

Article

Concrete Poiētics Entanglements between Drawing and Building

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Abstract

This paper reports on an experimental drawing installation that is part of a sequence of art works radicalising architectural drawing: Drawing in the Expanded Field. *Concrete Drawing* was shown at Adam Art Gallery | Te Pātaka Toi, Wellington, Aotearoa New Zealand (2015), and at Pallazo Mora, XV Venice Architecture Biennale, Venice, Italy (2016). The work explored architecture in the space between drawing and building and sought to capture a shared atmosphere, merging the implacable materiality of built space with the indeterminate, open *poiēsis* of a sketch. *Concrete Drawing* was a large 1:1 sketch of a single wall surface, cast in two tonnes of concrete and laid horizontally in the gallery. The work intensified many *poiētic* acts in drawing and recorded them in the wall's surface, which then engaged viewers in the installation. Small scale wall elements swarmed over the larger surface, alluding to the act of turning a model in the hands while designing. These arrays of miniature walls prompted viewers to move around the installation and bodily repeat the performance, mapping the dynamic space of drawing with that of the built.

The research draws from literature discussing the power of openness and indeterminacy in drawing, ideas on materiality, and the shared influence of human and non-human feedback. *Concrete Drawing* contributes to an expanded field of drawing through the pursuit of a *sfumato* architecture, where drawing and building are in subtle vibration. The research prompts questions about the finality and fixity of architecture, proposing it instead as an open, sketch-like phenomenon - a habitable drawing.

Keywords

Drawing, Installation Art, Materiality, Performance, Non-human agency, Poiēsis.

1. Introduction

At one level drawing is an instrumental means to determine how matter is formed; how it is shaped, constructed and, perhaps, felt. It also has its own set of material entanglements: the understanding of scale that comes from turning a physical model in the hand, the slow application of a pencil over paper, the rapid generation of multiplying lines by computer software. These facets of the architectural process are usually hidden, cleaned away by the presence and seriousness of buildings the draw-

ings are deemed to represent. Yet these delicate, complicated things figure the designer's spatial understanding and are the tissue of architecture; they are the making of it. This paper reports on an experimental drawing installation, *Concrete Drawing*, that explored these intangible material entanglements.

The paper gives an account of the process of designing and making the *Concrete Drawing* installation, as well as its curious presence in the gallery context. It follows a



Fig. 1. Simon Twose (2015) Concrete Drawing. Helicon image stack with combined focal points [Photo: Paul Hillier].



Fig. 2. Viewer engaging with installation, video still, Drawing Is/Not Building, Adam Art Gallery Te Pātaka Toi, Victoria University of Wellington [Photo: Tom Ryan].

line of thinking, developed through the creation of the work, that explores a plasticity of relations between the many objects, spatialities and events that figure drawing architecture. *Concrete Drawing* aimed to intensify the open *poiēsis* of the traditional architectural sketch, and explore how it might manifest as an intangible presence within the tangible materiality of built space - as a strange architecture that is neither drawing nor building, but somewhere in the shared space between.

The project is within a context that includes research on the indeterminacy of drawing, aesthetics of openness in art practice, and contemporary explorations in the intricate and entangled relations between materials, objects and humans. The installation draws from these to make a contribution to understandings of drawing as a radicalised material performative phenomenon, as *Drawing in the Expanded Field*. In doing so, it speculates on a *sfumato* architecture, where drawing and building are in subtle vibration, invested with the open *poiēsis* of a sketch.

2. Installation

On entering the narrow, tall space of the lower Adam art gallery, a surreal landscape presents itself. A massive concrete surface, textured and puckered with small impressions lays prone in the space, horizontal but tilted slightly along its length and across its width. Moving across the surface of this heavy terrain, swarms of miniature elements engage the viewer. These thin rectangular concrete blades sprout from the terrain in clusters, as if blown into alignment by a swirling wind. They catch the viewer in moments, where groups of them suddenly align and present only fine edges to the eye, as clusters of sectional profiles. A slight move to the side, or closer, and the clusters are seen more side-on, obscuring one other through their parallax relation. An observer scanning this terrain, moving around it, zooming in to observe it in detail and out to view it as a whole, traverses a host of different scales, textures and colour variegations. The surface, floating impossibly heavily in the space,

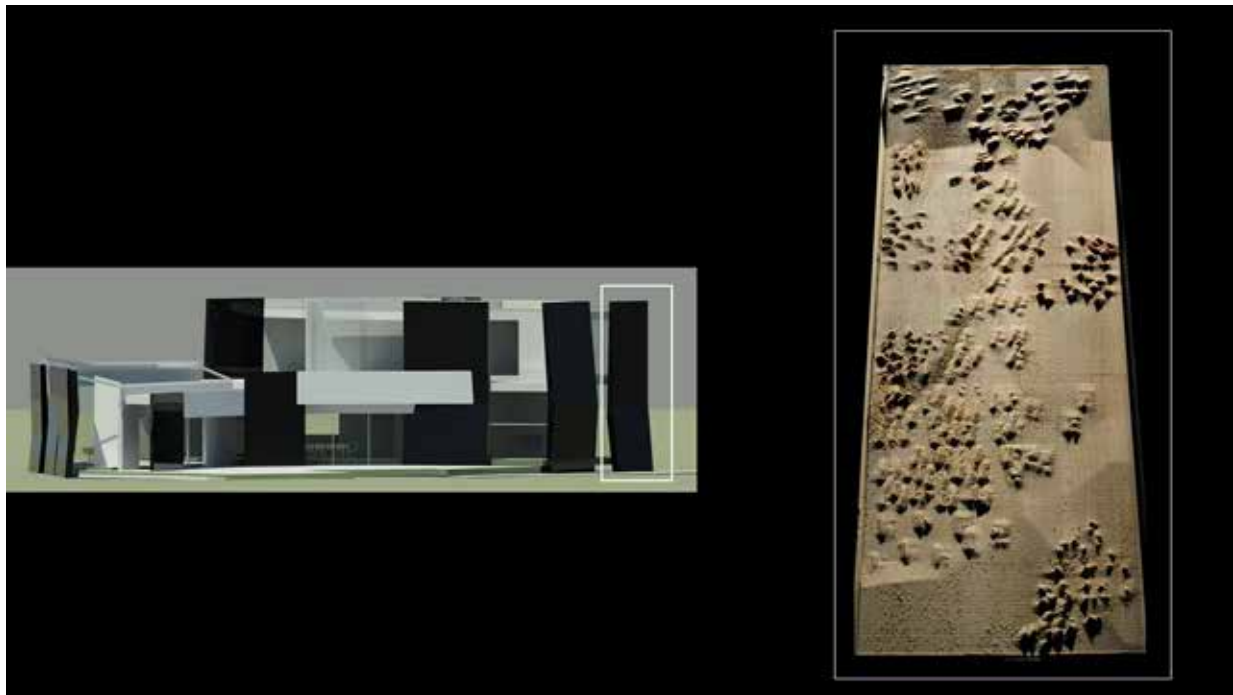


Fig. 3. Simon Twose (2014) Te Horo House. Wall surface extracted from building design, Revit render and CNC 1:20 model in Kauri [Images, Simon Twose, Paul Hillier].

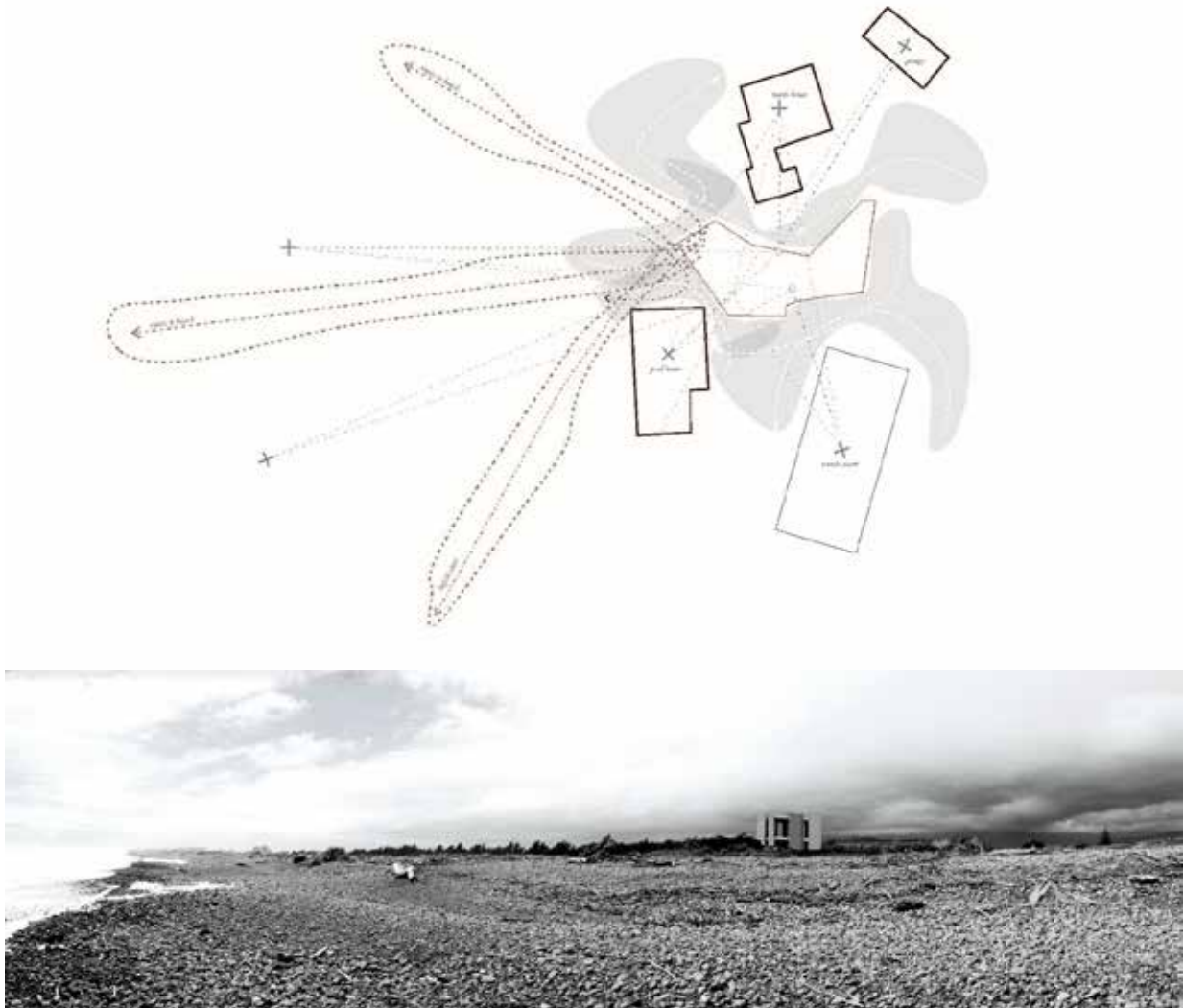


Fig. 4. Simon Twose (2014) Te Horo House. External pressure diagram, Site image. Images, Simon Twose, Declan Burn.

becomes a dynamic document, able to be read through embodied experience, which colours the sense of it as a strange architectural presence.

3. Poiētīc Process

Concrete Drawing presents the surface of a full-scale concrete wall, extracted from *Te Horo House*, an unbuilt design sited on the turbulent, rock strewn Kapiti coast of Aotearoa, New Zealand. The wall surface was constructed as a full-size drawing, in its intended material; it hovers in the gallery space as a massive concrete 'sketch', becoming a surreal and engaging landscape.

Te Horo House was an essay in dynamics. Rather than having a pre-figured form, it was composed based on huge stone and concrete elements being moved in virtual space, in response to 'narrative forces' of a domestic brief and the dynamic coastal landscape. Site lines, orientations, desires of the client to cook at the same time as viewing the sea and Kapiti Island - while chatting to family in the courtyard and barking at kids coming through from the pool - ephemeral performances in ordinary life shunted the concrete elements into equilibrium. *Concrete Drawing* extended this interest by capturing intimate dynamics within drawing. The intention was to imprint a single wall surface with ephemeral perfor-

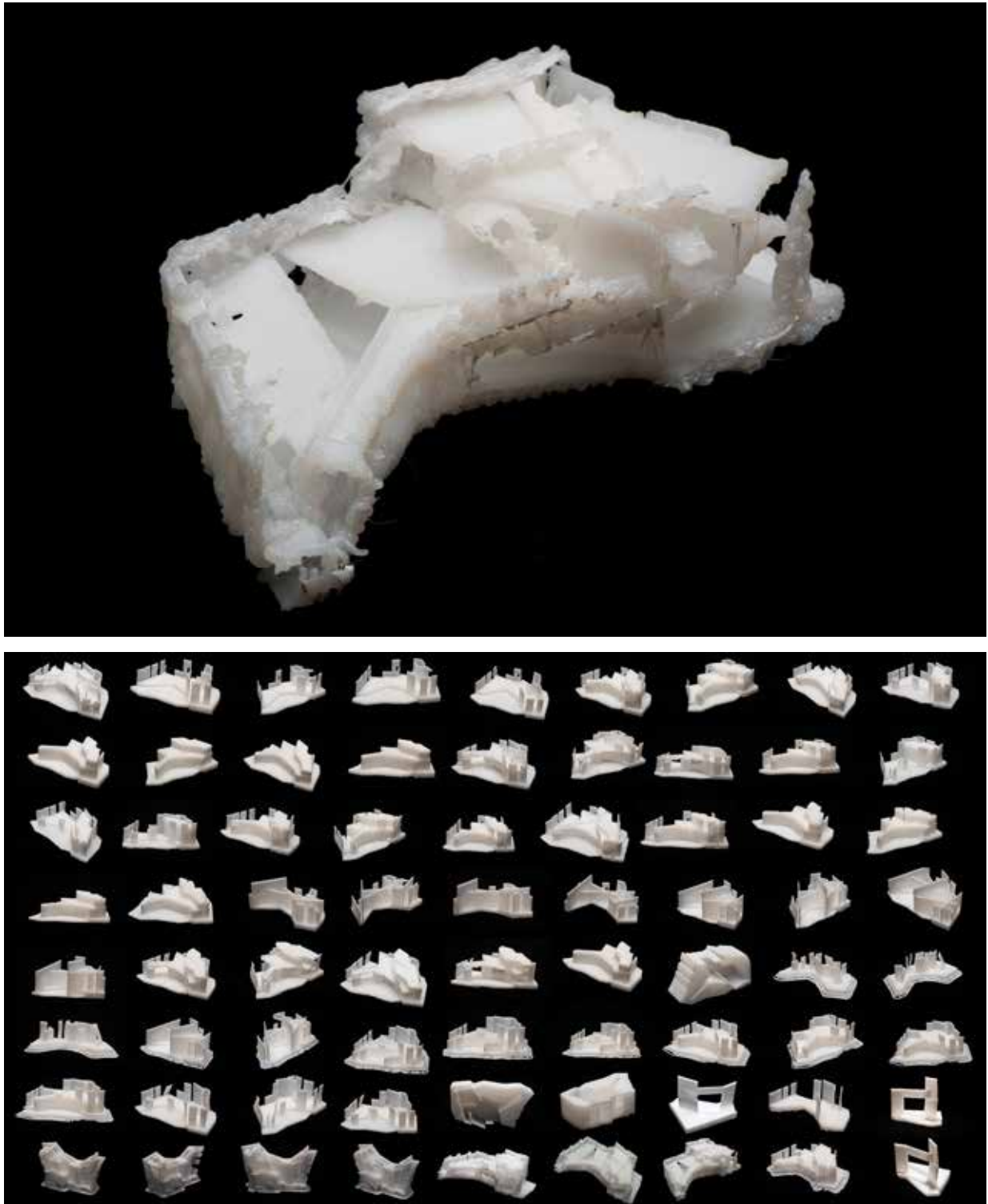


Fig. 5. Simon Twose (2014) Te Horo House. Exploratory UP printed models [Photos: Simon Twose, Paul Hillier].

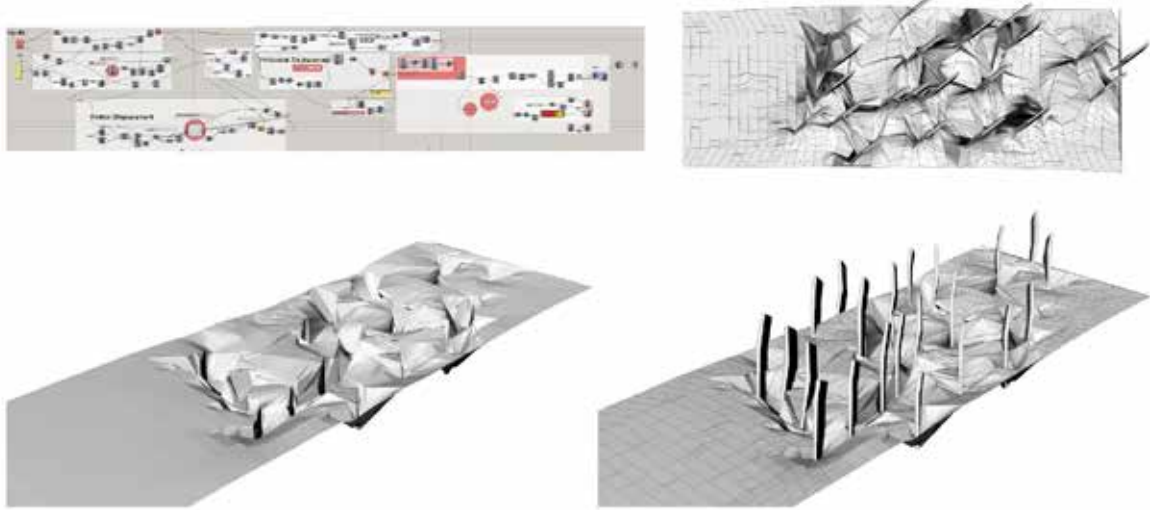


Fig. 6. Simon Twose (2014). Concrete Drawing, Development of wall surface in Rhinoceros [Images, Simon Twose, Declan Burn].

mances from the design process, binding another layer of plastic responsiveness into the project.

The *Concrete Drawing* project began with a series of rapidly 3-D printed models of the *Te Horo* house design. The purpose was to review the design; its axial logic, its components and its programmatic zones and pressures. The models were encouraged to glitch, deform and melt, as part of the printing process, and a series of reinterpreted house forms were created. These rather crude objects were held up and rotated in the hand and reviewed, to see how they added to or shifted the house design. To give the tiny objects force I tried arranging them in the studio in various ways and ended up grouping them in taxonomies of potential, with each group aligned towards a particular viewpoint and each model near-to or far-from the viewpoint, due to how interesting or 'forceful' I found it. I decided that, in order to record the varied impact of these small objects, they should interact with a large surface, which would act as a terrain that recorded their spatial relation to one another and to my eye.

The taxonomic arrays of models went on to inform a series of wall elements in the final installation, that

swarmed over their larger scale counterpart and reacted with it, recording attentions and aesthetic decisions in the drawing and design of the wall within the surface of the built work itself. The surface 'reaction' between the two scales of concrete walls was developed in Rhinoceros and Grasshopper software.

Over 300 small-scale walls were arrayed in taxonomic clusters across the larger wall, aligned to seven view-points in space. These were painstakingly made to interact with the surface of the larger wall; the surface was edited to flow around and under each of the little walls, creating a terrain of plastic responses to the tiny walls' dynamic positioning. The larger wall surface was then panelised and cast in concrete using 40 moulds CNC routed from Gold Foam. A lengthy process of casting followed where panels were cast in concrete, stripped, arranged in the studio garden, stacked, numbered and packaged ready for transport.

The small-scale walls were cast in fine-grained concrete and wax in a similarly time-consuming way, using stainless steel moulds. There were six different types of miniature wall, based on those in the *Te Horo* house.



Fig. 7. Simon Twose (2015). Concrete Drawing. Patterns, forms, scale shifts in the making of Concrete Drawing, XPS, concrete, water, stainless steel, wax, plaster [Photos, Simon Twose].

As viewers moved around the final installation, they encountered various alignments of these miniature walls, linking the reading of the work in real space with the dynamic space of design, which is inherently configured by a complexity of discussions, decisions, materiality and embodied performances.

The significant aspect of the process is that it seamlessly transitioned from analogue drawing to digital design to analogue making, and brought with it a landscape of materials, objects and intra-relations. As much as the little 3-D models were agential in the design, so were the negative forms of the moulds, the materiality of the concrete and wax in their liquid state, even the various arrangements of component parts incidental to the

process: the stacking, test arrangements, the transportation. Likewise, the final surface of the elements was ornamented with not just the creasing of tiny scale walls in the digital, but the tool path lines of CNC milling in making the moulds, mistakes and damage in the casting and inclusions in the final concrete castings. The project was intended to span across drawing/design and making to the experience of the final object, with all the various manifestations being taken as aesthetically significant. In doing so, the *Concrete Drawing* project was an intensification of *poiēsis*, the poetics of making behind the work. The final act of making was recording the installation in two different gallery contexts. The work was extensively recorded through photography, video and digital 3D scanning, effectively returning the built object to

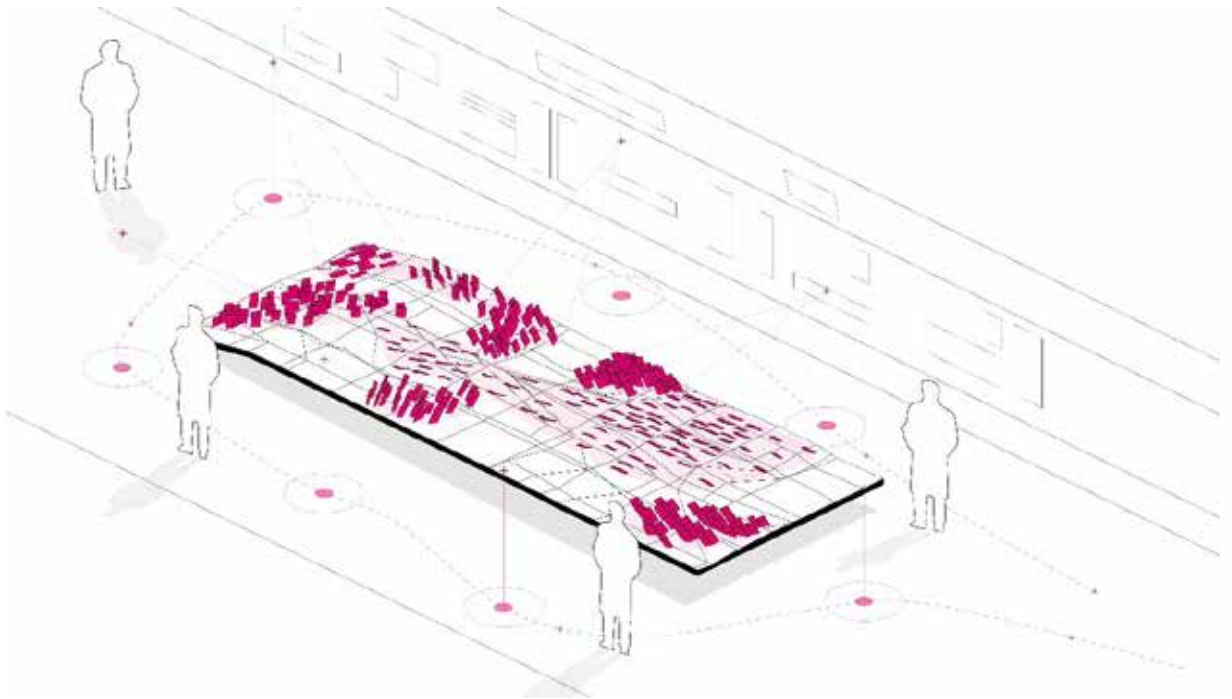


Fig. 8. Simon Twose (2014). Concrete Drawing. Diagram of engagement points [Image, Simon Twose, Declan Burn].

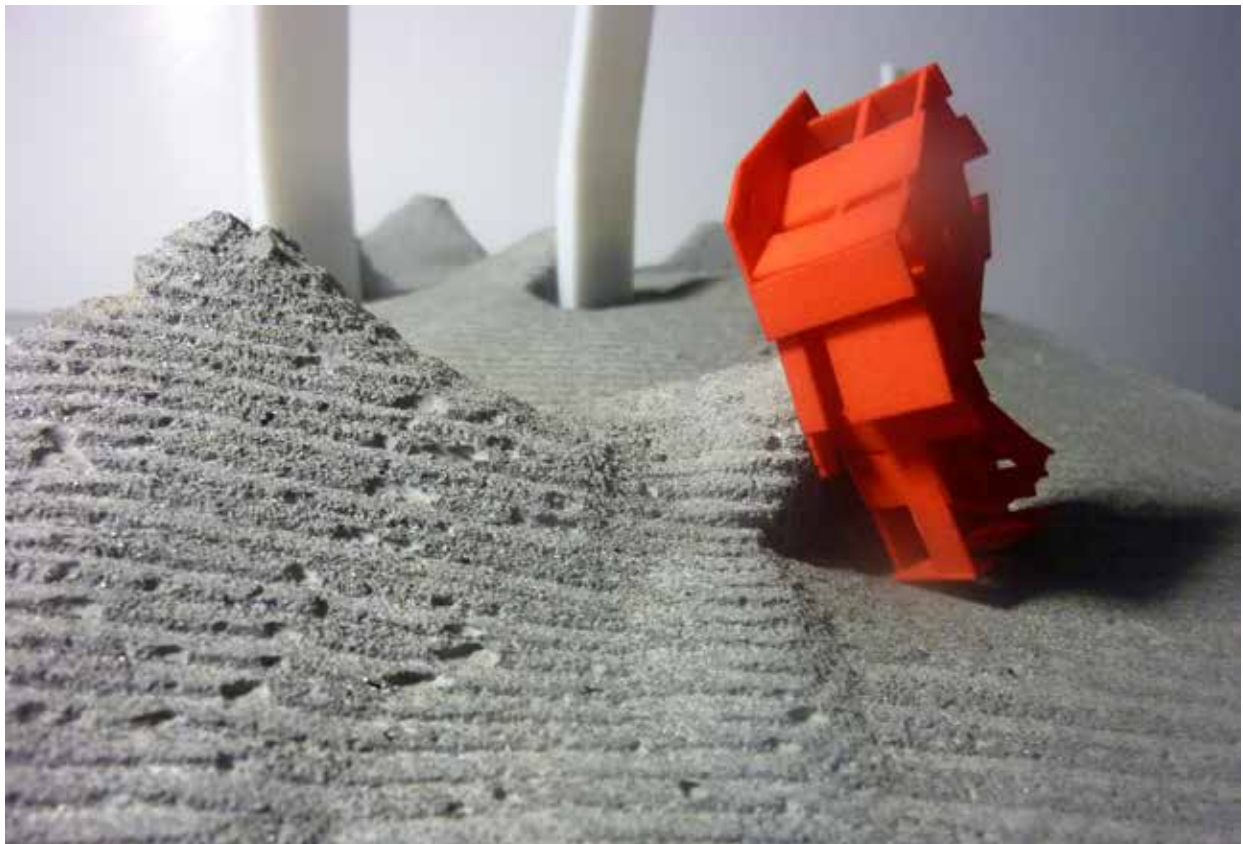


Fig. 9. Simon Twose (2014) Concrete Drawing. Exploratory tests of the interaction of scale and material, cast concrete, 3-D prototype models [Photo: Simon Twose].

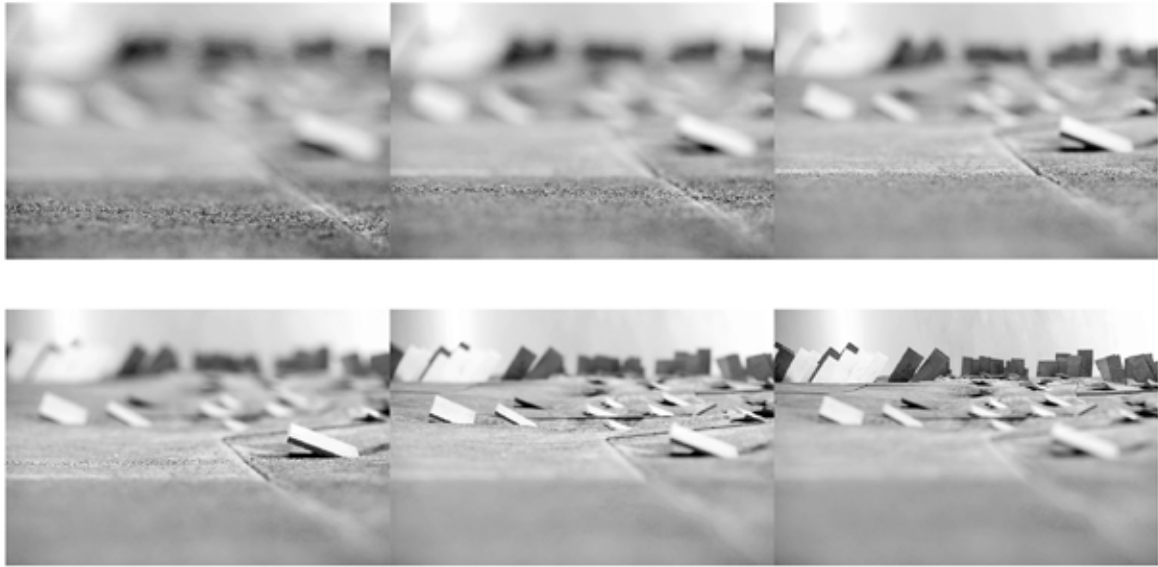


Fig. 10 Simon Twose (2015) *Concrete Drawing*. Helicon Images with 100 shifting focal points, animation stills, *Drawing Is/Not Building*, Adam Art Gallery Te Pātaka Toi, Victoria University of Wellington. [Images: Paul Hillier, Simon Twose].

the realm of representation. This captured some of the strangeness of the work but also opened further aesthetic possibilities. For instance, Helicon image-stacking software was used to create an animated image where a narrow band of clear focus slowly traverses the concrete terrain in 100 increments, as if closely inspecting its surface.

4. Discussion

The *Concrete Drawing* project was intended to intensify drawing as a material performative phenomenon. It was an experiment in short-circuiting the representational distance between architectural drawing and its built counterpart, merging the two in order that a strange, shared presence might emerge. The work drew from many contemporary areas of thinking, from the reappraisal of the power of drawing in art and architecture practice, to work in the humanities looking at the intricate mix of human and material agency. These coalesced as diverse components supporting a radicalisation, or intensification of drawing's traditional openness.

4.1 Drawing's Openness

The creative power of drawing, particularly the sketch, is

tied to its inherent capacity to be indeterminate, irresolute and open through a co-agency of hand, graphite and imagination. Drawing is, to quote Jean Luc Nancy, nascent, 'the opening of form'. Nancy highlights two ways in which drawing performs this opening: through gesture, 'in the sense of a beginning, departure, origin, despatch, impetus, or sketching out' and through an 'inherent capacity', something that 'indicates the figure's essential incompleteness, a non-closure or non-totalizing of form.' (Nancy 2103; 1). The traditional materiality of drawing promotes this emergence of open possibility. The rapidly drawn lines, smudges and "recalcitrant, "meaningless" smears and blotches" described by art theorist James Elkins create blurrings and unexpected shifts with the power to evade interpretation, they are "shimmering thing(s) at the edge of analysis" (Elkins, 1995: 858, 860). The open possibility afforded by the combination of gestural action and drawing's materiality is also bound in to traditions of architectural drawing, as noted by architects Nat Chard and Perry Kulper who describe drawings, whereby '... nuanced misalignments, approximate thoughts and imperfect moments ... resist fixing normative figuration ...' (Chard, Kulper, 2014: 63).



Fig. 11. Simon Twose (2015) Concrete Drawing, 1:20 model of wall surface, CNC model in Kauri, 1mm bit and 0.5mm linear passes [Image: Paul Hillier].

This power of the materiality of drawing to be open is not limited to analogue drawing. Betti Marenko & Philip van Allen describe the agency of digital media in creativity, describing human to machine interaction as “capable of fostering affects, sensibilities and thoughts that capitalize on the uncertain, the unpredictable and the non-linear, and their capacity to trigger creative pathways.” (Marenko, Allen, 2016: 52).

The attention to productive uncertainty, inherent to drawing, extends to work in artistic research, which looks to leverage uncertainty as a methodological tool. Thinkers such as Sarat Maharaj argue for knowledge pursued through art research to be continually ungraspable, in order for it to maintain its power as a complex and unique way of knowing; rather than following the “methodological steel tracks” of *know-how*, art research is a pursuit of *no-how*. (Maharaj, 2009: 3).

Concrete Drawing attempted to intensify the open possibilities in the gestural actions and material feedback of drawing. It endeavoured to distil them as an intangible atmosphere within the tangibility of architecture.

4.2 Entangled Relations

In drawing, matter and actions are always mutually constituted as, in Karan Barad’s words, ‘inseparable intra-acting components’ (Barad 2003: 815). This interest in the entanglement of human action with non-human participants in the drawing process, intersects with work looking at the aesthetic agency of objects, such as N Katherine Hayles’ Object Oriented Inquiry (OOI).

OOI is a twist on Graham Harman’s Object Oriented Ontologies (OOO) (Harman, 2002) which Hayles directs to a more inquisitorial approach. Hayles questions the centrality of human sense experience in aesthetics. She asks: “what would it mean, then, to imagine an aesthetics in which the human is decentred and inanimate objects, incapable of sense perceptions as we understand them, are included in the aesthetic experience?” (Hayles, 2014). She cites Pickering’s Mangle of Practice (Pickering, 1995) and his loop-of-resistance - of objects throwing up resistances to humans’ inquiry that alter the line of inquiry, forcing different questions to be asked. The non-human participants in the production of a shared



Fig. 12. Simon Twose (2015). Concrete Drawing. Detail view of installation, Drawing Is/Not Building, Adam Art Gallery Te Pātaka Toi, Victoria University of Wellington. [Photo: Shaun Waugh].



Fig. 13. Simon Twose (2015). Concrete Drawing. Detail view of installation, Drawing Is/Not Building, Adam Art Gallery Te Pātaka Toi, Victoria University of Wellington. [Photo: Shaun Waugh].



Fig. 14. Simon Twose (2015). *Concrete Drawing*. Detail view of installation, *Drawing Is/Not Building*, Adam Art Gallery Te Pātaka Toi, Victoria University of Wellington. [Photo: Shaun Waugh].

aesthetic also impact on one another, as Jane Bennet notes: "it is through relations that one object senses the specific parts of another object's "appeal" germane for the first object's purposes and benefits"(Bennett, 2010).

These ideas correspond to the intricate correlation of matter and objects to human action, and their aesthetic agency, which manifested in the *Concrete Drawing* project; the process was infused with the influence from the many materials, objects and their configurations: their ordering, stacking, packing, their active correspondence with one another when arranged into taxonomies and clustered in space. There were moments when the abject qualities of the objects pushed back on the process, contributing to it as an unfolding sequence of discovery. These aesthetic jolts were evident in the melted printed models, for example.

Thinking on the aesthetic agency of non-human objects directly relates to traditions of architectural drawing.

Drawings become an archive of feedback from non-human matter, which productively engages with the gestural acts in drawing's making. The many subtle aesthetic 'forces', to use Nancy's term, in the myriad objects in the *Concrete Drawing* process were bound in to the project.

4.2 Poiēsis

Acts of making, in concert with the forcefulness of materials and objects, ties to traditional ideas of *poiēsis*. *Poiēsis* (Ancient Greek: ποιησις) is the etymological root of poetics and is related to *technē*, or the making of things; the formative, becoming of form. In Heidegger's words 'technē is the name not only for the activities and skills of the craftsman, but also for the arts of the mind and the fine arts. Technē belongs to bringing-forth, to *poiēsis*; it is something *poiētic*.' (Heidegger 1977:5).

Poiēsis directly relates to architectural representation, which is a process of crafting something that inherently stands in for something beyond it, such as built space. Events in the process of drawing, involving the smudg-



Fig. 15. Simon Twose (2015) Concrete Drawing. Installation view in the Lower Chartwell Gallery in the exhibition Drawing Is/Not Building, Adam Art Gallery Te Pātaka Toi, Victoria University of Wellington. [Photo: Shaun Waugh].

ing of lines or the manipulation of physical or digital models, have the possibility to be in a constant state of bringing forth, of hovering between their existence as things in themselves and their transference to the space they stand in for. Many facets of the *Concrete Drawing* coalesced *poiētīc* possibilities. The project engaged the vitality of matter and the *poiētīcs* of action in an ongoing pursuit of openness, in order to test how the *poiētīcs* of drawing, and the space drawing stands in for, might hover together.

This hovering between conditions, with both present but neither dominating, calls to attention the painting technique *sfumato* which creates, in Vasari's words, a "hovering between the seen and unseen" (cited in Gombrich, 2004 [1959]: 185). *Sfumato* is the active crossing and blurring of one thing with another, taking care "that your shadows and lights be united without strokes or marks, in the manner of smoke" ("*senza tratti o segni, a uso di fumo*") (Leonardo quoted in Nagel, 1993: 11). This

painting technique creates a perceptual vibration between elements central to the gaze and shaded contours peripheral to it. *Sfumato* is a useful metaphor to evoke the atmosphere of complex intra-action and 'hovering between' that was pursued in the *Concrete Drawing*.

Concrete Drawing folded the vitality of arguments in the openness of drawing, its human and material entanglements, and its corresponding radical possibility, into its process. Despite the drawing media spanning sketching to modelling to the mass and scale of concrete, each part of the process was considered as a sketch, as a set of drawing performances conducted in concert with material, with the goal of distilling the irresolute, openness of drawing as an architecture.



Fig. 16 Simon Twose (2015). Concrete Drawing, Detail view of small-scale concrete walls and surface, Drawing Is/Not Building, Adam Art Gallery Te Pātaka Toi, Victoria University of Wellington. [Photo: Simon Twose].

4.3 Expanding the Field of Drawing

Concrete Drawing was an attempt to ‘draw out’ curious atmospheres between drawing and building, through amplifying material and performative intensities commuting between them. It speculated on a *sfumato* architecture, where drawing and building are in subtle vibration, invested with the open *poiēsis* of a sketch. In

doing so, the project discovered ways to expand drawing beyond its representational limits. This also prompts the notion that architecture could be also be extended beyond its limits. How could architecture be more than mute buildings, and be similar to drawing: open, irresolute yet a powerful device for thinking.

Concrete Drawing was exhibited in *Drawing Is/Not Building*, curated by Simon Twose, Adam Art Gallery Te Pātaka Toi, Wellington, New Zealand, April 24 – June 28, 2015. The work was also exhibited as part of the installation *Concrete /Cloud/* in *TIME –SPACE-EXISTENCE*, Palazzo Mora, XV Venice Architecture Biennale, Venice, 28 May – 27 November, 2016.

Acknowledgements

The following people and institutions are thanked for their contribution to the project:

Te Herenga Waka | Victoria University

Adam Art Gallery | Te Pātaka Toi

European Cultural Centre

Research assistants: Tom Ryan, Claire Burrell, Declan Burn

References:

Barad, K., 2003. Post humanist Performativity: Toward an Understanding of How Matter Comes to Matter, *Signs: Journal of Women in Culture and Society*, 28, No. 3, 801-831.

Bennett, J., 2010. *Vibrant Matter: A Political Ecology of Things*. Duke University Press, Durham, NC.

Chard, N., Kulper, P., 2013. *Pamphlet architecture 34: Fathoming the unfathomable*, New York, Princeton Architectural Press.

Elkins, J., 1995. Marks, traces, “traits”, contours, “orli”, and “splendores”: Nonsemiotic elements in pictures, *Critical Inquiry*, Vol. 21, No. 4, 822-860.

Faust, J., 2012. *Andrew Marvell’s liminal lyrics: The space between*, University of Delaware Press, Newark, DE.

Gombrich, E. H., 1959, 2004. *Art and illusion: A study in the psychology of pictorial representation*, Phaidon Press, New York, NY.

Harman, G., 2002. *Tool-Being: Heidegger and the Metaphysics of Objects*, Open Court, New York, NY.

Hayles, N. K., 2014. Speculative aesthetics and object orientated inquiry (OOI). *Speculations: A Journal of Speculative Realism*, 158-179. http://www.thing.net/~random/ucsd/3somesPlus/Hayles_Speculative_Aesthetic_and_Object_Oriented_Inquiry_OOI.pdf

Heidegger, M., 1977. *The question concerning technology* (Lovitt, W. (Trans.), Harper & Row, New York, NY.

Marenko, B., Van Allen, P., 2016. Animistic design: How to reimagine digital interaction between the human and the nonhuman, *digital creativity*, 27, 52-70. <https://doi.org/10.1080/14626268.2016.1145127>

Maharaj, S., 2009. Know-how and no-how, stopgap notes on “method” in visual art as knowledge production, *Art and Research, A Journal Of Ideas Contexts and Methods*, Vol. 2, No. 2, 1-11.

Nagel, A., 1993. Leonardo and Sfumato, *Anthropology and Aesthetics*, Res 24, 7-20.

Nancy, J-L., 2013. *The pleasure in drawing* (Armstrong, P. (Trans.). Fordham University Press, New York, NY.

Pickering, A., 1995. *The Mangle of Practice: Time, Agency and Science*, University of Chicago Press, Chicago.