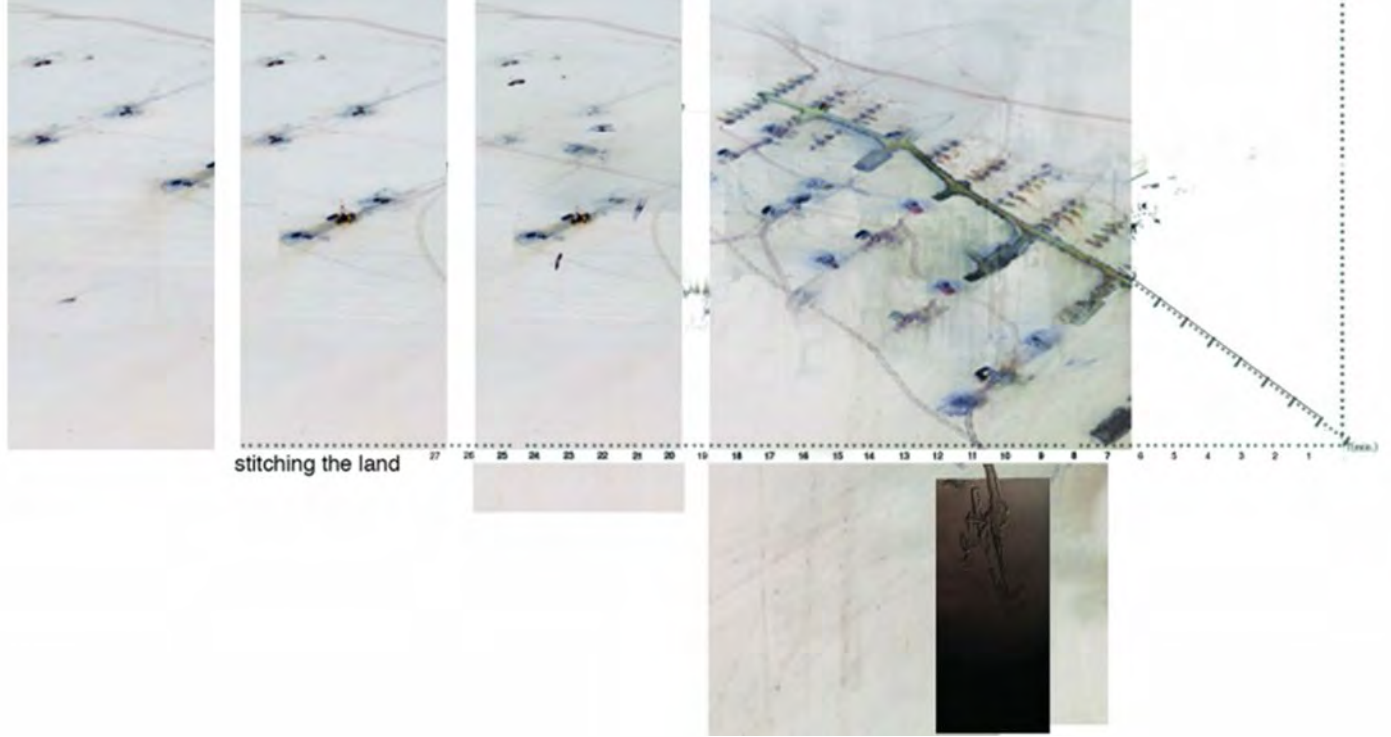


Fig. 3. Sharif, Y. (2012) Conceptual drawing for stitching the divided landscape of Palestine/Israel (Image courtesy of Yara Sharif).

spaces inhabited by elite groups. By definition, this attitude to design research brings into play a broad spectrum of social, economic, political and cultural issues. It also turns itself away from a more internalised form of discourse about architecture (e.g. theory/representation/meaning) in favour of analysing the social and cultural inequalities and clashes found in present-day or future cities. In turn this shifts the locus of agency within design research from the architect's individual contribution to the collective processes and spaces of our metropolitan life.

When analysing cities today, it is the processes of globalisation which predominate. I am not a fan of the usual definitions of globalisation within architectural discourse. Critics have rightly warned of the danger of treating globalisation as if it were a natural and inevitable process (Picon, 2010). But it seems equally dangerous to portray globalisation as merely a construct of neo-liberal economics which architects have to decide whether to 'react against', 'work within', etc (for an example of this conceptual error see Davidson, 1998). What is needed instead are ways of talking about globalisation that do not play into the hands of the powerful elites which currently dominate global capitalism - our aim should be to pull apart the material and ideological mystifications of globalisation.

We have to do this because globalisation, however defined, is the crucial transformation of our age. All other issues, including our widespread worries about climate change and loss of biodiversity, follow in its train. Yet it is equally obvious that architecture still has a difficult time in adapting its discourses and practices to suit global conditions. What is often referred to as architectural globalisation often doesn't have much to do with it, or else stems from its least interesting or appealing aspects. Instead, we need fresh thinking about architectural globalisation by changing our conception of scale away from the dimensions of form and space, to the dynamics of form and space.

Urban theorists like Doreen Massey or Manuel Castells have argued that there is a complex interlinking process, and indeed a wrapping together, of the local and global in every place in every city (Castells, 2009; Massey, 1994, 2007). Yet this message hasn't quite penetrated into architectural thinking. Hence I would suggest that it is better now to drop the schema of local/global, or 'glocal', or whichever term, and instead start

to conceive of globalisation as an absence of restraints rather than something that possesses any specific scalar properties. If globalisation is seen more as a void or vacuum which provides spaces for things to happen in, then scales become endlessly intertwined and superimposed on each other. The concept seems closer to space-time in advanced physics, or Deleuzian assemblages, or the highly mutable software of contemporary computer-aided design. It also allows that there will continue to be endless urban variations across the world, as well as myriad smaller urban variations within every city, never patterns of fixity. The dropping of the binary terms of local and global also gets around the impossibility - indeed danger - of trying to define what might be classified 'local' or 'global' today in a multicultural city like London, or the thorny problem of deciding who can claim authority to give phenomena one of these binary classifications.

Intellectual support is provided by Teddy Cruz (see fig. 2) - a Guatemala-born architect who operates in San Diego and Tijuana on either side of the US/Mexican border - when discussing the tasks facing architects today:

Architectural practice needs to engage in the re-organization of systems of urban development, challenging political and economic frameworks that are only benefiting homogenous large-scale interventions managed by private mega-block development. I believe the future is small, and this implies the dismantling of the LARGE by pixilating it with the micro: an urbanism of retrofit.

— (Cruz, 2009)

Cruz's neighbourhood-level projects chime closely with the complex hybridity of what Lefebvre described as 'planetary urbanization', rather than the outdated notion of treating cities as single entities. This is not to make the argument that 'small is beautiful', but rather to recognise the sheer intricacy of contemporary urban conditions. A generation ago, Kenneth Frampton wrote of oppositional projects as representing 'urban enclaves' that sought to resist but could never grapple with the increasingly dominant consumerist culture, as if their small size was an inherent problem (Frampton, 1980:p.297). But now with increasingly relevant theories of the disproportionate power of 'small change' from theorists like Nabeel Hamdi, we no longer need believe in Frampton's implicitly pejorative reading of architectural scale (Hamdi, 2004, 2009).

From a more political slant, I would mention briefly my own work with the Palestine Regeneration Team (PART), set up in 2008 with Yara Sharif and Nasser Golzari (Palestine Regeneration Project, 2013; Golzari & Sharif, 2011). We are involved in intertwined projects in Palestine, both of the 'real world' constructed variety - such as renewing the historic centre of Birzeit with Riwaq: Centre for Architectural Conservation, a Palestinian NGO - and other schemes which are open-ended and speculative. PART uses all types of design research and architectural projects to enact spatial changes, hence opening up new spatial possibilities within the ongoing Palestinian/Israeli conflict. The aspiration is to repair some of the violent fractures caused by years of Israeli occupation, and to help empower Palestinian communities. In this bitter confrontation, where the map on the ground is becoming ever more disconnected and fragmented, it is crucial for architects to define their role. Between existence and co-existence there is a thin line that manages to separate not only Palestinians from the Israelis, but also Palestinians from themselves.

Yara Sharif created a challenging body of texts and projects for her PhD by Design at Westminster University in London, which I supervised (see fig.3-4). Sharif embarked on a fertile process of testing, mapping, designing, building and reflecting, and she defined her intentions in this way:

Looking at the dialogue of daily resistance also shows that within the current Israeli policies of hardening the border zones, the quest for a counter-space is carving out new cultural and urban realities against the forces of power. Perhaps the most outstanding

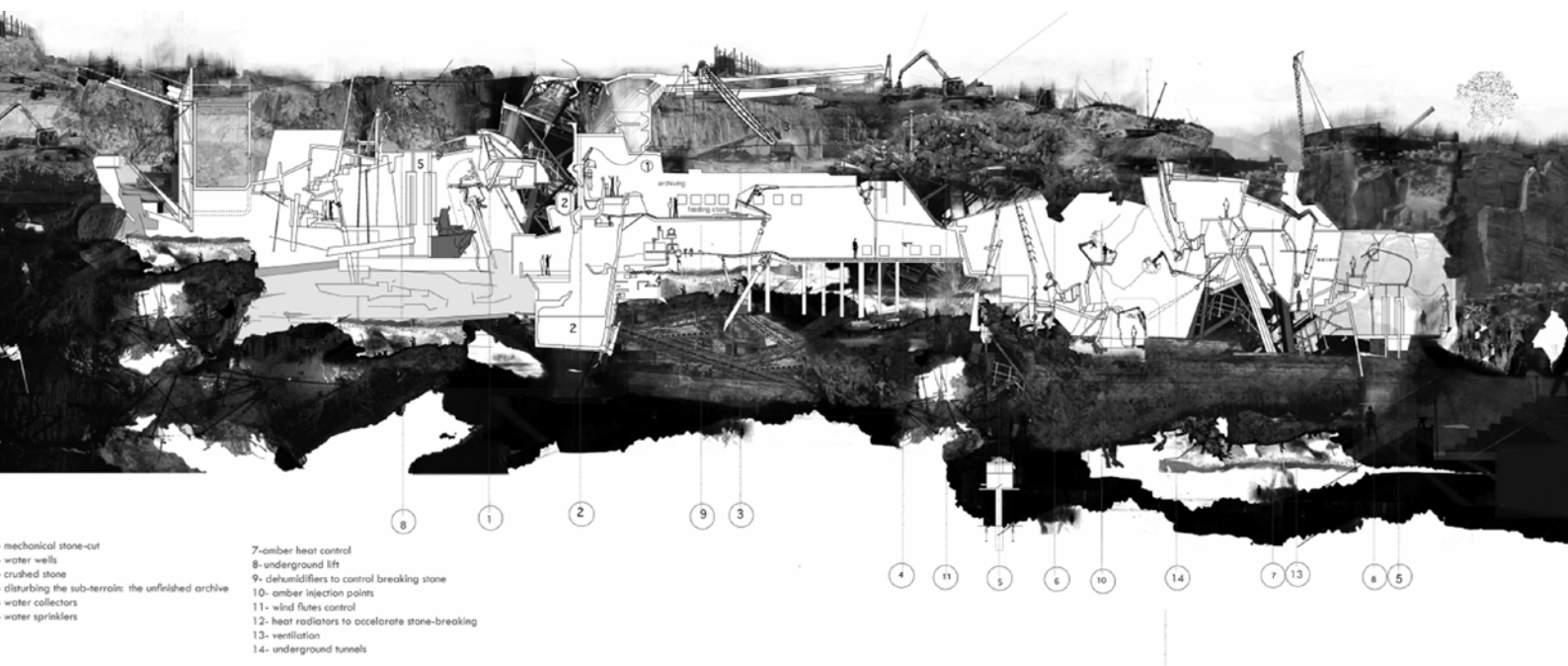


Fig. 4. Sharif, Y. (2012) Inserted structures which reoccupy the abandoned stone quarries of the Palestinian West Bank (Image courtesy of Yara Sharif).

outcomes of this reality are the everyday forms of Palestinian spatial resistance, which is recasting the geo-political map of Palestine by displaying creative tools that architecture and planning have so far failed to match. The emergence of small-scale Palestinian networks seems to be able to overcome and adapt to the situation, and as a result they can redefine the meaning of the built environment around them. These collective and informal networks/events are now also drawing their own lines for a new kind of thinking within architecture. Ostensibly, their task is to subvert spaces of pure oppression and change them into spaces of play and creativity so that social life can be recuperated.

— (Sharif, 2012:p.1)

Discussions with Palestinian groups gave Sharif the insights to identify the pressure points of tension and opportunity, many located near the notorious 'Separation Wall' erected by the Israeli government (see fig. 5 & 6). As she notes:

My design interventions - or more correctly the moments of possibility I have proposed in this thesis - may not hold the full answer or the solution for the Palestinian/Israeli conflict. However, they do illustrate how one could begin to pick up on a very simple detail from daily life and celebrate it, and then turn what might seem a very normal observation into a subversive concept, and then after that turn this concept into a tool, and that tool into a design proposal. Indeed, my wish is to argue that resilience as a way of life is not necessarily a form of giving up or accepting facts on the ground, as many might argue. Instead, it can be a creative tool of resistance when backed up with a clear strategy, such as can be provided - as shown here - by innovative architectural design proposals.

— (Sharif, 2012:p.293)

In one of her projects, Sharif addresses the destruction of much of the West Bank's land surface by stone quarries - some owned by Israeli companies, but most by Palestinian entrepreneurs. So lucrative is this trade that stone is nicknamed 'white gold' or 'white oil'. Whoever profits from these quarries, the brute reality is that the stone is mostly being extracted (an estimated 75% of it) to build illegal Israeli settlements in the West Bank, or to turn Jerusalem into a monocultural Jewish capital, the proverbial 'city of stone'. In parallel, the monopolisation of water resources in the West Bank by Israeli companies, with piped water sold to Palestinian citizens at a far higher cost than to Israeli settlers, is exacerbating the danger of water shortages (especially clean drinking water)

for West Bank Palestinians. Sharif imagined a future for the abandoned stone quarries where they are re-occupied by Palestinian groups who install networks of absorbent sponge bags to capture the rainfall and ground water before it filters down to the aquifer and gets tapped off by Israeli water companies. As a secret act of re-colonisation, these clusters of bags and reused underground spaces suggest sumptuous and subversive counter-spaces. It is a striking example of how local and global issues can be invoked within the same process of design research.

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Fig. 5. Sharif, Y. (2012) Long section through the reoccupied stone quarries [Image courtesy of Yara Sharif].

Abstract

Events such as the Venice Architecture Biennial place exhibition designers in the challenging position of working between the ephemeral exhibit and the more enduring remote sites it represents. This negotiation between the fleeting nature of installations and architecture's supposed stasis allows us to rethink how the slow time of the built environment intersects with the varying temporalities of historical, aesthetic, and embodied daily events in order to construct a theory of architectural performativity, which can be revealed and experienced within the exhibition itself.

Through my own collaborative practice of designing performative spatial exhibitions, I take on the role of curatorial provocateur in order to challenge the mimetic nature of exhibits and explore an interplay between the presentational, representational and re-presentational. This is enacted through a theory of 'spacing' – as a doing (action) and a thing done (artefact) – that facilitates the creation of specific conditions, which challenge viewing privileges and power relations as well as preconceptions around architecture's processes and practices. Acknowledging that places and things precede action – as action – enables an orchestration of varying elements in-motion that play not only on the eye but also on the senses and the psyche of the most important and unpredictable element in the event – the restless collective referred to as spectators, inhabitants or visitors.

Elsewhere

The major challenge for curators and designers of architectural exhibitions tends to be how to reconfigure archival information in order to display that which is unbuilt, long gone or far-flung: to bring the 'elsewhere' into the here and now. The emphasis is on representation and includes substitutive processual remains of pre and/or post-documentation – bracketing the thing itself – as critical to communicating the imagined, remembered or remote. For designers, showing 'what could have been or could still be' is often as critical as 'what once was or is now'. This allows for design to occupy that oscillating territory between action and artifact – between the speculative and the accomplished, linking it to Elin Diamond's description of performance as 'that risky and dangerous negotiation between a doing... and a thing done' (1996:p.5).

Considering the exhibition of architecture as a performative medium, 'spacing' is here posited as both its representative act (a doing) and embodied experience (a thing done) in order to expose constructed space as a complex and multilayered event that integrates many virtualities within the material reality of a here and now.

As a scenographer and theatre architect, I practice between the creation of ephemeral events and enduring structures, in which the former generally becomes a means of testing the latter. One of my ongoing projects is to develop and explore the notion of *event-space*, emphasizing how the built environment housing an event is itself an event and an integral driver of experience. Bridging performance and architectural theory, event-space provides a means for exploring spatial performativity generally and performance space specifically: asking not what architecture-as-object

passively is, but what as dynamic-space it *actively* does. Through performance theory my research-led design practice extends beyond the fields of theatre and architecture to include installations, exhibitions and interventions that establish animated nodes for experimentation, critique and debate.

This paper therefore negotiates between performance and architecture – the event and its spatial domain – in order to theorize strategies for designing exhibitions and exhibiting design. As a volatile nexus where the spatial, visual and performing arts meet, the temporary installation provides a potentially dynamic arena for exploring, analysing and proposing more permanent constructions as well as challenging established spatial practices and typological assumptions. The projects referred to here – *Landing: 7 Stages: Aotearoa/New Zealand* (1999), *Srdce: The Heart of PQ* (2003), *DisPlay: re-membering a performance landscape* (2004) and *Now/Next: Performance Space at the Crossroads* (2011) – span twelve years and were created for the *Prague Quadrennial* (PQ): This 4-yearly global meeting ground in the Czech Republic's capital has been exhibiting *Scenography and Theatre Architecture* since 1967 and, in 2011, changed its descriptor to *Performance Design and Space*: a development illustrative of regarding performing arts design within an ever-expanding field. Each project – NZ's national exhibit in 1999, PQ's central thematic installation of 2003 (re-presented in Wellington in 2004), and the 2011 international architecture section – attempts to incorporate the spectator as embodied participant, inviting fellow exhibitors and visitors to approach the exhibition site as a found-space for communal action and re-action. All are linked by the table as a spatial locus for corporeal engagement and shared interaction.

Over the last 15 years my challenge – as performance designer, theatre architect and exhibition curator – has been how to facilitate and communicate 'being there' in live events and lived spaces as well as utilizing temporary installations for proposing alternative models, while considering what I'm increasingly regarding as the 'dead air' of enclosed stages and exhibition halls (albeit the majestic enfilade within Venice's Arsenale or the varying pavilions of its Giardini) (Brown & Hannah, 2014). Although linked to the creative arts, such environments and the tacit spatial practices they engender are highly disciplinary, extremely regulated, and sociologically limited in the audiences they attract. How can we activate these spaces in order to challenge and engage with the bodies and minds of those who pass through them?

Being There

Performance's only life is in the present. Performance cannot be saved, recorded, documented, or otherwise participate in the circulation of representations of representations: once it does so, it becomes something other than performance.

— (Phelan, 1993:p.146)

Performance theorist, Peggy Phelan, has famously referred to the ontology of performance as a disappearing and unrepresentable act: a statement that seems to stand in opposition to architecture's enduring constructions – typically designed, built and communicated via conventional strategies of representation. Yet both architecture and the performing arts present challenges to the exhibition curator and designer because, unlike art objects produced specifically for display in galleries (painting, sculpture, media and even performance actions), they tend to be *presentational* events sited *elsewhere*, which are initially shaped from *representational* practices that persist as potential exhibition material. Constructed environments and staged events operate principally as site-specific spatiotemporal experiences and any attempt to archive, record, document or represent them will always be representational (constative) rather than presentational (performative) (see Austin, 1975). Following Phelan's argument, architecture, like

performance, is properly experienced in the 'now', and archival remains – including models, drawings, animations, photographs and even videos – constitute comparatively limited mnemonic devices that cannot replace the performative force experienced primarily through embodied inhabitation. This connection between past performances and remote spatial experiences renders architecture a complex event that we often seek to reconstruct in online and offline publications through various written and visual texts, which allow us to enact a virtual inhabitation. However the exhibition as an 'other' form of architecture provokes the ability to communally move beyond representations.

By delineating the performative aspects of the *presentational*, *representational* and *re-presentational*, strategies can emerge that fold other artist-designers into the exhibition as dynamic landscape, encouraging individual responses and spontaneous communal encounters, thereby complicating Phelan's assertion that representation is "something other than performance". Through the performative exhibition, designers can be figured as curatorial provocateurs able to test and play out their own ideas within an environment in which the passing public is invited to take part.

In New Zealand – still constructing itself as the *Last, Loneliest and Loveliest* place on this planet (a mythopoeic identity globally reinforced, not by delicate pacific structures in a precarious landscape but by Peter Jackson's fantasy films and our government's dodgy *100% Pure campaign*) – spatial and performing arts students as well as practitioners tend to glean an understanding of influential environments and events from books, magazines, online media and descriptions by those who were there. These representations act on *behalf* of the absent original through speculative design (as a pre-making) and documentations of the process and its production (as a re-making). Theatre has long been linked to the representational, often considered an etiolated version of reality, in which something is lost and the power/presence of the original is diminished. However the avant-garde of 20th century theatre resisted representation as mimesis, revealing its complicated relationship to reality. We are now aware that, while reflecting, portraying, or substituting the real, representations can be more real than the reality to which they refer, as witnessed by Jean Baudrillard's theory of the *simulacrum* (1988). Our fluctuating present is therefore saturated with multiple and mutable virtualities that enfold the past and harbor futurity.

Documentary representations always stand in for the missing spatial event, which is originally experienced in the present and therefore in presentational form. As both method and deed, presentation is predicated on live action; from the delivery of information and entertainment; to the bestowal of a gift. As the thing itself, presentation – a making-present in the moment of reception – is aligned to Phelan's unrepeatable and unrepresentable act: also asserted by last century's theatrical avant-garde. The performance event is therefore presentational, just as the art object is within a gallery context or architecture is through its lived occupation.

However, approaching the exhibition of remote and/or vanished acts by way of (re)/re-presentation allows them to remain performances and architectures, albeit versions offering new experiences while recognizing the impossibility of ever fully grasping that which they stand in for. So rather than creating 'something other than performance' or 'something other than architecture', the exhibition as event-space becomes the locus for a discourse on *presentation* and *representation* through *re-presentation*: a domain for rehearsing new spatial forms and relationships.

As a hyphenated or bracketed word, re-presentation/(re)presentation is the hybrid expression that negotiates between presentational act and representational facsimile: acknowledging that with each repeated encounter we discover difference. The hyphen/bracket, referred to by Derrida as a form of 'spacing' – "speak[ing] the articulation of

space and time, the becoming-space of time and the becoming-time of space” – sets things in motion (1997:p.68). Such punctuation is intentionally added to destabilize ‘representation’ as a reflection or transparent record of ‘reality’, suggesting that no re-presentation can be absolutely objective or universal. Critical theory suggests that we only know the world through re-presentations that allow us to access events and physical reality. Operating between ‘fact’ and the ‘ideal’, re-presentation is a presentational act of representation and therefore renders the copy performative by re-working it as an original. As ‘spacing’ the performative exhibition includes the makers’ originary act and the inhabitants’ participatory occupation: highlighting the ‘taking place’ of architecture as a potent and multiplicitous event (Derrida, 1997:pp.324–36, 320 & 335).

In recognizing that architecture ‘performs’ and that places and things precede action – as action – *spacing* becomes the active means of enabling the lived experience to persist in exhibition. It operates across the performative aspects of the *presentational*, *representational*, and *re-presentational* with strategies that create not ‘something other than performance’, but new unique productions as alternative performances.

Considering Phelan’s refutation of archival performativity, alongside Boris Groys’ statement in ‘Politics of Installation’ that the curatorial act both cures and corrupts the exhibited object (2009:p.2), offers new forms of curatorship and exhibition design. While the word curate conventionally refers to the *carer* and *curer* – the keeper, overseer, and custodian – designing exhibitions and exhibiting design provides an alternative and oppositional form of curatorship in which the exhibition design plays the corrupter, contaminator, and infector... the dis-easer. Although the conventional curator is guardian of the artifacts that have to be housed, treasured, and preserved (keeping in check their physical and memorial decline), to curate performance and architecture is to capture the ineffable, to house the un-housable, to reproduce through a contextual shift that which is absent or already long disappeared as well as beyond immediate and easy comprehension. The act of re-designing is therefore *critical* – as in dangerous, discursive and urgent.

The following projects not only play out the question of how to re-perform past events and remote sites by incorporating the participatory spectator in the exhibition site as a found-space for communal action and re-action, they also constitute spatiotemporal research for practicing future architectures and performances.



1999: Landing: 7 Stages: Aotearoa / NZ

In New Zealand the term ‘curator’ also applies to one who prepares a sportsground – a groundsman – suggesting a form of staging that is linked to landscape. New Zealand’s national scenography exhibit at the 1999 Prague Quadrennial was comprised of an architecturally scaled table, referring to vessel, jetty and terrain, which landed in the Quadrennial’s exhibition hall. As a site of collaboration, colonization and negotiation, the table formed a gathering ground for displaying past theatre events. Curating and co-designing this exhibition, I asked New Zealand designers what would they bring to the table that was ‘of this place?’ The result was an eleven-legged table with seven settings that presented seven productions in varying scales and methods, each individually lit from a central shaft of light that ran the length of the tabletop, based around Colin McCahon’s painting *Light Falling Through a Dark Landscape* (1972). The installation invited visitors to physically engage with the site, briefly forming small communities of embodied participants within the work. Only through such engagement (sitting at the chairs provided and opening drawers, turning pages, manipulating a magnifying lens etc.) could the displayed projects be apprehended.

The varied installation responses from designers selected by a national jury included; a flipbook showing the visual score for the premiere of a new opera produced by



the NZ International Arts Festival; a suitcase full of neon light and memorabilia from an interpretation of Puccini's *La Bohème*; a smooth undulating contour that rose out of the table's surface replicating a timber set designed as landform and whale-back; a Samoan kava bowl filled with water and moving images of dancers projected from below; a wooden tripod that pierced the table's surface to hold a model for a bicultural performance, its position deliberately denying the seated view at the colonizer's table; and my own costume designs for *Ricordi* (another premiere commissioned by the NZ International Arts Festival, 1998) re-presented as curious assemblages in large glass jars filled with oil and remnants washed up on the sewing room floor and lit from below.

The work exhibited in *Landing* negotiated between the representational and re-presentational. However, the exhibit itself was presentational with the performative landscape of the table harnessing and including the visitors' bodies, which were incorporated within the work and thereby necessary to completing the installation.

2003: *Srdce: The Heart of PQ: A Performance Landscape for the Senses*

The success of *Landing* at the 1999 Prague Quadrennial led to a commission from the Czech Theatre Institute to design the central thematic exhibition for PQ 2003. I therefore formed SCAPE @ Massey (a design studio for Social Cultural & Performance Environments) to develop *The Heart of PQ: A Performance Landscape for the Senses*. This resulted in a site-specific installation, located in the Middle Hall of Prague's Industrial palace, where we sought to dispense with all representation – models, artifacts, images – and present performance as a 'lived experience' upon terrain that offered a site with multiple places for performance, spectatorship and participation. Within this complex three-dimensional labyrinth, constructed of sensory towers set in an undulating landscape, theatrical space was discovered, and shared by practitioners and visitors alike. The aim was to challenge and eliminate the borders that traditionally exist in theatre so that new relationships could be explored between the embodied and the built, between the viewer and the viewed, between the designer and the director, between performers and audience. The performance landscape emerged through a global collaboration with interdisciplinary performing artists, via a number of situated workshops in Europe, leading to a range of dynamic spatial conditions for corporeal exploration in real space and time.



The installation as intersectional gathering ground was composed of five scaffolding towers, organized around a long table and bound within an abstract landscape of timber planks rising from a platform/stage. These structures formed containers for each of the (uncontainable) senses (smell, hearing, taste, touch and sight) to be enfolded with performance. The *landform* of undulating platforms rose up to the *threshold* through which the public enters; a multileveled archival wall made of cubby-holes designed as a repository for the senses. Below the landform, at its highest point, lay a subterranean space that could be accessed from two of the containers and the threshold wall. The scaffolding *towers of the senses* were 2.5m wide, 12m long and 9m-11m high, each one individually developed with a performing arts group from South Africa, the Pacific, Asia, Europe, North America, Kazakhstan and Russia. The central theme for this purely presentational exhibit was *containment and contamination*. In maintaining that performance can never be truly contained and that the performing body is a contaminating agent, these sensory vessels either opened out to or enclosed their surroundings, forming zones of action within a chaotic market place composed of varying and overlapping temporal rhythms.

The process, which focused on design representation in the studio and embodied re-presentation in project workshops, evolved over nearly three years as a collaborative investigation into the dynamics of theatrical space and the sensory body. Architecture took on the role of provocative agent rather than passive receptacle, through a studio project (run at Massey College of Creative Arts), a series of performance workshops (in Germany and the Czech Republic) and ongoing global dialogue between international artists (via fax, phone and email). The installation constituted the final workshop, inviting spontaneous performance explorations and a physical engagement by the public. This hybrid *sceno-architecture*, negotiating scenography and architecture, challenges both disciplines as well as our perceptions of space-in-action. As a complex landscape, with its towers and folded ground, it established a contemporary 'Babel' where language, culture, and performance were shared, contested, and negotiated.

The Heart of PQ was on one hand, a utopian idea fated to fail and, on the other hand, a dystopian experiment where failure was productive. Differing languages, cultural practices, and spatial conventions led to misinterpretations during the process and the production. Like the mythical city of Babel it proved an unsustainable dream, resulting in confusion, tension, and the pervasive threat of collapse. Yet within this provisional and

purely presentational environment, negotiating between architecture and scenography, resides the promise of architecture's inability to behave with propriety and the performing body's refusal to be securely contained.

2004: DisPlay: Re-membering a Performance Landscape

The challenge for the design team working in an international environment was to re-present the *Heart of PQ* back in the local New Zealand context by creating an installation in Wellington City's Art Gallery during the 2004 International Festival of the Arts.

DisPlay: Re-membering a Performance Landscape set out to playfully examine the ways in which a past performance event might be conveyed in a specifically gallery setting. It incorporated fragments of our design process, which included processual imaginings of the event design (3-D digital and material models, plans and perspectives), as well as still and moving images capturing its myriad performances. The strategy was to establish a white abstract landscape as a walk-in diorama, constructed of two undulating strips, that re-membered *The Heart of PQ*. This allowed the visitors to physically occupy the space in order to discover fragments embedded within the display and thereby find themselves on the stage itself reconstructing a body of work. A larger scale model, with soundscape and video projections, complemented the working maquettes hidden in the landscape. It was housed as a smaller diorama within a black box that could be viewed through a square window or peepholes on the side. In this way the prospective and retrospective merged to create a fractured archival experience in the moment.

DisPlay aimed to emphasize the engaged and embodied nature of performance design, with specific reference to the *Heart of PQ*, as a place for direct communal interaction in a time when communication was becoming more and more disembodied. Hélène Cixous's words reiterated this in a line of text wrapping the gallery walls:

In truth we go as little to the theatre as to our heart, and what we feel the lack of is going to our heart, our own and that of things. We live exterior to ourselves, in a world whose walls are replaced by television screens, which has lost its thickness, its depths, its treasures, and we take the newspaper columns for our thoughts. We are printed daily. We lack even walls, true walls, on which divine messages are written. We lack earth and flesh.

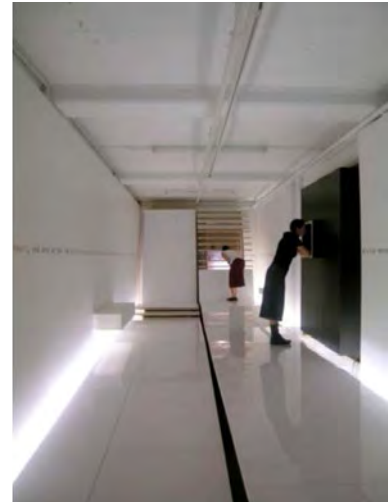
— (Cixous, 1995:p.341)

The design strategy was to provoke the audience into piecing together fragments of models and moving images viewed from a platform on which they became performers themselves, distracted in the process of actively creating their own unique interpretations of a past event. The otherwise passive viewer became an incorporated and active participant in the re-membering process.

2011 : Now/Next : Performance Space at the Crossroads

The most recent project in this ongoing investigation into the performative installation is the architecture section, designed and curated for the last Prague Quadrennial in 2011. Titled *Now/Next: Performance Space at the Crossroads*, the 10-day exhibition was sited at the literal *Prague Crossroads* in St Anne's church (established by former Czech president, dissident, and playwright, Václav Havel, for creative global dialogue that respects cultural diversity), and at the metaphorical crossroads between performance and space, theatre and architecture, environment and event, body and building.

Designed around an Open Spatial Laboratory, *Now/Next* reflected on the



architectural future of theatre and allied performing arts and what influence emerging spectatorial practices, performance genres and distribution technologies might have on performance space itself, no longer necessarily containable by the dark and disciplined stages in which they are traditionally bound (as proscenium arch auditoria or black box studios). The exhibition as an extended event inquired into how spatial artists and architects might imagine spaces or scenarios capable of transforming and re-inspiring public interest in live performance and whether such environments or interventions can influence and interact with the design of cities and landscapes as well as how theatrical events are produced and experienced.

The installation was composed of two parts – the National Exhibition on the ground floor (asserting what performance space is *Now* after the first decade of a new century) and the Spatial Laboratory upstairs (exploring what it could be *Next*) – both spatially connected by a 10-metre high Media Tower; deliberately obscuring the venue's stage, where collaborative projects, which negotiate the *In-Between*, were presented in moving images: these included choreographic dialogues with architecture; temporary performative pavilions; spectacular transformations of urban facades and city squares; fleeting constructions in remote landscapes; theatrical interventions to public buildings; and behavioral structures that respond to human movement, sound, and breath.

Asserting theatre architecture as a 'live space', the exhibition's curatorial statement encouraged participating countries to present their own concept of what (a) theatre is *here* (of a particular place) and *now* (of a particular time):

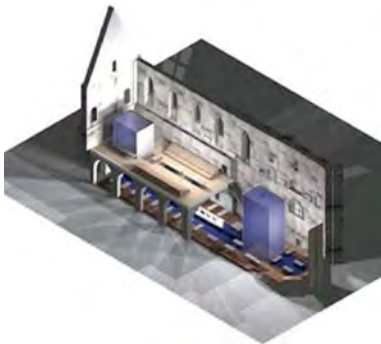
In this age of global media events, new technologies, shifting performance genres, and local festive expression each nation is asked...

...what is the contemporary place of theatre in your country?

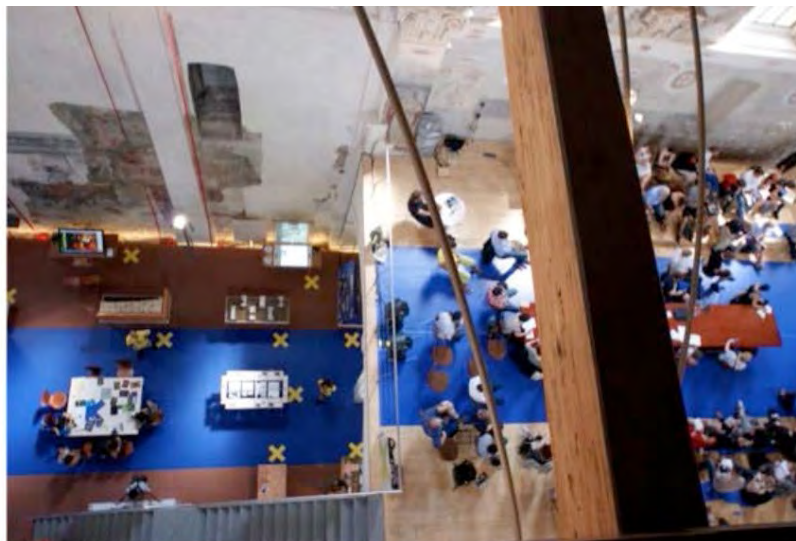
During the first decade of this new century, what active roles have performance environments played in shaping theatrical events and local cultures? What spaces were constructed (built), performed (improvised), or imagined (unbuilt)?

— (PQ'11/Hannah, 2010:p.4).

Each national curator was provided with a specially designed plywood table (finished with a whitewashed wax), available in varying heights, and encouraged to adapt or re-create this spatial site fitting within the 750-1800 footprint. Thirty-two countries from Asia, the Americas, Australasia, the Middle East and Africa responded by incorporating sound, light, objects and still/moving images: their designs ranging from embedding monitors, drawers and light-boxes; to generating performative objects that shook and rotated; to deconstructing the tables (one incorporating a live axolotl in a tank and another breaking up into a stage that was reconfigured around Prague); and even discarding the table in favour of a prayer rug (the only one that defied the overall orthogonal placement in order to face Mecca).



Returning as a performative locus for re-presenting work, the table could incorporate archival representations of *pre-making* and *re-making* where constructed environments are speculated, recorded or reinterpreted. It also provided a site to animate with critical performances: most profoundly expressed with Italy's shuddering *The Table Decided to Show Itself* and Lebanon's discursive *Mosquée del Mondo*, which augmented Aldo Rossi's *Teatro del Mondo* with minarets to proffer a floating platform for geopolitical debate. Intended as an intimate piece of architecture that engages directly with the body of the viewer; the table allowed curators to encourage visitors to linger and engage more directly with the work – once again becoming implicated in the presentational space of the exhibition as event. As with New Zealand's *Landing* exhibit designed for PQ'99, the tabletop provides the conditions for a miniaturized performance landscape upon, under; and around which spatial propositions can be played out.



The table is also where we communally create and can hotly debate the future of performance space and place pressure on contemporary theatre architecture, which appears to be failing performers and audiences who refuse to be contained by its spatial and dramatic conventions. Upstairs the 10-day international Spatial Laboratory – accessible to theatre professionals and the public while doubling as a venue for public lectures, symposia and reviews – operated principally as an open studio for 18 young scholars, designers, and performance-makers to work with professors and professional experts on the social, cultural, and political potential of performance space as both a global and local venue for creative, civic, and communal expression. Utilizing existing rostra and furniture I created a transverse setting with terraced seating either side of a long table that faced a smaller projection tower and operated effectively for the opening and closing feasts. This flexible arrangement rehearsed an alternative auditorium format, which was interestingly broken by those convening architectural symposia, who returned the setting to rows of seats facing the screen.

The 'x' in the *Now/Next* signified the crossing of languages, cultures and art forms and referred to the crossroads of the site buried within the labyrinth of Prague's Old Town. This signifier became a major element in the exhibition's spatial typography, serving to locate the individual tables and enable the bi-lingual text (Czech/English) to be combined without privileging a single language. By integrating presentational laboratory, representational media tower, and re-presentational national exhibits, *Now/Next* aimed to provide a 'live space' for public and professional discourse during the PQ. The addition of a small café under the stairs (offering espressos and pastries) with adjoining book table (covered in relevant contemporary publications) successfully encouraged the public to linger within the decommissioned church, which proved a relative haven within the multi-sited and event-soaked Quadrennial.

Concluding with Clouds

While the exhibition cannot replace the original event experienced primarily through embodied inhabitation, it can involve a re-presentation in which the remains and/or reimaginings take on a performative force. This is probably best seen in the seminal *Herzog & de Meuron: An Exhibition* (Tate Modern, 2005) where the architects' expansive and intensive design process lay on tables in the form of many objects of

varying materialities and scales, disclosing architecture as a myriad array of possible scenarios – multiple acts of design thinking. The absent is therefore often rendered supplemental – something that exceeded the project and its realization – providing an opportunity to perform disappeared ideas or actions.

However events such as the Prague Quadrennial and Venice's Architectural Biennial also encourage installations that move more overtly towards art and performance practices in order to create new experiences that don't rely on archival remains. This can be seen in various installations within Venice's recent Architecture Biennales: such as Anupama Kundoo's 1:1 reconstruction of her *Wall House* by a team of Indian Craftsmen in 2012, which gained its own spatial specificity within the Arsenale's brick confines; or Muf Architect's concurrent 'Stadium for Close Looking' in their design of the UK's *Villa Frankenstein* that housed a 1:10 model of London's Olympic stadium as a studio for drawing classes in which viewer and viewed confronted each other at the Pavilion's entrance. In 2010, guest curator, Kazuyo Sejima commissioned artists to explore new spaces from their particular point of view: the most transcendent by Tetsuo Kondo Architects and Transsolar Environmental Engineers who created an *Cloudscapes* by pumping three layers of air into an Arsenale hall within which a helical ramp allowed the public to circulate a constantly shifting atmosphere. This reflects a recent fascination with misty architectures: seen in Victor Muniz's *Skywriting* over NYC (2001); Diller & Scofidio's *Blur Building* hovering over Lake Neuchatel during the World Expo (2002); Anthony Gormley's *Blind Light* (2007) where dense ether filled a translucent box; similarly staged by Olafur Eliasson as *Your Felt Path* (2011) in Sao Paulo's SESC Pompeia; and the *Nimbus* project (2012) by Dutch artist, Berndnaut Smild who created truly ephemeral sculptures solely for photographic representation. The unsettling force of such evanescent spatiality reinforces Mark Wigley's contention that "the concept of atmosphere troubles architectural discourse – haunting those that try to escape it and eluding those that chase it" (1998:p.18): thereby staging the most evasive and continually disappearing act. In denying containment and threatening contamination these clouds expose problems with conventional exhibits, which tend to refuse performance and presence as active pollutants to the hermetically defined installation exhibiting well constructed architecture.

As a performance architect, my exhibition designs have aimed to provide an immediate and meaningful encounter with the spectators – the most essential element in theatre and architecture's ever-changing and fleeting presentational acts. The aim is not only to challenge exhibitionary conventions – outlined by Tony Bennett as those of discipline and display – but also to confront the spatial practices they engender for those who become implicit to the meaning-making of re-representation.

Designer-curators can also play the role of agent-provocateurs revealing the uncontainable nature of performative bodies, environments, and discourse; allowing meaning to seep, swirl and spill out; creating new events for audiences to encounter, engage with and interpret. The image is not healed, but rendered vulnerable, fragmentary, and contingent. By inhabiting a shared and contested space, the audience necessarily completes the event, which is different for each participant. In this way the exhibition is not 'something other than performance', but an 'other' performance.

All images courtesy of the Author

Project Credits

Landing: 7 Stages: Aotearoa/NZ

New Zealand National Exhibit: 1999 Prague Quadrennial

Project Coordinator: Dorita Hannah

Designers: Dorita Hannah, Helen Todd and Jon Rennie

Srdce: The Heart Of PQ:

A Performance Landscape for the Senses

2003 Prague Quadrennial: Výstaviště: Industrial Palace

Design Director: Dorita Hannah

PQ Team: Tomas Zizka, Soudja Lotker, Lucas

Matasek and Osamu Okamura

SCAPE @ Massey Design Team: Dorita Hannah,

Sven Mehzoud and Lee Gibson

DisPlay: Re-membling a Performance Landscape

2004 NZ International Arts Festival: Hirschfeld

Gallery: Wellington City Art Gallery

Project Coordinator: Sven Mehzoud

Design Team: Sven Mehzoud, Lee Gibson, Dorita

Hannah and Stuart Foster with Designworks

Wellington

Now/Next: Performance Space at the Crossroads

2011 Prague Quadrennial: St Annes Prague Crossroads

Architecture Commissioner and Exhibition

Designer: Dorita Hannah

Technical Designer: Lenka Bednarova

Research Assistant: Morgan Terry

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Drawing Forth

In contemporary discourse and practice it is familiar to discuss design research as if it is new to architecture. But this is to ignore the history of the architect. The methods and means of design research have been invaluable to the architect for over five hundred years. The history of design is interwoven with the history of drawing. The term 'design' derives from the Italian *disegno*, meaning drawing and suggesting both the drawing of a line and the drawing forth of an idea. *Disegno* allowed the three visual arts—architecture, painting and sculpture—to be recognised as liberal arts concerned with intellectual labour, a status they had rarely been accorded previously. The command of drawing not building unlocked the status of the architect, establishing the influential myth that architecture results not from the accumulated knowledge of a team of craftsmen working together on a construction site but the artistic creation of an individual architect in a studio. The architect as we understand the term today was established in Italy in around 1450, in France a century later and in Britain in the early 1600s.

In the new division of labour, architects acquired additional means to practice architecture that were as important as building, namely drawing but also writing. To affirm their newly acquired status, architects began increasingly to theorise architecture both for themselves and for their patrons, ensuring that the authored book became more valuable to architects than to painters and sculptors, whose status was more secure and means to acquire commissions less demanding. In contrast to the architectural drawing, which is seen in relation to other drawings and a building, the painting is unique and need not refer to an external object, thus appearing further removed from the material world and closer to that of ideas.

Written in around 1450 and published in 1485, Leon Battista Alberti's *De re aedificatoria* (Ten Books on Architecture) was the first thorough investigation of the Renaissance architect as artist and intellectual. Francesco Colonna's *Hypnerotomachia Poliphili*, 1499, was the second architectural book by a living writer published in the Renaissance and the first to be printed with illustrations, establishing the multimedia interdependence of text and image that has been essential to architectural books ever since. One model for the architectural book, *Hypnerotomachia Poliphili* is a fictional narrative illustrated with pictorial representations. A second model is the analytical manifesto justified with historical examples and illustrated with orthogonal drawings, such as Andrea Palladio's *I quattro libri dell' architettura* (The Four Books of Architecture), 1570. A further literary model, the manual conveys practical knowledge and is illustrated with diagrams and calculations. But these models are not hermetic and many architectural books refer to more than one, as Palladio's concern for practical matters indicates.

Often a design does not get built and an architect must be persuasive to see that it does. Sometimes a building is not the best means to explore architectural ideas. Consequently, influential architects tend to write and draw a lot as well as build. Palladio is a notable early exponent of this tradition, and Le Corbusier and Rem Koolhaas are more recent ones. The relations between the drawing, text and building are multi-directional. For example, drawing may lead to building, writing may lead to drawing, or building may lead to writing and drawing. If everyone reading this text listed all the architectural works that influence them, some would be drawings, some would be texts, and others would be buildings either visited or described in drawings and texts. Studying the history of architecture since the Italian Renaissance, it is evident that researching, testing and questioning the limits of architecture occur through drawing and writing as well as building.

Design Histories

In the Renaissance, ideas were understood to be universal and immaterial. Emphasising this distinction, the buildings drawn in *The Four Books of Architecture* are each an ideal, not those actually built. But in *An Essay Concerning Human Understanding*, John Locke dismissed the search for ultimate truth. Accepting that there are limits to what we can know, he argued that conclusions must be in proportion to the evidence: 'Our business here is not to know all things, but those which concern our conduct' (Locke, 1975). In the eighteenth century, and significantly due to empiricism's influence, a design could draw forth an idea that was provisional, changeable and dependent on experience at conception, production and reception. The emblem of this temporal process was the ruin, which was understood to represent potential as well as loss, the future as well as the past.

Just as the eighteenth century transformed the meaning of designs and ideas, it altered and expanded the two model publications formulated in the Renaissance and adjusted their interdependence with building design. Describing actual events and others of his own invention, Giorgio Vasari's *Le vite de' piu eccellenti pittori, scultori e architettori* (The Lives of the Most Eminent Painters, Sculptors and Architects), 1550, was the first significant history of art and architecture, initiating a new discipline. In the sixteenth century, history's purpose was to offer useful lessons; accuracy was not necessary. Empiricism gave greater emphasis to the distinction between fact and fiction, which came to transform historical analysis. Influenced by Francis Bacon, Giambattista Vico's *Scienza nuova*, 1725, was the first modern history, which employed a comparative method to characterise changing cultural, social, political and economic processes rather than Vasari's focus on individual achievements. By the nineteenth century, history was naively assumed to be a science capable of objective statements, which led to an emphasis on archival research. Science is supported in its claim to objectivity by the presence of its objects of study before the scientist, while history is an understanding of the past written in the present. Any archive, however complete, cannot return the historian to the past and no analysis is more than an interpretation. Any history expresses a particular ideology, as does any scientific statement; they cannot be neutral. A history may explicitly refer to the past in order to implicitly project an idea of the future as well as the present.

From the Renaissance to the early twentieth century the architect was a historian in the sense that an architectural treatise combined design and history and a building was expected to knowingly refer to earlier historical styles (Lasdun, 1984: p.7). Modernism ruptured this system in principle if not always in practice, but it returned with vigour after the Second World War, when modernism's previously dismissive reaction to social norms and cultural memories was itself anachronistic. As Denys Lasdun acknowledges: 'Context is not only topographical and physical, it is also historical ... My

concern for context is as an agent of architectural transformation. The place you build actually has formative influences on the nature of the building. And when the building is there it has formative influences and effects on the place it is made' (Lasdun, 1979: p.4). As history is an interpretation of the past formed in the present, each building is a new history. The architect is a historian twice over: as an author and as a designer.

Novel Designs

In valuing direct experience, precise description and a sceptical approach to 'facts', which needed to be repeatedly questioned, the empirical method also created a fruitful climate in which the everyday realism of a new literary genre—the novel—could prosper as 'factual fictions' (Davis, 1996: p.213; Watt, 1987: p. 62). In contrast to the earlier romance, the novel concentrated on contemporary society and the individualism it encouraged. The focused investigation and precise description that empiricism demanded was applied to the novel, which emphasised specific times, peoples and places and sought justification through reference to a combination of reasoned explanation and intuitive experience. The uncertainties and dilemmas of identity, as in Locke's assertion that 'Socrates waking and sleeping is not the same Person', were ripe for narrative account (Locke, 1975: p.341). Notably, Daniel Defoe's *Robinson Crusoe*, 1719, which is often described as the first English novel, is a fictional autobiography. Defoe characterises his later novel *Moll Flanders*, 1722, as 'a private History', and in a similar vein describes *Roxana*, 1724, as 'laid in Truth of Fact' and thus 'not a Story, but a History', a claim echoed by other novelists throughout the eighteenth century (2004: p.3; 2009: p.21). Since then, often retaining the first person narrative, some of the best-known novels have imagined the past or the future in order to question and re-assess the present.

The early novels—fictional autobiographies—developed in parallel with early diaries—autobiographical fictions. The novel's attention to contemporary individualism was also seen in diary writing, which Locke recommended as a means of personal development. People have written about themselves for millennia but the formation of modern identity is associated with a type of writing that Michel Foucault describes as a 'technology of the self' (1984: p.369). As Paul de Man remarks: 'We assume that life produces the autobiography as an act produces its consequences, but can we not suggest, with equal justice, that the autobiographical project may itself produce and determine the life and that whatever the writer does is in fact governed by the technical demands of self-portraiture and thus determined, in all its aspects, by the resources of his medium?' (De Man, 1984: p.69). Equivalent to a visual and spatial diary, the process of design—from one drawing to the next iteration and from one project to another—is itself an autobiographical 'technology of the self'.

The History Man

Histories and novels both need to be convincing but in different ways. Although no history is completely objective, to have any validity it must appear truthful to the past. A novel may be believable but not true. But recognising the overlaps between two literary genres, Malcolm Bradbury notably describes his novel *The History Man*, 1975, as 'a total invention with delusory approximations to historical reality, just as is history itself'.

Associating history-writing with story-telling, Lasdun remarks that each architect must devise his or her 'own creative myth', a set of values, forms and ideas that stimulate the process of design, which should be 'sufficiently objective' and also have 'an element of subjectivity; the myth must be partly an expression of the architect's personality and partly of his time, partly a distillation of permanent truths and partly of the ephemerae of the particular moment'. Indebted to the essay 'Tradition and

the Individual Talent', 1917, in which T. S. Eliot remarks that the present alters our understanding of the past as much as the past influences the present, Lasdun concludes: 'My own myth ... engages with history' (Eliot, 1941: pp.26–27; Lasdun, 1984: pp.137,139).

Objective as well as subjective, fictional as well as factual, a design is a reinterpretation of the past that is meaningful to the present, transforming both, like a history. Equally, a design is equivalent to a novel, convincing the user to suspend disbelief. Part-novelist, part-historian, the architect is the history man. We expect a history or a novel to be written in words, but they can also be cast in concrete or seeded in soil. An architectural book can be a history and a novel, and so can a building and a landscape.

Bradbury, M. (1975) *The History Man*. London, Secker and Warburg.

Davis, L.J. (1996) *Factual Fictions: The Origins of the English Novel*. Philadelphia, University of Pennsylvania Press.

Defoe, D. (2004) *Moll Flanders*. New York, Norton.

Defoe, D. (2009) *Roxana, or the Fortunate Mistress*. Furbank, P. N. (ed.) London, Pickering and Chatto.

De Man, P. (1984) *The Rhetoric of Romanticism*. New York, Columbia University Press.

Eliot, T. S. (1941) *Points of View*. London, Faber and Faber.

Foucault, M. (1984) On the genealogy of ethics: An overview of work in progress. In: Rabinow, P. (ed.) *The Foucault reader*. London, Random House.

Lasdun, D. (Agreed Draft, 27 June 1979) Interview with Denys Lasdun, Lasdun Archive, RIBA Drawings & Archives Collections, London, V & A.

Lasdun, D. (1984) The architecture of urban landscape. In: Lasdun, D. (ed.) *Architecture in an age of scepticism: a practitioner's anthology*. London, William Heinemann.

Locke, J. (1975 [first published 1690]) *An Essay Concerning Human Understanding*. In: Nidditch, P. H. (ed.) Oxford, Clarendon Press, ch. I.

Watt, I. (1987) *The Rise of the Novel: Studies in Defoe, Richardson and Fielding*. London, The Hogarth Press.

If we remember what the main game is these conversations are easier: Architecture is about ideas. It is as a way of thinking about the world in a broader sense. The role of the academy is to facilitate experimentation in ways that challenge the apparent self-evident certainties and accepted orthodoxies of the discipline, the underlying assumptions about what architecture is and can contain and point to what it should do next. 'Design' is not a discipline, my concern here is with Architecture.

As a practitioner and architectural designer working in the academy, what that means is that my activities – while not all the same – are integrated, interwoven and geared towards a contribution to the discipline and of course well beyond. My context is RMIT University, where I work in an environment in which design practice research is the dominant mode of inquiry.

(The Possibility of) Simultaneous Multiple Explorations

The focus of this text is research in the medium of the discipline in the context of the academy (See also Mitsogianni, 2015). Design Practice Research will be considered through two research projects which have been used to concentrate a series of projects and activities. This speculation will consider how design practice research operates in each; what it enables that might not have been achieved in any other way and the influence and agency of the research into the discipline and professional practice.

The model of research in the projects to be discussed is primarily research *through* design (contrasted with research *for* design and research *about* design) (Downton, 2003). In this model design propositions are produced *as research* - as prototypes and scenarios of particular propositions - which are subsequently disseminated. This isn't a value judgement - different modes are required for different purposes and often we might use different modes in a single research project. If a value statement was to be made it would be that a design architect should be able to undertake 'research in the medium' of the discipline, through forming projective propositions, not in word, but through the architectural proposition which by its definition requires demonstration (van Schaik, 2010).

Architecture can contain multiple propositions - sometimes multiple apparently contradictory propositions. Because of this characteristic, numerous ideas can be considered and multiple research explorations enacted, simultaneously, through architectural design. A building, itself, can contain multiple propositions (for site,



Fig. 1. QGoMA (2001) Project Credits: M@STUDIO Architects (Vivian Mitsogianni, Dean Boothroyd, Joseph Reyes, Mark Raggatt + Nicholas Hubicki). Project formed part of the reflection in Mitsogianni, V. *whitenoise PANORAMA: Process-based Architectural Design* PhD (2009).



Fig. 2. QGoMA (2001) Project Credits: M@STUDIO Architects (Vivian Mitsogianni, Dean Boothroyd, Joseph Reyes, Mark Raggatt + Nicholas Hubicki). Project formed part of the reflection in Mitsogianni, V. *whitenoise PANORAMA: Process-based Architectural Design* PhD (2009).

organisation, type, processes and techniques of its making, cultural engagement and so forth) and therefore can easily contain numerous, interwoven, research propositions which can be unpacked and evidenced. In addition, if it is understood that the complex performative conditions that buildings contain all necessarily impact on each other in integrated ways – isolating one 'area' when designing arguably produces a skewed and artificial situation in a project – a kind of strange 'ideal' building design. Design practice research allows for simultaneous multiple explorations without the need to strip away all of architecture's complexity and content to do so.

White Noise PANORAMA: Process-based Architectural Design

In a research context an alternative approach to solving problems that can already be identified - is designing to discover problems we didn't know existed. In this case the 'problem'- or better the expanded or new area of investigation not previously identified within existing known frameworks of the discipline - is developed through designing as a way to follow the trajectory from an initial 'what if?' or 'hunch'. This is what architectural design can do – through doing – we follow processes which expand our understanding and develop trajectories, not known before we commenced.

As a practitioner and educator focused on architectural design, I have been interested in process-based architectural design approaches and have been working with this approach for over two decades. My primary interest is in the use-value of these methods; what they can enable for architectural design, how this can then be harnessed as well as an interest (developed through teaching design studio in this area) of when these approaches limit and hinder rather than enable design. 'Process-based' design refers to the approach whereby a process - consisting of a series of actions or operations - is choreographed in order to initiate and develop architectural designs (sometimes known as rule-based or generative design processes). We can trace a lineage of this type of practice through the early projects of Peter Eisenman and Bernard Tschumi to various contemporary practices including aspects of digital scripting processes. While there are broad variations in this practice that mean that it can't be called one particular method, there are nevertheless certain shared characteristics; involving designing the process as a starting point with a series of rules or actions being choreographed; there is often an adoption of techniques or systems from other disciplines and a translation of these to architectural technique.

'white noise PANORAMA: Process-based Architectural Design' (2009) my design practice research PhD (by project) was completed in the RMIT University School of Architecture + Design in a program originated over 25 years ago by Professor Leon van Schaik which is described as focussing on 'research into what venturesome designers actually do when they design' (see van Schaik & Johnson, 2011). The PhD draws on a reflection on a series of 7 design projects and experiments, 7 research-led design studios, an examination of the Australian context engaged with by the projects as well as a substantial examination of the last thirty years of process-based practice in the international context (see fig. 1-3).

When I commenced the PhD I had a series of projects and three strong areas of inquiry through those projects but no research 'question'. The framing of the wider field in which the contribution is made came later as two of the three areas – which included architectural ornament and the contemporary civic project were overshadowed by what seemed to be the most urgent focus - spurred by a general dissatisfaction in the wider discourse around process-based architectural design.

I initially began working with process-based design methods because they offered the potential for the discovery of conditions, arrangements and effects that could not have been produced without them. As my practice developed and as I sought material for my design studios, I became increasingly critical of what I saw as the more problematic aspects of this type of design practice in the wider field, which I felt was becoming a confused terrain with questionable claims, sustained problems, and in some cases, had become what might be called a 'process style' or 'process aesthetic'. The problematic aspects of this area were compounded by the poor quality of available information, processes were rarely published with any clarity although they were often accompanied by in depth explanations. I observed that critics commonly evaluated the processes within the architect's terms and often building propositions were critiqued in relation to the success or otherwise of the process itself rather than critiquing the propositions (or buildings) in their own terms. The discourse was also overwhelmed with the anxiety to claim that the processes were not 'authored', which was a central discussion and distraction in this type of work as it shifted the focus away from what was actually occurring in the design processes and resultant projects.

In reflecting on the wider field while undertaking design projects and leading design studios, I began to also identify certain evolving tropes, traits and underlying assumptions associated with process-based design. The most obvious was an overwhelming focus on form – defining the formal envelope or armature, as being the entire project, often this work is stripped of referents, detached from program, site, materiality and particularly socio-political engagement which I believe then forms a very narrow view of what architecture is and can contain. A lot of the issues that I was starting to identify – and which were subsequently captured in the PhD - seemed so completely naturalised in this practice to not even be considered a necessary point of discussion or debate.

One contribution to the field arising from this reflection was to argue that contemporary process-based work is built on an inherited foundation of ideas that are often considered to be naturally linked to this way of working and that despite an evolving of these methods in contemporary practice, these fundamental assumptions continue to be maintained; are rarely specifically acknowledged and importantly can be seen to constrain this type of practice. I argue that the persistent, underlying assumptions about working in this way are not an inherent property of this type of practice. I demonstrate that they are simply properties which have grown to be normative values in contemporary work compromising the introduction of other possible approaches. I identify the recurring tropes and traits in relation to this practice and outline the compositional and formal prejudices present in process-based work that often originate



Fig. 3. Façade Experiments on Lingering Memory and Saturated Ornament (2009) Project Credit: Vivian Mitsogianni, Project formed part of the reflection in Mitsogianni, V. white noise PANORAMA: Process-based Architectural Design PhD (2009).

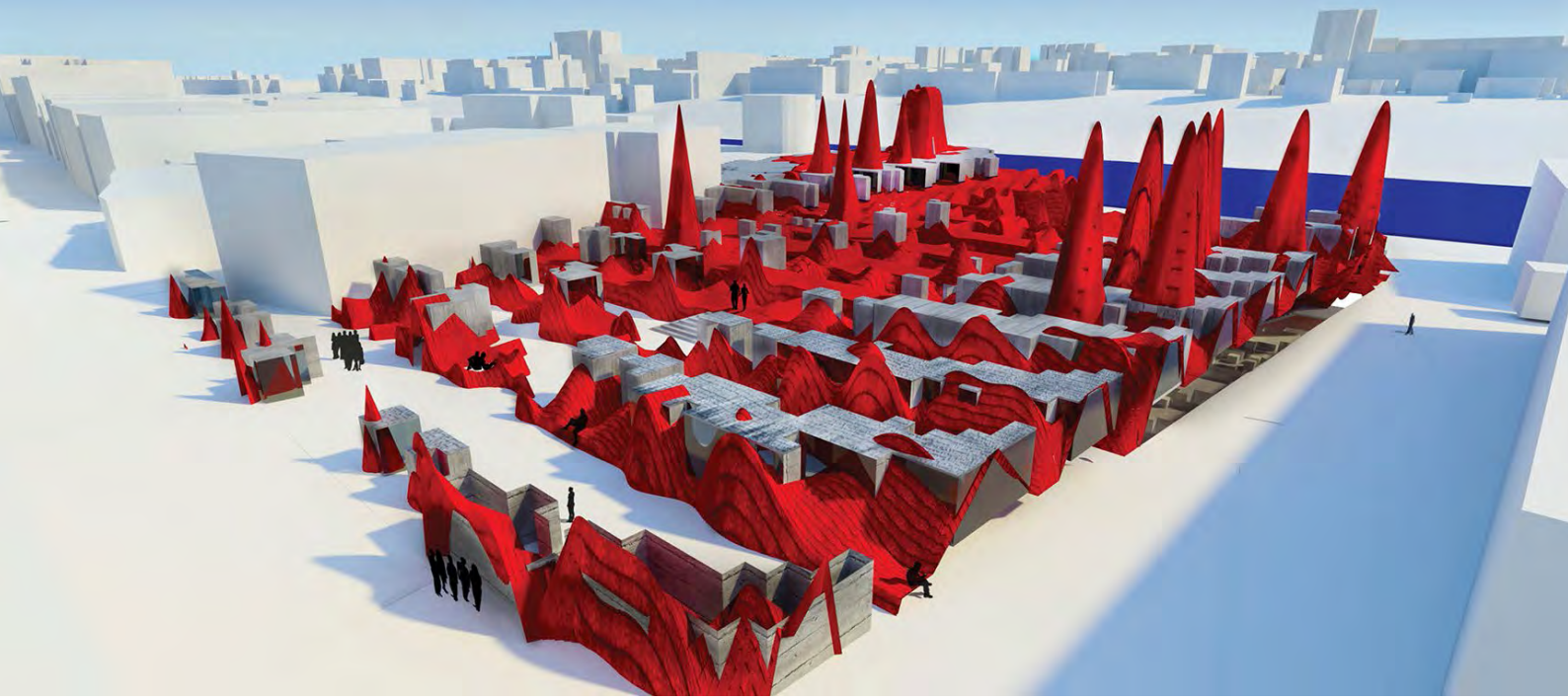


Fig. 4. Maribor Future University Building by David Wegman (First Year RMIT Master of Architecture Student) from "FORMFIELD" Design Studio (RMIT) 2012 led by Vivian Mitsogianni.

from an unacknowledged set of architectural concerns. I ultimately argue that the reasons one might use these processes might be different – away from these traditions and through my design projects demonstrate an expanded series of concerns for process-based design work.

I was able to make observations on the wider field precisely because reflection on my own projects had revealed differences. The insights into the field came through the agency offered by the medium of designing and which I then, through reflection, examined and used to consider the wider field by comparison. In this instance research through design facilitated insights and new ways of seeing an architectural design area which opened up its scope and potential, it demonstrated through the projects ways of undertaking design with these methods that exceeds the previous limits imposed by the discipline. The insights are important for pedagogy – including providing a re-evaluation of 'rigour' in relation to these practices, and offers one way with working in this way that others can be informed by for their own practice.

The Speculative Campus Project, FORMFIELD AND WONDERSTUFF

Whereas the PhD brought together a series of design projects around a sustained investigation, The Speculative Campus Project - an emerging design practice research project (RMIT University, Melbourne) focusses on two concurrent and interwoven investigations; experimenting with a 'process-based' architectural design approach and developing speculative design propositions for University learning environments. The project was seeded in the RMIT Design Research Institute as well as the School of Architecture and Design, and supported by a series of design studios known as the FORMFIELD (2010 – 2012) and WONDERSTUFF (2013 - 2014), which were used to think through the direction that the project might take and test its validity at its inception.

The project took as its base point of departure research on University learning environments which cites the importance and potential of social spaces as active learning spaces on campus, as well as workplace research around pay-as-you-go space. Starting from the premise that learning happens everywhere and anytime, we asked what might the possibilities be if we start to consider the social spaces on campus as

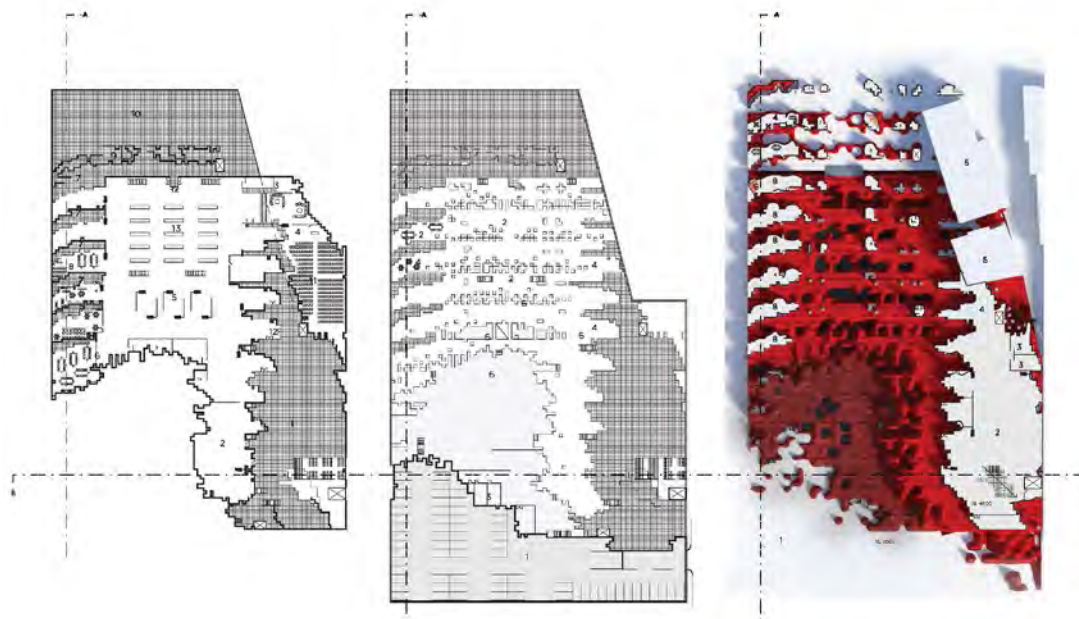


Fig. 5. Maribor Future University Building by David Wegman (First Year RMIT Master of Architecture Student) from "FORMFIELD" Design Studio (RMIT) 2012 led by Vivian Mitsogianni.

the dominant type and as active learning spaces. What are the different configurations through which this might occur; what do they look like, how are they organised and what might they lead to? The aim was to consider these possibilities for design by focussing on organisational strategies which facilitate interwoven formal systems. I have been interested in the design potential of the formal condition I called FORMFIELD, a term coined to describe a condition (or organisational system) in which form and field gain variation, differentiation, but also equivalence, possibly forming a third system from the interaction. The hunch was that new types of architectural relationships would be developed for learning environments, organisation, form, spatial qualities and so forth and these could be distributed on-mass (systematised through the process-based explorations and distributed widely and as interconnected - flexible malleable systems rather than designing one-off instances) (see figs. 3-6).

The latest iteration of this project; WONDERSTUFF & TURBULENCE —The RMIT Building 36 Project (2014), was a research-led design studio that I co-led with Paul Morgan Architects (PMA) and assisted by Patrick Macasaet and Helen Duong. The studio was a live project in its early stages to reimage an existing leased building as a new learning environment to suit two academic units. The wider learning environments project was conceived of as a collaboration between The Speculative Campus Project, the School of Architecture + Design, PMA and RMIT Property Services who were the client for the project and commissioned the research project. It also involved the user groups and the building owner and fits into contemporary definitions of work integrated learning. The project brought together a series of research projects and industry partners, to collaborate on a wider research project using a specific project as a test case. PMA was also commissioned to work on the feasibility study and I was developing my own speculative design concurrently which explored process-based design experiments involving fragments of social typologies, dispersed through the high rise building, to explore (the implications of) an integrated and porous formal/informal learning field.

Through the production of architectural design propositions, we sought to provide examples that might serve as prototypes of the built and spatial possibilities of the

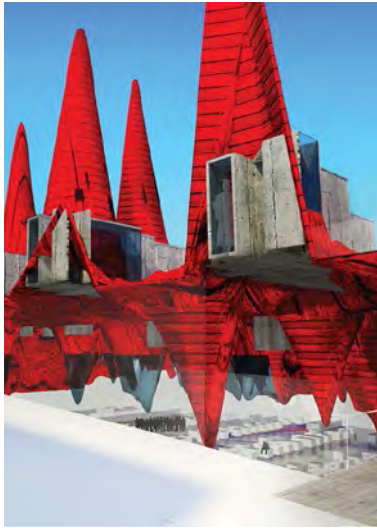


Fig. 6. Maribor Future University Building by David Wegman (First Year RMIT Master of Architecture Student) from "FORMFIELD" Design Studio (RMIT) 2012 led by Vivian Mitsogianni.

previously cited explorations, as the research. While it's one thing to have ambitions for social spaces being dispersed through more formal learning spaces - with the ambition to provide fields of spill out space for students to continue working outside class time, to provide spaces for students to interact deliberately and by chance and so forth - what does this condition in fact look like, what are the specific arrangements and what do different possibilities lead to? Importantly in pursuing this research question, the aim was to do it in such a way as to still propose building designs that do not strip away the complex series of concerns and wide range of other performative criteria that buildings need to engage with. We were producing architectural propositions and didn't find it necessary to isolate one 'research theme', while designing - but certainly in the dissemination of the projects we carefully unpacked the work for clearer exploration of the themes, ideas and propositions posited by the projects.

The WONDERSTUFF & TURBULENCE project outcomes are currently being compiled into a publication with accompanying reflection and speculation, using the projects as a base and also base point of departure. Previous research outcomes were presented in a number of public forums including the Work Where I Live Symposium (Crist & Whibley, 2011) and were exhibited in both the Architecture Pavilion and the Slovenian Pavilion of the Venice Architecture Biennale (2013) as well as part of the RMIT Design Research Institute's Convergence Exhibition (Watson & McEwan, 2013). The Speculative Campus Project itself sits in the RMIT D-Lab - a new design practice research centre - in two research clusters; Work/Learn/Live (led by myself with Professor Carey Lyon and Dr Graham Crist) which understands - and seeks to address through projects - that while a lot of research has been developed around workplace and university learning environments, very little is design-led; as well as in The Speculative Architecture Laboratory (which I also lead) which undertakes research into various generative design processes and techniques.

(The Possibility) of Disciplinary Explorations

My research interests include design process and this is a disciplinary concern. The means through which we uncover and explore ideas are vital in any discipline. Research in the academy though, most often revolves around solving problems and this is also how government funding models are structured, which dictate the survival of research labs in universities and shape the type of research that is undertaken. As founding research leader of the RMIT Design Research Institute Future Fabric of Cities Flagship which undertook transdisciplinary design-practice research, I developed four research clusters which included 'Urban Investigations and Approaches', 'Emerging Environments' and 'Advanced Technologies and the Urban Realm' as well as one that I called 'Design Process and Modes of Exploration'. A specific aim in the latter was to consider what design processes and explorations can bring to particular research questions and we encouraged experimentation and innovation in design processes and techniques - particularly where these may have application across research questions. I also developed and led the previously mentioned 'Speculative Architecture Laboratory' research team in this cluster in order to make room for the work of a number of colleagues who had strong design practice research which did not specifically relate to addressing one particular 'problem' or even area.

(Possibilities) Through Designing

What do architects do and what skills are embodied in that doing? As practicing architects we hover in an environment when we design where we juggle a multitude of intersecting conditions, and ideas - many of which are not concrete or known, with partial information that is constantly shifting. We hold this uncertainty and we make

decisions and push and steer projects in an agile and flexible way – constantly moving and shifting components when they need to be revised, as better ideas come up and as more information presents itself. We engage with multiple stakeholders and coordinate the input of a wide range of specialists and consultants. We do all this with expertise that is applied to situations that are different each time, different sites, typologies and we strive to do so in ways that innovate the discipline. This is a core strength of architectural design and expertise. Donald Schön 1985, was correct to suggest almost 30 years ago that architectural education is of benefit to other disciplines and business schools have readily embraced some version of this to educate future business leaders in being able to tackle future decisions in flux that will not have precedent, resemble past conditions and in environments not yet known.

The two projects cited posit that in research through design – as in architectural design in general – we are always working with multiple intersecting and interwoven ideas – each affecting the other and it is possible to do all simultaneously as one research project. Research through design isn't the only or best way to operate, it is one way. It facilitates specific research explorations, particularly into apparently highly disciplinary concerns. We might also use the unique qualities of architectural designing to assist to think about wider ideas and concepts more broadly, for example, it is not a contradiction in architectural design to argue for a clear and legible uncertainty. In fact architecture can posit uncertain conditions as concrete propositions (Mitsogianni, 2009: pp.92-94). Architecture can do things and hold conditions which do not make sense in other disciplines. Architecture as a discipline allows these multiple – simultaneous ways of thinking/doing and we should consistently strive to develop the tools and techniques to tackle the formation and possibility of new forms of knowledge, through any means that assists us to do so.

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P A P E R S

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The New NZ: methods for
reimagining the identity of
Aotearoa NZ

If a country's landscape is a reflection of its culture (Lewis, 1979), one would expect to see evidence of a 'sharing or blending of two cultures on more or less equal terms' (McKay, as cited in Memmott and Davidson, 2008: p. 98) in our bi-cultural nation's designed landscapes. What we typically see, however, is a design default to a narrow number of archetypes and symbols typically expressed as standard forms and surface patterning (see fig. 1). These designs, while often well regarded, are 'by their very nature... superficial in terms of their cultural expression, narrative content, and cultural accommodation' (Simpson, 2008: p.2). Mackay's sharing on equal terms requires an unprecedented intensity of cultural exchange; so either bi-cultural exchange in this country is far from equal, or designers are not yet sufficiently conversant with the appropriate design modes and practices necessary to effect meaningful cultural exchange.

Background

This paper describes four years of research with iwi and hapu partners on the Horowhenua coast (see fig. 2), where accelerated and inappropriate land use have led to environmental degradation and economic decline. The research explores the potential of design to re-establish cultural connections to ancestral lands for the benefit of all communities and, through the establishment of productive bi-cultural partnerships, to re-imagine a new bi-cultural future for NZ. The team includes masters students in Landscape Architecture at the School of Architecture at VUW, and Manaaki Taha Moana, a government funded iwi led research project established in 2009 to investigate the health of the region's extensive freshwater ecosystems. Design allows us to consider the inter-relationship between new economies, cultural practices and freshwater ecosystems, and in particular, to rigorously test how an emphasis on one can act as a catalyst for development of the other two. The work is consciously directed towards the realization of spatial solutions at the local, human scale while imagining the regional and global implications.

The Protocol

The Resource Management Act (RMA) 1991 recognises and provides for the values of both Māori and Pākehā in the development and protection of natural and physical resources but there are at least two major impediments to this objective: i) Māori values and knowledge systems and relationships with land and waterways and their kaitiaki (custodian) responsibilities for place, remain poorly understood and ii) amongst Pākehā there appears to be a fear of cultural transgression, which can be crippling for design.

To address these issues, we designed a protocol, effectively a third space to operate 'between cultures' that would encourage experimentation and innovation while leaving



Fig. 1. Te Aro Park, Wellington (2013) Google Earth 2009. 41°17'40.60", 174°46'51" elevation 3.0m. At: <<http://www.google.com/earth/index.html>> [Accessed on 38.08.13].



Fig. 2. Cairns, L. (2009) Aerial view of tribal region showing Tararua Ranges in the background.



the worldviews, knowledge bases and mental spaces of each culture intact. The protocol, basically a set of operating principles, is based on a model developed by Charles Royal which advocates for the creation of discrete spaces in which the cultures... 'can interact with one another while naturally evolving in their own way' (Royal 1998: p.10). The protocol's recommendations include: that bi-cultural partnerships should be preceded by an immersion in culture; be characterised by a fundamental shift in method; lead to innovation; have active Māori participation; use mainstream and Māori tools for analysis; include Māori values to evaluate the research; and not distort the context and content of cultural knowledge.

The protocol establishes the conditions for transgression to occur in an appropriate way. It is useful as both a diagnostic as well as a prescriptive design tool: its recommendations have guided the establishment of the partnership but they have also been referred to regularly to sharpen values and techniques. We have found that an intense front-loading of protocol techniques is an effective way of building the kind of trust in a relationship conducive to experimentation and innovative design outcomes. The extended period of cultural immersion (see fig. 3) has encouraged designers to recast their own insights and experiences through a series of radically different lenses and the process has become a defining characteristic of the partnership.

Māori Methods

We have also begun to experiment with Māori methods, e.g. hīkoi, (walking/talking with others on whenua), whakapapa (the expression of interrelated and interdependent familial relationships between cosmology, peoples, environmental properties and land) and oral narrative (characterised by a continuous dialectic between past and present and future). Designers are asked to work with these methods and to position them within their own cultural and disciplinary contexts, in order to locate a lineage of analytical and generative design technique that might resonate. For example, hīkoi is aligned in non-Māori design with work by artist Richard Long and the Situationists, who incorporated 'rules' in their technique to radically shift perspective. To stimulate the enquiry we asked: What might an overlay of these techniques reveal? How can an understanding of the similarities as well as differences help to refine technique? What kind of outcome does this kind of radical subjectivity encourage? Does this process of alignment help to integrate cultural exchange at the level of value as well as aesthetic?

Fig. 3. Author, (2010) Cultural Immersion.

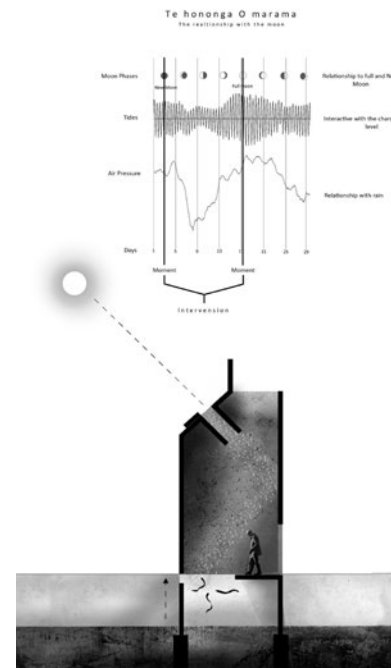


Fig. 4. Dewhurst, W. (2013) Te Hononga O Marama.



Fig. 5. Roberts, D. (2013) Oral Narrative "Life Support".

The Work

Examples of design responses include Dewhirst's landscape 'devices' (see fig. 4), which spatialise and amplify, for the purposes of knowledge transmission, the whakapapa connections between seasons and the harvesting of resources ('when it's raining and the tide is low, the eels are running'). Roberts (see fig. 5) applied a set of 'rules' to extract the spatial dimensions of locally generated oral narratives and used this to generate the design of a space for the transmission of new narratives inspired by the cultural activities associated with the rehabilitation of ancestral lands.

Conclusion

While physical outcomes are important, the significance of this project lies in the potential for design to interrogate and propose new methods and modes of bi-cultural engagement. The hope is that this might encourage a shift from the appropriation of Māori surface patterns and symbols towards a less token approach; one that integrates the rich knowledge base of two very different cultures on 'more or less equal terms' to solve some of this country's most serious environmental challenges.

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Touchstones in Design: learning through interdisciplinary collaboration

Touchstone, Shakespeare's fool in *As You Like It*, is essentially a critic. He is an actor with knowledge of the 'court' who scratches away at the words and actions of the 'court' and consequently, in the interest of the 'court', exposes a new perspective, a new way of thinking.

We need similar players in spatial design education. The design process, and especially creativity, entails numerous intersections between thinking divergently (Jones, 1991) and thinking critically (Bowring, 2000). So how do we teach students to be critical? One possibility is, like Shakespeare's Touchstone, to engage actors who can question the orthodoxies of students' decision making and, in doing so, initiate divergent thinking. At architectural design schools, the readily available touchstone is possibly the disciplinarily distinct design peer – the landscape architect or interior architect – who knows the design 'court', who is detached from the other discipline, and who is interested in sharing goals for innovative design outcomes.

This research investigates the possibility that students could integrate their own particular disciplinary skills with different disciplinary insights as a way of learning to be more creative. Could interdisciplinary collaborations in educational studios help develop new design skills? What teaching techniques could help facilitate this learning?

To address these questions I designed research using the live educational practices of design studios: a collaborative studio of twenty fourth-year landscape architecture and twenty-five fourth-year interior architecture students; and, a year later, a studio of twenty third-year architecture students collaborated with twenty third-year landscape architecture students. In these studios students trialled interdisciplinary collaboration in two-person partnerships with a focus on an interdisciplinary approach to conceptualisation. The studio activities (and teaching techniques) for exploring interdisciplinarity entailed: 'a market place' where students displayed and sold their initial design ideas to find a compatible interdisciplinary peer partner; 'a founding diagram' exercise which provided the direction for individual discipline specific designs; 'trading places,' a teacher-supervised task where each student critiqued his or her partner's concepts; 'designspeak' which sought to establish a 'common' language out of discipline specific jargon; 'learning critting' to enable critique of someone from another discipline; and 'discipline-specificity' aimed at maintaining difference.

During and after each studio, a reflection of the learning experience and outcomes took place, informed by students' views and teachers' / researchers' perceptions. Student journals, questionnaires, and focus group discussions provided data, which prompted adaptations, recycling and iterative reapplications to the ongoing educational process. This process recognises that design, teaching design and acquiring design-knowledge are all subjective in nature, and that the learning process of an interdisciplinary collaboration entails incremental personal transformations of design practice rather than significant or decisive shifts in student learning (Deming and Swaffield, 2011).

The research revealed a number of key themes. *Students saw value in the particularity of their own discipline, but recognised 'a different angle' that challenged their assumptions.* Significantly, the studios were catalytic in encouraging critique as a key skill for design.

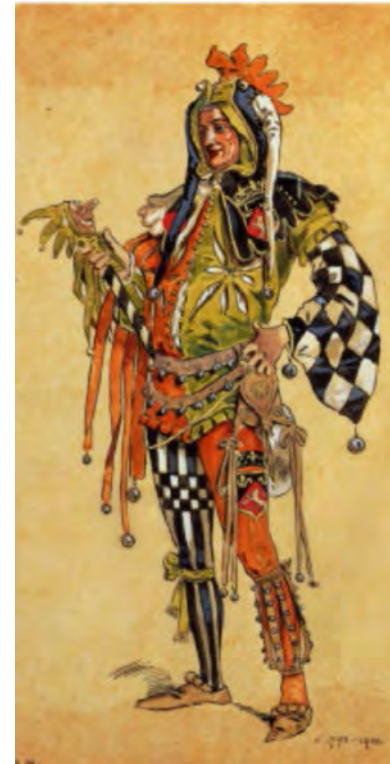


Fig. 1. "Fortune makes Nature's natural the cutter-off of Nature's wit." Shakespeare's Touchstone. At: <http://shake-speares-bible.com/2011/11/01/in-the-land-of-the-blind-the-one-eyed-man-is-king/> (Accessed 25.02.13).



Fig. 2. Dobson, B. & Stuart, B. (2011) Urban acupuncture, Interdisciplinary design work that pushes the boundaries of traditional architecture and landscape architecture.

According to one fourth year interior student, the trimester was not so much about drawing, but about 'argument. I now understand what this does to design potential. Dialogue and argument are great tools to express ideas critically. Clear ideas are the tools for collaboration.' A landscape architectural student said 'if my partner says 'looks sweet as', that is actually useless, actually useless. They had to say why it was good or bad. They had an investment in making their partner's work good because first it would help their own schemes to look cohesive and secondly would provide principles for their own designs.' Reinforcing this, from a third year architectural student: 'dialogue was a place to find common ground. The drawings were hard to read and too vague, but when we got together and talked we 'critted' each other's ideas.' In this interdisciplinary dialogue, discipline-specific language seemed to be the obstacle to getting into the potential of other disciplines. The common diagram often provided the solution. By expressing in a diagram what seemed intuitive, students realised that their discipline specific ideas expressed in a different language precipitated creative design concepts.

The key pedagogical techniques that proved valuable in this process were: the 'founding diagram' that set the common idea in place graphically, overcoming jargonistic issues, and facilitating progressive development of the interdisciplinary project; 'learning critting' which allowed the discourse to prosper, encouraging design iteration and experimentation; and reinforcing knowledge of the principles and particularities of their own *discipline specificity* to provide a strong basis for undertaking these arguments.

It is worthwhile comparing this with others' recent research into education based interdisciplinary collaboration. Feast (2010) suggests that interdisciplinarity in design practice accompanied by argumentation and confrontation can inherently solve complex problems and develop new knowledge. Botterill (2013), after observing interdisciplinary collaboration processes between web designers and graphic designers concludes on the importance of the start up techniques to find consensus on goals and the need to place boundaries around the group for ultimate success. If the disciplinary boundaries are either too porous or too impervious, there is contested space, leading to a lack of horizontal discourse and an unwillingness to compromise.

In my research the importance of start-up process was also fundamental: the 'founding diagram' and 'learning critting' put students into a space where they had clear boundaries on the potential and the limits for collaboration. Constant interaction and discipline specificity balanced the porosity of the boundaries. If the boundaries were too open there was a potential for the work to be diluted, giving in to over-simplification at the expense of confrontation; and if too closed it might not have challenged disciplinary boundaries.

Interdisciplinary collaborations in a designer's education have the potential to be a touchstone for the creativeness and experimentation of learning design research. By clarifying the lens of their own discipline, interdisciplinarity accelerates lessons in critique, and pushes divergent thinking. Ideation may be best as an individual pursuit, but interdisciplinary collaboration encourages students to immerse themselves in design once they have brought 'something to the table', confident of their own knowledge, but inquisitive enough to want to scratch away at the possibilities under the surface.

Bowring, J. (2000) Increasing the critical mass: emphasising critique in studio teaching. *Landscape Review*, 6 (2), 41-52.

Botterill, M. (2013) *Behind the Screen: Intergroup Collaboration in Developing University-Based Online Learning Resources*. Ph.D thesis, Melbourne, RMIT University.

Cowdroy, R. & de Graff, E. (2005) Assessing highly creative ability. *Assessment and Evaluation in Higher Education*, 30 (5), 507-518.

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Jones, C. (1991) *Designing Designing*. London, Longman.

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Murphy, E. (2004) Recognising and promoting collaboration in an online asynchronous discussion. *British Journal of Educational Technology*, 35 (4), 421-431.

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Sanoff, H. (2007) Community based design learning: democracy and collective decision making. In: Salama, A. & Wilkinson, N. (eds.) *Design studio pedagogy: horizons for the future*. Gateshead, Urban International Press, pp. 21-40.

Teymur, N. (2007) Vitruvius in the studio - what is missing? In: Salama, A. & Wilkinson, N. (eds.) *Design studio pedagogy: horizons for the future*. Gateshead, Urban International Press, pp. 91-110.

Wagner, M., & Gansemer-Topf, A. (2005) Learning by teaching others: a qualitative study exploring the benefits of peer teaching. *Landscape Journal*, 24(2), 198-208.

Wheatley, M. (1999) *Leadership and the New Science*. New York, Berrett-Koehler Publishers.



Fig. 3. Fau, T. & Fong, R. (2011) *Comm Unity*, Interdisciplinary design work that explored the possibilities of urban design through collaboration.



Fig. 4. Kuiti, J. & Pile, A. (2011) *The founding diagram*, Petone ecological urbanism

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Open Agenda: on platforms for speculative research between academia and practice



This presentation focuses discussion on the modes through which design research is promoted and fostered through a competition format that sits between professional and academic research contexts. Professional practice in research and development terms tends to focus in architecture on near term goals and tools and processes development that lead more or less directly to enhancing project opportunities through efficiencies or project specialisation. In academia, research accounting, a heavy weighting on HERDC outcomes, research cultures that are institutionally oriented and strong research hierarchies also tend to institutionally thwart new approaches to research and highly speculative content. This paper presents a speculative Architectural design research competition, aimed at avoiding the limitations of both of these research contexts, while offering them both a unique opportunity to benefit from new topics and new forms of work.

Open Agenda (2010-2014) is a competition and research platform for early career architects from Australian and New Zealand, aimed at exploring new avenues in architectural research through design and speculation. Established in 2010, Open Agenda is an anonymously juried competition, and annually awards three winners seed funding to develop their architectural research proposals specifically through design speculation towards exhibition. Three winners exhibit their work each year as part of the Architecture Festival in Sydney, and are included in a small annual publication. In 2012 the competition was opened up to include recent graduates from New Zealand reinforcing one of the primary aims of the competition to promote a strong and specifically regional culture of speculative research through design in architecture. Open Agenda is now in its fifth year.

Fig. 1. Open Agenda Publication (2011) Front and Back cover scan, DABDOCS 15 (left).

Fig. 2. Salama, T. (2012) Kite Body, Open Agenda 2012, DABDOCS 16, 2012 (right).



Fig. 5. Beson, R. (2012) *Atmospheres of Architecture: the quest for composition*, Open Agenda 2012, exhibition display Customs house (photography, Michael Ford).

the competition have gone on to positions in various forms of (typically new) practice combined with academic positions in roughly equal amounts, suggesting this competition sits between these two research poles. Additionally through exhibiting with the Sydney Architecture Festival in highly public venues such as customs house in Sydney, tens of thousands of people have come to or come across the research itself.

As design research continues to grow, there will be more pressure to develop modes of research validation and promotion such as Open Agenda that straddle more institutionally stable research modes and focus on broad communication. As a prototype platform, Open Agenda has been modestly successful and is now looking to expand the platform to other regional centres. This symposium offers the opportunity to discuss the successes and failures, merits and draw backs of new design research platforms such as this.

NB: Open Agenda is supported by Architecture Review Asia Pacific, Scott Carver, Sydney Architecture Festival and UTS, and the generous time of the advisory panel, Craig Allchin, Six Degrees, Andrew Benjamin, Monash University David Burns, UTS Photography and Situated Media, Pia Ednie-Brown, RMIT, Richard Goodwin, UNSW COFA, Adrian Lahoud, Course Director Urban Design, Bartlett UCL, Michael Holt, editor Architectural Review Asia Pacific, Nicolas de Monchaux, UC Berkeley, Bob Perry, Director, Scott Carver, Diego Ramirez-Lovering, Monash University, Professor Charles Rice, Head of School, School of Art and Design History, Kingston University, Marisa Yiu, CUHK. Open Agenda is chaired by Prof Anthony Burke, UTS Architecture, and the Competition Co-ordinator is Rebecca Thomas.

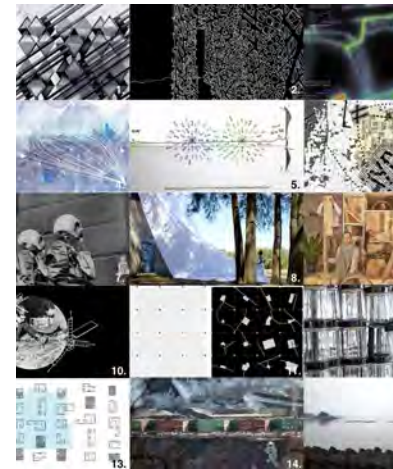


Fig. 6. Open Agenda Winners, 2010-2014.

Open Agenda, (DAB DOCs, University of Technology, Sydney, 2010-2014). [Online] Available from: <http://www.utsarchitecture.net/openagenda/> [accessed 23rd June, 2014].

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The Graham Foundation, [Online] Available: from <http://www.grahamfoundation.org/> [accessed 23rd June, 2014].

The Storefront for Art and Architecture, NY, [Online] Available from: <http://www.storefrontnews.org/> [accessed 23rd June, 2014].

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RMIT

Building Movements
(in ten steps)

1. The cohabitation of different positions and approaches is vital to research cultures. This idea is embedded in the tripolar model of RMIT's design research culture, as championed by Leon van Schaik: 'innovative communities of practice tend to thrive when at least three alternative and differentiated positions are actively operating as part of the constitution of that culture' (108).

2. Critique is a detailed assessment, questioning or commentary that provides a voice for such differences (in opinion, subjectivity, values, etc). Commonly understood to occur from a position of distance from the subject under assessment, critique is largely assumed to function through the medium of writing or in the verbal feedback of, say, the design jury. In what is often referred to as the 'post-critical' era, marked by the death of journals dedicated to scholarly architectural critique such as *Assemblage* (1986 to 2000) and, in Australia, *Transitions* (1979 to 2000), the critic as a figure lost its previously authoritative status and, arguably, the critical aspirations of architecture broadly became more difficult to discern.

3. The 'post-critical' demotion of critics, critique and theory in general was counter-posed by the gradual rise of research through design where, arguably, critique becomes resituated inside the act of designing and reflecting on practice. Self-critique, differentiation, and the articulation of value occurs across multiple modes of action: making/producing artefacts, writing and speaking. This multi-modal redistribution of critique inevitably draws attention to *situatedness*, where the very particular conditions, contexts and contingencies implicit to forming and articulating differences become more explicit. This tempers the ability for one kind of position (such as the lofty critic) to assume ultimate power and authority over what might be considered architecturally meritorious. There is a redistribution of power at work, resonant with broader conditions.

4. A situation: RMIT's design research facility, The Design Hub, was designed by Sean Godsell Architects and opened for business in 2012. The building is compositionally and sculpturally powerful, but can be difficult to use. Power points hide under heavy, unwieldy metal floor grills, repetitively patterned wall surfaces produce distracting visual effects (that amplify the longer you stay with them), the acoustics often render communication difficult, and the list goes on. Litany of inconvenience sit inside the affective impact of a relentlessly consistent formal composition. This may be felt both positively, perhaps as inspiring, uplifting, and even sublime, and negatively, perhaps as alienating, diminishing, and oppressive. Anecdotally, responses vary across this spectrum, even from a single person. Clearly, there is something contestable at stake. It makes and stakes a position with such clarity that it renders obvious the fact that buildings don't just sit there, inertly. *They act*.

5. In 2013 I assembled a workshop called *Building Movements* with colleagues and PhD candidates aimed at an exploratory engagement with this architectural character. This led to a group exhibition of works produced to act with or in response to the



Fig. 1. Matherson, G. (2013) Building Movements 2 installation by Chris Cottrell, Scott Andrew Elliot, and Olivia Pintos-Lopez, Building Movements, The Design Hub, RMIT University, July 2013.



Fig. 2. Matherson, G. (2013) *Building Movements* 2 and 3 installations (from inside lift) by Chris Cottrell, Scott Andrew Elliot, and Olivia Pintos-Lopez, *Building Movements*, The Design Hub, RMIT University, July 2013.



Fig. 3. Matherson, G. (2013) *Building Movements* 3 installation by Chris Cottrell, Scott Andrew Elliot, and Olivia Pintos-Lopez, *Building Movements*, The Design Hub, RMIT University, July 2013.

building. These took various forms, with numerous architectural installations, a floor drawing, a game, artworks hung on the walls, from the ceiling and placed on seats, a collectively generated web site, and a performance (fig 1). All the work clearly pursued a particular research trajectory already being explored in the context of each practitioner's work, while operating to draw forward particular aspects of the Design Hub. In various ways they offered new ways of thinking about and experientially entering into properties of the building. For instance, several installations were pressed up against a lift opening (figs. 1, 2, 3 & 5). From inside the lift when the lift door opened, one was presented with an obstacle of sorts. One was a perforated metal cube on wheels (fig. 3), positioned tightly inside another cube (fig. 1). Materially a continuation of the lift space, it required pushing in order to make a space just big enough to squeeze around and out. It was both a giant puzzle and an annoying obstruction. Poignantly, the layers of perforated metal produced a moiré pattern of larger circles, that appear at first to be created by light through the façade circles of the Design Hub. This and the other works enacted various kinds of engaged critique through attunements and wilful mis-attunements with selected aspects of the building's presence.

6. But if this is a form of critique (which may be arguable), what are its key properties? Arguably, practices like Ashton Raggatt, McDougal (ARM) have pushed the point that architecture can at least implicitly critique other architecture in wordless ways, offering one notable approach. Using the building envelope as key political agent, Alejandro Zaera Polo has argued for 'a new political critique of architecture capable of addressing the challenges posed by globalization by incorporating political content to architectural entities' (2008: p.76). Rather than simply the 'entity', however, our experiments suggested that the very situated, material properties of this kind of critique integrally involves process.

7. Unexpected events in the process of producing *Building Movements* were just as revealing as the works themselves. For instance, a person from Sean Godsell's office tore down notices we had placed by the lifts. This occurred without any discussion, but presumably was done because they weren't hung on the specially designed regulation white circles made for signage in the building. Installations positioned in front of the lifts led to the elevator company to shut down that elevator – entirely – such that no-one could enter the works until two hours before the closing event. Neither of these acts

were of the building per se, but both resonated in different and telling ways with our experiences of it. These events were far more than just obstructive, they were instructive: they allowed us to understand the building as a set of interacting regimes of power that resonated with one another, becoming linked like the choir of a regulatory compliance regime.

8. Collectively, the exhibition began to shape a story about the degree to which this building – compositionally, operationally, and pragmatically – embodies an architecture of bureaucracy with its uncompromising application of (compositional) rules and regulations, and related machinic qualities. Those subject to its regime must (like so many of us inside the compliance driven demands of the bureaucratic-university-machine), work out inventive ways through its restrictions, obstructions, and vector driven spaces. One might productively spend some time imagining how well the Design Hub could become a character in a novel by Franz Kafka.

9. In *Kafka: Toward a Minor Literature*, Deleuze and Guattari suggested that: 'Criticism is completely useless. It is more important to connect to the virtual movement that is already real even though it is not yet in existence (conformists and bureaucrats are always stopping the movement at this or that point)' (1994: p.58). *Building Movements* didn't arise from establishing the distance of criticism, but rather from entering into, engaging with and modulating the virtual movements of a subject. The kind of critique that one might see as 'proper' to research through design *remains situated* in the operational fabric of the subject under critique. Distance becomes an unearthing of difference.

10. If criticism has become 'completely useless', it has perhaps joined in at last with the joyful surplus of aesthetic yield: 'The aesthetic yield is the qualitative excess of an act lived purely for its own sake, as a value in itself, over and against any function the act might also fulfill' (Massumi, 2014: p.10).



Fig. 4. Matherson, G. (2013) *Bikini Party* performance by Adele Varcoe, et al. & *Building Movements 4* installation (foreground) by Chris Cottrell, Scott Andrew Elliot, and Olivia Pintos-Lopez, *Building Movements*, The Design Hub, RMIT University, July 2013.

Massumi, B. (2014) *What Animals Teach Us About Politics*. Durham, Duke University Press Books.

Deleuze, G. & Guattari F. (1994) *Kafka: Towards a Minor Literature, Theory and History of Literature*, Vol 30, fourth edition. Minneapolis, University of Minnesota Press.

van Schaik, L. (2013) Differentiation in vital practice: an analysis using RMIT University of Technology and Design interfaces with architects. In: Ednie-Brown, P, Burry, M. & Burrow, A. (eds.) *Castle, H.* (series ed.) *The innovation imperative: architectures of vitality*, Architectural Design Profile No 221, London, Wiley, pp. 106 – 113.

Zaera Polo, A. (2008) *The Politics of the Envelope*, Volume# 17, 76 – 105.



Fig. 5. Matherson, G. (2013) *The Rhub* (floor drawing) by Pia Ednie-Brown and Jondi Keane, *Building Movements*, The Design Hub, RMIT University, July 2013.

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'Magmatic' Drawings and
Architecture's Design - Research
Repertoire

In response to Rem Koolhaas' (2013) overarching brief for the biennale I propose to discuss how drawing forms part of, to cite Koolhaas, 'architecture's fundamental repertoire.' Acknowledging the difficulties posed by particular forms of architectural drawing (questions of power, language, authority, etc.) in what follows I will briefly present a series of drawings with the aim of highlighting how drawing can be considered a critical research tactic. These drawings were produced as part of a PhD by Design thesis looking at Edinburgh, banking and the implications of failure for thinking about architecture and architectural design.

'Magmatic' Landscapes

The first drawing is entitled 'Edinburgh: Magmatic Landscape' (fig. 1). It describes the creation of a landscape (centre) as a site for a speculative design project. This site pulls together elements from two other territories (top and bottom). The first (bottom – fig. 2) is based on a record from 1696, and plots the various subscriptions to the Company of Scotland expedition to establish a trading colony at Darien in Panama. This plotting produces a surface that is, in effect, an economic topography of Scotland at the beginnings of industrial (speculative) capitalism. The excerpt here looks specifically at the city of Edinburgh. The second territory (top) charts the expansion of Edinburgh and the concurrent expansion and contraction of bank networks within the city from 1845 to the aftermath of the global financial crisis of 2008. The drawing resulting from the combination of these territories (fig. 3) becomes the project site, with a topography vertically scaled in relation to both the contemporary city and the (fictional) economic topography. This project site retains registrations from both other territories, particularly sites relating to the failure of the Company of Scotland and the banks of Edinburgh, which inform the disposition of architectural pieces on the project site (figs. 4 & 5). These originary drawings are, therefore, simultaneously archives, analytical studies and projective sketches. They work collectively to present three overlapping imaginings of the same context brought together by presenting the 'given' world alongside the world constituted by a speculative design project.

The resulting landscape I describe as 'magmatic', and it is this 'magmatic' quality that I will discuss briefly here. Magma refers to both Greek-French philosopher Cornelius Castoriadis' (1987: pp. 340-344) term the 'magma of social imaginary significations' and, more simply, to magma as a geological phenomenon. To briefly elaborate: Castoriadis states that society is based upon a collective 'magma' of significations, or a collection of fundamental meanings that order the world for that society. These meanings, Castoriadis (1987: p. 355) notes, 'can exist [in the world] only through their 'incarnation', their

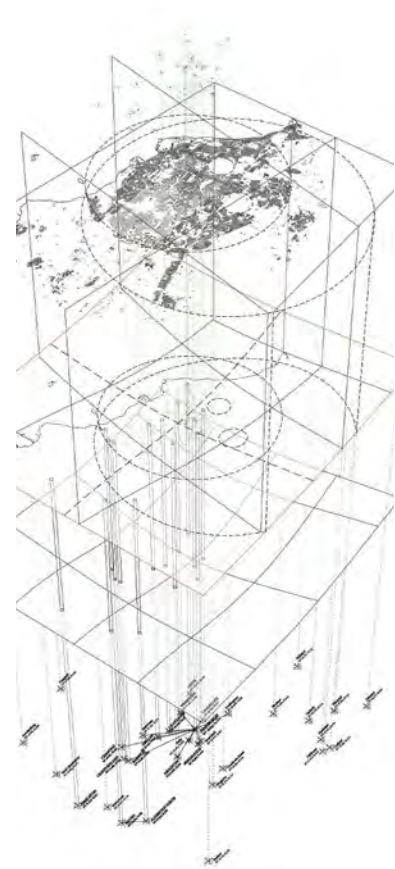


Fig. 1. Author, (2012) Edinburgh: Magmatic Landscape.



Fig. 2. Author, (2012) Edinburgh: Magmatic Landscape.

'inscription', their presentation and figuration in and through a network of individuals and objects.' In short it is through objects as materializations of meaning that society develops. In the context of this particular project I argue that the various physical apparatus associated with banking, namely chests, scales, vaults, bank buildings, etc. are an example of a series of such materializations. The second use of the term 'magma', which I will discuss more fully here in relation to drawing, simply means a suspension, something that holds particulates of different types and states together.

I consider the drawings described above as magmatic in both senses, that is, as both suspensions holding 'particulates' in relation and documents charting particular social significations (meanings). At the same time the drawings are active components of a design project, they shape the work produced by establishing the context and limits for that work. I would argue that it is in this capacity to simultaneously hold, ground and project that the drawing becomes a fundamental, critical research tool.

Drawing as a Critical Research Tactic

Drawings of this nature enable productive shifts between the analytical and the speculative, the real and the imagined, and the existing and that which is to come. As Perry Kulper (2013: p.59) notes of his drawings for David's Island:

Strategic plots represent conceptual frameworks, territories, actions and relations... These choreographed marks comprise notations, indexes and proto-spatial marks, enabling the consideration of durational, ephemeral and stable conditions for spatial speculations.

Crucially, however; this relationship between the analytic (strategic) and the speculative is not causal – we do not analyse and then project into – rather it is co-constitutive. By bringing something that does not yet exist into existence through the drawing we come to understand and know a given situation. As Neil Spiller (2013: p.268) notes: "it is the making of the drawing that builds our understanding of our world," and at the same time through this 'building of our understanding' through drawing we change that which is projected, we adapt the imagined image of what is to come.

This is all well understood in the context of the design project. Spiller, for example, cites Piranesi's *Campo Marzio* as an example of the simultaneous creation and extrapolation of a 'magical metaphysics' made architecture (Spiller, 2013: p.264).

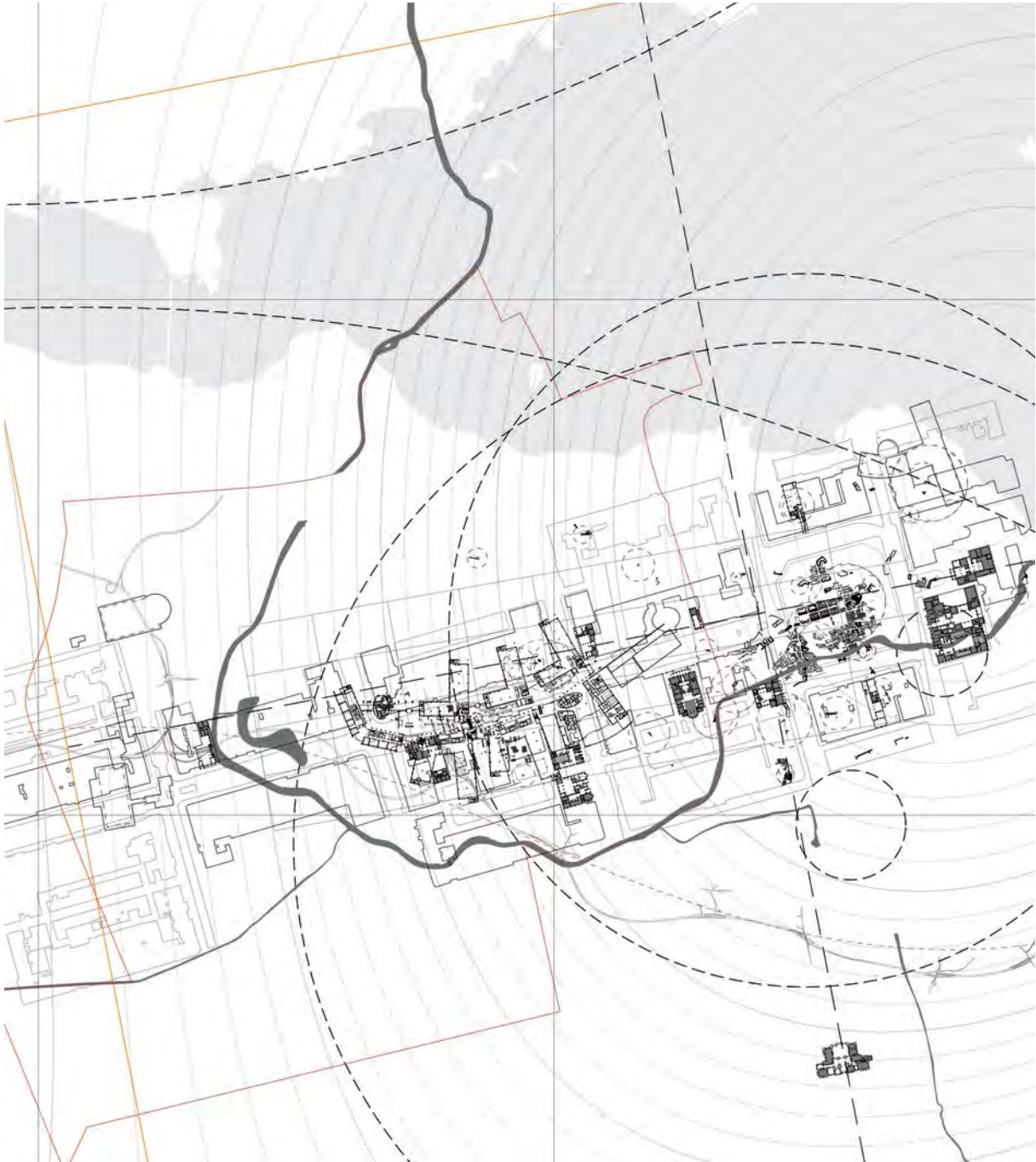


Fig. 3. Author, (2013) Project site: Magmatic ground.

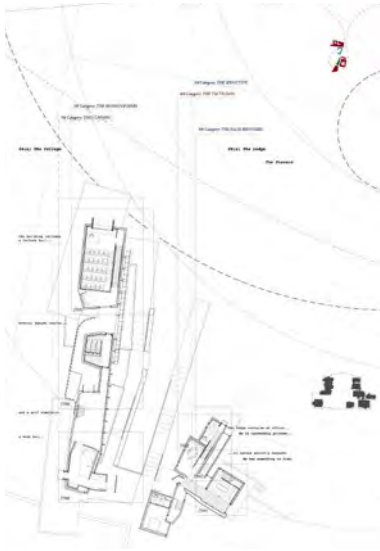


Fig 4. Author, (2014) Designs for a Financial Re-Training Facility: College & Stewards Lodge.



Fig. 5. Author, (2014) Designs for a Financial Re-Training Facility: Registrations and Fragments.

We might, by extension, include Peter Eisenman's re-working of the *Campo Marzio* for the 2012 Venice biennale, or (remaining with Eisenman and Venice) the registration of the absence of Le Corbusier's Hospital alongside the existing archipelago in Eisenman's scheme for Cannaregio West as further examples (Eisenman, 1994). But it is in the specific context of design-research rather than the design project that what I am terming the 'magmatic' drawing takes on particular significance. The explorative drawing as a research tool differs fundamentally from those representational devices open to other disciplines (graphs, diagrams, and, to some extent, text). The explorative, or as Spiller might say, 'magical' drawing is a site of both understanding and emergence, a repository of information and a 'working' surface on the one hand, and the location of multiple potential imaginaries on the other. This doubling is unique, to my mind, to drawing as a research method (and here I would stress that by 'drawing' I do not mean to limit this to orthographic, line drawing, but also to include collage, painting, digital productions, animations, etc. that work to bring multiple orderings into dialogue). This expanded form of drawing possesses an innate ability to foster new imaginings through nothing more than the means of its own production, through the combination and presentation of particulates held in a suspended state. The drawing understood as a research tool in this light becomes a thinking machine, both a space of thinking and a device for encouraging thought. It becomes fundamental not only to the production of a project, but to how we come to understand and intervene in the world.

Castoriadis, C. (1987 [1975]) *The Imaginary Institution of Society*, Translated by B. Kathleen., Cambridge, MA., MIT Press.

Castoriadis, C. (1997) Logic, imagination, reflection. In: Ames Curtis, D. (ed.) *World in fragments: writings on politics, society, psychoanalysis, and the imagination*. Stanford, CA: Stanford University Press, pp.246-272.

Eisenman, P. (1994) *Cities of Artificial Excavation: the Work of Peter Eisenman, 1978-1988*. Montréal, Canadian Centre for Architecture.

Koolhaas, R. (2013) 14th International Architecture Exhibition/Fundamentals. *La Biennale di Venezia - 14th International Architecture Exhibition*. [Online] Available from: <http://www.labiennale.org/en/architecture/news/25-01.html> [Accessed 22nd June 2014].

Kulper, P. (2013) A world below. In: Spiller, N. (ed.) *Drawing architecture*. London, John Wiley and Sons.

Spiller, N. (2013) The magical architecture in drawing drawings, *Journal of Architectural Education*, 67 (2), 264-269.

Michael Holt

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Elements

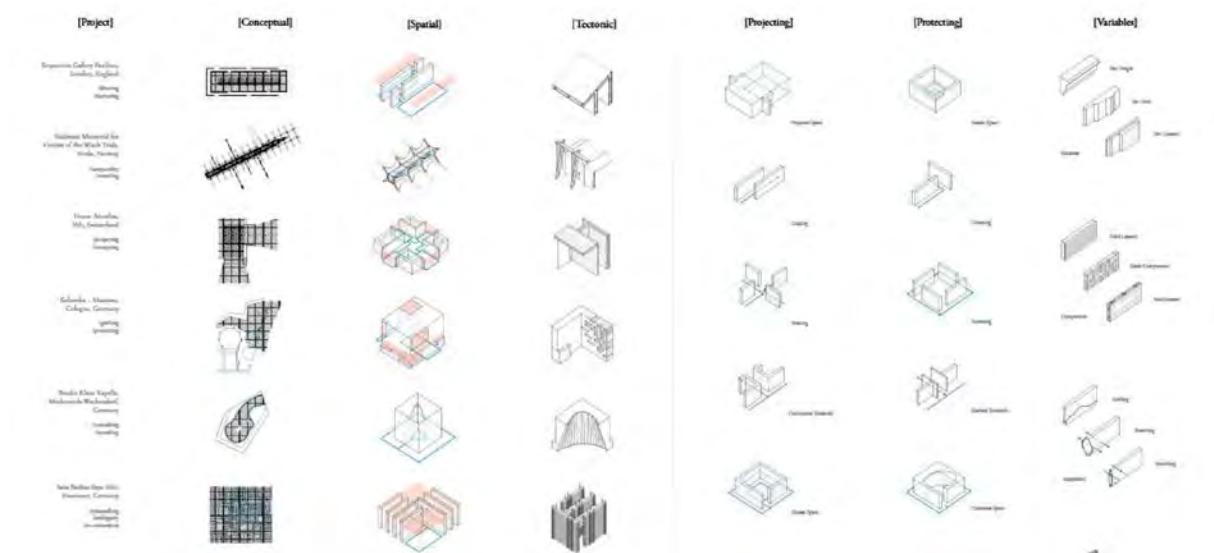


Fig. 1 & Fig. 2. Soriot, J. (2013) [Image courtesy, Master of Design student work at University of Technology, Sydney].

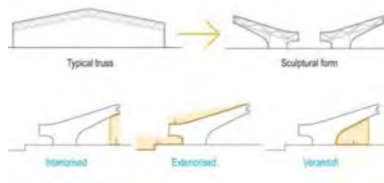
Alejandro Zaera-Polo in his *Politics of the Envelope* (Zaera-Polo, 2008) strove to 'politicise' architecture, believing that the discipline at that time was split 'between those who believe architecture is a mere social construct and those who believe that architecture's facts are determined by the inexorable laws of physics, economics, buildability, climatology and ergonomics.' His article outlined that through a politicised discipline architecture may be seen as 'matters of concern: *things* rather than *objects*'. We would take this one step further and say the discipline remains apolitical, but that it has since entirely disregarded the theoretical aspects so integral to its very core and in doing so has abolished the idea of critique. We would argue that the Capitalist model of production>distribution>consumption has rendered architecture at the back end, its 'consumption'; and in doing so has lost its theoretical, critical and ideological mainframe once so significant on the development of architectural discourse and as such design projects.

Capitalism's model has reconfigured urban and global space, outsourcing manufacture to the cheapest wage labour countries and aggressively converting public sectors into centres for the service and finance industries. The Marxian 'social class' has all-but disappeared in the West as a result of a de-industrialised condition. As such, in a profession laden by its relatively low wages, long working hours, diminishing





Fig. 3, Fig. 4 & Fig. 5. Authors, (2014) Green Square Aquatic Centre competition entry, main entry view, elemental diagrams, floor plan and landscape design.



role and increasingly schizophrenic position, it is hardly surprising to see a profession that sleepwalks without questioning; a reverse avant garde. Fresh on the back of Poststructuralism, Postmodernism and Deconstructionism, 'theory' lays forlorn as forms of 'pragmatism' takes hold. A place of ideological and aesthetic stasis whereby there are no defining *-isms*, no stylistics, and no manifestoes.

This practice method is not a negative statement or eulogising the death of theory. Instead, it is to suggest a moment of opportunity.

A Theory for a Freedom From Within

Hannah Arendt, in *The Human Condition* (Arendt, 2013), invests a great deal of attention in the necessary role of institutions in society and how they impact upon the idea of democracy and freedom. For Arendt, modern politics means a free and 'new founding of freedom'. As she understands it, what distinguishes revolution from rebellion is that while rebellious acts may liberate a citizenry from rule, revolutionary acts conjure up new institutions that incubate freedom. Essentially, Arendt states that 'freedom cannot exist outside of institutions', believing that 'power and freedom belong together'. For Arendt, it is important to note that freedom consists in the exercise of freedom; it is a matter undertaken by a plurality and, hence, is a concerted exercise – an exercise in concert. Arendt outlines the need to demarcate the institutional boundary in order to *understand* how to attain freedom, but it is also essential for freedom to be attained only when the confines of the institutional boundary are located.

However, as noted by Judith Butler; there is a contradiction in Arendt's position: there are circumstances for when one can be within an institutional boundary, but are unable to be part of the system and constitutional authority that oversees the boundary. In other words, one can be constitutionally alien, for instance a refugee or illegal immigrant; in what Butler defines as the 'Stateless within a State [those] contained within an interiorised outside' (Butler and Chakravorty Spivak, 2011).

The discipline of architecture can similarly find its own stateless position; as a profession that is no longer part of the operational disciplinary border; architecture has been placed within a much larger, less defined boundary within a conglomerate design team, with its primary focus fixed on value in purely financial terms. Architects are in an unbalanced system with planners, sustainability consultants, risk analysts,



and developers all staking their claim – all blurring the professional edge. It is not to say that these disciplines did not exist before, rather architecture is becoming more fixated with the end result (consumption): the Green Star Rating, the Floor Space Ratio (FSR), performance testing, quantitative measures, etc. in order to justify their position. Architecture has disintegrated its own boundary. This proposal makes the claim that in order to create a freedom from external control, the profession must enforce a disciplinary autonomous project.

Italian philosopher and politician, Mario Tronti, advocated for a radical perspective of 'against from within' when discussing the ability of the working class to mediate within a bourgeois capitalist culture. It was not a statement against capitalism in an act of rebellion, but the notion of mobilising workers to recognise its own power and capacity to 'forward capitalism's evolution by means of incessant struggle with it' (Aureli, 2008). Tronti suggested that such an institutionally framed revolution would mean a return to the production side of the capitalist doctrine, as opposed to outright rebellion and overthrow. Architecture could take a similar line of autonomous attack: 'against from within' – freedom within the disciplinary institution – to work within the parameters to redefine.

Method of Practice: Elements

Elements are singular, scalar building components: stairs, columns, floor plates, windows, walls, ceilings. Each, when individually assessed, may seem to be less than significant, or the least notable or immediately identifiable as potentially theoretical constructs; but each is nevertheless essential to the physical nature of building. That is not to say these elements should become token gestures viewed purely in isolation. Instead, each element is viewed across a project which allows for analyses and a criticality on something much larger and from within architecture's boundaries. *Elements* is an empirical research body analysing one particular element through the work of one architect or practice, an element is then pared back and deployed.



Fig. 6. & Fig. 7. Ma, N. (2013) Images courtesy, Master of Design student work at University of Technology, Sydney.



Fig. 8. Authors, (2011) Falling Upwards: SANA and the ceiling plane, Domusweb. At: <https://www.domusweb.it/en/architecture/2011/09/10/sana-a-falling-upwards.html> (Accessed 22.09.2014) (left).



Fig. 9. Authors, (2010) Frank Gehry: The Accidental Redefinition of the Window, Domusweb. At: <http://www.domusweb.it/en/architecture/2011/05/07/frank-gehyr-the-accidental-redefinition-of-the-window.html> (Accessed 22.09.2014) (centre).



Fig. 10. (right) & Fig 11 (below) Authors, (2014) AR135-Elements, Architectural Review Asia Pacific, 2014. Editorial team and contributing writers for the 'In Conversation' feature.

But why do we see the need to identify an element? We are not suggesting that these offices are solely or consciously using the elements we identify; what we claim is that by localising an argument on an element enables and facilitates a discussion and by reducing a body of work to an elemental condition state could then allow for the possession of new design tools in the form of elements as catalytic agents in the design process.

The present state of architecture needs a non-prescriptive future in which we are not reliant on reformulating the past, but through a tactical present. It is only through an understanding of the disciplinary crises, structural imbalances and dialectical contradictions or apparent divisions that we can begin to realign architectural practice and discourse as culturally significant. Elements wishes to reposition the fixation from consumption to production. A method of practice should be formed. It is not an ontological query, nor an entirely practical account. It is the convergence of both towards 'practical theory'.



Arendt, H. (2013) *The Human Condition: Second Edition*. Chicago, IL, USA, University of Chicago Press.

Aureli, P.V. (2008) *The Project of Autonomy: Politics and Architecture Within and Against Capitalism*. Princeton, NJ, USA, Princeton Architectural Press.

Butler, J. & Chakravorty Spivak, G. (2011) *Who Sings the Nation-State?: Language, Politics, Belonging*. Calcutta, India, Seagull Books.

Zaera-Polo, A. (2008) *The Politics of the Envelope: A Political Critique of Materialism* (Vol. 17). New York, NY, USA, Volume magazine.

Can the university architecture studio be the site not just for training in design processes but for knowledge production as well? What studio practices are available to address the apparent oscillation between obligations to the profession and its past on the one hand, and a responsibility to the future on the other? In other words, which kind of studio best responds to the dual challenge of transmitting discipline-specific traditions while at the same time serving as a research vehicle to speculate on new conditions, institutions, and ways of building?

In part as a result of the Bologna Process, these and similar questions have been the catalyst for extended debate in schools of architecture and the object of conferences and publications in recent years. Impossible to categorise fully within the limits of this paper, a survey of recent literature (Brandt, et al., 2013; De Vos, et al., 2012; Brisbin and Thiessen, 2013; Ramirez-Lovering, Alexander and Farrley, 2013; Partanen, et al., 2014) could however be claimed to reveal three different approaches to research through design: a more theoretical bias, an emphasis on teaching strategies and devices, and a focus on practice and conditions outside the academy. These three approaches - prioritising theory, teaching, or practice - can provide a preliminary context for examining one specific university architecture studio.

Peter Eisenman's Venice Project studio was delivered over three years at the Yale School of Architecture in 2009, 2010, 2011. The Eisenman studios, it is postulated, engaged architectural problems, concepts and devices that can be considered internal and external to the discipline. An analysis of studio materials and student work provide one response to the opening questions and one index for speculating on the topic of architectural research through design.

A close reading of studio outlines reveals four elements in each: a pair of ideas, or a polarity as will be seen; an exemplary building or urban situation to be engaged critically; a contemporary theoretical lens deployed in order to test its possibilities within/as architecture; and a limited set of formal, generative, and transformative operations (Eisenman, 2009, 2010, 2011). A functional program was always also in place, though was specifically treated in a perfunctory manner.

The first Venice Project studio dealt with rhetoric and grammar. It asked studio members to confront the 16th-century proposals of Alvise Cornaro for Venice's basin with Guy Debord's notion of detournement and Pier Vittorio Aureli's reading of the city as an 'archipelago of monuments' (Venice Project I, 2010: p.1; see fig. 1, 2).

In the second year, the polarity is that of genius loci (or spirit of the place) and zeitgeist (spirit of the time). The case study site for analysis was Le Corbusier's Venice Hospital. The place of the contemporary lens was occupied by Michel Foucault's concept of heterotopia, a condition in which simultaneously several perhaps incompatible places exist (Venice Project II, 2011; see fig. 3, 4).

In Venice Studio III, the polarity or idea pair was figure and typology. This polarity was further complicated by a confrontation with the notions of *disegno* and *colore*, a dialectical pair proposed to mark differences between the Florentine painting of Pontormo (on the side of *disegno*) from the Venetian painting of Giorgione (on the side

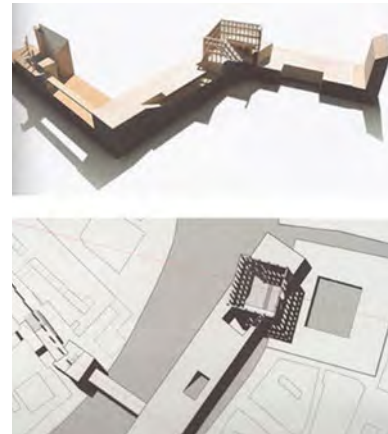


Fig. 1. Doyle, A. & Geraki, P. (2009) Venice Project Studio I. In: *Retrospecta 2009-2010*, p. 35 (© Yale School of Architecture).

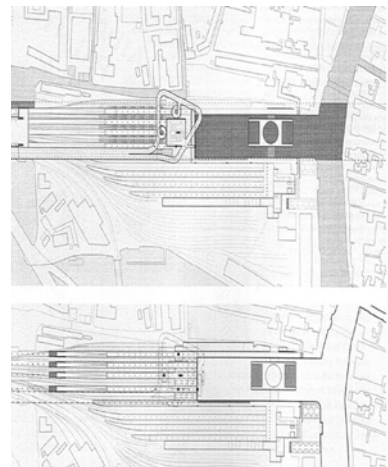


Fig. 2. Chapple, C. & Persinger, M. (2009) Venice Project Studio I. In: *Retrospecta 2009-2010*, p. 36 (© Yale School of Architecture).



Fig. 3. Rowen, J. and Markiewicz, D. (2010) Venice Project Studio II. In: *Retrospecta 2010-2011*, p. 45 (© Yale School of Architecture).

of colore). The case study sites were Rossi's Gallaretese Housing and his Cemetery of San Cataldo in Modena. Two project sites echoed this conceptual doubling, with studio members working simultaneously on a site in Florence (Piazza della Signoria) and in Venice (the Arsenale basin) (Venice Project III, 2012; see fig. 5, 6).

In terms of studio structure, at their most basic the Eisenman studios were divided into an analysis phase (five weeks, or one third of a fourteen week semester) and a project phase (the remaining two-thirds or nine weeks). The structure of the design studio as research mimed the ambitions of Eisenman. To take the case of Studio I, this involved conflating Cornaro with Palladio read through the lens of Debord's idea of *detournement*. Studying the impact in terms of analytic and visualisation techniques, composition method, and the derivation of formal responses were specific internal studio phases (Eisenman, 2009).

To generalize lessons from the three Venice Project studios, to identify principles with further application is difficult especially from so brief an examination. That said, an accounting of the underlying ambitions can be tried. Eisenman hints at such ambitions in the second year studio outline where he discusses the investigation of the possibilities of grammar and rhetoric as operative linguistic devices in architecture (Eisenman, 2010: p.1). Polarities, that of *genius loci* and *zeitgeist* for instance, are proposed as hypothetical frameworks for a critical approach to analysis and the development of specific responses to studio briefs. Eisenman deploys them as one means to encourage studio members to try via formal means to locate possible architectural capacities in the space between conceptual terms and within specific sites.

This is one way to formulate the research problem then tested in the student projects. It is not so much a 'what is' the space between two terms of a polarity but how might one formulate and test the architectural question of the two such that something new is created or revealed. The generative nature of the Venice Project studios is one way to characterise the specific research problem interrogated in the studios. The studio as an opening to possible futures or capacities in architecture is another. In other words, the research problem in Eisenman's Venice Project studios might be characterized as form research using operative frameworks delimited by aspects formed in binary couples (rhetoric and grammar; *genius loci* and *zeitgeist*; figure and typology). These are used in turn to read projects and places from the history of the discipline (Rossi's Gallaretese

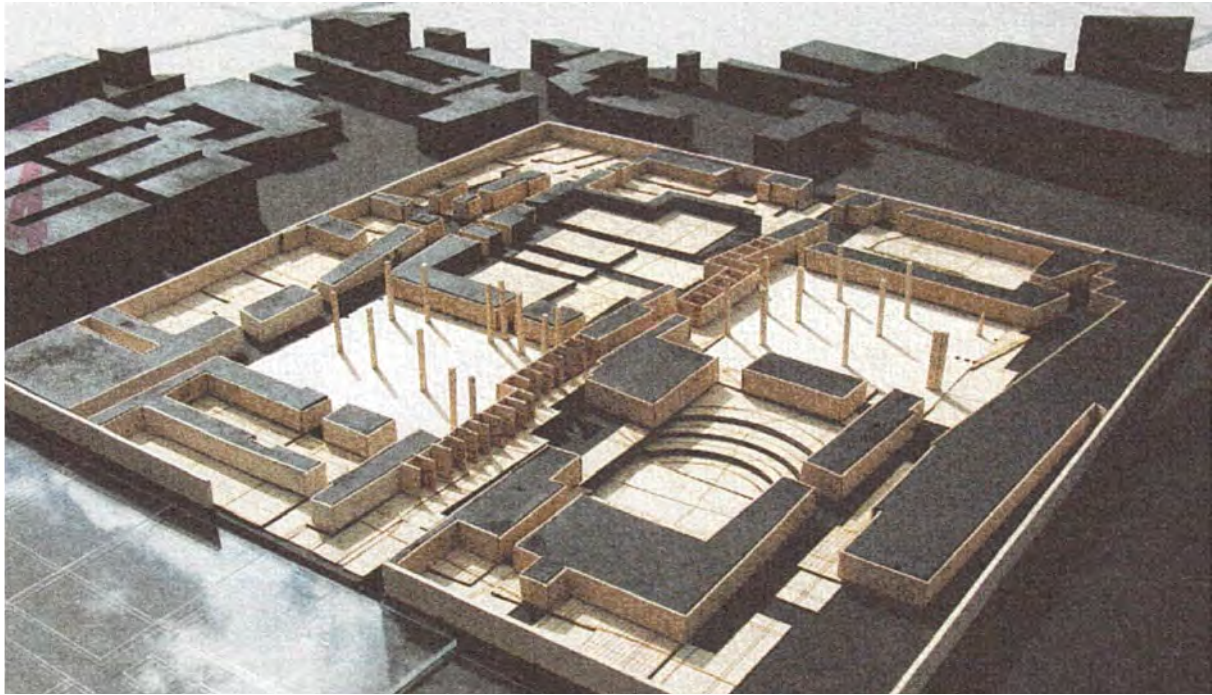


Fig. 4. Rowen, J. & Markiewicz, D. (2010) Venice Project Studio II. In: *Retrospecta 2010-2011*, p. 45 (© Yale School of Architecture).

Housing, the Rialto Bridge). It is a parallel and self-complicating dialectic with multiple contexts (historical, real, contemporary) and internal conditions of any architecture.

As a provisional summary, Eisenman's research field of inquiry can be claimed to be founded on a setting of ideas and forms, whether Cornaro's bacino, Rossi's Milan, or Le Corbusier's Venice Hospital. It is deeply engaged with architecture's future by a parallel confrontation with architecture's past. It contains an openness to the potential in concepts and ideas from other realms, whether the grammar/rhetoric polarity, Michel Foucault's heterotopia, or Debord's detournement.

Returning to the opening questions, the Venice Project studios reveal one approach to design-led research in the university architecture studio. The studios appear less to interrogate specific conditions then to stage differences between the synthetic activities of the always-transitory design process itself and the discipline of architecture as beyond functional and iconographic aspects of singular buildings and sites. In other words, the studio works to create the conditions of possibility for the new to appear.

In closing, let us return to the topic of research through design in the context of the academy, and to the general taxonomy of approaches prioritising alternately theory, teaching, or practice. From the above, the Eisenman studios appear to cross categories. The Venice Project studios engage theory by design while at the same time emphatically take on teaching practices and devices in an intentionally open-ended manner. There is a highly refined armature of contemporary theory underpinning the studio brief. At the same time there is a parallel critical emphasis on the autonomy of the architecture studio as necessary to the discipline. In this way, the studios operate in an exemplary manner as one model of architectural research.

Fig. 5. Brooks, M. & DeDonato, A. (2011) Venice Project Studio III. In: *Retrospecta 2011-2012*, p. 48 (© Yale School of Architecture).



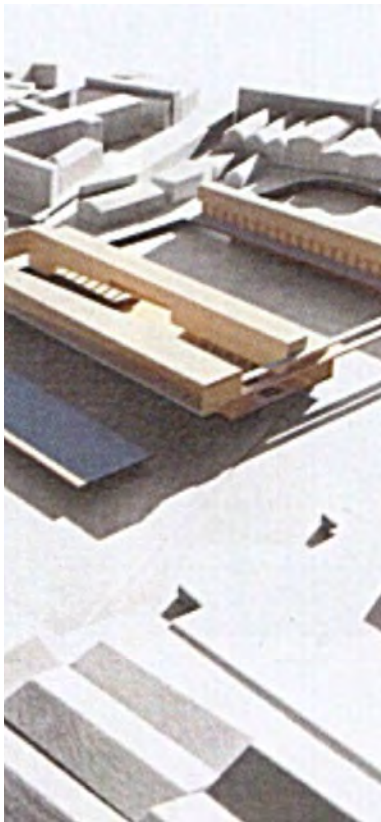


Fig. 6. Bench, D. Bui, C. & Mikhaeil, A. (2011) Venice Project Studio III. In: *Retrospecta 2011-2012*, p. 47 (© Yale School of Architecture).

Brandt, E., Ehn, P., Johansson, T. D., Reimer, M. H., Markussen, T. and Vallgardo, A. (eds.) (2013) *Nordes 2013: Experiments in Design Research -Conference Proceedings 9-12 June 2013*, Copenhagen: The Royal Danish Academy of Fine Arts, Schools for Architecture, Design and Conservation.

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Venice Project I, (2010) In: Bui, C.V., Bolos, C., Trigg, J. & Nee, D. (eds.) *Retrospecta 2009-2010*. New Haven, Yale School of Architecture, pp. 34-37.

Venice Project II, (2011) In: Kessler, A., Hsu, E. & Tarhan, Y. (eds.) *Retrospecta 2010-2011*. New Haven, Yale School of Architecture, pp. 44-45.

Venice Project III, (2012) In: Collins, T., McPhail, L. & Wiskup, E. (eds.) *Retrospecta 2011-2012*. New Haven, Yale School of Architecture, pp. 47-48, 137-138.

Michael Jemtrud

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Messy Technics :
multi-methodological research
and the collaborative design project

Thought in its essence is fabricative. It monstates and requires demonstration in order to be granted the legitimation necessary to continue the process of worlding. Such demonstration is a communal act, not a singular one, and can only take place within the bounds of an understood discourse (Berns, 2002).

The presentation argues that project-based research through design is a profound mode of knowledge production and that it is the most 'radical' site (Colomina, 2012) for contemporary education in skills acquisition, professional ethical development, and critical-imaginative inquiry. It asserts that the complexity of considerations in design activity requires a mode of investigation, discovery, and realization that is inherently collaborative, trans-disciplinary, and material. Project-based inquiry that is at least in part embedded within community, municipal, professional, industrial, and political realms inherently challenge scholarly methodological and output norms through the incorporation of multiple stakeholders concerns and 'real world' constraints. As such, research through design is a *messy technics* analogous to professional activity that is strictly speaking impossible to simulate within the academy through curriculum and normalized educational structures. It stands alongside and apart from university curricula burdened with institutional economies, accreditation strictures, and professional association predilections. It offers the privileged, unique and seemingly paradoxical opportunity to operate simultaneously as a concretely constrained and counterfactual proposition that can more directly, actively, and productively address Joseph Rykwert's notion of the 'public good' (2001).

The discussion that follows is situated within the context of a funded research project entitled the 'Arts and Ideas in Motion/Mediated Cities Project.' It considers *technics* as the 'master metaphor of our times, the basis of a new theology: a constellation of concepts, models and paradigms' (Vaccari, 2009). It argues for the primacy of *fabricative knowledge* (the capacity to know through making) as a profound access to the unthinkable. It is an original sort of inquiry and *knowledge* generation that, when in dialog with traditional scholarship, is a powerful mode of research unlike any other.

The inaugural stage of the research project is fundamentally a methodological question with various partners from architecture, design, engineering, computer science, humanities, and the social sciences working together to establish and accomplish a range of research objectives and deliverables. A coordinated set of scholarly research axes revolve around an architectural object and reoccurring urban intervention called the 'Mobile Urban Stage.' MUSE is a machinic *interface* expected to fulfil a number of roles within the research program. Its basic programmatic function is to tell stories about the city, its civic culture, and to offer up alternative realities and futures as a critical-imaginative device. As a designed *technical object* it is envisioned as a deployable, sentient, and responsive apparatus that has a number of functions such as the capacity to sense its immediate environment and interactively respond through sound, light, and movement.



Fig. 1. Wagon (2009) From: *The Imaginarium of Doctor Parnassus*. Directed by: Terry Gilliam [film still]. Great Britain/Canada. Davis Films.

Fig. 2. Ewais, Z. (2014) MUSE Arduino platform v0.021, installation for Arts and Ideas in Motion, Facility for Architectural Research in Media and Mediation, McGill University, August 2014.

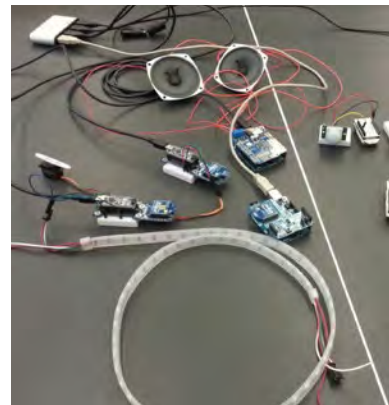




Fig. 3. Brush, B. (2014) MUSE variables and instances, diagram for Arts and Ideas in Motion, Facility for Architectural Research in Media and Mediation, McGill University, August 2014.

Fig. 4. Brown, A. (2014) Mapping spaces for an Opportunistic Architecture image for Arts and Ideas in Motion, Facility for Architectural Research in Media and Mediation, McGill University, August 2014.



It can utilize and express real-time information (ecological, social, economic) as it communicates with an associated web artefact and social media network. As a material construction it is envisioned as a *context mutator* that claims and reconfigures physical space. Lastly, it is similarly a device and lens through which scholarly speculation occurs for the trans-disciplinary team who will actively participate in its design, construction, and subsequent staging. As the research-creation component of the research program it acts as a repository of methodologies and theoretical positions.

For the purpose of this discussion the focus is upon a set of differing graduate level methodologies implicated in the MUSE design proposition. The work of three PhD students, two Master in architecture (professional) students, and a post-doctoral fellow following three common methodologies loosely defined as humanities based scholarship (history and theory, cultural studies); technological (engineering thesis); and design (research-creation) are laterally entwined, while respecting given disciplinary path dependencies, in order to advance the research objectives. The issue of enabling and capitalizing on the *messy technics* of cross-methodological strategies is at once the challenge and opportunity.

The initial challenge is to establish a discursive ground by articulating shared themes germane to the inquiry. These themes consider the intertwined nature between urban art, festivals, and performance; architecture and urban design; the technological platform of the mediated city; and the urban ecological milieu of the contemporary city. Differing perspectives, languages, and approaches act much like a fugue that simultaneously test each individual point of view and methodology, subvert their respective autonomy, and paradoxically bind the collaborative effort. Issues concerning vocabulary, language, ideology, techniques, tools, and politics arise and disrupt the discourse from the outset. The aim is not to level these differences but to give voice to the differing perspectives and maintain the 'monstrous' and dynamic quality of the collective.

The design-research program is a form of inquiry largely based in the power of fabricative knowledge to reveal unique insights into the questions of concern. The design, prototyping, and programming of MUSE, by a heterogeneous group of participants, encounters productive resistances that subvert simple or task-oriented schematizations and disciplining. Rather, it engenders a project-specific *technics of collaboration* that must be continually re-visited and re-made. 'Techniques are always immanent to the event

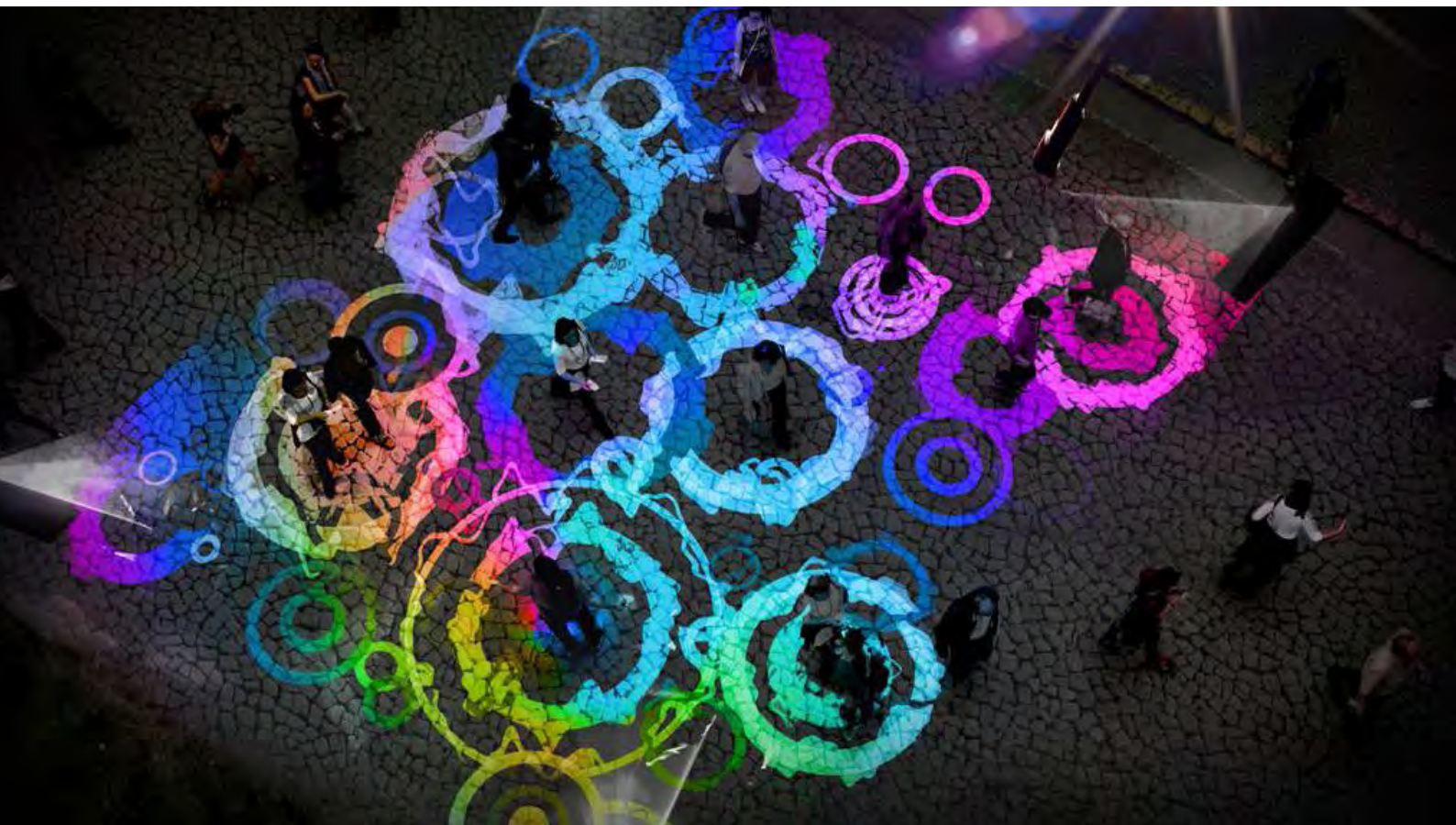


Fig. 5. Duval-Stojanovic, M. (2013) MUSE
"Interactive Ground Animation" scenario
proposition image for Arts and Ideas in Motion,
Facility for Architectural Research in Media and
Mediation, McGill University, October 2013.



Fig. 6. Diamanti, E. (2014) Contested space
[Photograph] In possession of: Eleonora Diamanti:
Montréal.

in its unfolding. They are not equal to all tasks and must therefore be reinvented each time' (Manning, 2009). It is held that technique, in itself, is a mode of questioning and knowledge production that has a *disinhibiting potential* for each participant and for the collective to delay the prefiguring of problems and solutions.

Lastly, the dynamic between imaginative counterfactual and factual constraint driven decision-making endemic to design-project activity allows for collective ownership by its trans-disciplinary and multiple stakeholder constituency. Propositional activity inherently gathers multiple and often conflicting variables, concerns, discourses, and desires that eschew the pejorative 'academic' moniker. It has a critical and subversive capacity that emerges through the collective construction of 'what if' scenarios situated within a concrete material reality. Project-based research activity as such is a messy endeavour that challenges the very status of traditional institutional epistemological and pedagogical structures. It generates original insight and a rich ethical posture that can only be found in *research through design*.

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Perplexity and Questioning:
how to frame design as a
mode of thinking?
How to let design think in and
from its own place?

I focus here on two closely related aspects which concern the ineluctable conjunction of discursive and poetic thinking in design research. First, the issue of perplexity/wonder; *thaumazein*. Second, the question of the question. I have treated these in an earlier article (Jenner, 2013) but will try to draw them together here. Both issues have immediate relevance, for instance, for the ways in which tacit knowledge (situated in the research project) is articulated; the experimental and hermeneutic methods employed; their documentation and dissemination; the epistemological status of embodied forms of experience and knowledge; and the relationship of the material-performative to the rational-discursive or the engaged. Both issues remain to be examined in depth, and continually, unless they are to be subsumed into the category of resolved, hence, simply taken for granted.

I.

St-John Perse commented, in a 1960 speech on the connection between the discursive and the poetic, that scientist and poet '[b]oth put the same question to the same abyss: they differ only in their methods of investigation' (Perse, 1971: p.5).

Indeed, in its beginnings every creative act of the spirit is 'poetic' in the proper sense of the word. In giving equal value to sensory and mental forms, the same activity serves, initially, the enterprises of the scientist and the poet alike. Which has travelled, which will travel, a longer way – discursive thinking or poetic ellipsis? From that primal abyss where two blind figures, blind from birth are groping, one equipped with all the apparatus of science, the other assisted only by flashes of intuition – which comes to the surface sooner and more highly charged with a brief phosphorescence? How we answer this question is of no importance. All that matters is the mystery in which both share. (pp.5-7)

Anterior to the question is the *incentive* - the state of wonder. Socrates remarked on wonder as the beginning of philosophy – Perse makes *poiésis*, instead, begin in wonder. In Plato (Plato, 1924: p.155c-d), *thaumazein* means being in a state of *aporia*, dilemma, perplexity, but also awe, marvel and wonder. A doctoral project could do a lot worse than begin with (and continue to consider) the whole gamut of these states. Much has been written on this passage, not the least by Martin Heidegger (Heidegger 1994: pp.133-150).

One of the most difficult aspects of making (*poiésis*), being quasi magical, is its complicity, "where reality seems to shape itself within the poem" (Perse, 1971: p.7). The world is caught in the act of making itself, and the maker is an amazed observer/participant. Architecture, then, (no matter of simple representation but of transformation into poetic reality) no longer follows reality, even if it was configured and founded in reality.

Representations in design and architecture, unlike those in other arts, are projective, they have an intention or purpose. This intentionality connects them to the project,

which, as its etymology implies, is something thrown forward, representation awaiting existence. Drawing, then, is a statement of intention towards some artefact other than itself. The notion of *disegno* points to the greatly underestimated potentialities of drawing as a mode of thought. We have still to learn modes of thought other than the digital demonstration of an accomplished fact, which would allow thinking through drawing. Jean-Luc Nancy's proposition, 'drawing is the opening of form' (2007: p.13), rather than a foreclosure by preconceived logic or algorithm, still remains to be thought through.

2.

A large proportion of a project may be non-discursive, heuristic, fuzzy, or just plain messy. This need not preclude questions. Knowledge and experience, as Henk Borgdorff notes, are founded 'in and through practices, actions and interactions' and 'pre-reflexive artistic actions embody knowledge in a form that is not directly accessible for justification' (Borgdorff, 2011: p.47). There is a potentially productive tension between artistic research and academia which, 'can spark a good deal of tension' through 'border violations' (Borgdorff, 2011: p.44). These can occur productively *within* a project-led thesis.

If design is *not* a separate category of research in general, the normal criterion of research: question posed and answered, would apply, and design become a mode of research: research and design as one and the same. But can a work of art and design ever simply answer a question? Can the aim of a PhD be to produce a work of art? Michael Biggs and Daniela Büchler rule that 'peers must judge the merit of the solution, not as a creative contribution, but as an answer to a question' (Biggs & Büchler, 2007: p.68). However, design is inherently devoted to creative contributions and discoveries not simply to solutions. Even under functionalism, which sought 'the engineering solution to a building problem', a simple 'solution' was never enough. Rather, design was to spring from an unexpected event: invention, the shedding of new light, something outside conventions. As long as production and determination of events can be guaranteed by conventions, though, what happens remains inside a possible and controllable horizon of anticipation: 'As I have often tried to demonstrate', writes Derrida, 'only the impossible can arrive' (p.54). The event punctures preconceived bounds.

One way of examining the issue of the question might simply be the reversal of one of Hans-Georg Gadamer's arguments: when texts, artworks, and buildings ask a question of their interpreters, as objects of interpretation, they need to recognise 'the horizon of the question within which the sense of the text is determined'. 'A work of art', Gadamer continues, 'can be understood only if we assume its adequacy as an expression of the artistic idea. Here we also have to discover the question that it answers, if we are to understand it as an answer' (1975: pp.333-34). If, then, artworks can be interpreted as responses to questions, might the question, even if only at the back of the mind, not be one of the most useful issues which would be explicated in a PhD?

In research, processes need to be argued to formulate the project, develop the question to be posed, and wrest the answer from it – by words, diagrams or drawings none of these in a necessarily linear path. Some parts of the research may be hypothesis-led, some discovery-led. The design thesis is a negotiation between project and text, in which Derrida's logic of the supplement works both ways. It is clear that in most cases of design research the question does not always arrive at the start as pre-given. It may come late, justifying the project retroactively after long and fruitful negotiations between perplexity and the very intuitions that led the research.

Biggs, M.A. R., & Büchler, D. (2007) Rigor and practice-based research. *Design Issues*, 23(3), 62-69.

Borgdorff, H. (2011) The production of knowledge in artistic research. In: Biggs, M. & Karlsson, H. (eds.) *The routledge companion to research in the arts*. London, Routledge, pp. 44-63.

Gadamer, H.-G. (1975) *Truth and Method*. London, Sheed and Ward.

Heidegger, M. (1994) *Basic Questions of Philosophy*. Translated by R. Rojcewicz & A. Schuwer; Bloomington and Indianapolis, Indiana University Press.

Jenner, G. R. (2013) Thought out of bounds: theory and practice in architecture doctorates. In: Engels-Schwarzpaul, A.-C. & Peters, M. A. (eds.) *Of other thoughts: non-traditional ways to the doctorate: a guidebook for candidates and supervisors*. Rotterdam, Sage, pp. 203-220.

Nancy, J.-L. (2007) *Le plaisir au dessin*. Paris, Éditions Hazan.

Perse, S.-J. (1971) *Collected Poems*. Princeton, Princeton University Press.

Plato. (1924, 7 January 2009) *Theaetatus* (Benjamin Jowett, Trans.). [Online] Available from: <http://classics.mit.edu/Plato/theatu.html> [Accessed 22 September, 2014].

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CREMORNE2025:
top-down and bottom-up tactics:
a strategy for robust urbanism

Cremorne 2025 is a design research project raising awareness for the need for densification within well-connected urban areas. It aims to challenge the consequences of urban sprawl, focusing on the potentials of existing inner-city industrial sites. Its research-driven design process, merging top-down and bottom-up tactics, generated discussion within wider communities, reminding the importance of active urban participation. Cremorne 2025 offers adaptive tactics addressing the challenges of urban expansion, revealed by rigorous on-field analysis to maximise the potentials of industrial sites. In addition, a respectful intensification and transformation of urban heritage was acknowledged as a necessity in retaining atmosphere, identity and attractiveness. Cremorne 2025's urban tactics form a holistic strategy to promote well-considered, site-specific urban design, bridging the distinction between practice and academia, and physically connecting with real world concerns. The project strives for wider interest and acceptance of provocative proposals to catalyse influence within urban culture and sustainable future development.

Revisiting Cremorne after two years revealed changes in the area, and also the impact of our self-driven project on the world wide web and in real life. It showed the importance of a methodology combining top-down and bottom-up approaches.

Design-Research

The research process operated at different scales, from developing visions for larger areas to investigating the existing grain in individual projects. Site analyses and fieldwork were conducted through first-person inquisition and documentation, revealing its crucial context and features. Individual student projects tested, demonstrated and informed the overall strategy, while emphasising the mutual influence of research and design. The discussion ranged from global challenges, to Melbourne as a whole, to developing visions for specific urban areas, to working out these areas in greater detail. On-field temporary interventions exposed the dynamism and activation of public space. The different scales of investigation were made accessible in those installations in makeshift presentation spaces, which invited the public to participate and discuss Cremorne's vision and research, and offer feedback into the project's trajectories.

Interventions

These urban interventions were realised on site and fulfilled in 2012 and 2013, offering an interactive platform for student exhibition and community engagement within a car park and gallery space. Transformed and activated for one night, they illustrated the potentials of urban intensification. Activating underutilised spaces combined small-scale



Fig. 1. Cassaignau, M., Jung, M. & Corallo, J. (2013) Cremorne2025 Visualisation [3D Visualisation] At: <http://www.cremorne2025.org/#lvision/c1x7x> (Accessed on 26.08.14).



Fig. 2. Cassaignau, M., Jung, M., Wallis, D. & Corallo, J. (2013) Cremorne2025 Strategic Plan [Photocollage] At: http://www.cremorne2025.org/#lstrategic_plan/czwo (Accessed on 26.08.14).

elements within a socially dynamic context. A strong emphasis was placed on interaction as a means of physical engagement and education. The resulting exchange directly informed the design process. It created awareness of the projects' external perception, and gave the community a voice in challenging issues of urban agglomeration.

Multi-Media

Communication tactics were implemented with informal and conventional methods. Online presence, exhibition posters, physical models, maps and renders were combined with flyer campaigns, street tags and urban interventions. This offered new readabilities for wider audiences, and exposed poetic, narrative and experiential moments in reflection of the dynamism needed to rethink current building culture.

Practice and Theory

Investigating and blurring the boundaries between research and design, and education and practice, the project aimed to identify methodologies addressing contemporary challenges of growing cities within Asian-Pacific contexts. It highlights the necessity of open processes in urban design. Cremorne 2025 approaches theory and practice with parallel methodology, and recognises the responsibility of academia to interact and take position in questions arising within their urban context. Reaching beyond the discipline incites the development of innovative ideas with unpredictable, but effective outcomes.

Collaboration

Collaborating with a diversity of groups revealed potentials between students, professionals and advocates of architecture, urbanism, urban activism, journalism and graphic design. Such trans-disciplinary participation offered a platform to encourage critical thinking and innovation. This interplay of complementary knowledge allowed the integration of multiple perspectives and personalities, creating a sophisticated body of work, with the aim to offer wider accessibility beyond the disciplines of architecture and urbanism. It captured the attention of local and international communities through political debate, conference and online journals.

Revisiting Cremorne

Two years later, comparisons were found between Cremorne 2025's predicted urban conditions, and the dynamics on site. Following the launch of Cremorne2025.org, a series of articles recognized the area's potential, influencing the refurbishment of iconic warehouses and large residential interventions. Creative industries are emerging as smaller warehouses transform, adding liveliness and density to a revitalised streetscape.

The City of Melbourne recently released 'Plan Melbourne 2050', (State Government Victoria, 2012) including Cremorne as a potential 'urban renewal area' (p.40). It acknowledges 'urban renewal and regeneration as important elements of a city's growth, as government has a key role to play...', (p.11) while the Council has also established a Cremorne Heritage Walk (Yarra Council, 2013).

Impact and Relevance

The influence of our self-driven academic project has been interesting to observe. Cremorne 2025 revealed new outlooks for a precinct with rich history, emphasised the value of reuse in maximising a site's potential, and created incentives for new projects.

Parallels between real projects and changes and Cremorne2025 tell their own story: Incentives for new developments were reflected by the project's crucial use of media and collaboration. Informal and online engagement created small snowball effects, inspiring moves and processes in the area. The combination of bottom-up and top-down tactics proved a solid formula for robust urban design, and brought together parties, communities and stakeholders. The project's feedback influenced the openness within the university for merging research with teaching, and recognising unconventional research methods. The Cremorne project also worked as reference for new collaborations between the university and councils both locally and overseas. Therefore, we advocate for continuing methods combining formal and informal tactics. They allow us to:

1. Reach the public and give them a voice in discussions and acceptance of projects.
2. Instigate the interest of stakeholders and offer incentives for site responsive projects.
3. Provoke governing bodies to take a stronger lead in urban transformation processes.

To achieve provocative outcomes, we need to take 'insane risks' (Koolhaas, 1995) and communicate via strong, speculative, atmospheric images, models, and installations. We need to deliver them with a combination of grassroots and contemporary tactics to connect with the real world.

Strongly embedded in academia, our practice encourages risk taking, future speculation about our living environment, and leveraging the necessary energy and networks for provocative contributions.

Koolhaas, R. (1995) What ever happened to urbanism? In: Koolhaas, R. & Mau, B. (eds.) New York, The Monicelli Press, pp. 959-971.

State Government Victoria. (2013) *Plan Melbourne, Metropolitan Planning Strategy*. [Online] Available from: <http://www.planmelbourne.vic.gov.au/home> [Accessed 1st July 2013].

Yarra Council. (2013) *Cremorne Heritage Walk*. [Online] Available from: <http://www.yarracity.gov.au/Planning-Building/Heritage/Heritage-Walk/Cremorne-Heritage-Walk> [Accessed 1st July 2013].



Fig. 3. Cassaignau, M. et al (2013)
Cremorne2025 Intervention Tactics [Diagram] At: <http://www.cremorne2025.org/#!strategies/cegd> (Accessed on 26.08.14).

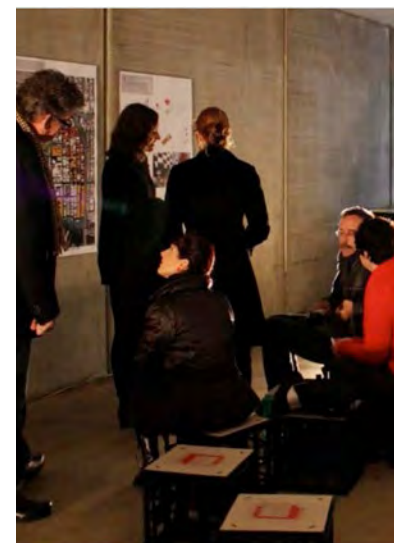


Fig. 4. Cassaignau, M. & Jung, M. (2012)
Cremorne2025 Event 1 [Photograph] At: <http://www.cremorne2025.org/#!event/c1ryd> (Accessed on 26.08.14).



Fig. 5. Cassaignau, M. & Jung, M. (2013)
Cremorne2025 Event 2 [Photograph] At: <http://www.cremorne2025.org/#!event-2013/c159b>
(Accessed on 26.08.14).

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Designing with Images

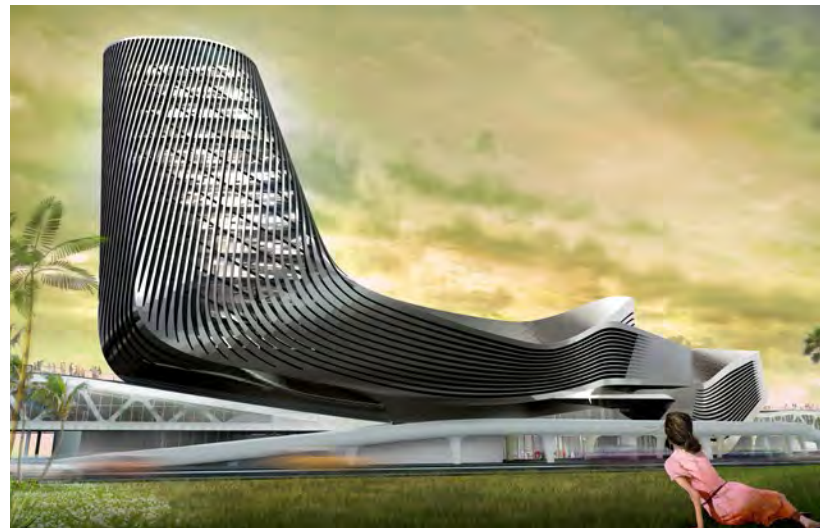


Fig. 1. Image courtesy of RUR (2014) KPT Exterior.

Fig. 2. Image courtesy of RUR (2014) KPT Exterior.

Recent discourses in visual studies and cultural geography, as well as architectural and historical scholarship are re-working the relationship between architecture and its visualization (see for example, Pelizzari and Scrivano, 2011; Latham and McCormack, 2009; Pallasmaa, 2011). These discussions shift away from interpreting architectural images (i.e. photography [Colomina, 1987; Frampton, 1986], moving-imagery [Eisenstein, 1989; Keiller, 2002; Bruno, 2002; Borden, 2000; Schwarzer, 2004], and lately, digital visualizations, or renderings [Fracari, Hale and Starkey 2007]) as purely documenting buildings and representational (Borden 2007) towards a more 'interdisciplinary approach' that considers things like the 'context of production and media distribution of images' (Pelizzari and Scrivano, 2011: p.109). This concern allows us to recognize image-production as a vital part of architectural practices, where design processes necessarily involve, as Benjamin Buchloh notes, 'an endless process of transforming the tectonic and spatial into the spectacular' through images (Buchloh, 1994, quoted in Pelizzari and Scrivano, 2011: p.109).

Recognizing the value of these studies, this paper aims to extend the interrelation between architecture and its image, by considering affect, that is, the affective capacity of images, particularly through affective image-making. We ask specifically, how does affective image-making operate as a design research strategy? This paper explores this question through a case study of RUR Architecture PC (hereafter referred to as RUR),



Fig. 3. Image courtesy of RUR (2014) KPT Interior.

and their Kaohsiung Port Terminal project. A full discussion of the project lies beyond the scope of this paper; and hence, this paper engages mainly with the images produced for the project prior to its construction - at the competition stage. The architectural practice of RUR is exclusively defined by competition work. As principle architect Jesse Reiser describes, competitions become a 'real-life vehicle' providing opportunities to explore formal and organizational interests, within the constraints of the specific programmatic requirements. This is tied directly to the publication of their work, and thereby, to the practice's investment in image-making. RUR's research-in-practice operates through the 'vehicle of competitions' - where the practice finds a chance to do and continue their research interests (Reiser, 2014). These images that are produced for competitions offer important sites of investigation into RUR's image-making practice and how they carry out their design-as-research. Particularly, the images allow analysis of the strategies and processes employed by RUR to affectively charge their images.

The research is based on a mixture of methods including, interviewing Reiser; visiting to the architectural office of RUR; writing of observational notes and collection of key documents and plans relating to the design project discussed. In particular, this study utilizes an interpretive case study approach (Stake, 1995). This approach is selected for the research as 'affect' as a theoretical concept has potential to be studied in-depth within a 'real-life context' (Yin, 2003) of architectural practices. In our analysis of the images we draw attention to Sara Ahmed's metaphor of stickiness. (Ahmed, 2004) Literature of affect has developed a range of metaphors that illustrate the movement and channelling of affect through 'pipes and cables' (Thrift, 2004), 'ropes and lines' (McCormack, 2008), 'transmissions' (Brennan, 2004), and 'contagions' (Gibbs, 2001). Such descriptions convey a kind of rapid, mechanistic and programmatic movement of affect. (Thien, 2005) While these conceptualizations are acknowledged in this paper, in the following, we look to Ahmed's metaphor of stickiness as the theoretical platform for the paper.

After the architectural practice of RUR and the architectural project, Kaohsiung Port Terminal, are briefly introduced, this paper will focus on the specific kind of images (visualizations) produced for the project and the relationship to their practice. This paper looks at three visualizations that RUR constructs for their Kaohsiung Port Terminal project; two exterior views and one interior view, the latter capturing, as Reiser describes, the 'sweet spot' of the project. In these series of images, we find processes of affective charge. In discussing these image-making practices we argue RUR's image-making is heavily invested in affective charge where the charge intensifies the surface of the images, thereby creating sticky images (Ahmed, 2004). RUR's image-making practice is as much about a process of the charge of the image as about a process of generating new strategies to design from- or design to- for the production of architecture. At issue here is not a matter of image as representation that sticks to reality. Rather, as Latham and McCormack put it, the endeavour is 'to make more of image' (2009: p.252) where

images (can) become sticky through affect. Thinking through sticky-images this paper concludes by considering some of the implications of extending the theory of affect to account for architectural practices invested in methods of image-making. Where image-making is situated as an important aspect of discussions around design research and what constitutes design research.

Ahmed, S. (2004) Collective feelings or, the impression left by others. *Theory, Culture and Society*, 21 (2), 25-42.

Ahmed, S. (2010) *The Promise of Happiness*. Durham, Duke University Press.

Borden, I. (2000) Material Sounds: Jacques Tati and Modern Architecture. *Architecture + Film II Architectural Design*, 70(1), 26-31, New York, Wiley.

Borden, I. (2007) Imaging architecture: the uses of photography in the practice of architectural history. *Journal of Architecture*, 12 (1), 55-77.

Brennan, T. (2004) *The Transmission of Affect*. Ithaca, NY, Cornell University Press.

Bruno, G. (2002) *Atlas of Emotion: Journeys in Art, Architecture, and Film*. New York, Verso.

Colomina, B. (1987) Le Corbusier and photography. *Assemblage*, 4, 6-23.

Eisenstein, S. M. (1989) Montage and Architecture. *Assemblage*, 10, 110-131.

Frampton, K. (1986). A Note on photography and its influence on architecture. *Perspecta*, 22, 38-41.

Frascari, M., Hale, J., & Starkey, B. (eds.) (2007) *From Models to Drawings: Imagination and Representation in Architecture*. London and New York, Routledge.

Gibbs, A. (2001) Contagious feelings: Pauline Hanson and the epidemiology of affect. *The Australian Humanities Review* 24. [Online] Available from: <http://www.australianhumanitiesreview.org/archive/Issue-December-2001/gibbs.html> [Accessed 15 July, 2011].

Keiller, P. (2002) Architectural cinematography. In: Rattenbury, K. (ed.) *This is not architecture: media constructions*, New York, Routledge, pp. 37-44.

Latham, A., & McCormack, D. P. (2009) Thinking with images in non-representational cities: vignettes from Berlin. *Area*, 41 (2), 252-262.

McCormack, D. (2008) Engineering affective atmospheres on the moving geographies of the 1897 Andrée expedition. *Cultural Geographies*, 15, 413-430.

Pallasmaa, J. (2011) *The Embodied Image – Imagination and Imagery in Architecture*. Chichester, John Wiley & Sons.

Pelizzari, M. A., & Scrivano, P. (2011) Intersection of photography and architecture-introduction. *Visual Resources*, 27 (2), 107-112.

Schwarzer, M. (2004) *Zoomscape: Architecture in Motion and Media*. New York, Princeton Architectural Press.

Stake, R. E. (1995) *The Art of Case Study Research*. Thousand Oaks, CA, Sage.

Thien, D. (2005) After or beyond feeling?: a consideration of affect and emotion in geography. *Area*, 37(4), 450-456.

Thrift, N. (2004) Intensities of feeling: towards a spatial politics of affect. *Geografiska Annaler: Series B, Human Geography*, 86, 57-78.

Yin, R. K. (2003) *Case Study Research: Design and Methods*. Thousand Oaks, CA, Sage Publications.



Fig. 6. Image courtesy of RUR (2014) KPT Exterior.

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[Re]searching [im]probable,
[im]possible and [un]desirable
design futures

The rapid technological and social changes of the past two decades have presented complex challenges to architectural practice and education; but at the same time they have spurred a rethinking of what we name, deem relevant, and value as 'design knowledge'. Internationally, academia is reacting in varying ways to the agency of design, and to how design as a material practice is to be understood as providing a valid model for knowledge creation 'through making', transformation and innovation; facilitated through the unique and distinct model of 'research by design'. In research by design, design becomes more than a problem-solving exercise and creates new questions and solutions simultaneously, in which the creative process is driven by an embedded intelligence in the design process. It differs radically from commercially motivated 'design practice' and more importantly, it poses a distinctive departure from the established 'scientific' models, being neither quantitative nor qualitative, and therefore seems to address the novel definition of research used by UK AHRC, namely to provide 'insights'. In the proposed presentation we aim to lead a discussion on the discovery and identification of the intellectual, methodological and representational richness, distinctions and potentials underpinned by this new practice of research and its contribution to bridging the long-standing gap between architectural theory and practice.

The admission of design-led research - also known as research through design, design-led research, and more broadly in fields such as art, education, health, etc. as practice-based research - as a valid form of research method in academia is quite recent. Until recently, architectural research and postgraduate education have looked to cultural studies, philosophy and literary criticism for their theoretical models, thereby minimizing their operative and technical capacity (Allen, 2012). As a result, a substantial divide has appeared between academic architectural theory on the one hand, and professional architectural practice on the other. According to Allen, academic architectural research has therefore developed as a kind of independent, discursive, text-based practice, in order that it would be legitimized by the established hegemony. The power 'theory' had on the intellectual culture of academia was so strong and influential that it inhibited the development of any alternative forms of thinking or knowledge creation. The 1990s



Fig. 1. Bonnevier, K. (2007) Book Cover, Behind Straight Curtains: Towards a Queer Feminist Theory Of Architecture. PhD, Royal Institute of Technology, Stockholm. At: <http://www.diva-portal.org/smash/get/diva2:11685/FULLTEXT01.pdf> [Accessed 20.06.01] .

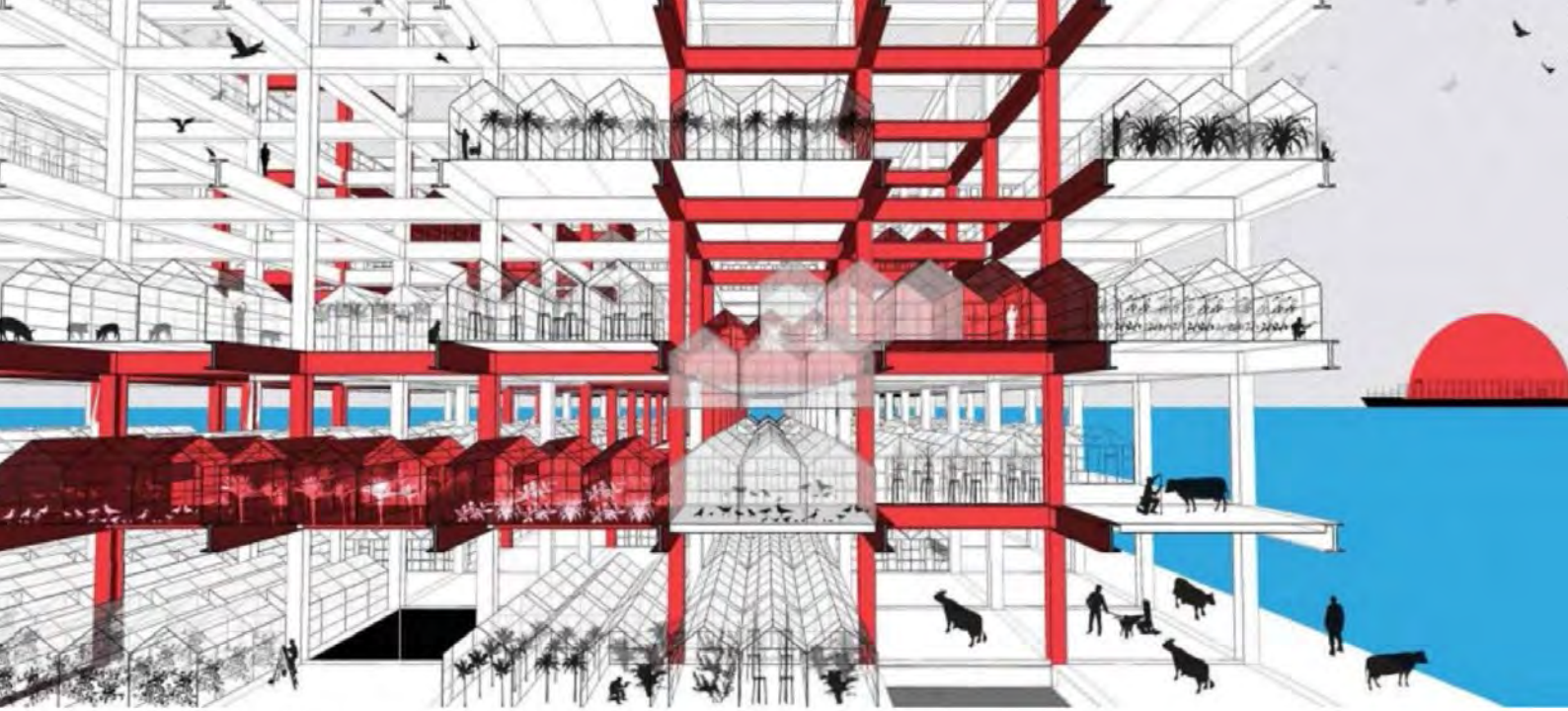
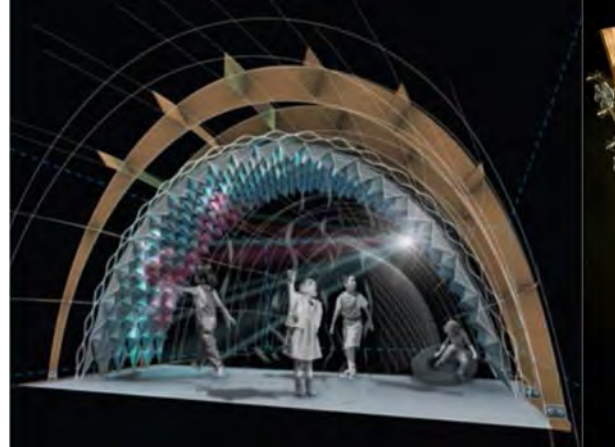
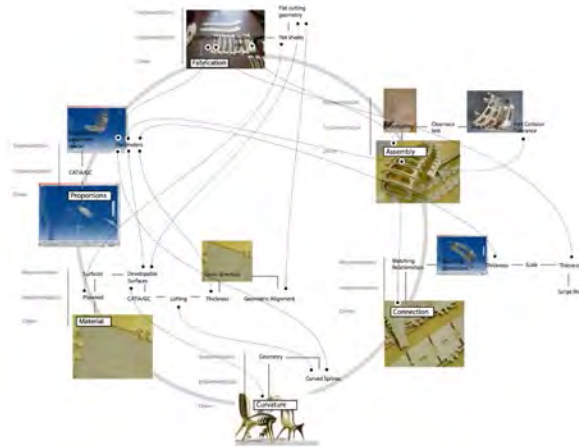


Fig. 2. Spatial Strategies for an Unknown Future, Spring (2012/2013) Resilient NL Research by Design Studio, The Why Factory, Delft University of Technology, NL. URL <http://thewhyfactory.com/education/nl-resilience/> [Accessed 20.06.01].

marked a big shift because the dominance of theory began to subside as globalisation, digital technology, environmental change, and an increasingly market-driven education economy began to reshape academia (Ockman and Williamson, 2012).

The emergence of 'making' as a potentially legitimate form of knowledge production and the broader context of the 'practice turn in contemporary theory' (Knorr Cetina, Schatzki et al., 2005) should not be understood in isolation, but as a consequence of the so-called 'crisis of representation', in which knowledge is constructed through the way we do things. In his article 'Intelligence after Theory', Michael Speaks refers to 'intelligence' which has become the current 'intellectual dominant of the early twenty-first century post-vanguards' (Speaks, 2007). Speaks draws our attention to a new group of emerging intelligence-based practices and their unique design intelligence that enables them to innovate by learning from, and adapting to, instability. This group is more concerned with the 'plausible' truths generated by doing and prototyping than with the 'received truths' of theory and philosophy. Does this imply that 'theory is dead' or redundant in a world driven by rapid technological change and innovation? Is theory really an impediment to innovation or can it still play a role as a form of representation in the search for new discoveries and innovation?

In pursuit of answers to some of the most recent discussions on the topic, we propose to focus on three controversial and distinct features of design-led research, in the context of postgraduate study. Firstly, its context of investigation is not bound to the actual; but creates plausible knowledge of [im]probable, [im]possible or [un]desirable futures. Secondly, it requires a multi-modal representational richness - beyond the rather restricted format of a written thesis - in order to communicate its outputs and contextual, professional and time-bound validity. And thirdly, it requires methodological diversity in order to adapt to continuous change, instability, uncertainty and value conflict in complex socio-technical contexts. In our presentation, we aim to exemplify these features through the examination of a selected number of postgraduate level 'research by design' studies (figs. 1 - 4). In addition to illustrating how representational form has agency in the knowledge-claims made by the researchers themselves, we



propose to stimulate discussion in the audience about the potential these new forms have for making architectural research more relevant to the practice of architecture, to break down the perception of academization, and to expose the agency and utility of choosing a particular research method.

Allen, S. (2012) The future is now. In: Ockman, J. & R. Williamson (eds.) *Architecture school: three centuries of educating architects in North America*, Cambridge MA., MIT Press, pp. 204-229.

Knorr Cetina, K., T.R. Schatzki & E. von Savigny (2005) *The Practice Turn in Contemporary Theory*. London, Routledge.

Ockman, J. and Williamson, R. (eds.) (2012) *Architecture School: Three Centuries of Educating Architects in North America*, Cambridge MA., MIT Press.

Speaks, A. M. (2007) Intelligence after theory. In: Burke, A. & Tierney, T. (eds.) *Network practices: new strategies in architecture and design*. Princeton, NJ., Princeton Architectural Press, 212-216.

Fig. 3. Kilian, A. (2006) Circular dependencies in the chair design and fabrication study, *Design Exploration through Bidirectional Modeling of Constraints*. PhD, Massachusetts Institute of Technology, Cambridge, MA. At <http://designexplorer.net/download/Kilian-phd-arch-2006.pdf> [Accessed 20.06.01].

Fig. 4. Townsend, S. (2009) *The Kinesthetic Interaction Space, Part 2 Project*, University of Nottingham, UK. At: <http://www.presidentsmedals.com/Entry-24241> [Accessed 20.06.01].

The current condition of architectural design education, of studio design education (at least within the Australian context), is at a crossing point, an X-point. The evolution of 5-year B.Arch programs into B.Arch plus M.Arch programs, whereby a previous undergraduate B.Arch program is repositioned as a 3-year B.Arch (or B.Envs program to take the University of Melbourne as an example) plus a 2-year M.Arch program makes a great deal of sense in the context of general University programs, degrees and fees, but presents a conflicted and contradictory situation with respect to design and research. The aspiration of a research agenda within studio design is less an issue of the validity of design as a research activity and more an issue of the problematic conflation of a graduate degree with professional accreditation, as well as with academic research legitimacy.

I would suggest that M.Arch design studios in most schools of architecture act as a linear continuation of B.Arch design studios, albeit with heightened expectations of competency, fluency of technique and sophistication of ideas and execution. While the logistics and management of this transition from a 5-year B.Arch to a 3 + 2 year M.Arch (based on accreditation and professional registration) seems to be under control, there remain several structural anomalies and unresolved consequences. Foremost of these is a lingering sense that rather than being an elevation of architectural education to graduate status, the shift is in effect an inflation of undergraduate pedagogy to a higher status without a significant change in manner of operation or production.

The continuity that is embedded in this arrangement is clearly a consequence of the need to maintain, through accreditation, the link to professional competencies and registration. As such, the nature and operation of current M.Arch design studios are strikingly similar to when they operated under the category of 4th and 5th year B.Arch design studios. In the context of professional qualifications and training, this is entirely justifiable. But it leaves as problematic the degree to which a 'masters' degree acknowledges a profound shift in experience and architectural knowledge beyond that supplied with a mere 'bachelor' degree.

If architectural design studios are to be championed as exemplars, as prototypes of '*design as research*' then the dimension (width and/or breadth) of their research engagement needs exposition and elaboration. The casual assumption that because they now exist within a graduate-level mandate, design studios are necessarily part of a research culture is hard to substantiate, particularly in light of the conflicting allegiance with the profession and its required competencies. The aspiration – '*design as research*' – is not just a noble, or even necessary re-balancing or re-positioning of architectural education, but also an important opportunity to see post-graduate architectural education as more than the re-badging of a previous format.

In the context of early 21st century architectural education, if we are to take serious the title of 'Master of Architecture', then it must involve serious, industrious research work (individually and collectively) in the context of design production and speculation.

This position does not accept the proposition that design – by its very nature – is intrinsically research. Rather, it counters that the research dimension for post-graduate architectural design is a productive, co-generative stream within design practices. It is not the same as design, nor is it separate or distinct from design, but rather is an intertwined, shared mode of deductive, analytic and synthetic speculation with demonstrative inputs and consequential contributions. It might be considered a 'trajectory of investigations' rather than a design solution or proposal.

This conundrum, this certain uncertainty is exacerbated within a program structure that is predominant (if not completely) based on semester-length design studios. The question remains: 'is it possible to do serious, authentic research in conjunction with a design proposition (with approximately 6hrs/week studio time) within a 12 or 13 weeks semester?' The nature and cycle of research (and this is not to accept that there is an a priori definition or methodology of how this takes place) is hard to square with the implied instrumentality imposed in the service of design studio agendas and production schedules – situated within a fixed semester. Width (or breadth) versus depth of research? Or, width multiplied by depth in design research. The normative cycle of *introduction*, *'research'*, *concept*, *design development* and *completion* that marks most semester-long studios consigns research to a superficial role.

Expediency is an ever-present threat in the pursuit and expectation of research to fulfil a 'useable' input to a design (a questionable feature of many such undertakings), where research is often abridged or truncated when pressures of time and the perennial assumptions of primacy of design conspire to shift the focus to formal resolution and identifiable implementation. In such instances, there is little width of research when time is short and the exigencies for usage and input (within the design) come crashing down.

Depth of research is even more problematic as its efficacy is often undermined by norms that fix its contributions to the beginning (or early stage) of a design project, rather than at the end. What is often called research is usually no more than the background information that situates a project in a context, or is focused attention to an element or component of a larger design proposition. The interrogative, iterative working through of a specific line of enquiry in pursuit of testable design qualities and architectural effects throughout the duration of a project is seldom enacted.

The conclusions I would draw is that for post-graduate architectural design studios to operate legitimately as research platforms, they must contemplate severing the direct linkage with the attainment of professional competencies. The semester by semester exposure to short, concise design scenarios, needs to be replaced by longer duration formats, based around the completion dictates of a research agenda, not an academic cycle. And finally, the definition of an architectural design 'project' should not be determined by being resolved into an identifiable building proposition, but by the body of work that advances the disciplinary knowledge of architecture.

Conceptualising Tactics

It is one thing to create new knowledge within the theoretical, methodological, material, and disciplinary paradigms of a field; it is something quite different to imagine a new knowledge platform, a new way of designing knowledge and engaging in broad communities in knowledge creation (Burdick et al, 2012: p.86).

The presentation will discuss tactics for conceptualising, creating and documenting innovative research in architectural history and theory by highlighting the possibilities that digital media platforms have opened, but to date have been less taken up in architecture than other fields. By adopting the term 'tactics', in reference to the symposium proposal, I am referring to the notion that tactics can infiltrate opportunities and appropriate strategic structures to generate alternative and new outcomes. As Michel de Certeau suggested, small gestures of tactical practice can be crafted so as to quietly disrupt normative strategies (de Certeau, 1984: pp. xi-xix). Applied to the topic at hand, we are now at a time when practices around accepted academic research have been, and continue to be, challenged so as to re-make habitual understandings on the recognised production and accountability structures that support creative endeavours.

Taking an historical perspective, architecture is of course no stranger to finding novel ways of creating and disseminating interpretative and critical meaning through media other than conventional textual accounts (Hill, 2007). Already by the mid-twentieth century, with the growing availability of new media tools, and an architectural pursuit of technology, the international project of Modernism was harnessing multi-media exhibitions, documentaries and photography to create vivid and engaging modes of interrogation and representation that furthered the polemical thrust of Modernism (e.g. Colomina, 1996; etc; Lewi, 2014; Mort, 2004). While architects also creatively re-made the conventional book into a designed visual tool for research and representation (Powers, 2002: pp.157-174). The post-WWII architectural partnership of Alison and Peter Smithson, for example, created architecture through books like *DS: An eye on the Road*; *The Charged Void: Architecture*; and *Without Rhetoric*, and famously commented that 'A book is like a small building for us.'

We can fruitfully extend this approach to the making of digital equivalents to traditional exhibitions, documentaries and designed books, and thereby contribute to what has been described in the Digital Humanities as the 'fundamental remapping' of the current contours of scholarship; 'through collaborations in which researchers can curate, narrate, annotate, and augment physical landscapes...' (Burdick et al, 2012: p.46).

To take three conceptual tactics for this remapping of scholarship that can be applied to architecture: first, architectural research can now be *located* through mobile applications and guides that have the capacity to interpret and shape our experience of



Fig. 1. Lewi, Williamson & Goldswain (2001)
Visualising the Architecture of Federation, CD-
Rom, sample navigation page.

buildings and places *in situ*. Thus, as already practiced in related fields such as archaeology and heritage, the possibilities of immediacy and simultaneity of interpretation and experience can be developed that can, in turn, reframe formally rigid boundaries towards more porous relationships between the subject of study, the archive and the research outcomes (McCullough, 2004: p.5).

Second, through creative application of digital databases and networks, knowledge generation can be carried out at a scope and depth typically not previously readily accessible through conventional library repositories and publications. As cultural historians have suggested, archives are being animated in new and participatory ways, which hold enormous possibilities for architectural scholarship (Edwards, 2012: pp.254-257; Labrador et al, 2009: p.3).

And third, ubiquitous access to the internet and social media has created infinite public forums for engaging in and *co-producing* research and research resources into buildings and places. These public platforms have issued serious challenges and opportunities to research gate-keeping around authorship, accessibility and verification.

Creating Tactics

Some examples of digital media production that have constituted a body of architectural research (involving curation, interpretation, collection and knowledge production) that I have been engaged in and written about, through team collaborations, for 15 years are summarised here:

- *Visualising the Architecture of Federation* CD-Rom (2001) - a virtual museum that digitally visualised the prolific period of architecture in Western Australia at the time of Federation in 1901 (Lewi, 2007).
- *Formative Histories* App (2008) - an educative guide to the 19th century architecture of Melbourne city for students and the general public (Lewi and Smith, 2011).
- *Shrine of Remembrance* App (2009) - an interpretative ipod guide prototype for the general public which explored site-generated ways of guiding experience of the Shrine of Remembrance in Melbourne, and interpreting its historical significance, through techniques such as a digital locative 'sun-dial'; detailed image interpretation; film sequences; and ambient oral histories (Smith, Lewi et al, 2010).

- *Landscapes in Time* iPad App (2011) - an interpretative guide to the Royal Botanic Gardens Melbourne for Masters students that explores how to visualise change over time, and performative experience of this highly significant historical park (Lewi and Saniga et al, 2014).
- North Fitzroy State School (2014) - a digital film produced for an exhibition and website dissemination that animates an existing photographic and sound archival material.
- *Citizen Heritage* (in progress) - work commencing from a current Australian Research Council Discovery project on creating a citizen, co-produced, digital tool for documenting and experiencing archives and memories of the Port Melbourne area.

Documenting Tactics

Through what has often been termed the 'visual' and 'spatial' turns in knowledge production (e.g Stafford, 1996 etc.), we can fruitfully extend attention to the visual and the spatial to the act of authoring through visual and spatial tactics that can express new ideas and interpretations. Through exploring new digital repositories and media environments, research outputs in creative practice and humanities disciplines are thus rapidly becoming more malleable and permeable. Accordingly, research management in academia in the last decade has begun to catch up to these new outputs, albeit in a slow and steady manner. Therefore, in conclusion, questions can be asked around finding appropriate protocols for evaluating, disseminating and documenting creative digital research outputs in the context of current research metrics (e.g. in Australia, the ERA and HERDC indices). How can we critically review and recognise such outputs on their own terms as designed, scholarly and creative research productions that extend architecture knowledge? How can we better recognise different modes of work involved in creating such outputs that involve experimentation, prototyping or the contingencies of community engagement? And how might such research assessment protocols be alert to the possibilities for carrying out digital, media-specific analysis, peer review and dissemination, that are not necessarily eclipsed by text?

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Colomina, B. (1996) *Privacy and Publicity: Modern Architecture as Mass Media*, Cambridge, Mass., MIT Press.

de Certeau, M. (1984) *The Practice of Everyday Life*, Berkeley, University of California Press.

Edwards, E. (2012) *The Camera as Historian*, Durham, Duke University Press.

Hill, J. (2007) Criticism by design. In: Rendell, J., Hill, J., Fraser, M. & Dorraïn, M., *Critical architecture*. London and New York, Routledge, pp. 165-168.

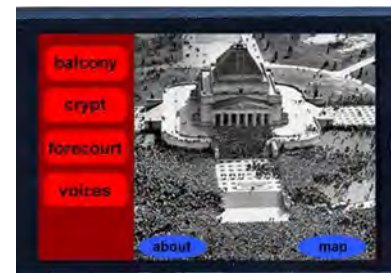


Fig. 2. Lewi & Stitt (2008) Formative Histories Walk, iPod App, sample navigation page (top).

Fig. 3. Lewi, Smith & Stitt (2009) Shrine of Remembrance, iPod App, sample navigation page. (centre).

Fig. 4. Saniga, Lewi & Smith (2011) Landscapes in Time, iPad App, sample navigation page (bottom).



Fig. 5. Lewi H. (2011) *Landscapes in Time*, use of guide in the field.

Labrador, A. & Chilton, E. (2009) Re-locating meaning in heritage archives: a call for participatory heritage databases, *Computer Application to Archaeology*, March, 1-7.

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Powers, A. (2002) The architectural book, In: Rattenbury, K. (ed.) *This is not architecture*, London, Routledge, pp.157-174.

Smithson, A. (2001) *As in DS: An eye on the Road*, Verlag.

Smithson, A. & Smithson, P. (1974) *Without Rhetoric, An Architectural Aesthetic*, 1955-1972, Cambridge Mass., The MIT Press.

Smithson, A. & Smithson, P. (2001) *The Charged Void: Architecture*, London, The Monacelli Press. [Online] Available from: science.jrank.org/pages/10822/Practices-Practice-Resistance-Michel-de-Certeau.html "Practices - Practice As Resistance: Michel De Certeau" [accessed July 2014].

Smith, W., Lewi, H., K Darian-Smith, K., & Pearce, J. (2010) Re-connecting visual content to place in a mobile guide for the shrine of remembrance. In: Seal, Bowen & Ng, *Proceedings of EVA 2010: Electronic Visualisation in the Arts*. NA, United Kingdom, British Computing Society.

Stafford, B. M. (1996) *Good Looking: Essays on the Virtue of Images*, Cambridge, Mass., MIT Press.

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Maria João Pita

Atelier da Rua

Designing with the People,
on the Street, Towards the City

1. This paper is focused on the project of 'Atelier da Rua' (Street Workshop), which goals are the transformation and the activation of ordinary public space using a participative methodology. Animated by a team of four architects of three generations, Atelier da Rua (fig.1) was one of the 10 projects selected by 'Ideias de Origem Portuguesa 2014' (Ideas of Portuguese Origin), promoted by Fundação Calouste Gulbenkian, Portugal, a competition looking for social entrepreneurship projects created by the Portuguese diaspora. The paper is divided into 2 major parts. Firstly we present a brief characterization of the main problems and objectives. Secondly the working methodology of Atelier da Rua.

2. Many areas in Portugal are marked by negligence, lack of ambition concerning investment, development, use and maintenance of streets. These situations illustrate the contradiction between an urgent need of architectural intervention and the scarcity of work for architects. It also demonstrates the instituted power incapacity to promote new strategies to transform and activate public space. Atelier da Rua assumes that citizens need to live the street in a positive way, recognizing and exploring its value (Bourdin, 2011). To reach this, we recognize the need of awareness and the involvement of local government representatives, street users, inhabitants and stakeholders (Jacobs, 1962). However, one of the main project challenges lies in the difficulty to reach communities, reinforcing their conception of the street as an important structure to improve the spatial and social quality of our cities. The generalized gap between people and their power to change and improve their street demands to question in a broad perspective: How is your street? In order to contribute to a possible answer, Atelier da Rua firstly aims to:

Secondly, we propose to create a street project methodology based on a conventional architectural design approach. Issues such as programming, architectural design, implementation/action, relation promoter/usufructuary (Quarioni, 1977) apply and overlap to a bottom-up approach based on a participatory process (Bourdin, 2011). These objectives anchor in the pursuit of dialogue between the different actors, namely: residents, owners, workers, local authorities, investors, stakeholders, and researchers. This approach will generate a platform that looks for the stakeholder's interest's conciliation. Simultaneously, alternative funding solutions are to be explored. The core working team embodies these principles by integrating other contributions from different areas of research and design practice.

Therefore, our ultimate aim is to approximate people of their power to transform the street. Thus all actors will be able to participate on the construction of their social

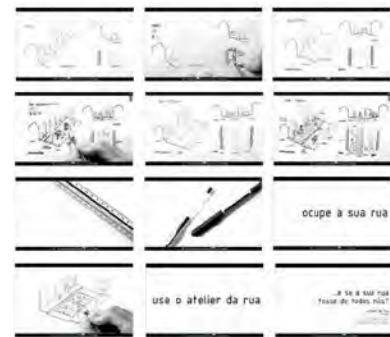


Fig. 1. Pita, M., Marques, P. & Mendes, P. (2014)
Extract from the video of the project "se essa rua
fosse minha..." - ATELIER DA RUA: programme,
methodology and examples.

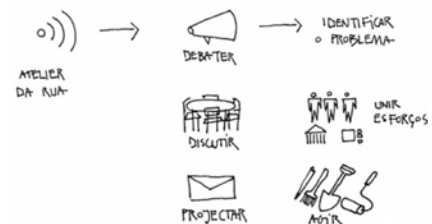


Fig. 2. Pita, M., Marques, P. & Mendes, P. (2014)
Extract from the video of the project "se essa rua
fosse minha..." - ATELIER DA RUA: methodology.



Fig. 4. Cruz, T. (2014) Case-study: street in a consolidated urban context - Rua do Salvador, Lisboa.

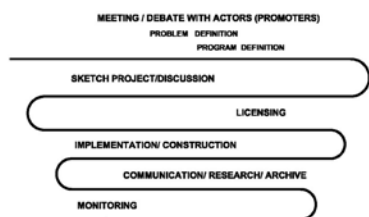


Fig. 3. Pita, M., Marques, P. & Mendes, P. (2014) Working methodology - ATELIER DA RUA.

and architectonic street identity. Atelier da Rua looks for a strategy with local and global impact that can improve the living quality of the street, the neighbourhood, the city and even the country.

In addition, we propose a website that is a dynamic database promoting communication between agents. It presents, explores, and compares in a systematic way the object of each project. This catalogue associated to the project methodology pretends to be a working tool for all actors dealing with architectural design and urban intervention.

3. The working methodology will establish a systematic perspective of each project (fig. 2, fig 3). Nevertheless the specific solutions will be based on the work and dialogue between citizens and experts, in a human, simple, accessible, understandable, and architectural tool (Alexander, 1977). Each project is case-sensitive to each particular context, time and space scale, but also submitted to a systematic approach. This enables a comparative analysis of different case-studies. The ongoing proposal for Rua do Salvador configures the specificity of a case-study of a street in a consolidated urban context (fig. 4, fig 5).

The proposed methodology is based on the use of classic architectonic tools (plans, sections, axonometric drawings), without neglecting a critical and active use of contemporary research and intervention tools to develop design schemes with collective authorships. Six main steps support the methodology:

- Meeting with demanding actors (promoters) and other groups of interest. Identify/ create the promoters representativeness structure (neighbourhood association); agreement signature; problem definition, diagnosis and data collection; and finally program definition.
- Production of the sketch project: - written part: note about the project context and the specific proposed design solutions; -graphic part: plan+section+axonometric of the existing situation; plan+section+axonometric of a minimum scenario; plan+ section+axonometric of a maximum scenario; -photographic gallery.
- Presentation of the final document and discussion of the solution, payment; project calendar of further phases, copy to the competent local authorities; licensing implementation/construction.
- An online database will be developed as communication, research and archive tool. The structure of this database will focus on: the physical and architectonic aspects, the participation models and the alternative funding solutions.
- Monitoring.
- The application of this methodology is not seen with a rigid sequence. It is rather seen as a non-linear process, full of advances and retreats, characterized by ongoing interplay of factors involved in the development of a participated synthesis.
- Once Atelier da Rua is running it will be crucial to identify the tools and indicators that allow a strategic monitoring of the project. It is also during this period that is possible to assess the design fitness between form, context (Alexander, 1964) and participation, to implement in future improvements

To conclude, Atelier da Rua, through a bottom-up and participative model, proposes to intervene in ordinary public spaces, streets in special, and to create a systematic catalogue of case studies, potentially helpful to other disciplines. The central goal is to enable the emergence of a participated and articulated architectural design that enriches different stakeholders in an active way. The potential of this process is not seen as the dissolution of architectural design, but rather a new strategy that reinforces its character and effectiveness.



Fig. 5. Cruz, T. (2014) Case-study: street in a consolidated urban context - Rua do Salvador, Lisboa.

Alexander, C. (1964) *Notes on the Synthesis of Form*. Cambridge, Massachusetts and London, England. Harvard University Press.

Alexander, C. (1977) *A Pattern Language: Towns, Buildings, Construction*. New York, Oxford University Press.

Bourdín, A. (2011) *O urbanismo depois da crise*. Lisboa. Livros Horizonte.

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Missing in Action? Planning a
Design Thesis: ways, means and
tactics for research through design

SCOPE	<i>The ASPECT of architecture being explored</i>
PROPOSITION	<i>A POSITION, often contingent.</i>
QUESTION	<i>The CONTEXT that enables design to begin</i>
METHODS	<i>The WAYS and MEANS of designing</i>
METHODOLOGY	<i>The TATICS by which ways and means are critically deployed</i>
RESULTS	<i>The DESIGN (S)</i>
CONCLUSION	<i>Critical INSIGHT that can inform subsequent design</i>

Design is messy and over analysis will stop the flow ... was the parting line from a colleague after a conversation on design methods. For many, 'method' is associated with a grim period in architecture where science held sway. I certainly have no intention of resurrecting the dogma of that period, but in equal measure I agree with Till (2012) that painting the design researcher as a heroic genius, marginalises the agency of design research. Despite the various arguments surrounding the value of design as research such as those developed by Downton (2003), van Schaik (2008), or Fraser (2013), there are only a few contemporary resources (Jomaka, 2008) (Mückenheim and Demel, 2012), which at best provide partial references for students planning a design thesis. If the research emphasis is on designing, then critical knowledge and skills on the ways and means (methods) and tactics for their deployment (methodology) is essential.

New Zealand architecture schools have from 2010 required that the final year of study is undertaken as a 12 month Masters research thesis. For our school in Wellington the shift from a typical design studio framework to a prolonged research thesis has produced large numbers of thesis students (90+ per year). In order to support this shift, embedded in the curriculum is a course in research methodologies that precedes the thesis. At the onset, the course adopted the traditional structure of research: scope, proposition, question, literature review, method, discussion, and conclusion. However, the expectation of a clear research question *before* starting a design, appeared to intimidate students. The scholarly emphasis associated with the research nomenclature suggested long literature reviews and prolonged theoretical positioning. Hence, the tendency in the early years of the thesis was for the design component to be comparatively underdone. In order to address this, the research methodologies course has shifted to focus on designing as the central activity of the thesis.

As illustrated in figure 1, this has led to the translation of traditional research nomenclature to the context of planning research through design. The translation of research terminology to the act of designing emphasizes that: the proposition is often contingent; a question merely provides a context to begin designing that will lead to more questions; that there are multiple ways and means of exploring a proposition; and that their tactical deployment is generally required to progress a design; as for example changing design media or exploring the emerging idea through alternate scales and

Fig. 1. Author, (2014) Translation of research nomenclature to designing.

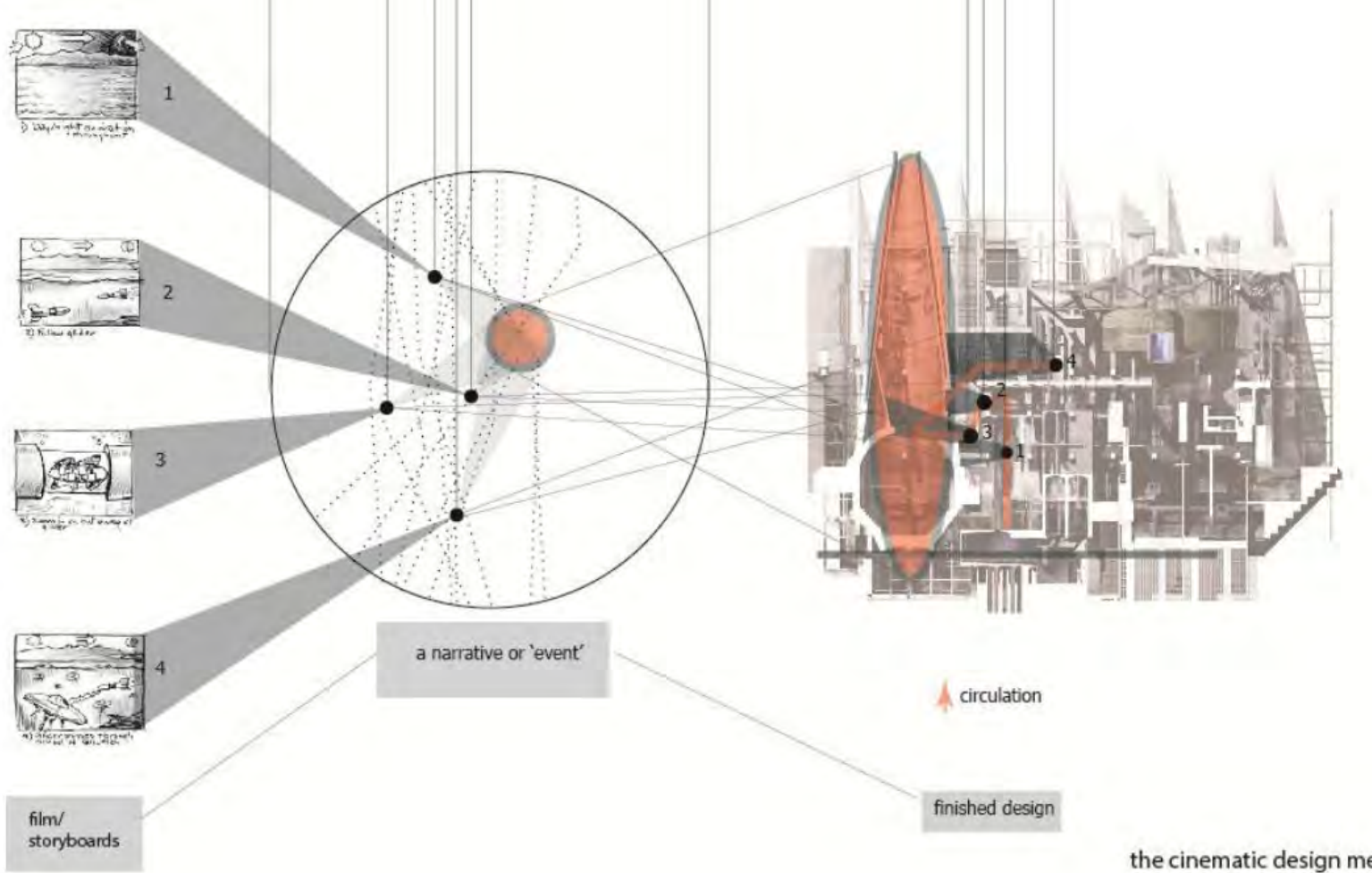


Fig. 2. Student exercise supervised by author (2013) Operational study of cinematic framing.

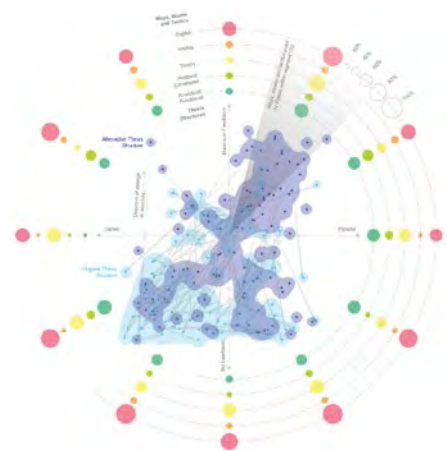
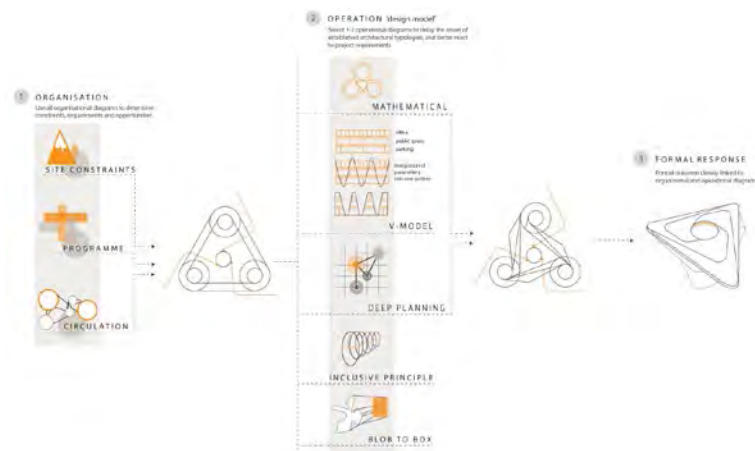


Fig. 3. Student exercise supervised by author (2013) Operational study of paper maquette techniques.

site contexts. *Tactics* is used to articulate the contingent use of the ways and means of designing, deployed with attitude in order to explore the design proposition. For a student planning research, this translation encapsulates that for a prolonged design thesis, a critical and experimental attitude to designing is desirable.

From one point of view there are as many ways of designing as there are individual designers, but arguably there are common threads and approaches. With colleagues and students we have identified over forty and these have been compiled as a resource for the course. These provide a repository that describes the approach, provides an overview of the critical context in which a method or technique emerged, with references to key texts and projects, should a student want to explore in more detail. Of equal importance we have developed with our students, annotated diagrams that succinctly describe the design operations. The emphasis was to communicate these in a form they that their fellow students would find useful. Figures 2, 3 and 4 illustrate examples of the student diagrams of 'ways and means': cinematic framing; paper maquette; diagraming. We accept that in themselves, these operational snapshots are reductive and that each approach can be reconfigured in the hands of different designers. Nor do we suggest that merely understanding the mechanism of designing, necessarily leads a student to a quality outcome. But in the context of opening up early design researchers to the range of ways and means at their disposal, feedback from students is that it provides a useful resource to begin planning a year of design research.

A complimentary study examined typical thesis structures and how design research had been undertaken. Students were required to analyse previous theses and propose



alternate structures and methods. These were compiled and students were asked to analyse trends by inventing an ordering system. Figure 4 is an analysis of the class set based on two continuums (degree of feedback and serial versus parallel design steps) mapped against ways and means. The light blue locates the existing thesis, with the purple been the alternate proposed by the student. This broad approach taken by the students in this example, locates existing patterns and how students are reacting to these. The general trend been towards more feedback loops, the tactic of designing in parallel rather than linear and a mix of digital, abstract and analytical ways and means.

It is a given that design is 'messy' and that it typically requires the bringing together of multiple strands of knowledge, ideas and techniques. Nor are these strands necessarily repeatable from project to project. It is also obvious that the encyclopaedic gathering of common approaches should be critically adapted in relation to local and regional contexts. However, if research through design is to develop in the context of planning a thesis, we see a need to be more explicit in mapping out design trajectories. Ways, means and tactics is one approach to providing a design specific set of terms to introduce students to researching through design. A fundamental component of any thesis proposal is critical reflection on the proposed research methods aligned with a proposition. I see no reason why architectural education should be absolved from this basic tenant of a thesis proposal. Thesis plans will, more often than not, explicitly locate designing as contingent, multi-faceted and open ended, but with ways, means and tactics in place to maintain momentum over 12 months of design research.

Fig. 4. Student exercise supervised by author (2013) Operational study of diagramming.

Fig. 5. Student exercise supervised by author (2014) Ordering system for locating trends in thesis structure.

Downton, P. (2003) *Design Research*. Melbourne, RMIT Publishing.

Fraser, M. (2013) *Design Research in Architecture: An Overview*. London, Ashgate.

Jomakka K. (2008) *Design Methods*. Amsterdam, Birkhäuser.

Mückenheim M. and Demel J. (2012) *Contemporary Design Methods in Architecture*. Amsterdam, BIS Publishers.

Till, J. (2012) *What is architectural research?* London, RIBA working paper.

van Schaik L. (2008) *Spatial Intelligence: New Futures for Architecture*. Chichester, Wiley.

In an essay in *The Endless City: The Urban Age Project*, Deyan Sudjic (2007) proposes that the problems of our cities can be understood and managed through collaboration between three groups: policymakers, builders and theorists. In this context, Sudjic describes theorists as:

...those groups of researchers who spend their working lives looking at the meaning of cities. They each have their own perspective of course: sociological, political or economic. They may be geographers or anthropologists, they may be detached or engaged, angry or objective. But they are not the same as the policymakers... (Sudjic, 2007, p.36).

The Regional Urban Studies Laboratory (RUSL) is a research project within the School of Architecture & Design at the University of Tasmania (UTAS) that provides on-going collaborative research between the academy and local government - the policymakers and city builders. RUSL is positioned as the theorist within this important tripartite collaboration, developing ways of investigating 'real world' problems through a collaborative process that examines the specific nature of design issues that may be socially, culturally and/or situationally conditioned. RUSL establishes projects that explore urban issues for small cities and towns, working directly with local authorities to examine concerns for the future development of cities, beyond the bounds of pre-existing strategic planning and policy constraints.

Projects are developed directly with local authorities, providing an opportunity to engage in a deep inquiry around fundamental urban issues, particularly those that site at the periphery of day-to-day operational concerns, but are central to broader scale strategic thinking. This extends the university's research capacity while also allowing the local authorities to examine issues for the future development of their cities. Projects are developed collaboratively with academics and students, bridging the teaching-research nexus through the investigation of core urban issues, which span across the disciplines of architecture, urban design, landscape architecture and planning.

Research through the medium of design provides a broad framework for speculation; it allows design problems to be seen in a different light, utilizing a process of iterative thinking, which leads to speculation that is founded on in-depth research. RUSL tests Christopher Frayling's proposition that design research can be understood in three ways: research *into*, *for* and *through* design. Research *INTO* Design examines historical and theoretical perspectives, providing the advancement of new scholarship through alternative interpretations. Research *FOR* Design involves investigations conducted with a design application in mind, examining development and application of new materials, technologies and methods from other disciplines or sources. Research *THROUGH* Design takes design processes to constitute the research methodology itself, with the focus bridging between product and process.

Diagramming techniques are employed to visually map research process. 'Meteor' diagrams are used to chart the context of research in relation to the broader pre-existing field of enquiry, and in relation to other RUSL research. These diagrams assist highlighting key fields of enquiry that specific projects might draw from or contribute to. Examples of meteor diagrams are illustrated in figure I; the first shows the mapping

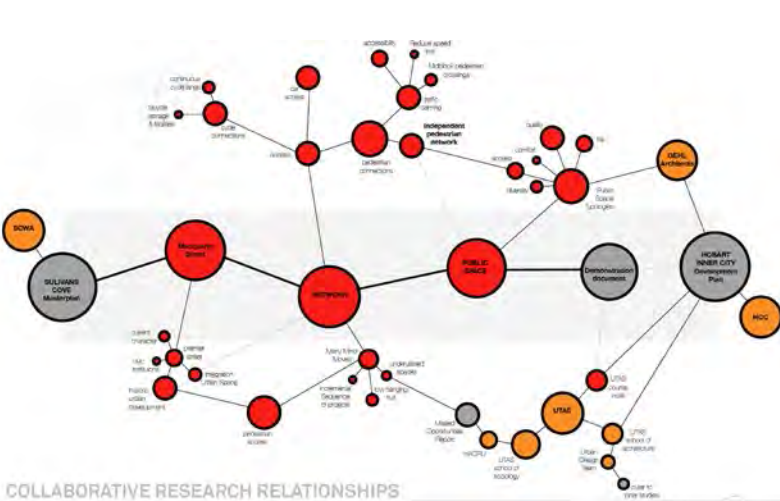


Fig. 1. RUSL, (2010-11) Collaborative research relationships between RUSL and local and state government; and between a series of RUSL projects that were carried out concurrently, images by Alysia Bennett and Rebekah Verrier.

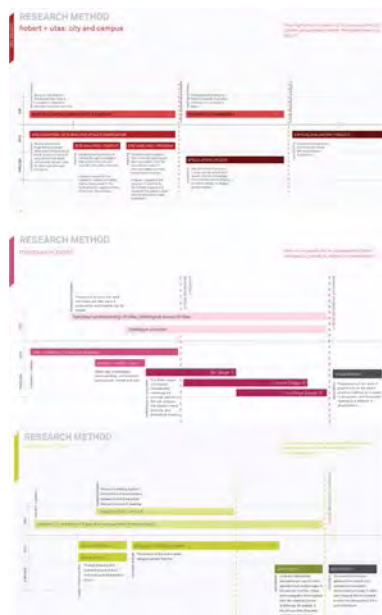
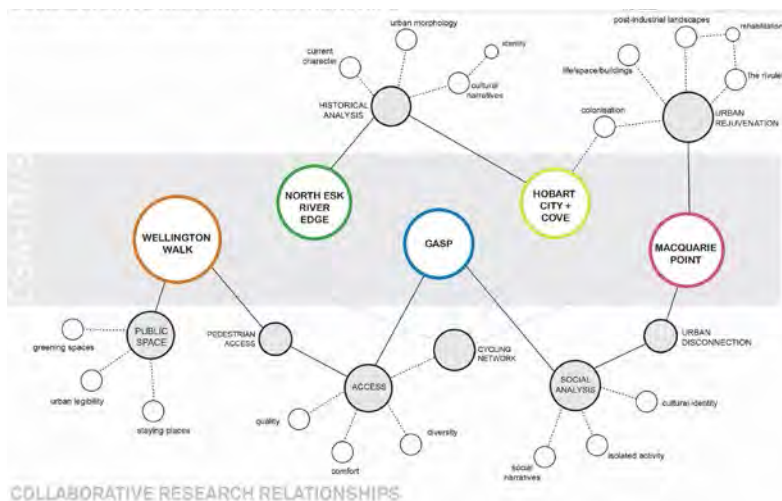
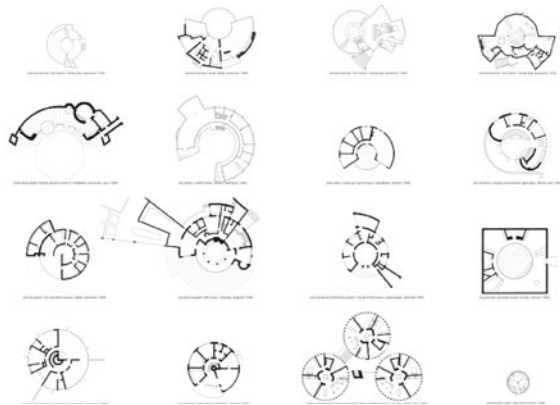


Fig. 2. RUSL, (2011-13) Research method diagrams showing different hybrid methods of research into/for/through design.

of RUSL projects within the context of other urban projects in Hobart, and the second illustrates the interrelationship of a group of RUSL projects that were carried out in parallel.

A second visual mapping technique illustrates hybrid research processes, using Frayling's definitions of Research *for/into/through* Design as a scaffold. As Friedman (2008) points out, although Frayling is widely quoted, his tripartite definition is speculative rather than rigorously constituted. The visual mapping of research tasks requires an interpretation of Frayling's definitions. Many of the projects begin with either Research *for* Design - gathering reference materials to inform an understanding of the design issues at the core of the project - or Research *into* Design - exploring historical or theoretical ideas. Generally these two processes constitute the majority of the research task, however many projects also involve some component of design speculation or artefact production, and this shifts the process towards Research *through* Design. These diagrams are to some extent contestable, as Frayling's definitions are by no means definitive; however they offer a comparative analysis of the different processes, which can be used to demonstrate research methods, and this provides a form of research in itself (Owen and Norrie, 2013).

While some projects are almost exclusively Research *into* Design, examining historical and theoretical issues, others involve overlapping and intertwining research methods. For example, a study of J Esmond Dorney's Round House at Porter Hill investigated the historical context of this project in order to establish its international significance. Research *into* design involved cataloguing a range of other modernist houses to establish a temporal context of design ideas. Understanding the lineage of the house, and particularly its relationship to landscape, allowed for a set of parameters to be established for the future use of the building. In contrast, other projects include processes of mapping, auditing and speculation, which can be understood as an amalgam of Research *for/into/through* Design. For example, *Children in the City* involved an exploration of play theory as a starting point for understanding the potential to conceptualise the 'city as an urban playground.' This involved research *for* design, drawing on knowledge from outside of the discipline of design, which could assist in informing the design process. In parallel, research *into* design involved the investigation of precedents which were then analysed against the spatial criteria developed via the research *for*



design process. These ideas were then examined through a series of speculative design for spaces in the city, utilizing processes of research *through* design to test ideas against the criteria established in the first two stages (Owen and Norrie, 2013).

RUSL provides a framework for engaging a productive two-way relationship in the nexus between teaching and research, and also explores how universities can engage with government policy makers. Projects developed as part of the Masters of Architecture programme have led to an array of collaborative research models and methodologies, which allow the investigation the broader conceptual or theoretical issues that lie outside of the day-to-day operational concerns, but are central to the understanding of productive urban futures.

Fig. 3. RUSL, (2013) SPECULATE: PorterHilll DorneyHouse, images Joel Seadon, Prudence Laws.

Fig. 4. RUSL, (2011) SPECULATE: De:colonising Macquaire Point, images by Rebekah Verrier and Hannah Gora.

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Critical Modernism -
(Re) Building Politics

Architecture ou Révolution (Le Corbusier, 1923)

The historian Eric Hobsbawm defined the 20th century as the 'Extreme Era' (1994). Therefore, it is important to reflect on our recent past, in order to obtain a superior awareness of the challenges that are faced in the 21st century, which is still to be written. The main goal of the continuous analysis of history is to find patterns of events that exist in different levels including in Architecture, as a cumulative science of the human complexity. The understanding that there is a political and critical tradition that goes throughout the whole 20th century of Architecture, regardless of the specific movements in which it is inserted, aims to alert to the social conscience of Architecture as a pattern (Jencks, 1973). The increasing political, social and economic instability in our Global World is becoming a reality, as we can see according to the results of recent European Elections 2014.

Charles Jencks (2007) pointed out, with historical lucidity and awareness, a possible path for the challenges that architects from the 21st century will face. His manifest supports a modernism II, a Critical Modernism, a return from ideology related to social ethics of architecture. The cocktail between criticality and modernity means a dialogue between scepticism and overcoming. Critical Modernism integrates the complex sciences tradition, since only these are able to obtain a vision of the whole: Art, Technique, Society, Economics, Politics and Culture.

The Critical Modernism that Jencks (2007) outlines comprises the several modern movements based on a continuous analysis of architectural history and it should aim for a personal critical awareness based on the criticism of each one of them. Critical modernism, must seek a superior range regarding its specialization, with a global vision that includes politics, especially in countries with recent Democracies, which Hannah Arendt so well outlined in *On Revolution* (1963). He considers essential that, to be critical, architecture must be able to be creative, responding to society's generalized disappointment and public's alienation. Society shows inability of a real criticism due to information overload and that's the reason why Critical Modernism, should support a pedagogical position as a cultural and political art.

Architects should present themselves as people of their time, linked to the society which they belong to, and be detainers of a sophisticated criticism which represents the conscience of themselves in a world of multiple modernisms. Jencks's observation leads him to consider five clear intentions of generic order: *External Issues*; *Relevant Iconography*; *Multivalence*; *Usage Change* and *Honouring by Critique* (Jencks, 2007).

The presented Municipal Library project (Bastos, Freitas & Oliveira, 2013) is an example of metaphysical thought of architecture according to current times and it is a conscious manifest of theory into practice, championed by Jencks. This project represents the *Zeitgeist* at a period of deep economic and social crisis in Portugal (see fig. 1). With a strong national identity, the *Volksgeist* is here represented, by the symbolic capacity of architecture, extolling a historical and symbolical figure of the Portuguese



Fig. 1. Diário de Notícias (2013) Over a Million Sang Grândola (trans.), [Newspaper Cover] At: <http://dissidentex.wordpress.com/2013/03/04/manifestacao-de-2-de-marco-de-2013-em-portugal-protests-in-portugal-march-2o-2013-newspapers-frontpages-capas-de-jornais/> (Accessed 17.06. 14).



Fig. 2. Oliveira, F. (2013) José Afonso Auditorium [Photograph] In possession of: The author: Setúbal, Portugal.



Fig. 4. Bastos, Freitas & Oliveira (2013) José Afonso Square Proposal [Digital Image] , Setúbal International Public Library Competition for José Afonso Square, 11th/127 teams, Exhibited at 11th Municipal Gallery, Setúbal, Portugal, 7 Jun – 5 Oct.



Fig. 3. Bastos, Freitas & Oliveira (2013) Iconography Concept [Cad Image] In possession of: The authors: Setúbal, Portugal.

Revolution of 1974: the freedom singer, José Afonso (1914-1987). He is a major figure in Portuguese culture in the 20th century as an activist against dictatorship. As a composer he conceived popular music with traditional themes, as protest songs. A critical reflexion turned up due to the square name: 'José Afonso', giving context and meaning (see fig.2). The Portuguese Revolution of 1974 started at midnight on 25th April with its most famous song - 'Grândola Vila Morena'- as the code signal. It ended with 48 years of dictatorship and oppression. Nowadays, José Afonso still represents the willing of the people, democracy and unity, and it is a symbol of liberty. 'Grândola Vila Morena' became a symbolical song of protest under oppression (SIC, 2013).

The submitted project focuses on 'External Issues' to Architecture, looking for a critique of the present time, with a subversive vision, extolling a prominent figure in the history of Portuguese democracy, acting as a form of screen reflecting basic political values: "Liberté, Egalité, Fraternité". In that sense, it is pioneer. This 'Relevant Iconography' linked to human condition, is achieved by drawing the figure of José Afonso throughout a millenarian building technique in a new logic, made possible by the application of brick, the unity, as a pixel. Our goal was to create a building that was simultaneously a monument towards freedom and knowledge, with a strong empathy with the population, and also a functional project by rationality. The 'Usage Change', transforming the library in a memorial aims to fight for the human condition in a particular context and at a specific location, in accordance with its toponymy (see fig.3).

The 'Multivalence' is achieved by the scenic effect created by the dialogue between the pre-existence and the submitted proposal, framing the figure intended to honour. This puts two codes in opposition to each other: the glories and achievements of the past versus the present condition of economical oppression. The use of collective memory is linked to democratic values to which it is added a social critique by framing the past. This complex logic between Order and Chaos seeks a synthesis which depicts



the complexity of the society in which we live. The project looks for the popular dialogue, the mainstream, an approximation of people to bigger goals, in a humanistic logic. From the double cross-code with the intention of confronting the present with the past, one seeks to subvert the dominant culture in order to represent the irony of complex contemporary life, based on the message content, whose vehicle, in this case, is architecture as a non-linear Science of complexity (see fig. 4&5). It '*Honours by Critique*' so that social progress can be achieved.

Critical modernism in this project operates from the virtues of Modernism, to which it adds an element of anxiety in human consciousness, causing restlessness, especially from metaphors. The importance of mysticism and contents points towards a positive order of values achieved through a dialectical relationship between critique and art (see fig.6). As Jencks states, it is important to reach a hyper-awareness of the individual to himself and their historical responsibility towards the future. In this sense '*the challenge of art is to find the right joints, the key units, the lasting iconic ideas and then transform them into a lasting iconography*' (Jencks, 2007: p.187).

Goethe defined Architecture as '*petrified music*' (Goethe, Eckerman and Fuller, 1839, p.282). The analogies to Music constitute a pattern of definition that appears in the different modern movements throughout the 20th century. Architecture, in this case, should be petrified music of freedom - '*Grândola Vila Morena*' by José Afonso - which embodies within itself a critical perspective. In that sense, it is much more than 'another brick in the wall'.

Fig. 5. Bastos, Freitas & Oliveira (2013) José Afonso square Proposal [Digital Image] , Setubal International Public Library Competition for José Afonso Square, 11th/127 teams, Exhibited at 11th Municipal Gallery, Setubal, Portugal, 7 Jun - 5 Oct.



Fig. 6. Bastos, Freitas & Oliveira (2013)
Public Space Concept [Digital Image], Setubal
International Public Library Competition for José Afonso Square,
11th/127 teams, Exhibited at 11th
Municipal Gallery, Setubal, Portugal, 7 Jun – 5
Oct.

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Available from: <https://www.youtube.com/watch?v=VWZuQ0g6Uoo> [Accessed 2nd September 2014].

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Re-defining Authorship: Venice
as a model for design research

Rem Koolhaas' *Fundamentals* shifted this year's Venice Biennale away from authored architectural projects to an exhibition of 15 architectural elements. In an interview with Charles Jenks he explained that his aim was to show that architectural innovation is subject to market forces and technological transformations (Jenks 2014). These forces 'mindlessly' operate beyond architectural intention, which is tied up to a preconceived idea of the whole, and individual authorship. This view has marked Koolhaas' approach since *Delirious New York* (Koolhaas, 1978), reading the city as a self-organising field that maximises programmatic potential through the urban grid. Yet, while *Delirious New York* celebrated the un-authored creativity of the city, the exhibition in the Central Pavilion of the Biennale focuses on architecture, raising issues about intellectual ownership. Koolhaas' propositions have ramifications for design research, fashioning architecture as a practice concerned with the assemblage of elements. Assemblages are bottom-up, evolutionary and 'blind' to the eventual outcome of the design. In contrast, the Albertian model of architecture is top-down, clear in terms of conscious will, but 'blind' to evolutionary process.

The shift from top-down design to bottom-up rules marks a turn away from the traditional idea of composition to architecture as a formation of elements based on local scale relations. At a time where economic forces and computational architecture change the ways in which buildings and cities are produced, it is essential to explore how this new paradigm influences design research. If we define design research as the exploration of alternative worlds that re-organise our knowledge, how can we conceptualise new possibilities for authorship conceiving new worlds and re-shaping experience?

Starting from the observation that New York formed the ground for Koolhaas' ideas for architecture, I will explore Venice and two authored works to which Venice gave rise: Italo Calvino's *Invisible Cities* (1997) and Le Corbusier's Venice Hospital. Alongside serving as the formal and historical opposite to Manhattan, Venice is chosen for two reasons: for intersecting the medieval urban fabric with architectural authorship of the Albertian kind; for being, like Manhattan, a singular city that has inspired collective mythology. Through a comparative discussion of the three artefacts I will discuss what happens when architecture and the city are thought of as an assemblage of elements that is self-organising. The purpose is to employ Venice as a model for design research *beyond the dichotomy of self-organisation and architectural authorship*.

Using spatial network analysis, I will first analyse the water and street infrastructure of Venice alongside historical information to reveal an evolutionary pattern centred on the nodal position of urban squares in the pedestrian and water networks and their key economic and cultural function, since early times. This pattern is produced through a combinatorial rule-set of elements such as squares, churches, canals, bridges, and mooring steps, which leads to the emergence of recognisable order devoid of preconception. Self-organising combinatorial sets require to re-conceptualise cities not as Euclidian plans conceived from the outside, but as self-organising morphological processes adapting and evolving from the inside.

I will then analyse the Venice Hospital as a formal and spatial system to suggest that the architects of the Hospital retrieved the self-organising order of Venice and creatively

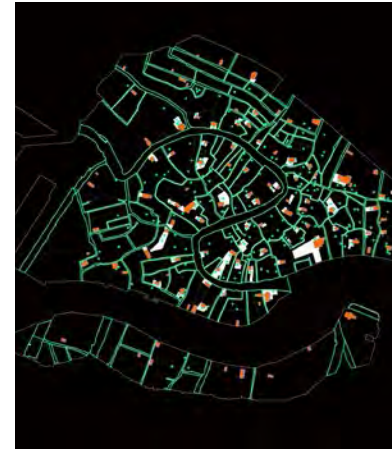


Fig. 1. Psarra, S. (2012) Hydrological networks and distributed 'centres' in Venice.

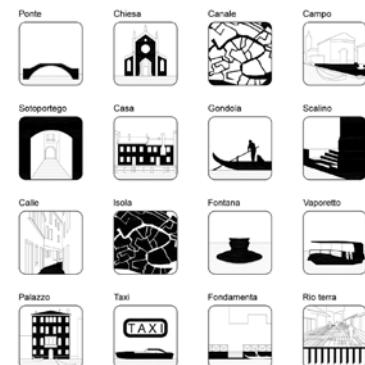


Fig. 2. Psarra, S. & Oramas-Dorta, T. (2012) Redefining the 'Elements'.

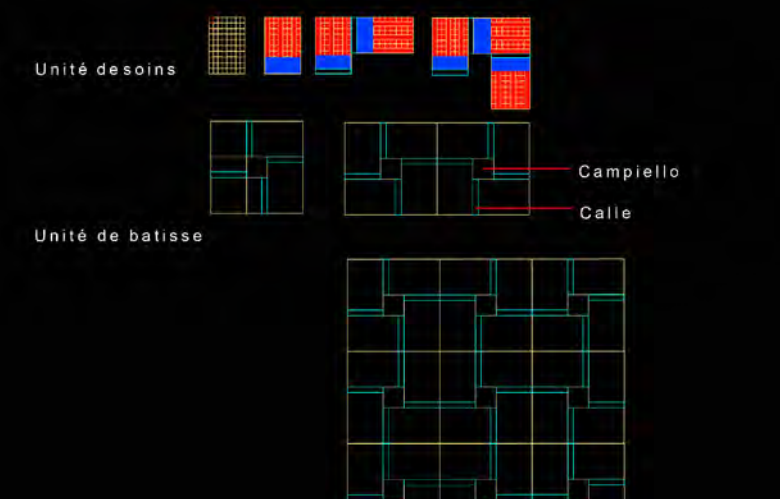


Fig. 3. Psarra, S. (2012) Venice Hospital Generative Diagrams (left).



Fig. 4. Psarra, S. (2012) Venice - an archipelago of elements (right).

reconfigured it in a new design reality. Deriving inspiration from cities is an associative operation, showing that urban environments and architecture are not simply mindless assemblages but also consciously appropriated by minds from the outside. If the self-organised city influences the designed city, the reverse is also the case suggesting that cities are shaped by many as well as by few minds.

Moving to Calvino's *Invisible Cities* next, I will show that it has a network-like algorithmic logic integrating combinatorial possibility with conscious intention. This logic has the effect of preconceiving the general order of the work but releasing enormous amount of potentiality that trains the readers' imagination. This interpretation demonstrates Calvino's view of the imagination as 'a multi-faceted structure' in which each element is part of a network where 'one can follow multiple routes and draw multiple, ramified conclusions' (Calvino, 2002: p. 71). The morphological affinities between the three artefacts bring along alternative definitions of authorship. They show that they are dynamically situated between the evolutionary recombinant logic of elements and intentional design.

I will finally return to the general questions raised in this presentation and argue that evolutionary assemblages promote a division between the Albertian and post-Albertian definition of design. Philosophically speaking, they divorce conscious thought from design generation, and reiterate an old division between the world and the mind. As the three works show, the conscious development of space and form and the unconscious self-organising patterns can be seen as interacting rather than placed side-by-side. Research through the medium of design needs to situate itself in the history and theory of architecture through diverse models of interface between evolutionary driven environments and authorial design. The key to design research lies in the comparative and associative understanding of the formation of spatial, social and experiential systems. This can be found in reconceptualising architecture and the city to take into account how they are conceived, how they are perceived, and how are informed by processes that are self-organising.

Calvino, I. (1997) *Invisible Cities*. London, Vintage Books.

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Sarkis, H. (2001) *Le Corbusier's Venice Hospital*. Munich, London, New York, Prestel, Verlag.

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Land-Formations Tectonic-Grounds:
The Foundations of a Research
by Design Practice

The understanding of Architecture, Landscape and Urbanism as a form of inquiry rather than a professional practice suggests fundamental –operative- changes in the disciplinary procedures to go beyond problem-solving approaches and open them up to the possibilities that the inquiring attitude entails. However, this re-positioning of the disciplines along a 'research by design' agenda demands a methodological clarification of the inherent contradictions of research (understood as eminently observational) and design (fundamentally generative) (Letherbarrow, 2012). The Landscape Urbanism MA at the Architectural Association and its associated practice Groundlab have engaged with this contemporary position through its subject-matter: Landscape as Territory.

It is possible to define our existence as a constant experience of landscapes in the form of historical assemblages with geographical differentiations. Our direct or distant relations with them have and will continue to define in a myriad ways and degrees our identities, responses and behaviours, locally and globally. Hence, these relations are necessarily territorial. Landscape blends a material foundation of a piece of land with the way in which we measure and control it, through a technological and calculative grasp of it (Elden, 2013).

Seen as the subject of a territorial inquiry, landscape sits at the intersection of physical and social processes that constantly generate new forms of urban typologies, governance and knowledge. It encompasses the geomorphological formations of landforms (Tectonic Grounds) as well as the actual cultural, political and economic forces that drive and choreograph the social formations of its territories (Land Formations).

Landscape Urbanism and Groundlab understand this as a crucial and fundamental project of research by design through which alternative landscape organisations can emerge as the foundations to any new territorial environment and by extension to any architectural intervention (see fig. 1). These landscape organizations in turn are a pre-condition, a foundation (a literal ground to architecture fundamentals), upon which any architect and/or designer intervenes through the architectural elements (the door, the ceiling, the window, etc.) that have been defining by the discipline, anytime, anywhere. Landscape as territory delineates the approach, the character and the identity of such elements (geographically and historically) as cultural productions, as the ones absorbing modernity.



Fig. 1. Kakali, N. & Kotenko, A. (2014) Curonian Spit Territory. Architectural Association Landscape Urbanism MA 2013-14.

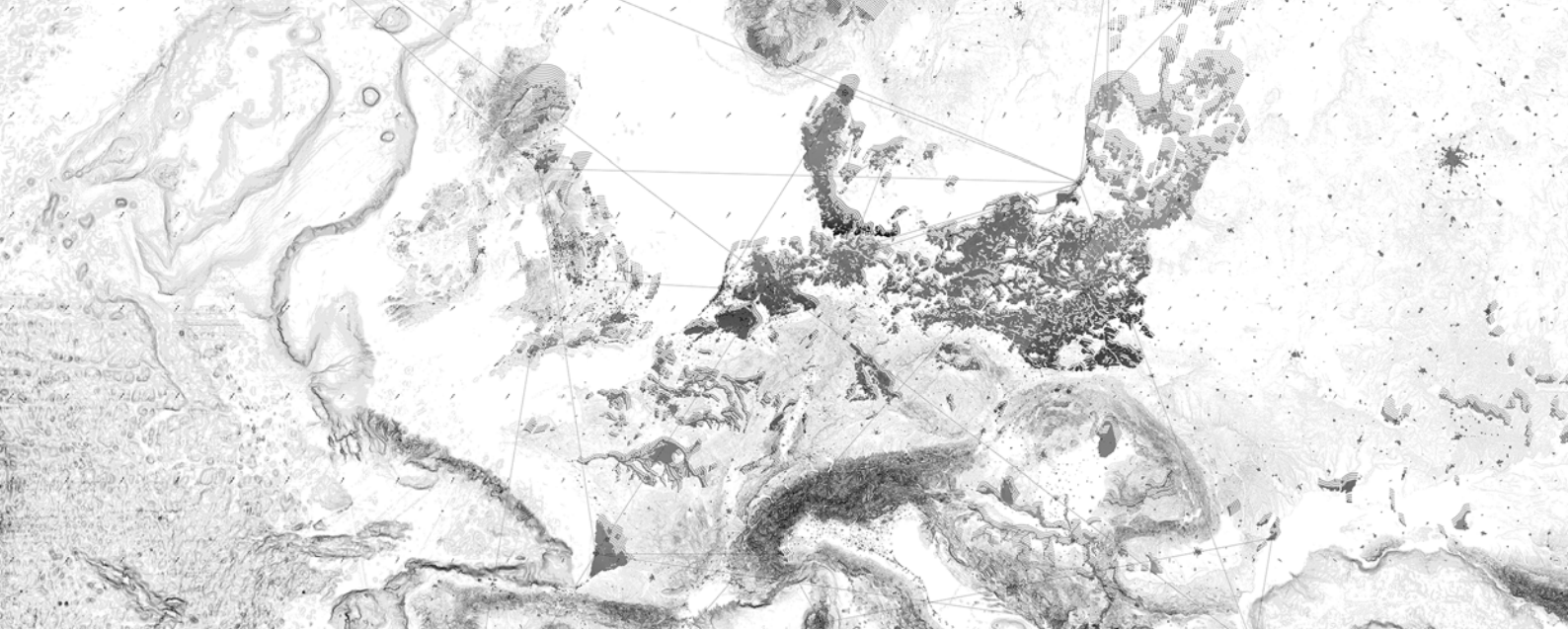
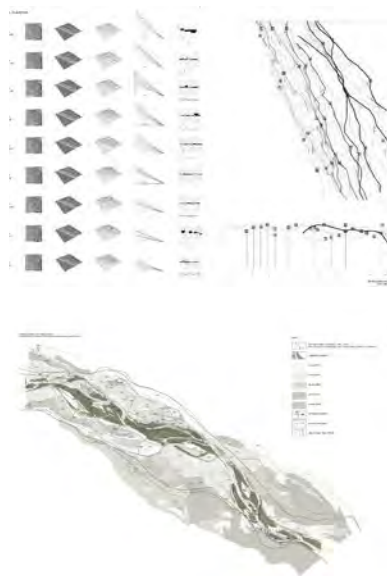


Fig. 2. Kakali, N. & Kotenko, A. (2014) *European Sand Atlas*. Architectural Association Landscape Urbanism MA 2013-14 (above).

Fig. 3. Kakali, N. & Kotenko, A. (2014) *Sand Scripted Digital Simulation Models*. Architectural Association Landscape Urbanism MA 2013-14 (below).

Fig. 4. Darin, E. & Lambert, J. (2014) *Tectonic Intersection in a Riparian Landscape*. Architectural Association Landscape Urbanism MA 2013-14 (below).



The medium through which we face the challenges of a design by research approach, is primarily via the constant production and iterations of digital and physical modelling, fabrication and, mainly, cartographic representations, of both tectonic grounds (meandering rivers, coastal erosion, sand dunes, riparian landscapes, deltaic morphologies) and land formations (production dynamics and processes, land administration and management, infrastructural and logistics systems, real state subdivisions) (see fig. 2). Cartography is used here as an instrument to both, research and design landscapes. Being both, a survey/index of existing elements as well as a set of decisions – taken by the designer or researcher-, cartographies embody the apparent contradictory dichotomy of research and design, putting forward a projective framework for a territorial vision. For instance, the way in which a geomorphological process such as coastal erosion is coded in a computer generated model (see fig. 3), the variables it takes into account and the way it is abstracted and represented, conditions the way the process is understood/researched and thus intervened/designed. In a similar fashion, the way information related to land properties, infrastructural networks or production activities is overlapped, highlighted or even omitted constructs an image of the territory inherently biased and ultimately designed.

Cartographic representations also operate as a form of research or discovery of latent relationships, existing land formations and ground tectonic dynamics but they also inform, ground and delineate, through a very particular or subjective understanding, interventions within a given landscape. Thus, it seems for us difficult to draw a clear-cut line where research starts and where design ends and vice versa; same as it seems misleading to claim research as the gathering and representation of objective facts and design as *a posteriori* autonomous decisions or interventions. It is rather, a twofold process that reads but at the same time orchestrates and conditions the way territories are thought and thus, intervened and constructed.

In this sense, we investigate the projective capacity of landscapes especially within contemporary conditions where formations such as riparian landscapes (see fig. 4.) or coastal dynamics have been constrained, controlled or hidden away when confronted with any human development. By levelling the ground, tunnelling the mounts, channelling streams, damming rivers or freezing dunes a constant reassertion of efficiency, free flow and frictionless environment has been at stake to facilitate its administration, governance



and ultimately profitability. In contrast, the construction of novel cartographic readings and projections of the territory reflects the constant negotiations of frictions in between them, which ultimately provide the sources to alternative modes of urbanism and territorial organisations (see figs. 5 and 6.). In this way, we envision potential scenarios to strategically intersect infrastructural networks that use riparian landscapes as its engines, industrial forestry patches that interact seasonally and productively with neighbouring shifting dunes or meanders that provide novel urban armatures and frameworks to decaying cities.

By making compromises, establishing priorities, and empowering the landforms with social gears, we explore the potential of cartography to unveil glitches, opportunities and frictions between conflicting systems. Cartographies become the research by design tool to implement projects whereby the introduction of novel regimes within existing territorial landscapes provide alternatives to their future. It is here where our agency as researchers and designers resides, in the choreography of the territorial assemblages of land formations and tectonic grounds (landscapes) derived from a constant and relentless human and natural activity full of conflicts, struggles, alterations, and shifts, within or outside legal or institutional frameworks. As such they become the result of a non-discernable assemblage between research of specific land formations with its future design consequences and implications.

Elden, S. (2013) *The Birth of the Territory*. Chicago, University Of Chicago Press.

Letherbarrow, D. (2012) The project of design research. In: Michael U. Hensel (ed.) *Design innovation for the built environment: research by design and the renovation of practice*. Oxon and New York, Routledge, pp. 5-14.



Fig. 5. Darin, E. & Lambert, J. (2014) *The Challenging of the Imposing Traditional Coastline*. Architectural Association Landscape Urbanism MA 2013-14 (top).

Fig. 6. Garcia, V. & Tang, Y. (2014) *European Flooding Scenarios Cartography*. Architectural Association Landscape Urbanism MA 2013-14.

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Re-contextualizing Identity
within Design Discourses

This paper hopes to initiate a series of discourses on the role and definition of the concept of 'identity' within architecture research and design sensibility. It is hoped that this exercise will encourage the re-evaluation and redefinition of the historicity within architecture and urban design sensibility and the role of 'identity' as a vital consonance that connects both. How do we situate the ongoing urban and architectural discourses and research within this rhetoric?

As a case in point, the authors review and analyse the Amsterdam's iconic 17th century Ring of Canals and its morphological repercussions on new developments such as the late 19th century extension of the city with the development of the Java Island.

Amsterdam's Ring of Canals

In her readings of the city, Komossa (2010) argues that the 'identity of the Dutch city of homes' was not based on some fixed canon of urban planning and architecture, laid down centuries ago and unchanged thereafter, but was the product of a highly complex, dynamic interaction between, on the one hand, the way in which Holland cultivated its marshy subsoil, and on the other hand, the middle class culture which, together with a pragmatic commercial outlook, formed the basis of Dutch administrative models. Other relevant factors were technological developments and factors such as continual innovations in water management.

Given the above account on the use of pure functional logic and research informing the Dutch urban identity, as most specifically highlighted in the seventeenth century blocks from the ring of canals, the authors in this paper question the logic of its continuity within the twenty-first century interventions such as on 'Java Island' neighbourhood. The Dutch urban block in the ring of canals does indeed have an unusual shape: it is elongated and shallow in relation to its length. We question the reading behind the continuity of this shape remaining more or less unchanged over a very long period from 1600 to around 1935, along with its almost enforced presence within the residential typology in Java Island.

As noted in the detail of the parcellation of 1614, originally the Ring of Canal plots were of fixed and regular dimensions for instance 30 feet wide and 190 feet deep. In the early days after 1616, the canals lots were mostly developed and sold as houses and possible workshops by the carpenters, masons and the ironmongers.

We question why a design sensibility that emerged in the seventeenth century – founded purely on a research-based solution to 'highly complex topological and social issues' – has become, in the twenty-first century, something of a fixed canon of urban planning and architecture. Has the memory and association of a past city become an integral part of identity within its twenty-first century dynamics?

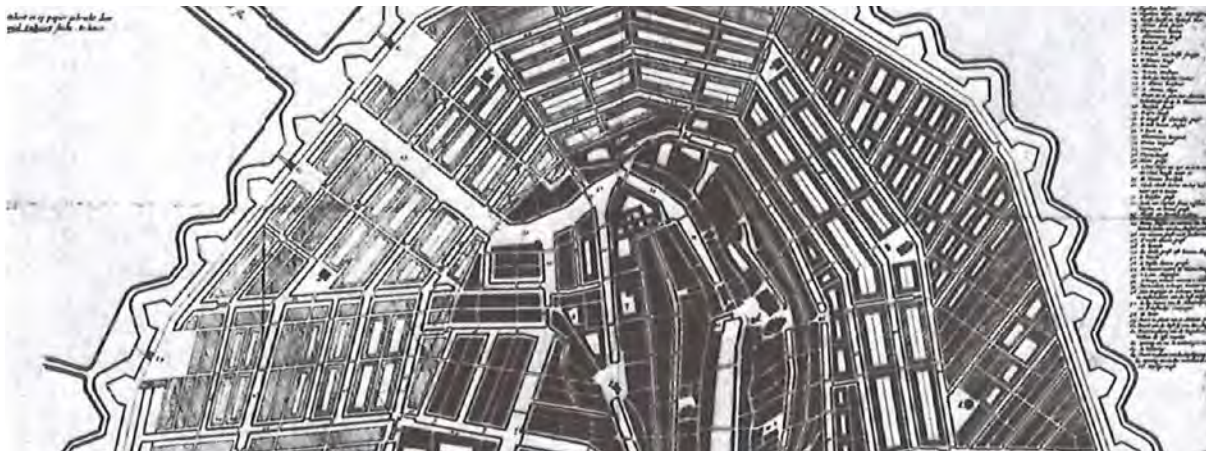


Fig. 1. D. Stalpaert, 1662 Map of the 'old and new works of the City of Amsterdam'. In: Komossa, S. Meyer, H. Risselada, M. Thomaes, S. & Jutten, N. (2005) Atlas of the Dutch Urban Block, Bussum Thoth Publishers, p. 20 (top)

Fig. 2. Java Island: The various urban blocks – the five rooms. In: Komossa, S. Meyer, H. Risselada, M. Thomaes, S. & Jutten, N. (2005) Atlas of the Dutch Urban Block, Bussum Thoth Publishers, p. 224 (left).

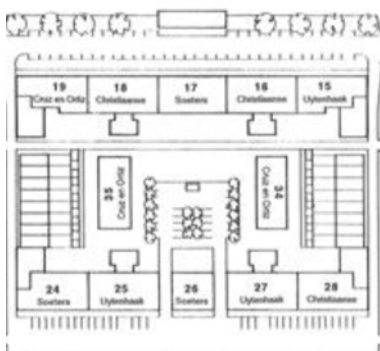
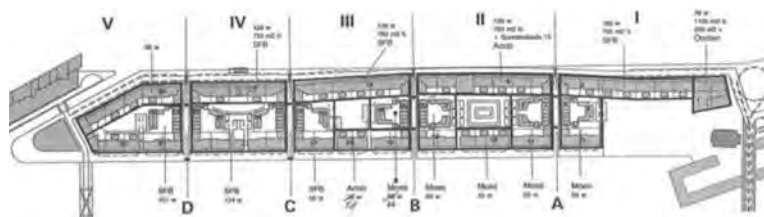


Fig. 3. Java Island: Detail of 'room' four, with the names of the architects. In: Komossa, S. Meyer, H. Risselada, M. Thomaes, S. & Jutten, N. (2005) Atlas of the Dutch Urban Block, Bussum Thoth Publishers, p. 224.



Java Island

Java Island was planned by Sjoerd Soeters and it is located at the Eastern Harbor District of Amsterdam. It was built from 1995 to 1996. Java is an artificial Island which measure 130m wide by 1200m. Pragmatically: The construction in the IJ began at the end of the 19th century. Initially the island was a breakwater for the Eastern Quay (Handelskade). In the years afterwards it housed a steamship company (Stoomvaart Maatschappij Nederland) till the end of Second World War and the end of the colonization of Indonesia. In the 1980's the island became the 'house' of artists and squatters until it was in the 1990's destined to housing. In 1995 the Island got its 4 canals. Morphology: Java is connected to the old city of Amsterdam via two bridges. The grid seems to be determined by the concept of the 5 rooms (courtyards) which are linked by an internal route for pedestrians and bikers. This island is cut by 4 canals. On the North and on the South of the island one can find a car road, being the one in the South local and interrupted by intervals, so that only bikers or pedestrians can bike/walk the whole quay area.

In the four canals that cross the island there are great similarity in the urban level with the ring of canals. So dwellings directly reach the public space via a small set of steps, typical element of the houses of the ring of canals. There are also houses instead of apartments and the façades are all differing from each other. However, the width does not vary; the size of each house is 4,5m and the height is from 4 to 5 stories. The façades are different from each other and each canal has a recombination of some of the 19 projects designed by young architects for the canals. The difference is on scale, on the time for building, on functionality and on the rigid module of 4.5m for the width of



the houses. It badly mimics the ring of canals and imposes a feeling of identity under the actual city centre of Amsterdam only by pictorial association.

Here a further complexity within the definitions of memory and identity is put forward, that of associations in a multicultural society. The city in this case opens up to a new layer of complexity and constraints. We argue that design and research remains a double-edged sword that on the one hand tries to connect diverse cultures, societies and design sensibilities into a single whole, and at the same time remains the very contradiction to this very assimilation.

Given the above account on the use of pure functional logic and research informing the Dutch urban identity, as most specifically highlighted in the seventeenth century blocks from the ring of canals, the authors in this paper question the logic of its continuity within the twenty-first century interventions such as on the neighbourhood of Java Island.

Our paper argues that the un-critical conservation of historic cities has become a doctrine for contemporary urban design and architecture. In a sense this paper then questions the research strategies used in design practice, given the elements of continuity and discontinuity that tend to strive over time and space within a specific cityscape.

Komossa, S. (2008) *The Dutch Urban Block and the Public Realm: Models, Rules, Ideals*. Faculty of Architecture, Delft University of Technology.

Komossa, S., Meyer, H., Risselada, M., Thomaes, S. & Jutten, N. (2005) *Atlas of the Dutch Urban Block*. Bussum, Thoth Publishers.

Pevsner, N. (2005) *Pioneers of Modern Design: from William Morris to Walter Gropius*. New Haven, Conn., London, Yale University Press.

Pevsner, N. (2010) *Visual planning and the picturesque*. In: Aitchison, M. (ed.), Los Angeles, Getty Research Institute.

Moraes Zarzar, K. & Shah, M. (2013) *Generative design mechanism: city as a physical construct, an analysis of the urban context within post-war housing in Amsterdam - Java Island*. Generative Design Conference 2013, Department of Architecture, Politecnico di Milano, Italy. (Paper presentation).

Fig. 4. Java Island: The north quay, Sumatrakade.
In: Komossa, S. Meyer, H. Risselada, M. Thomaes, S. & Jutten, N. (2005) *Atlas of the Dutch Urban Block*, Bussum Thoth Publishers, pp. 224.



Fig. 5. Java Island: The south quay, Javakade.
In: Komossa, S. Meyer, H. Risselada, M. Thomaes, S. & Jutten, N. (2005) *Atlas of the Dutch Urban Block*, Bussum Thoth Publishers, p. 224.

Katrina Simon

Built Environment, UNSW Australia

Tactics and Transformations for
Uncertain Territories:
activating cartography's
contradictory moments

Cartography is a highly complex system of representation that intersects with, and is appropriated architecture, landscape architecture and urban design. This research practice addresses the ambiguities inherent in the conventions of cartography and seeks to use these to not only expand the repertoire of spatial representation, but also to provoke new speculative forms of territory. It reincorporates the atmospheric qualities of the experienced world that are generally eliminated by such conventions, and in doing so allows new landscapes to be conceived and shaped.

This mode of working moves between the domains of cartography, art practice, the depiction of the city and landscape representation. It responds to the critique of cartography that challenges the idea of the map as a mirror of reality, but also tries to move beyond this critique. Rather than identify the non-equivalence of map and world as evidence of failure, this can be seen as an opportunity for a new kind of exploration and production. As John Pickles writes:

It is to say that it may be possible to develop new cartographies and geographies only by changing the way we think about the cartographies we have. The end of cartography as we know it is, as Gibson-Graham, Deleuze and Guattari and Negri and Hardt have variously shown us, the possibility of opening the contradictory moments within existing practices to new opportunities and alternative projects (Pickles, 2004: p.194).

This research identifies three such 'contradictory moments' within cartography – generalisation, iteration and projection. The techniques fundamental to the making of maps are in turn activated to shape new speculative geographies.

Generalisation relates to the selection of what will be drawn on the map, and how it will be drawn. As a map is typically smaller than the area to which it refers, translations are needed to reduce elements and characteristics to fit. A series of generalization operations are used to enable this transformation to be performed, and include strategies such as omission, combination and symbolization. They interact with one another in the way that any chosen element or feature is depicted within the overall map. Generalization can be considered a 'contradictory moment', as the choices of operators are not inherent in the things, characteristics or qualities being depicted. They can, however, come to define them, both on the surface of the map and in the world, as the map's agency re-projects their effects back onto the territories they purport to describe, and thus transform them.

Iteration involves 'repetition of a process or utterance', (Oxford Dictionary of English, 2010: p.930), with each repetition being carried out on the result of the previous



Fig. 1. Author, (2010) Untitled terrain study, [Ink on paper].



Fig. 2. Author, (2009) 'Untitled', Divided series.
[Ink on claybord panel].

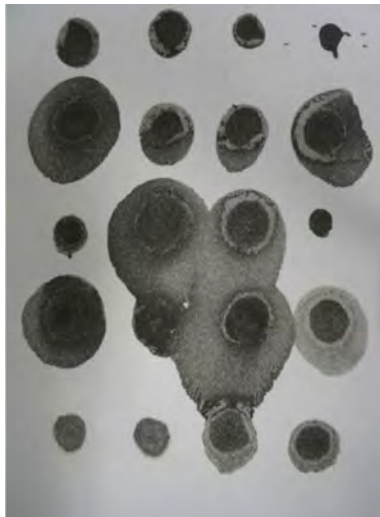


Fig. 3. Author, (2011) 'Untitled', terrain study.
[Liquid graphite on paper].

one. (Borowski and Borwein, 2002: p.300). Applied to the drawing of a map from existing sources, this has the effect of bringing the drawing process itself into what appears on the map surface, and as this iterative process continues, the processes of making can have a transformative effect on the image and thus directly on the territory itself.

Projection makes it possible to map the surface of a three dimensional body, such as the surface of the earth, onto a two dimensional surface, and vice versa. The apparatus of projection is a source of immense variation – world projections are virtually limitless – and also a 'zone of instability' (Evans, 1995: p. xii).

Three case studies have been used as a 'ground', (or to unsettle the ground), for this designerly investigation – three texts, all by designers and all containing maps, each of which explicitly addresses processes of drawing specifically in relation to cities and their terrain. The three case studies are *Design with Nature* by Ian McHarg, *The Culture of Description* by Manuel de Solà-Morales, and the chapter 'Territorial Image' from *Earth Moves: The Furnishing of Territories*, by Bernard Cache. In each case, the particular intentions of the mapping procedure, as well as the techniques discussed in the text, are repurposed and redeployed to not only expand the repertoire of cartographic production, but also to use this expanded repertoire to generate new forms of territory.

The maps included in *Design with Nature* are intended to convey an authoritative and objective analysis of a landscape intended for future urban development. Yet within the carefully layered and graduated map inscriptions in *Design with Nature* there are intriguing moments of interference and contradiction. From this case study, the generalisation processes of layering, delineating, gradating through colour, and excision have been identified as productive procedures that can be iteratively performed in order to inscribe new forms of territory.

Responding to the meticulously delineated map inscriptions in *The Culture of Description*, the processes of iteration using liquid media have engaged and transformed the procedures of selection, combination, emphasis and omission, producing speculative terrain that dramatically exaggerates the complex topographies described by Solà-Morales.

The deliberately reduced and enigmatic map inscription of Lausanne in *Territorial Image* is included to draw attention to the ambiguity of not only the cartographic image of the territory (which shows only inflection rather than absolute elevation), but also the



Fig. 4. Author, (2010) Material experiment: liquid graphite terrain experiment. [Liquid graphite on smooth watercolour paper, 300gsm].

open-ended possibilities of the reshaping of the territory itself as the city of Lausanne has grown. This case study allows the exploration of projection through remaking the map, particularly by cutting and re-projecting through the armature of the cut surface. These re-projected transformed surfaces create a new topography from the flat map of a complex surface – generating a new plastic and undulating field of inflection and enfolding.

In each instance, the performance of making new iterations shifts attention from what is being drawn to how the drawing is being made – while drawing materials are used from the traditions of cartographic production they are used in a liquid rather than static medium, with slippery and elusive substrates. The actions inherent in generalisation, iteration and projection become the mechanisms for creating new images which bear the marks of the unique affordances of these dynamic materials and processes. This generates a distinctive ambiguous quality of atmospheric spatial production, propositions that oscillate between picture, territory and map – tactically deploying the inherent ambiguity of cartography to transform the territories of the possible.

Borowski, E & Borwein, J. (2002) *Collins Dictionary of Mathematics 2nd Edition*. Glasgow, Harper 7 Collins.

Cache, B. (1995) *Earth Moves: The Furnishing of Territories*. Translated by A. Boyman., Cambridge, Mass., MIT Press.

Evans, R. (1995) *The Projective Cast: Architecture and its Three Geometries*. Cambridge, Mass., MIT Press.

McHarg, I. (1969) *Design with Nature*. New York, Natural History Press, Garden City.

Oxford Dictionary of English. (2010) Third Edition, Oxford, Oxford University Press.

Pickles, J. (2004) *A History of Spaces: Cartographic Reason, Mapping and the Geo-Coded World*. Routledge, London.

Solà-Morales, M de. (1989) The culture of description. *Perspecta*, 25, 16-25.



Fig. 5. Author, (2010) Cutout Orographic Map .
[Drafting film hand-cut stencil].



Fig. 6. Author, (2008) Lausanne orographic figure
excised. [Photocopy of cut glassine paper].

Jan Smitheram

Victoria University of Wellington

Te Horo:
following the concrete drawing



Simon Twose exhibited a cloud of images from two of his houses at Venice in 2012 to depict his design process. This cloud of over 500 images made evident the innovative edge of chaos, where the drawn iterations of dead ends and frustrations are exhibited alongside those moments where the design changes direction and moves forward. The cloud of images created by Twose elude an understanding of architecture as coherent, final or singular in meaning, instead embodying the recursive, interactive and dynamic process of practice. Why Clouds? Clouds are one of those things that arouse emotions in us. They are atmospheric; subject to the push and pull of the wind, they are neither present nor absent, they are hard to pin down like Twose's design process (Anderson, 2009; Hill, 2006). So to understand Twose's work one must be a student of the clouds.

I was such a student of the clouds for six months (2013-2014), as I observed Twose's work with the Te Horo project. This is a project designed but never built, that later became the foundation for two intertwined agendas of a funded university project. The first took the form of Twose's design for the Prague Quadrennial, in which case the design for Te Horo acted as a catalyst to create an installation, within an academic environment. Elements of the un-built project were extracted, extended and re-designed, in order to investigate the way in which architecture can prompt the body, and to act as a starting point for looking at the relationship between the body and architecture through design-as-research generally. The second agenda was to use the design of the installation as a case study for exploring in detail, through observation, the complexity of design-as-research. This second agenda is discussed here, as I look closely at the conditions in which design-as-research is conceived and produced, but also determine what it might say critically about design-as-research itself (Yaneva, 2005). The first question this process of observation raises is simply how the design of this project, set within its academic environment, relates to the work carried out in architectural practice? (Fraser, 2013: p.8). This symposium presentation will focus on a second question how the design process is occupied by Twose through the use of 'models', 'diagrams' and 'drawings' as translational devices.

My 'cloud gazing' constitutes a research method, more usually known as ethnography, the intent of which is to provide a detailed account and description of everyday practice,

Fig. 1. Twose, S. (2013) Site [Photograph Courtesy of Twose].



Fig. 2. Twose, S. (2014) Original design Te Horo [Photograph Courtesy of Twose].



Fig. 3. Twose, S. (2014) Fabricated model tests of building elements Te Horo [Photograph Courtesy of Twose].

in this case of architectural practice (Hammersley and Atkinson, 2007; Yaneva, 2005). I used different media to document the research process sound and video recordings, photographs, and text – in an attempt to capture the immaterial and material aspects of the design process as a multi-sensory activity. The short-comings of this strategy, as with ethnography generally, are that recording through text, and still and moving image, does not adequately describe affective experience. However, it comes some way towards doing this, while at the same time acknowledging the role of the researcher, and extending the role into a more active one. I was more than a bystander; I participated actively, albeit misguided at times (Hammersley and Atkinson, 2007). Of importance by recording the design-as-research process, I was able to account for the ways in which the design process of Twose materially enabled the manufacture of an installation; to testify to a process by which an installation may be realised through making and re-making.

This paper is structured sequentially, beginning with an account of attempts to diagram the forces that impinged on the original design, and progressing to the incompletion of the project (to be completed at the end of 2014). Such an approach may seem to run at odds with the inherent character of the process under examination, the constant backwards and forwards without a clear point of origin or end point, as Twose iteratively occupies the 'design cloud,' but it allows the grounds for a discussion to take place (Fraser, 2013; Yaneva, 2005; Schatz & Fiszer, 1999). This paper draws two conclusions from the observation of design-as-research. The first is that the time available to be spent in discursive and digressive re-visiting of the design process - using design as research - is different in practice from the academic environment. Occupying the cloud of design is still accompanied by similar material and immaterial pressures to the original design but the orientation and direction shifts, slightly. The second argument is that design-as-research is a refinement of affects, as much as it is an intersection with the material and immaterial constraints of designing through 'models', 'diagrams' and 'drawings'. To argue this, this paper draws from the performative framework of Karen Barad where design-as-research is considered to be a process of stabilizing and destabilizing relations as an iterative intra-activity (2003: p. 822).



Fig. 4. Author, (2013) Design discussions/ gestures series.

Anderson, B. (2009) Affective atmospheres. *Emotion, Space and Society*, 2, 77-81.

Barad, K. (2003) Posthumanist performativity: toward an understanding of how matter comes to matter. *Signs: Journal of Women in Culture and Society*, 28 (3), 801-831.

Fraser, M. (2013) *Design Research in Architecture: an Overview*. Farnham, Surrey, Burlington, Ashgate.

Hammersley, M. & Atkinson, P. (2007) *Ethnography: Principles in Practice*. New York, Routledge.

Hill, J. (2006) *Immaterial Architecture*, New York and London, Routledge.

Schatz, F. & Stanislas, F. (1999) Dealing with space: tales and scales in architectural design. *Innehåll*, 1, 43-59.

Yaneva, A. (2005) Scaling up and down: extraction trials in architectural design. *Social Studies of Science*, 35(6), 867-894.



Fig. 5. & Fig. 6. Twose, S. (2014) Wall Tests
[photographs courtesy of Twose].

Bree Trevena

Arts Victoria

Millie Cattlin

Arts Victoria

Testing Grounds

- Research Through Design,
Public Infrastructure and Policy

How can research by design interact with top-down planning to guide social and political outcomes? Is it possible that research through design can respond to a call for a new culture of decision making in a world of sticky problems, where participatory interdisciplinary acts and a new language of design can self-reflexively influence and engage with a complex politics? (Hill, 2014; Sullivan, 2010). This symposium discussion will explore the efficacy of this research practice as a meaningful contributor to decision making around the production of cultural infrastructure through a case study of the ongoing 'Testing Grounds' project.

Research through design and arts practice has gained increasingly academic currency, with leading research institutions in Australia and New Zealand situating the methodology firmly within an accepted disciplinary framework. In the face of 'messy' problems without clear parameters, a shift has occurred towards interdisciplinary engagement and diversification of strategies including a critical appraisal of research by design and arts practice (see Kristeva, 1997; Frayling, 1993; Biggs and Buchler, 2004; Dryssen, 2010; Dunin-Woyseth and Nilsson, 2011). How then can this emergent shift translate from a conversation within academia to a resonant dialogue with the wider public and, importantly, with decision makers?

A focus on the value of 'the city' has increasingly entered the language of everyday social and political dialogue under the banner of urbanism or place making or condition making. This dynamic conversation sits seemingly at odds with policy making, typically characterised as a fixed, unresponsive framework existing in within a defined regulatory system. This process significantly impacts on social agency in public space, reflecting what artist Olafur Eliasson called the 'bureaucratic regulatory ambition' that compels decision makers to exert control in the face of unexpected uses (Eliasson, 2009). Yet, as Philip Colligan has noted, 'the way public services are organised inevitably influences the outcomes they achieve. Policy makers and managers are taking design decisions all the time, too often without realising it' (Colligan, 2011).

The field of research by design represents an opportunity to engage meaningfully with planning and policy dialogue by offering redefined problems and a suite of flexible solutions. At the same time, limitations of this research in relation to bureaucratic and political process are still in a nascent stage that requires further critical exploration (Zieger, 2014). The Testing Grounds project asks how tactics established through research



Fig. 1. The projects, (2014) Next Wave Festival Launch.



Fig. 2. The projects, (2014) One to One re:claim – Student Organised Network for Architecture, Victorian Young Architects and Graduates and the Australian Institute of Architects.

by design and art can be used (or indeed are not used) to inform policy, harnessing the intellectual infrastructure of a 'designerly way of thinking' (Cross, 2008) to unpick that which holds flexible government decision making back. The project represents an attempt to re-engineer the mechanics in the middle; the space that exists between top down decision-making and self activated design and arts.

Both an activity and an organisation of space, Testing Grounds takes as its site of enquiry a closed off and vacant block of Crown land (Reserved for Arts Purposes) at the edge of Melbourne Arts Precinct. The Victorian State Government and the City of Melbourne have both developed visions for the area, with the Arts Precinct acting as a key plank in branding of the state and capital city. Strategically located alongside some of Melbourne's leading arts and cultural organisations, the future of the site has remained undetermined since the former YMCA building was demolished in the mid 1980s. This pilot project initiates a conversation between the authorising voice of decision makers and designers and artists in relation to the future use of this site for public cultural infrastructure.

This liminal time between what the site was and what it will (or could) be has allowed an opportunistic tactical approach to emerge and to inform the discussion. Established as a free use, open-air interdisciplinary space for exploration of new ideas, Testing Grounds - a play on the surrounding triptych of cultural buildings designed by architect Roy Grounds - is a partnership between architecture and design practice These Are The Projects We Do Together and Arts Victoria, the Victorian government arts department.

Rather than a 'pop up' experience, the project is constructed as a sustained 16-month research project that will deliver a range of field specific outputs to be integrated into to the broader conversation about future use, an act of ongoing participatory engagement to support decision making for the future of the site and the area as a whole. A collaboratively mediated space emphasising exchanges about the possibilities and limitations of public space and cultural infrastructure to inform, Testing Grounds is loosely 'curated' by These Are The Projects We Do Together through an expression of interest process accepting all ideas on the condition that they are legal and the site is not pre-booked. The project's ongoing funding is provided through funds earmarked for maintaining the site (more typically security, weeding and graffiti removal).

Since opening in October 2013 Testing Grounds has been used by individual practitioners, collectives and tertiary institutions (including RMIT, the University of Melbourne, Monash University and the Victorian College of the Arts) for over 150 design and arts projects. Situated on the visible footings of the now demolished YMAC building, the site has a dual function as a place of future potential and a ruin or relic of the past, a fragment that acts as a testimony to a larger whole. Many of the projects have responded to this element of the site as representation of the city -open, incomplete and always becoming.

Testing Grounds tests the capacity of tactical research by design to challenge the normative systems that determine the 'best and appropriate' use of public space. A range of projects on site will be discussed at the symposium in the context of their relationship to the site, the Arts Precinct and the wider city. The symposium will present a forum to discuss the outputs, limits and evaluation of these approaches in contributing to an informed, knowledgeable place for creative and critical enquiry that can influence local city shaping and state decision-making.

Biggs, M & Buchler, D. (2011) Transdisciplinarity and new paradigm research. In: Doucet, I and Janssens, N. (eds.) *Transdisciplinary knowledge production in architecture and urbanism: towards hybrid modes of inquiry*. Dordrecht, Springer; pp.63 -78.

Colligan, P. (2011) What does it mean to design public services? [Online] *The Guardian*, 1st September. Available from: www.theguardian.com/public-leaders-network/blog/2011/sep/01/design-public-services.

Cross, N. (2006) *Designerly Ways of Knowing*. London, Springer.

Dunin-Woyseth, H. & Nilsson, F. (2011) Building a culture of doctoral scholarship in architecture and design: a Belgian-Scandinavian case. *Nordic Journal of Architectural Research*, 23(1), 42-55.

Dryssen, C. (2010) Navigation in heterogeneity: architectural thinking and art-based research. In: Biggs, M & Karlsson, H (eds.) *The Routledge companion to research in the arts*, Taylor and Francis e-Library, 223 -239.

Eliasson, O. (2009) *Olafur Eliasson on Doreen Massey*. [Online Lecture] The Open University, 11th March. Available from: www.open.edu/openlearn/society/politics-policy-people/geography/doreen-massey-space-place-and-politics

Kristeva, J. (1997) Institutional interdisciplinary in theory and practice: an interview. In: Coles, A. & Defert, A. (eds.) *The anxiety of interdisciplinarity, de-, dis-, ex-* (2), London, Black Dog Publishing, pp. 3-21.

Frayling, C. (1993) *Research in Art and Design*. London, Royal College of Art, 1 (1), pp.1-5

Hill, D. (2014) *Dark Matter and Trojan Horses: A Strategic Vocabulary of Design* Moscow: Strelka Press. [Online] Available from: www.strelka.com/en/press/books/dark-matter-and-trojan-horses-a-strategic-design-vocabulary.

Hill, D. (2012) *Dark Matter and Trojan Horses* [Lecture] Melbourne University, 27th March.

Rendell, J. (2004) Architecture research and disciplinarily. *ARQ*, 8 (4), pp.141-7.

Sullivan, G. (2010) *Art Practice as Research: Inquiry in Visual Arts* 2nd ed. Los Angeles, Sage Publication.

Zieger, M. (2014) *The Intermediate* [Lecture] Hyde Park Art Centre Chicago, 14th June.



Fig. 3. The projects, (2014) *How to Encounter Surface and Structure* - RMIT University Bachelor of Interior Design, Design Studio.



Fig. 4. The projects, (2014) *iDone* – first video drone projection in Australia – Testing Grounds registered as a flight zone.

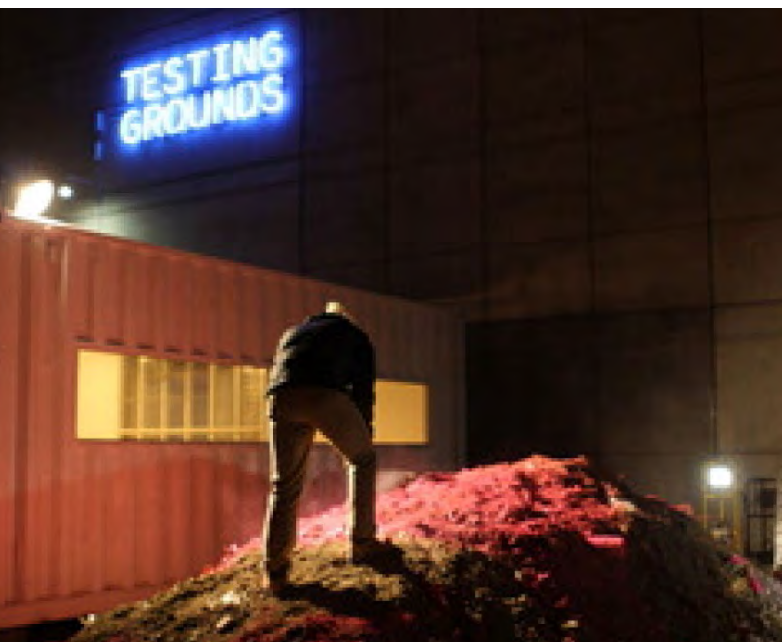


Fig. 5. The projects, (2014) From Dawn to Dawn - 72hour site-specific durational performance - Ivan Sikic.



Fig. 6. The projects, (2014) D+S+L movement sensor - captured information from Testing Grounds projected on site - Marcus Cook.

Simon Twose

Victoria University of Wellington

Practice clouds: architecture
still actively in formation



...he who desires to see, or rather to look, will lose the unity of an enclosed world to find himself in the uncomfortable opening of a universe henceforth suspended, subject to all the winds of meaning.

— (Didi-Huberman, 2005: p.140)

Architectural practice is infused with space - across drawing and building. Eager clients project themselves into plans, papery models transfer their lightness to walls, buildings resist and afford occupation. The practice of designing has many registers of material and engagement, and these combine to make a particular way of seeing; more than a method of procuring built space, practice is spatially infused research.

This paper presents practice as a way of seeing in relation to *Familial clouds*, a New Zealand installation at the 2012 Venice Biennale. In this installation, two houses were exhibited by way of their design process, which was dispersed into clouds of miniature representations in space. The drawings, models and images of the buildings were arrayed in the gallery to allude to a simultaneous occupation of practice, building and installation. This highlights ways of seeing drawn from architecture in active formation.

Fig. 1. Author, (2012) *Familial clouds*.



Fig. 2. Author, (2012) Familial clouds, cluster and viewpoint mapping sketches.

Familial clouds exhibited the *White house* and *Concrete house* as an uninterrupted stream of design material: hundreds of drawings, shrunk to business card dimensions, along with models, text and images swarmed around the walls of the exhibition space (fig. 1). The intention was to make unseen dynamics in the practice of architecture spatially palpable; to use the fallout of the design process to allude to myriad crossings of representation and occupation that precede and figure built space. In composing this evidential material into a cloud, drawings, models and images were clustered into constellations according to events in the process. Design iterations bloomed in frenetic groups, aesthetic dead ends crashed into the gallery corner; analogue drawings overlapped with digital; the various clusters were arranged to reflect intensities in the events that created them. Clusters were directed towards thirty five points in space by way of small angled mirrors springing from the walls. Viewers traversing the installation at close range could discover these points of intensity through somewhat comical head movements (fig. 2).

Two buildings provided the source material for this spatial array, the *White house* and the *Concrete house*. The *White house* was designed through fluid hand drawings, as a way to distil the apparent suburban plasticity of Auckland. *Concrete house* used digital drawing to distil the seismic potentiality of Wellington. Each developed ways of seeing through performances of practice. The *White house* became distinctly plastic in its form through an analogue design process, described below:

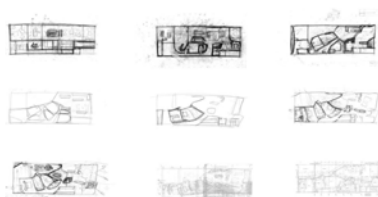
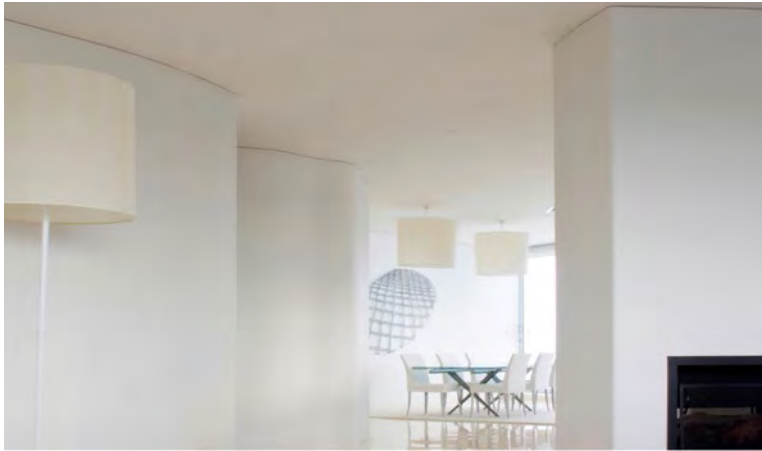


Fig. 3. Author, (2009) White House drawing iterations.

Crude drawings negotiated the clients' desires for the *White house*, recording the polite and appropriate organisation of materials and events (fig. 3). Throughout, the drawings were tested through action; the clients mocked up kitchen benches and set about cooking together; mapped out the appropriate space for greeting a guest who, being a potential client staying for the night, required a particular formality to the entry vestibule: framed view of the harbour; cloak cupboard to secrete a coat, console to hide necessities and display flowers. The clients' expectations and desires for each part of the house were spatialised, transferred into drawings, and caused to interact with movements of pencil over large sheets of paper. The performances in the drawing process linked the house to Auckland, itself a thin contested surface drawn by complicated domestic performances. This view of Auckland's spatial DNA found its way into the thin white buckled surfaces of the house. In this project, the practice of drawing



the building was as much a way of observing its context as a mode of determining its atmosphere (fig. 4).

The second building in the installation was the *Concrete house*, composed in digital software. In this project, massive concrete elements were jolted and moved around in 3D digital space; panels raised from the ground, leaned over or rotated within the confines of a small urban site, manipulated via the screen and mouse. The intention was for the ominous potential of the ground to be present in all the spaces of the house, a condition that was distilled through the shunts and shifts possible in digital drawing. Whereas the *White house* wrapped itself in the soft horizontal flows of Auckland, *Concrete house* distilled the potential ruptures of Wellington. This found its way into the building as an atmosphere of fragile equilibrium (fig. 5).

Familial clouds displayed the intimate, largely unseen conditions in the practice of realising *White house* and *Concrete house*. Drawing led to building led to installation, making the process one of continuously unfolding research. The power of practice as research may be in its incomplete drawing out, where designing, or drawing, following Jean Luc Nancy, is the 'opening of form', something that 'indicates the figure's essential incompleteness, a non-closure or non-totalizing of form' (Nancy, 2013: p.1). The drawing out of the design process directs the provisionality of the medium as a powerful lens, coalescing understandings that cross material and spatial territories.

This paper is directed towards amplifying these dynamics to maintain the 'pure potential' of drawing in the built. This reflects much of the contemporary discourse on design research but also draws on general shifts towards the performative and non-representational. Current thinking on the potentialities of practice by figures such as Leon van Schaik (2010) and Richard Blythe (2013) describe knowledge as embedded in architectural works, and cite spatial intelligence, honed from the practice of designing buildings, as the method. *Familial clouds* reflects this approach and locates the embedded architectural knowledge across the built and non-built, encompassing constituent parts that are both physical and non-physical. Ascribing critical observation to the ways and means of designing inevitably engages representation, and knowledge gained from a critical practice approach, as seen in the research led by Johnathan Hill (2013) and Jane Rendell (2013). But *Familial clouds* does not propose practice as solely concerned with representation; it proposes practice as a tool honed through a habitual synthesis of

Fig. 4. Author, (2009) White House interior.

Fig. 5. Author, (2011) Concrete House interior.



Fig. 6. Author, (2012) Familial clouds, detail.

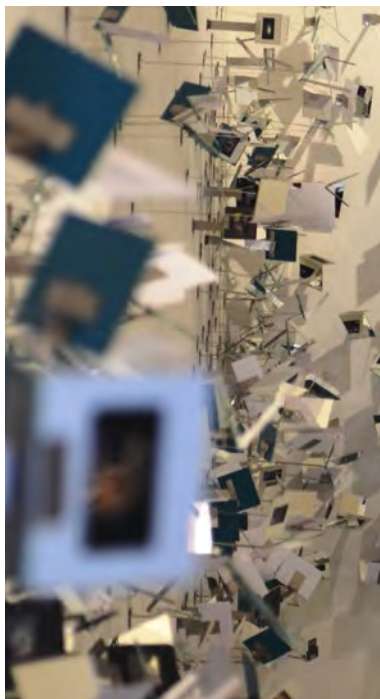


Fig. 7. Author, (2012) Familial clouds, detail.

discursive and non-discursive components. This makes it a sophisticated tool to distil subjective and objective complexities in the contexts it rubs up against. By engaging practice's capacity to negotiate and maintain potentialities, architecture and the subject of its research are always in a state of emergence.

To quote Sarah Treadwell, 'Lines seem to be so straightforward, propelling us from here to there with no problems: architecture loves lines... however... it might be productive to look instead for places where the legibility of signs and the assumptions of rational procedures become silenced, exposing the 'underside' of visual representation' (Treadwell, 2013). *Familial clouds* presented practice as an ever in-folding process of occupying representation; a mode of enquiry coloured by a constant shuttling between subjective and objective understandings. Practice is a discipline with an active way of seeing, a spatial acumen gained from drawing, building and redrawing (fig. 6).

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Methodology and Tactics
for Design Research
- the Cross-Pollinating Three Way

The role of the architect and urban designer has changed arguably becoming more significant (Madanipour, 2006). The role is multifaceted and is becoming more complex (Inam, 2011), engaging with multiple scales; a diverse range of stakeholders and policy makers; an increasing number of disciplines and areas of concern (Krieger and Saunders, 2009). Architecture, like large scale city design, is a complex multi-disciplinarily 'wicked problem' (Rittel and Webber, 1973, Conklin, 2005).

Professional practice, architectural research and education face new challenges in the need for transdisciplinarity (Burry, 2012). There is a need to balance scholarly higher learning objectives of the discipline with the preparation of students for private practice – the profession (Anderson, 2001; Carolin, 2001). Arida suggests in his book *Quantum City* that educators need to 'totally rethink the teaching of architecture and urban design' (2002) to respond to the 'wicked' collaborative complexity of contemporary design issues. There is ongoing debate over who is the best placed to provide such education particularly in design studio teaching (Carolin, 2001; Hawkes, 2000; Lewis, 2013) – the non-practicing research-academics or private practitioners who may or may not be considered researchers depending on your definition of 'research' (Downton, 2003).

The cross pollination between research and private practice, practice as research, research led practice and practice led research and the relationship between studio teaching by practice professionals versus research-academics has been discussed widely (Burry, 2012; Carolin, 2001; Ledewitz, 1985; Van Schaik, 2005; Smith and Dean, 2009; Downton, 2003). The following is a brief account of my own personal experience post completion of a practice based PhD, of a researcher and lecturer at the University of Melbourne, and director of the private architectural practice of Harrison and White.

I will outline key areas I have seen as being beneficial in my attempt at a cross-pollinating three-way approach to interweaving research, teaching and practice.

Three-Way Cross-Pollination

When an architect can engage in practice, research and teaching, the boundaries are blurred or become 'grey' (Laaksonen, 2001) and it is difficult to see where one ends and another begins with a 'practice based research culture that imbues the undergraduate experience' (Van Schaik, 2005). The monogamy and commitment to one specific aspect of architecture, be it practice, education or pure traditional academic research, limits potential opportunities for development and innovation. In the 'three-way cross-pollination' approach, practice informs teaching informs research informs practice. By combining aspects of these three areas of endeavour, we provide a meditation on the intangibility of each (Ellis, 2000).

Generosity and Sharing

The dissemination of knowledge is critical in the architectural three-way approach. It is important to unlock the research conducted in practice and share it with the wider profession to make it disciplinary knowledge (Carolin, 2001).

Though there is the temptation for practices to hold onto commercial 'secrets', properly accredited distribution of their research through national and international conferences, academic journal publications, and exhibitions solidifies the knowledge



Fig. 1. White, M. (2014) Custom metal cladding: Metal cladding finish installed in snake-skin pattern on Heald (Pants) House (Photographs by).



Fig. 2. Hosking, B. (2008) Foyn-Johanson House: Solar amenity preservation method called the "subtract-sun" (White, 2008a) [Photograph].

generated, capturing it for the practice's benefit, but also to contribute to the discipline (Anderson, 2001). The research develops, becoming part of the practice's marketing, becoming more commercial and therefore more satisfying, in a narrower way (Ellis, 2000). By engaging in education at both undergraduate and postgraduate level through design studios and research seminars, it is possible to share practice research knowledge and academic research knowledge with the next generation of architects and urban designers (Carolin, 2001). By teaching students 'trade secret' design methods in a research focused design studio or seminar, you not only instil in the student valuable knowledge and skills, but with the right students, the knowledge is extended. When this happens it can be positive and affirmative. The extension of knowledge can be fed back into both practice and academic research which deepens and enriches (Ellis, 2000).

Recording and Reflection

In the cross-pollinating three-way approach, it is important to reflect upon both design work and teaching through 'writing-up' what may sometimes be, at least in part, an intuitive process (Smith and Dean, 2009). By dissecting a built project, or a completed design studio, we learn what elements are successful and perhaps less successful (White, 2013) – such as where there has been too little integration of research into the design process (Ledewitz, 1985) or too much emphasis on research and analysis (Sancar, 1996) or too much emphasis on digital tools (Kolarevic, 2003).

For this kind of reflection it is essential to (knowledge) capture the process to scrutinise at a later date. We should record the process of research and design in practice (Van Schaik, 2005) as well as in teaching. Publically accessible wikis, blogs and social media sites such as Google Plus Communities are cheap and easy methods for recording – particularly when used with other recording technology such as screen capture (Figure 3) (IrfanView, Camtasia™ or BB FlashBack™), shared cloud servers and ubiquitous mobile phone cameras.

Performance and Agility

By combining research and teaching with practice, each project can incorporate an efficiency research component, leading to practices becoming faster and more agile, allowing practices to spend time that would have been lost with less efficient working methods to investigate new construction or fabrication methods; new materials; new design approaches; and new performative modelling methods.

It is possible to explore specific areas of research involving emerging performative modelling technologies or developing and testing new technologies (Figure 2, Figure 4 and Figure 5) which may be directly applicable to a specific project, but can also become part or architectural practice's repertoire to engage with wicked problems. This leads to a new peak of professionalism where specific projects are used as case studies and framed both in a professional context but also tested in an academic context.

Research, Practice and Teaching at Multiple Scales – Micro, Meso and Macro

The cross-pollinating three-way approach stresses the importance of practicing, teaching and researching at multiple scales. From the highly detailed thinking of the colours of business cards through to the large scale urban contemplation about regional planning and abusive political authority way (Ellis, 2000).

At the micro scale, engagement with building construction technologies through 'making' studios and seminars can inform exploration in practice (Hughes, 2013). For example, the investigation of custom folded steel cladding systems which exploit the lyrical craftsmanship of steel fabricators (figure 1) moving from academic 'sketch-model' using post-it notes through to prototyping, university wind tunnel testing through to full scale built case study.

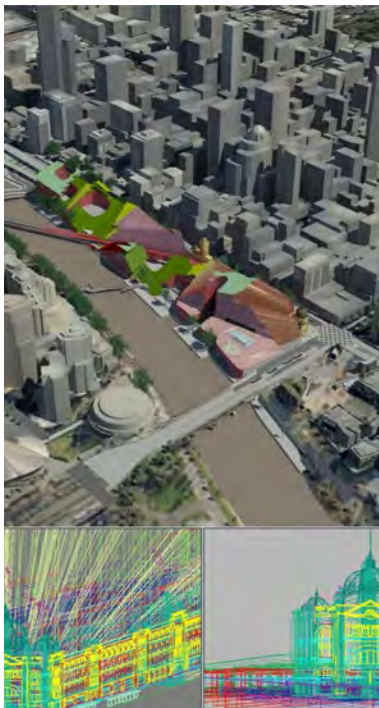
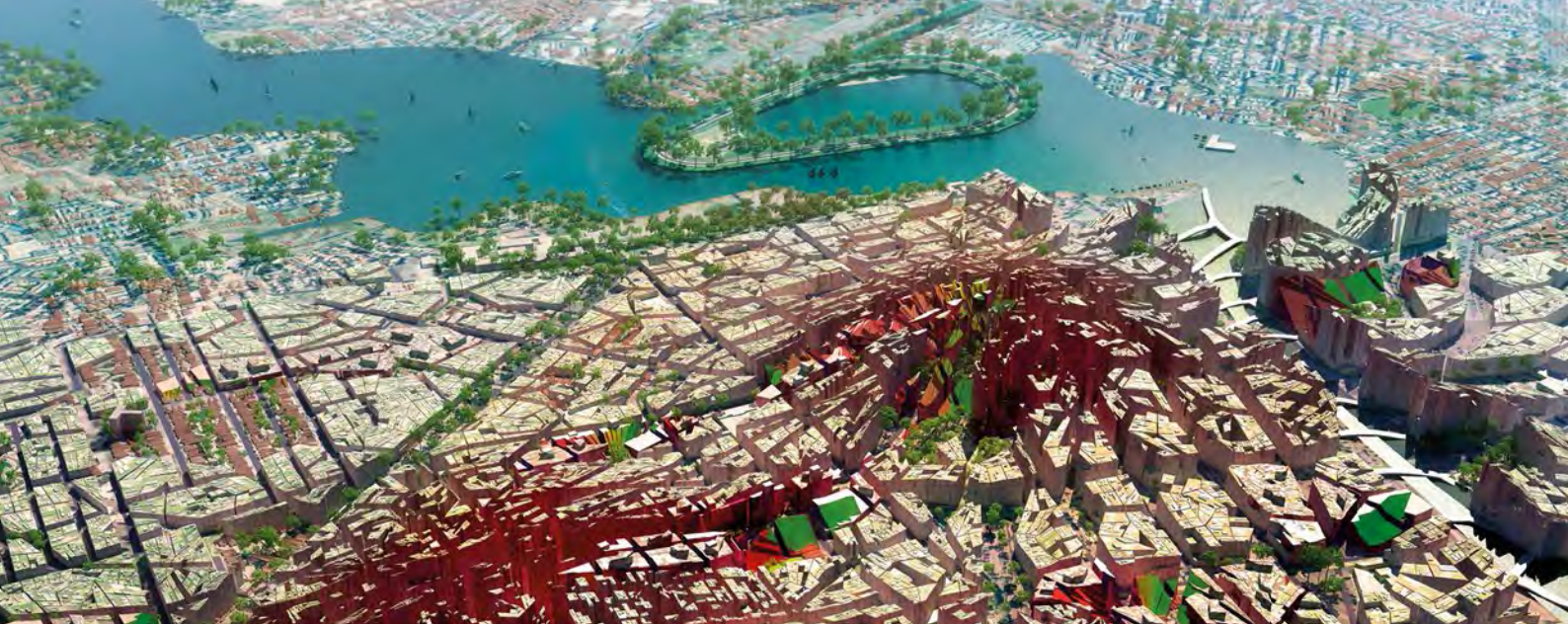


Fig. 3. White, M. (2014a) Harrison and White Finders Street Station competition entry.



At the meso scale, research into the evolution of workplace planning (Blebly, 2013) as well as teaching and learning spaces can directly feed into practice, where current practice projects explore the growing need for balancing collaborative environments in workspaces and libraries with quiet contemplative spaces. The contemporary office, like the contemporary library, requires spaces that allow one to work solo but that increasingly also allow the ability to work within the confines of a group (Ellis, 1991).

Fig. 4. White, M. In collaboration with Flood, S. & Langenhiem, N. (2014) 'Implementing the Rhetoric' urban design proposition, (White, 2010a, White, 2010b, White, 2007a, White, 2008a, White, 2008b).

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Fig. 5. White, M. & Langenhiem, N. (2014) Micro climatic exploration of the Arden Macaulay using high polygon proxy object tree modelling with photometric solar analysis, University of Melbourne's Grahame Tralour Fellowship project (White, 2014b).

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Modern architecture's emphasis on space rather than air masks the material presence of the fluid we dwell in (Simmons and Frascari, 2006: p. 87).

Breath (*pneuma*) and air (*aer*) encompass the world. Air is inseparable from life, and consequently architecture. Air touches all the senses, and 'pneuma conscious architects work through representations of air addressing multi-sensorial structure of perception' (Simmons and Frascari, 2006: p. 90). Representations of air in architectural treatises address its invisibility. Palladio represents air through wind vanes in his elevations. Philip de l'Orme drew billowing clouds and positioned wind vanes next to chimneys in his elevations, in which air is represented as undulating lines. Beyond drawing, air was deployed in the performances of sacred theatre staged in cathedrals (Annunciation and Ascension) by utilizing elaborate machinery, and scenographic techniques in which air was materialised through undulating ribbons. The role of these undulating lines of clouds, smoke, ribbons or staged movements depart from the conventions of perspective, and are 'paralleled to a visual field of representations that are neither determined nor arbitrary, but consistent in their associations' (Simmons & Frascari, 2006: p.96).

The representation of air appears to combine two methods of study in design research - one concerned with drawing (undulating lines) and the other with making (elaborate machinery). This duality seems to originate in a way of thinking that is relational and embodied in tacit knowledge of how things work (where clouds and smoke come from), forces that enable such movement (how wind occurs), and how air influences life processes and occupation (how we breathe and how we sense our environment). As such, air is a perfect agency to consider how we encourage a perceptual, cognitive way of experiencing the world that cherishes an idea of wonder in art and sciences? What kind of architectural encounter such exploration may offer? While architectural drawing works with associations, the making of architecture considers analogy as a medium for experimentation. Rich in analogical knowledge is the *Wunderkammer*.

Its origin was in mid 16th century Europe - a box or room of curiosities, a cabinet, or a cupboard often called a 'device of wonder', and was in fact the perfect architectural space - a miniature house of images that functioned as a dolls' house, a theatre, or a laboratory, but most importantly, as a system of interconnection. Simultaneously small and vast, their display was a theater of learning through objects, specimens, instruments



Fig. 1. Wingham, I. (2014) With studio Integrate
An Architecture of Extended and Instant
Scenographic Encounter, Installation. Brighton.
(Photo Angus Leadley Brown).

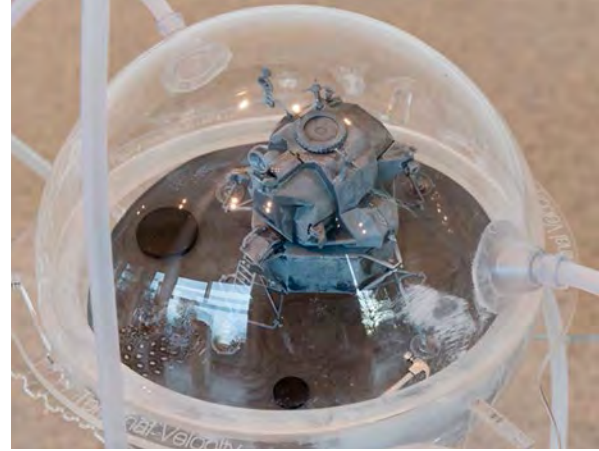


Fig. 2. Wingham, I. (2014) With studio Integrate,
An Architecture of Extended and Instant
Scenographic Encounter, Installation. Brighton.
(Photo Angus Leadley Brown).

and pictures. Nature, beasts, insects, the human body, and indefinable creatures were common subjects in these works, many of which had surrealist qualities. The uniqueness of the early *Wunderkammer* lay in its non-taxonomic collection - like Andre Breton's collection, it was a 'magical continent' that contained his heart and mind in fragments' (Olalquiaga, 2007). What such collections offer is a sense of wonder and of imagination embedded in the use, staging and perception of the display. Scenographic in nature, they question representation as a particular set of rules. They contain the ideas of exploration, dream, myth, and experimentation, and are always open to interpretation. Focusing on discontinuities and confluences that occur in displays of objects in art and science, and representations operating between analogy, association and scenography, this design research uses air as an agency for exploring a pneumatic encounter with the our world. The site of the research resembles the early *Wunderkammer*, and surrealist searching for discontinuities in natural taxonomies and scientific apparatuses, and the interconnection of nature, art and science (fig.1 & fig. 2).

Fascination with air, and the lack of it, has been represented in art and experimented upon in science. Paintings by Joseph Wright of Derby show veins on an inflating bladder about to burst - *Two Boys by Candlelight blowing a Bladder* - and the suffocation of a bird - *An Experiment on a Bird in the Air Pump* (fig. 3). The latter painting was based on Robert Boyle and Robert Hooke's famous Air Pump apparatus. With it, Boyle was able to carry out a whole series of experiments that illustrated the characteristics and functions of the air; by studying, for example, the effects of its withdrawal on flame, light and living creatures. Boyle argued that if one wanted to know what air is - what it *does* - it was reasonable to remove the air and watch what happens to an animal or a flame that has been put in that environment. The lack of air also produces a lack of drag force. To prove Gallileo's hypothesis that two objects of different masses will fall at the same rate in the absence of air; Commander David Scott of the Apollo 15 mission, on the airless Moon, dropped a hammer and feather and showed that the two landed at exactly the same time (fig. 4). Air was related to colour, too. The air-filled soap bubbles of Simeon Chardin's painting were connected to Isaac Newton's innovative theories on optics. Newton acknowledged that his observations of soap bubbles contributed to his theory of colour: different thicknesses of soap film reflect different colours (fig. 5).

From this field of exploration, this design research aims to bring the world of art, representation and technology together in a particular scenographic encounter with the



world; working between tradition and technology, questioning what architecture can do, utilizing hard and soft materiality through digital and analogue fabrication. This project - *An Architectural Scenographic Encounter* - sets the stage for an unpredictable occupation bringing art, architecture, performance and technology together. Today, the gap between Carpo's conceivers and makers is closing fast. Bespoke fabrication processes have opened the field to Banham's 'freebooters', and Ingold's 'wanderers' and 'wayfarers'. Such wanderers can move swiftly from research experiments to full-scale architectural encounter. Perhaps the role of experimental design research should be considered as bridging this old-age gap between old and new, tradition and technology, art and science, through proposing different architectural encounters with the way we live and the world that surrounds us? (fig. 6)

Fig. 3. Wingham, I. (2014) With studio Integrate, *Spring of Air Bubble*, Detail of Installation. Brighton. (Photo Angus Leadley Brown)(left).

Fig. 4. Wingham, I. (2014) With studio Integrate, *Terminal Velocity Bubble*, Detail of Installation. Brighton. (Photo Angus Leadley Brown)(right).



Fig. 5. Wingham, I. (2014) With studio Integrate, *Origin of the World Bubble*, Detail of Installation. Brighton. (Photo Angus Leadley Brown).

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Fig. 6. Wingham, I. (2014) With studio Integrate, An Architecture of Extended and Instant Scenographic Encounter, Installation. Katja Vaghi performing. Antoni Malinowski paintings, background. Brighton. (Photo Angus Leadley Brown) (below).



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