Operationalising the Sublime:

Remediation of the Horokiwi Quarry

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Remediation of the Horokiwi Quarry

By

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Abstract

Landscape designers have been fixated on the aesthetic category of the sublime ever since its emergence in the early 18th century, yet the concept has tended to escape the grasp of many of those who have grappled with its complexities. The capacity of the sublime to overwhelm a body is attractive to designers but tends to be seen as difficult to represent, and therefore design with. This thesis examines the sublime as an aesthetic experience that is fundamental to how landscape designers engage with their medium. It traces the relationship between the sublime and the discipline from the 18th-century to the dominant form of contemporary systems-based designing. The challenge of engaging with the pre-existing is central to landscape design practices yet has received little attention throughout the past two decades. Responding to this deferral from aesthetics by contemporary landscape architectural discourse and practice, the thesis unpacks the works of several designer-thinkers who establish a community of practice for exploring the aesthetic relationship to the pre-existing landscape. In order to operationalise the sublime, the thesis proposes a design model based on Gilles Deleuze's notions of intensity, problematics, affects, and assemblage – one that is closer to the 18th century theorists – as a productive means through which designers both represent and adjust its operations. This model is explored through a practice-led design research project. The Horokiwi Quarry in Wellington, New Zealand acts as a testbed for developing and documenting design techniques suited to the sublime. This study seeks to give expression – re-present and experience – the affectual dimensions of sublime encounters discovered within the Horokiwi Quarry. In this, drawings and other forms of representation are required to explicate and later modify the spatio-temporal relations that give rise to the sublime.

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Stratum 0

An Ode to Stone

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Fig 1.01. Leachate from Waihinahina Park – capped rubbish dump – flowing into the Lower Quarry.

1 Shaun Rosier and Peter Connolly, *Public Life of Two Kapiti Towns*, Kapiti District Council (2016).

2 Andrea Mubi Brighenti, "On territory: Towards a general science of territory," *Theory, culture & society* 27, no. 1 (2010): 67-68.

Introduction

I began this thesis as a novice landscape architect and researcher in 2016 undertaking a Master of Landscape Architecture, later transitioning to a PhD. Having begun my landscape architectural education in 2012, I was thoroughly embedded in the systems-based thinking and design that has dominated the discipline since the late 1990s. These forms of thinking were undoubtedly empowering to a young designer as they allowed agency and power to manipulate landscape systems beyond just the visual and the garden scale. However, over time I had become suspicious of the claims and methods argued for by the designers and thinkers within this movement – most notably the lack of rigorous attention paid to the experiential and social dimensions of landscapes. These are alluded to in both projects and writing, though they almost always lacked concrete findings or propositions. I did not yet have the language or knowledge to describe precisely what felt wrong, yet it was still ever-present throughout the way I thought about and practised design. After having worked on a research project with landscape architect and academic, Peter Connolly – combined with my predisposition towards being a voracious reader – I developed this language through an apprenticeship to Gilles Deleuze and Felix Guattari.¹

My interest in the sublime was born from this dissatisfaction with the discipline's inattention to how *real* landscapes are experienced and encountered. When engaging with a site for the first time, I was always fixated on its experience – *how it moves me*. This dimension was where I felt that I could find the power and possibility of landscape design in its richest form. Scientific disciplines can tell us how natural ecologies function across space and time, yet the aesthetic dimension of landscape architecture was both unappreciated and underdeveloped in contemporary discourse. To address this, I turned to the sublime to question how it can be relevant again in design practice, and what we can discover about how landscapes *aesthetically function*. Posing these as fundamentally *design questions* compels this research to move beyond engaging with the sublime via literature alone. While we can gain a lot from literature analysis and theoretical arguments in favour of a contemporary sublime, the act of design alongside these more traditional scholarly approaches allows for a rich dialogue between theory and praxis. The sublime is, after all, a fundamentally design-oriented disciplinary problem, dating back to the works of Richard Payne Knight, Uvedale Price, and William Gilpin. This research has worked towards developing a series of design techniques and methods through a practice-led approach that operationalises the sublime.

The following introduction outlines the argument and constituent parts of the research, highlighting the motivations, questions posed, and contributions that it makes to the discipline. This allows for a research *territory* to be established, which, as Andrea Brighenti points out, is not an area of aggressive dominance, but a creative act that establishes relations between heterogeneous agents.²

3 Peter Connolly, "What is Design Research: Problem, Technique, Ambition," in *Technique: landscape architecture graduate research at RMIT University 1995-2002*, ed. Reneé Van de Vall and Peter Connolly (Melbourne: RMIT University Press, 2002), 23-25.

4 Simone Brott, *Architecture for a Free Subjectivity: Deleuze and Guattari at the horizon of the real* (Farnham, Surrey: Ashgate, 2011); Peter Connolly, "An affirmative open systems conception of how to design landscape" (Doctor of Philosophy RMIT, 2012).

This research shows that the sublime is an encounter with the world that can be deciphered and manipulated by designing through a Deleuzian aesthetics of assemblages and affect. I evidence this by two entwined research streams: a practice-led design research project that experiments with design techniques and practices suited to engaging with the sublime, and a textual analysis and theorisation that unpacks how aesthetic encounters with the sublime unfold. Both research streams feed into each other. It is not a case of theorising and then designing – this is not theory being applied. Designing discovers problems which philosophy helps to sharpen, leading to further experimentation recursively. Problems in this sense are entirely positive and are embraced as central to landscape architectural research.³

The design project centres on the remediation of a large aggregate quarry in Horokiwi, Wellington, New Zealand towards an eventual large public park. This project presents several avenues of critique and investigation on both the sublime and contemporary discourse. Quarries, like other brownfield sites, have received significant attention recently from systems-oriented landscape designers. Such approaches do not embrace the challenge of how to engage with them via an aesthetic encounter, instead deferring to cliché or anti-aesthetic measures. This deferral is avoided by paying closer attention to fieldwork, representation, and drawing techniques in order to engage with the sublime dimensions of this landscape. This is supported by an *aesthetic* reading of Deleuze – notably *Difference and Repetition* (1968) – that shows the sublime is an encounter with *intensity*. In doing so, through an aesthetic of assemblages, representation is empowered to document what entities in time and space *contracted* to form a sublime event.

This approach challenges the dominant discourse within landscape architecture, which focuses on a techno-science reading of Deleuze and Guattari's work at the expense of their aesthetic material.⁴ In doing so, this research highlights a series of design practices and techniques relevant to engaging with how landscapes work in an aesthetic sense – a realm significantly richer than tends to be understood by contemporary discourse. The sublime as understood by this research shows that encounters with landscapes, both extreme and everyday, are complex and wildly varying – and deserve significantly closer attention.

Research Questions:

How can landscape architecture operationalise the sublime?
How can the sublime be made a part of the public life of the city?

Contemporary Disciplinary Shifts

The past 30 years, perhaps longer, have seen a societal shift towards embracing objective methods and knowledge as wholly dominant over other forms. Here we can draw parallels to the emergence of the Enlightenment with its scientific method. Perhaps a closer line can be

5 Federico Campagna, “After Nihilism, After Technic: Sketches for a New Philosophical Architecture,” *E-Flux* 56th Venice Biennale (July 3rd 2015 2015). <http://supercommunity.e-flux.com/texts/after-nihilism-after-technic-sketches-for-a-new-philosophical-architecture/>.

6 Ibid.

7 Connolly, “An affirmative open systems conception of how to design landscape,” 185-93. DeLanda is the predominant Deleuzian theorist related to architectural studies in North America and Europe.

8 Brott, *Architecture for a Free Subjectivity*. See the following a concise account of this historical tracing: Simone Brott, “Deleuze and ‘The Intercessors,’” *Log*, no. 18 (2010).

9 Brott, *Architecture for a Free Subjectivity*, 8.

10 Marc Claramunt and Catherine Mosbach, “Nature of a Landscape Project,” *Pages Paysage* 7, no. Anamorphose (1999); Marc Claramunt and Catherine Mosbach, “Editorial,” *Pages Paysage* 9, no. Embodied: Figures in the Landscape (2002); Christophe Girot, “Four Trace Concepts in Landscape Architecture,” in *Recovering Landscape: Essays in Contemporary Landscape Architecture*, ed. James Corner (New York: Princeton Architectural Press, 1999); Christophe Girot, “Towards a General Theory of Landscape,” *Topos: European Landscape Magazine* 28 (1999); Sébastien Marot, “The reclaiming of sites,” in *Recovering landscape: Essays in contemporary landscape architecture*, ed. James Corner (New York, NY: Princeton Architectural Press, 1999); Sebastien Marot, *Sub-urbanism and the art of memory* (London: Architectural Association, 2003); Elizabeth K. Meyer, “Landscape Architecture as Modern Other and Postmodern Ground,” in *The Culture of Landscape Architecture*, ed. Harriet Edquist and Vanessa Bird (Melbourne: EDGE Publishing Committee, 1994); Elizabeth K. Meyer, “Site Citations: The Grounds of Modern Landscape,” in *Site Matters: Design Concepts, Histories and Strategies*, ed. Carol J. Burns and Andrea Kahn (New York: Routledge, 2005).

11 See Connolly’s thesis for a thorough exploration of their writing. Connolly, “An affirmative open systems conception of how to design landscape,” 26-90.

drawn between the Enlightenment and what Federico Campagna has termed the Technic: “the essence of the principle of instrumentality, according to which it is possible to transform things into means to be employed in the pursuit of aims.”⁵ The Technic has been set free from the reigns of capitalism and the beast of instrumentality now grinds it beneath its heel. Further, Campagna writes that the Technic has “issued a universal call to order – its own order – following which the whole of reality is expected to present itself as readily available to be linguistically defined, classified, broken into discernible units suitable for purely productive employment.”⁶

Returning to landscape architectural issues, what this thesis terms as Systems-Based-Design (SBD) discourse has risen from the emergence of the technic. Landscape architectural design has shifted towards establishing autonomous and objectively measured design assemblages dealing largely with (natural/scientific) ecological processes. Peter Connolly, a landscape architect and urban design academic, argues that landscape urbanism (a constituent movement of SBD) has been seriously influenced by the philosophical work of Gilles Deleuze and Felix Guattari, though is restricted in scope, tending to deal with scientific systems, physical change over time, quantities, and metrics. This is attributed to a lack of engagement with affects, human-environment collectives, and reliance on Manuel DeLanda’s reading of assemblage theory.⁷ Simone Brott also charted the translation of Deleuze and Guattari’s ideas across North American architecture programmes following the early seminars they attended in the 1970s – seminar members including Sanford Kwinter, Sylvere Lotringer, Kenneth Frampton, Peter Eisenman, and Daniel Libeskind.⁸ Brott identifies the same conditions that Connolly found in landscape architectural discourse, terming it a “techno-science” employment of Deleuze and Guattari’s thinking.⁹

Global trends have pushed hierarchical establishment of scientific bodies of knowledge as the principal source of expertise, other knowledge bases must take the opportunity to innovate new lines of flight. Within this discipline, there has been a body of discourse interested in landscape aesthetics and its role in the design process. Designer-thinkers such as Christophe Girot, Elizabeth Meyer, Sebastian Marot, Marc Claramunt and Catherine Mosbach all wrote in the late 1990s – early 2000s about how the landscape *directs* the design process.¹⁰ Collectively these writers described this in a concrete manner that affirms what is powerful and singular about landscape designing.¹¹

Alongside the resurgent interest in landscape aesthetics, there is an under-discussed body of argument around the sublime in landscape architecture. It is not a unified or even consistent stream of discourse, leaving it to have gone seemingly unnoticed or underappreciated. Multiple ontological models have been employed to explore this renewed interest in the sublime, including Jean-François Lyotard, Immanuel Kant, Thomas Weiskel, Timothy Morton, and Gilles Deleuze. Revisiting the sublime appears to be a timely disciplinary question. Meyer’s

12 Elizabeth K. Meyer, “Seized by Sublime Sentiments: between terra firma and terra incognita,” in *Richard Haag: bloedel reserve and gas works park*. Princeton Architectural Press, New York, ed. William S. Saunders (1998).

13 I would suggest that this was done to not introduce conflict with the anti-aesthetic nature of SBD discourse and practice.

14 Notably: Linda Pollak, “Sublime Matters: Freshkills,” *Praxis* 4 (2002); Linda Pollak, “Matrix Landscape: Construction of Identity in the Large Park,” in *Large Parks*, ed. Julia Czerniak and George Hargreaves (New York: Princeton Architectural Press, 2007).

15 Paul A Roncken, “Shades of sublime: a design for landscape experiences as an instrument in the making of meaning” (Wageningen University, 2018), 263.

16 Ibid., 133.

17 Meyer, “Seized by Sublime Sentiments.”

18 Maria Hellström, “*Rappel au désordre*: Architectural Aesthetics Between the Performative and the Sublime,” *Nordic Journal of Architectural Research* 19, no. 4 (2006): 20.

19 Ibid.

argument within “Seized by Sublime Sentiments: between terra firma and terra incognita” is the most thorough account of the sublime in contemporary design language.¹² Here she employs Lyotard’s notion of the sublime as *presenting the unrepresentable* to explain the bodily experience of feeling unseen ecological processes and systems. She also expands this to objects that act as ‘spatialised time’ – for example, the remnant tree stumps which spatialise the time since the tree’s felling, and the time taken to grow to this significant scale. She conceptualises this as an experience of the *longue durée* or deep time. This notion of unrepresentability struck a chord with SBD discourse – despite very few references to Lyotard or the sublime.¹³ A central point of many design schemes within this movement has been to spatialise ecological processes to make their mechanisms visible to the observer. Simultaneously, they argue these processes are too large to conceive and contain. In doing so, they argue the sublime to be strictly not an aesthetic encounter, but a rational or intellectual one.¹⁴

Beyond SBD discourse the sublime has seen increasing interest from contemporary landscape architectural academics, though no commonality in approaches or findings exists. Paul Roncken’s recent doctoral thesis argues that the sublime is a “creative act of imagination and identification” during which “sensations are processed but are not yet fully resolved.”¹⁵ Further, he suggests the sublime is “a habit-breaking affect that awakens the creative capacity of an audience or individual.”¹⁶ However, in exploring this via design project case studies his argument defaults to an SBD-like approach which fails to engage with the aesthetic dimensions of life.

The writing of both Elizabeth Meyer and Maria Hellström Reimer offers promising aesthetics-based accounts for the sublime. Meyer argues that the *feeling* of ecological processes or the ‘*longue durée*’ can lead to an encounter with the sublime based on Lyotard’s unrepresentability.¹⁷ Importantly, Meyer argues this from a position of aesthetic bodily encounter, separating it from SBD-based models. Hellström Reimer argues for a landscape sublime built on the philosophy of Gilles Deleuze. She argues that the sublime is “an upfront confrontation with the World, a horizontal encounter, discomfiting and agitated...calling for the interaction with the ‘raw’ realm of Otherness.”¹⁸ Further, it involves a “sphere of events, of striking difference, of all singularities and deviating phenomena that ‘culture’ as normative aestheticization tends to oppress.”¹⁹ If the sublime involves a striking difference, it suggests an inquiry into intensity as the ultimate expression of ‘difference-in-itself’ as the means through which we encounter the sublime.

My research expands on this inquiry by exploring the sublime through Deleuze’s notion of intensity. We read here intensity as an encounter with an entity or relation that shocks us by disrupting our habitual responses. Through Deleuze’s ontological framework, this research describes the sublime as a pre-personal and autonomous bodily encounter with the landscape, whose relations can readily be given expression

20 Stephen Zagala, “Aesthetics: A place I’ve never seen,” in *A Shock to Thought: Expression after Deleuze and Guattari*, ed. Brian Massumi (London, New York: Routledge, 2005), 22.

21 Ibid., 36.

22 Ibid., 36-37.

through design representation. Further, it shows that everyday encounters with landscapes are sublime and deserve closer attention. These findings are articulated through a novel argument that brings Deleuze’s aesthetic philosophy together to explicate how an encounter with the sublime unfolds, alongside a practice-led project that shows how this encounter might be operationalised through landscape design.

A Note on Aesthetics

Aesthetics play a central role throughout this research. Within the context of this research, aesthetics is defined not as a determination of taste or judgement, nor a categorisation: ‘this aesthetic, not that’. Instead, it is employed in a Deleuzian form that deals with encounters of the world: the realm of experience, sensation, and event. In this sense, it involves the study of the encounters not as a rationalisation, but in how they can *stand up for themselves*. Aesthetic encounters are autonomous and not reliant on psychological or sociological factors alone.²⁰ Within landscape architectural discourse, this term is fraught with misinterpretation as being merely ‘visual’ or the appearance of an object or scene. This research seeks to counter such ideas through championing landscape aesthetics as a *performative* encounter that involves a contraction of forces and entities to produce or connect to something greater. It is wholly of the sensible, the “dynamics of sensible assemblages” or a “science of sensibility”, and is linked to ethics, ontologies, epistemologies, and historiographies.²¹ Aesthetics then is the cartographic study of pre-individual singularities, percepts, affects, intensities, multiplicities, and territories.²² This is why the work of Francis Bacon is equally important to Deleuze and Guattari’s aesthetic studies as the orchid and the wasp.

The Classical Sublime

Any study of the sublime in landscape architecture must begin in the 18th century. Both the sublime and the beautiful proved central to the formation of landscape architecture as a distinct practise separate from architecture. Yet both these notions and their later associate, the picturesque, have fallen to the wayside in the latter part of the 20th century. Whilst the sublime has seen some revival through Lyotard’s discourse on art, its position within contemporary design thinking remains unclear.

The sublime marks the tension in the Enlightenment between the emergent scientific method and what could not be accounted for under its criteria. The Church faded away as the repository of knowledge, leaving questions of what it means to be human, our history, and the history of the world set free and ready to be interrogated anew. This freedom, as Andrew Ashfield and Peter De Bolla suggest, posed the significant question: what does it mean to exist as a subject? Eighteenth century discourse on the sublime emerged in response to this question, along with the Enlightenment’s struggles in grappling

23 Andrew Ashfield and Peter de Bolla, eds., *The Sublime: A reader in British eighteenth-century aesthetic theory* (Cambridge: Press Syndicate of the University of Cambridge, 1998), 9.

with the “complexities of affective experience” found in landscapes or other encounters. Those who undertook the Grand Tour across Europe articulated these experiences in relation to William Smith’s translation (1739) of *On the Sublime* by Longinus. Though these accounts vary in their specifics, and in where they place the source of the sublime, a common thread exists in that the sublime involves feeling a shift in one’s power of being as the result of a disruptive shock.

Despite this, Ashfield and de Bolla argue that no “final analysis” of the sublime would be produced due to the concept becoming too complex, unable to be submitted to a chronological summary showcasing a project of conceptual refinement.²³ The 18th century landscape designer-thinkers Thomas Whately, Uvedale Price, and Richard Payne Knight are notable as they are first to actively experiment with the sublime and write about their findings; in contrast to their contemporaries Capability Brown and Humphrey Repton, who they argued dealt only with the beautiful to a limited degree. Of these three, Price offers the most to this research as he describes a concrete method of designing with the sublime – notably his Fir tree example discussed in Stratum 2. From both Price and Knight, we can gather that encounters with the sublime can be designed for, though only Price offers this as an open experience where Knight restricts it behind the curtain of subjectivity.

Fig 1.02. *Becoming of Orchid-Wasp*. Jean and Fred. “Hang on there girl”. 2007. <https://flic.kr/p/4CsZa7>. Altered to greyscale. CC BY 2.0.

24 David E Nye, *American technological sublime* (New Baskerville: MIT Press, 1994).

25 Meyer, "Landscape Architecture as Modern Other and Postmodern Ground," 26.

26 Jon Burley, "The Emergence of Landscape Urbanism: A Chronological Criticism Essay," *Land* 7, no. 4 (2018); Christophe Girod and Dora Imhof, *Thinking the Contemporary Landscape* (New York: New York, NY: Princeton Architectural Press, 2016); Meyer, "Landscape Architecture as Modern Other and Postmodern Ground.," Elizabeth K. Meyer, "Sustaining beauty: The performance of appearance," *Journal of Landscape Architecture* 3, no. 1 (2008); David Salomon, "Towards a new infrastructure: aesthetic thinking, synthetic sensibilities," *ibid.* 11, no. 2 (2016); Charles Waldheim, "Landscape urbanism: a genealogy," *Praxis: Journal of writing+ building*, no. 4 (2002); Charles Waldheim, *Landscape as urbanism: A general theory* (Princeton University Press, 2016).

27 Waldheim, *Landscape as Urbanism*, 15.

28 Gilles Deleuze, *Difference and Repetition*, trans. Paul Patton (London: Athlone Press, 1994), 23.

The Techno-Natural Sublime

The sublime had begun to be replaced by the picturesque in 19th century design discourse following the work of Knight and Price, though it makes a return in an unrecognised form through Frederick Law Olmsted. Through David E. Nye’s work in *American Technological Sublime*, we can position Olmsted’s designed landscape, particularly the Emerald Necklace in Boston, as an example of a ‘technologically sublime’ landscape.²⁴ This “cyborg landscape” – hybrid of man-made and natural systems – is notable on two fronts.²⁵

First: whilst it is likely an aesthetic experience on its own, its role as a technological marvel in environmental design is significant. The technological sublime is a collective experience of marvel and shock to the understanding of what is possible.

Secondly: It is often referred to by contemporary discourse as the first example of systems design that moves beyond designing just the visual.²⁶ In doing so, the ecological dimension of design is idolised at the expense of the aesthetic and social. Waldheim writes, concerning the Emerald Necklace, that later practices “reject the camouflaging of ecological systems within pastoral images of ‘nature’ ” typical of 19th, and 20th century designs.²⁷ Systems-based design and discourse of the late 20th and early 21st centuries have appropriated this techno-natural sublime without naming it or perhaps even realising their entry into this realm.

Operationalising the Sublime

This research aims to develop a series of techniques and methods which allow landscape designers to engage with sublime landscape encounters. For landscape designers to engage with the sublime they must be able to discover and unpack the spatio-temporal relations between human organisms and their environments that come together to produce these encounters. Previous research and design studies by this researcher and others have suggested thinking and practising through a Deleuzian aesthetic of assemblages is the most appropriate method to achieve this insight. This is further affirmed by Roncken and Hellström Reimer’s insights into the sublime through a Deleuzian lens. If the sublime is an encounter with difference, we must draw a line between the sublime and Deleuze’s ideas on intensity. The sublime is operationalised here by considering it an event based on an encounter with intensity – a disruptive shock to the habitual responses of the organism. In turn, the organism creatively experiments with its relation to its environment to discover a way forward (an action, a thought, etc). In *Difference and Repetition*, Deleuze uses the example of swimming to show how the wave and the novice swimmer are not separate; they mix in the search for an answer to a problem (an intensive shock) of learning to swim.²⁸ This example will be unpacked in Stratum 5, but for now we can use the diagram in Fig. 1.03.

Fig 1.03. Encounter with a sublime intensity diagram.

29 Not all these texts are recently published, in which case they are now receiving more attention. Brenton Ables, “The Anticipations of Sensation: Deleuze and Kant on the Intensive Ground of Sensible Experience,” *Deleuze Studies* 11, no. 3 (2017); Sean Bowden, “Gilles Deleuze, a Reader of Gilbert Simondon,” in *Gilbert Simondon: being and technology*, ed. Arne De Boever et al. (Edinburgh: Edinburgh University Press, 2012); Sean Bowden, “The Intensive Expression of the Virtual: Revisiting the Relation of Expression in Difference and Repetition,” *Deleuze Studies* 11, no. 2 (2017); Dale Clisby, “Intensity in Context: Thermodynamics and Transcendental Philosophy,” *ibid.*; Manuel DeLanda, “Space: Extensive and Intensive, Actual and Virtual,” in *Deleuze and Space*, ed. Ian Buchanan and Gregg Lambert (Edinburgh: Edinburgh University Press, 2005); Joe Hughes, *Deleuze’s Difference and Repetition: A Reader’s Guide* (Bloomsbury Publishing, 2009); John Protevi, “Adding Deleuze to the mix,” *Phenomenology and the cognitive sciences* 9, no. 3 (2010); Jon Roffe, *Badiou’s Deleuze* (Montreal & Kingston: McGill-Queen’s University Press, 2014); Marc Rölli, “Deleuze on Intensity Differentials and the Being of the Sensible,” *Deleuze Studies* 3, no. 1 (2009); Marc Rölli, *Gilles Deleuze’s Transcendental Empiricism: From Tradition to Difference*, trans. Peter Hertz-Ohmes (Edinburgh University Press, 2016); Daniela Voss, “Intensity and the missing virtual: Deleuze’s reading of Spinoza,” *Deleuze Studies* 11, no. 2 (2017).

30 Arjen Kleinherenbrink, “All Entities are Sublime: Chaos according to Deleuze” (Daughters of Chaos: Deleuze Studies International Conference Stockholm 2015, Stockholm, 2015).

31 Alan Berger, “Drosscape,” in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006); Alan Berger, *Drosscape: wasting land urban America* (Princeton Architectural Press, 2007); Alan Berger, ed., *Designing the Reclaimed Landscape* (New York: Taylor and Francis, 2008).

32 Elizabeth K. Meyer, “Uncertain Parks: Disturbed Sites, Citizens, and Risk Society,” in *Large Parks*, ed. Julia Czerniak and George Hargreaves (New York: Princeton Architectural Press, 2007).

Deleuze’s ontology allows this research to approach the sublime as a concrete ‘designable’ encounter through his concept of ‘intensity’. Recent scholarship on *Difference and Repetition* shows that intensity is a third ontological register alongside the actual and the virtual – in contrast to the predominant understanding that it resides within the latter.²⁹ In doing so, this research presents a robust and novel reading of Deleuze suited to landscape architectural design based on his *aesthetic* material that affirms life and the nature of encounters.

Importantly, this argument allows us to work with the sublime through an aesthetic of assemblages and affect. It shows that the sublime is felt as a disruptive shock to the body’s habitual responses leading to a contraction of any revelation relations between an organism and its environment for experimentation, and later action, to occur. Further, it dispels any notion that the sublime is merely subjective. The sublime as an encounter with intensity is *pre-personal* and *autonomous*, not relying on taste or conscious thought.

Lastly, *Difference and Repetition* shows that life is far from mundane; each encounter is a wildly creative act. This research demonstrates that whilst there are extreme examples that we readily recognise as sublime, mundane and everyday encounters are equally powerful and worthy of rigorous designerly attention. Whereas Arjen Kleinherenbrink argues that the sublime is not exceptional because it is constitutive of every entity, this research argues that the reverse is true.³⁰ Each encounter is exceptional because every intensity is sublime.

A Question of Quarries

Quarries, as far as they relate to city and designing, have been considered something Other, only manageable via objective forms of knowing. Experiences of them tend to be cliché or weakly engaged with, often regarded as overtly sublime. Alan Berger shows that contemporary practice exhibits expertise in remediating brownfield sites through process-based methodologies.³¹ These *disturbed sites*, using Meyer’s term, are seductive in that they offer ‘big problems’ for design to solve due to their economic, political, spatial, and cultural entanglement that is a condition of modernity.³² These sites exist as products of the city; they are emergent conditions arising in the leftover or discarded space of the city – beyond the horizon of everyday perception. Quarries, whilst not emergent in the same way as brownfield sites, are both the products and producers of the modern city. Increasing urbanisation has brought active or deceased quarries that were previously peripheral into the middle of things.

33 Andrea Kahn, “From the Ground Up: Programming the Urban Site,” *The Harvard Architecture Review* 10 Civitas / What is the City (1998): 7-9.

34 Shaun Rosier, “Operationalising the sublime: bringing the sublime from abstract to concrete” (paper presented at the International Conference of the Architectural Science Association, Melbourne, 2018).

35 New Zealand Government, “Resource Management Act 1991,” (1991), Section 6(a).

36 J Dahm, *Natural character: concept development in New Zealand planning law and policy*, Hamilton: Environment Waikato (2000), 92-93.

37 Wellington City Council, *Kiwi Point Quarry Management Plan* (2014), <https://wellington.govt.nz/~media/have-your-say/public-input/files/consultations/2017/09/kiwi-point-quarry/section-32/s32appdh.pdf?la=en>.

38 Meyer, “Uncertain Parks: Disturbed Sites, Citizens, and Risk Society.”; Meyer, “Sustaining beauty: The performance of appearance.”

39 Alan Berger, *Reclaiming the American West* (New York: Princeton Architectural Press, 2002).

40 A. Hine, P. Kirsch, and I. Amizlev, “Red Mud: Art and the post-mining landscape,” *Artlink* 34, no. 4 (2014): 35.

41 *Ibid.*, 36.

42 A. Hine and P. Kirsch, “Dreams of Futures Past - Curating post-mining landscapes” (paper presented at the Proceedings Life of Mine, Melbourne, 2014); A. Hine and P. Kirsch, “Earthworks-Mineworks - creating shared visions for postmined landscapes” (paper presented at the Mine Closure, Vancouver, Canada, 2015).

43 Emanuela Schir, “Extraction landscapes: From active quarry to disused sites: methodological approaches and future scenarios of the porphyry territory in Trentino” (University of Trento, 2010), 137-38.

44 *Ibid.*, 140.

The city must confront these “[not] *[sic]* urban sites” as they make themselves known.³³ Often the only evidence of an active quarry in everyday life are scenes of trucks carrying product to whatever site it is destined for. Quarries are inherently *anti-public*, doing their best to isolate themselves wherever possible during and post-operation.³⁴ New Zealand quarry operators are required to have a rehabilitation plan in place once operations cease. This is directly controlled at the regional and district plan level, though is informed by the Resource Management Act 1991 (RMA). Importantly, the RMA mandates a requirement to maintain “natural character” or to remediate its disturbance where possible through built works. Three components underpin this term: natural processes, natural elements, and natural patterns.³⁵ However, ‘natural’ has not been defined, leading to different interpretations – often leading to a dichotomy of nature/culture that does not address any of the complexities inherent to it.³⁶

This research engages with the active Horokiwi Quarry in Wellington, New Zealand. Though it does not have a publicly available management plan, we can draw information from other sources.³⁷ Both the RMA and other management plans strongly suggest that after extraction the Horokiwi Quarry will be ‘greened over’ in exactly the way Meyer suggests is antithetical to establishing long-lasting relationships between society and landscape.³⁸ Berger’s *Reclaiming the American West* portrays several quarries in a way that suggests that, despite their effect on the environment, they have something to offer the world in their current or a partially modified state.³⁹ Similarly, Paul Kirsch, Amelia Hine, and Iris Amizlev argue a new design methodology that addresses the problem of remediation as necessary. Contemporary approaches do “not respond appropriately to the less technical needs of the site” – the latent social, spatial, experiential, ethical, and political potentials.⁴⁰ Instead, an approach is proposed based on the earthworks movement of the mid-20th century, citing Robert Smithson and Robert Morris as key contributors.⁴¹ Kirsch, Hine, and Amizlev envision a new form of design aesthetics actively involved in the remediation process as the quarry is operating, allowing for the design, economic, environmental, and political concerns to play out concurrently.⁴² Emanuela Schir argues following the traditional approach – “working ‘afterwards’ ” – risks excluding any sense of publicness to the resulting landscape by creating artificial nature/culture divides.⁴³ An alternative approach is suggested: “Excavation has to create and not destroy.”⁴⁴ We must turn the act of quarrying towards the creation of a resultant designed landscape by actively employing the logic of extraction as a positive and productive tool. This scholarship suggests that landscape architectural design, alongside other specialist disciplines, needs to be involved in the process of quarrying itself as it looks to remediation. Doing so provides the impetus for this research to consider quarrying as an act of creation – the primary mechanism of formal production in the design project component of this research.

45 Linda Candy, *Practice based research: A guide*, University of Technology Sydney (2006), 1.

46 Jeremy Till, *What is architectural research? Architectural research: three myths and one model*, RIBA Research and Development Committee, Royal Institute of British Architects (2005), 5.

47 Ibid., 4.

Affect as Method

This research aims to produce discipline-specific landscape architectural knowledge about and through design practice. This is achieved by operating via a practice-led research modality, which is a broader notion of Sir Christopher Frayling's formative notion of research-through-design. Linda Candy's definition of practice-led research is an investigation "concerned with the nature of practice and leads to new knowledge that has operational significance for that practice."⁴⁵ Typically practice-led or -based research argues that tacit knowledge in practice is the key methodological or outcome contribution, allowing this to play a role in the creation of new knowledge if it can be documented and reflected upon robustly. However, this research employs practice as both the means and the object of research which invites the disciplinary preoccupations to be included in the process alongside other forms of knowledge. Jeremy Till identifies this research type in his framework where he notes three modes of architectural research: architectural processes, product, and performance research.⁴⁶ For Till, "practice has the raw data on which architectural knowledge is founded; academia can release this potential through research".⁴⁷ The focus in this research is directly on the first of these processes, but also on the products, to the degree that the products make sense of or demonstrate the ability of these processes.

Practice-led or -based research is focused on what practices do, and how those doings can be sharpened and communicated to others. This research employs Deleuze's notions of affect and assemblage as a method throughout the practice-led component of this research. Doing so allows an intensification of what 'landscape-design-assemblages' *do* leading to an intensification of what 'landscape-assemblages' *do*. It also establishes an immanent field of evaluation. This allows the research to be evaluated on the particularities of the problem it engages with – not external criteria as expected by social or hard sciences.

Outline of Research Strata

The naming of sections 'chapters' has been eschewed in favour of 'stratum' or 'strata' to better connect to the heterogeneous series of relations which led to their formation. This also affirms the language of landscape, embedding it throughout.

Stratum 1 introduces the sublime as a philosophical concept by discussing Edmund Burke's, Immanuel Kant's, and Jean-François Lyotard's contributions to the sublime. Here several misconceptions or weaknesses in typical disciplinary readings of these philosophers are discussed and moved past to build a foundation for later stratum.

Stratum 2 explores how the sublime has been employed within the landscape architecture discipline. It begins with the original 18th-century designer-thinkers, moving to the techno-natural sublime of Frederick Law Olmsted's 19th century designs, and closes with a critical analysis of contemporary disciplinary writings.

Fault 1, through a fieldwork-driven study of Central Park (New York City), explores how the sublime can be accounted for via design representation. This study attempts to give expression to a discovery of a 'slow-zone' within The Ramble, a labyrinth-like part of the park.

Stratum 3 accounts for various forms of thinking and practice within disciplinary discourse that have led to a deferral from landscape aesthetics in the design process. This stratum does so by critiquing examples of both practice and discourse, so that context is given for why the sublime and aesthetics at large are worth revisiting.

Stratum 4 discusses the work of several designer-thinkers from the 1990s (Elizabeth Meyer, Christophe Girot, Marc Claramunt and Catherine Mosbach), alongside the contemporary work of Barbara Prezelj, Karl Kullmann, and Meyer, which builds a 'community of practice' for this research. Each of these authors, alongside others, offer a means to engage with landscape aesthetics in a *concrete* manner.

Stratum 5 returns to the sublime through the Deleuzian notion of *intensity*. Here the sublime as an experiential encounter is reconstructed through an *aesthetic* reading of Deleuze – counter to the predominant understanding by others.

Fault 2 explores, through a study of Pukeahu Memorial Park (Wellington), how the sublime is involved in seemingly everyday landscape encounters. It shows how the sublime can be appropriated by the city (as does the Central Park study) and gives a real-world example of Deleuze's notion of 'the middle.'

Stratum 6 introduces how design is employed in this research through affect and assemblage thinking. It accounts for the role of designing, reflection, and evaluation in a practice-led research environment.

Fault 3 operationalises the sublime via the design project component based at the Horokiwi Quarry. Through this designed work the research explores through practice how the sublime can be understood through fieldwork, representation, design proposition, and descriptive accounts. This work shows that the sublime can be engaged with through design in a *precise* and *concrete manner* using bodily encounters with the landscape as its foundation.

Stratum 7 summarises the research, its findings, and its contributions to the discipline – from both the design and text-based arguments. Here the sublime is put forth as an affirmation of the power of landscape and its design – a positive challenge that should be embraced by the discipline and not seen as an inherent issue.

This body of research and practice offers to the discipline an understanding of the sublime that is real, concrete, everyday, and fundamentally creative. Given that the sublime was previously central to landscape architectural practice and aesthetics and has recently been unattended to, there is a timeliness to this contribution. The sublime as understood here posits an obligation to landscape designers to seriously engage with pre-existing landscapes beyond scientific systems. The practice-led component of this research offers several lines of inquiry into how this may practically unfold.

Stratum 1

On the Sublime in Philosophy

19	Introduction
19	Edmund Burke – Psychological Mode
22	Immanuel Kant – Mathematical and Dynamic
25	Jean-François Lyotard – Allure of the Unpresentable
28	Conclusion

Fig 2.04. Controlled bench failures on Mitre Peak.

48 Jean-Luc Nancy, “The Sublime Offering,” in *Of the Sublime: Presence in question* (New York: State University of New York Press, 1993); Lap-Chuen Tsang, *The Sublime: Groundwork Towards a Theory* (University Rochester Press, 1998); Stephen Zepke, “‘My Whole Structure of Perception is in the Process of Exploding’, Deleuze and the Sublime” (Deleuze and Foucault’s Political Philosophy, Purdue University, 2015); Stephen Zepke, “‘A work of art does not contain the least bit of information’: Deleuze and Guattari and Contemporary Art,” *Performance Philosophy* 3, no. 3 (2017).

49 Edmund Burke, *A philosophical enquiry into the sublime and beautiful* ed. James T. Boulton (London: Routledge Classics, 2008), 57.

50 Ashfield and de Bolla, *The Sublime: A reader in British eighteenth-century aesthetic theory*, 129.

51 Anoka Faruquee, “The Kantian Sublime: Why Care?,” *Cal Arts Exhibition Catalogue* Why Theory (2009).

52 Immanuel Kant, *Critique of judgment*, trans. Werner S Pluhar (Hackett Publishing, 1987), 427. Despite borrowing these from Burke, Kant is highly critical of his work, suggesting that it is mere groundwork for real philosophy.

53 Though Burke considered there to be other notions important to the sublime such as the infinite, scale, and solitude, they are more readily understood and do not require the same attention.

54 See Stratum 5.

Introduction

The notions of both the sublime and the beautiful were central to the formation of landscape architecture as a distinct practice from architecture. Yet these notions and their later associate, the picturesque, have fallen to the wayside in the latter part of the 20th century. This stratum will outline the sublime as an aesthetic encounter as Edmund Burke, Immanuel Kant, and Jean-François Lyotard understood it. These three philosophers are the most cited when the sublime is discussed concerning spatial design. Others, such as Jean-Luc Nancy, Lap-Chuen Tsang, and Stephen Zepke have made contributions to the topic, though their work has not received significant traction within design discourse.⁴⁸ The work of Burke, Kant, and Lyotard will be unpacked to explain why their work has been employed by others, and to examine critically what it has offered designers. This stratum provides context for later work where these philosophical writings will be discussed in direct relation to their employment in landscape design discourse.

Edmund Burke – Psychological mode

Edmund Burke’s *A Philosophical Enquiry into the Sublime and the Beautiful* (1757) instigated a shift away from descriptions of nature (through oration or text) as being sublime, to nature itself as the source of such experiences.⁴⁹ Whilst for Burke language may not act as the source of sublime experiences, it is a capable form of representation to describe or convey its nature to another, giving life to what is unrepresentable.⁵⁰ Instead, Burke argued certain natural scenes or events are where we encounter the sublime, placing its instigative processes exterior to the subject. The *Enquiry* constructs a two-part interrogation of both the sublime and beautiful, each elucidating the other, and is the first to consider them as exclusive aesthetic categories from one another. Consider Anna Faruquee’s comparison of the two:

“...while beauty for Burke is comforting, the sublime makes one question one’s own existence and threatens harmony and order...while the beautiful is of human scale, and the viewer can perceive it in its totality, the sublime is something out of human scale...”⁵¹

The notions of scale, totality, and the whole are taken up later by Kant in his formulation of the sublime following Burke.⁵² The *Enquiry* contrasts with Kant’s work by being empirical in the same vein as Locke and Hume, using experience itself to determine what is sublime or beautiful and through which mechanisms these experiences unfold. Central to Burke’s thoughts on the sublime are three criteria: a critical distance, terror, and a painful pleasure, each of which will be unpacked.⁵³ This section on Burke is based on the predominant understanding that Burke’s sublime operates first via psychological means, anything else is subsequent. Later, a physiological model will be unpacked, as design discourse has not engaged with this dimension of Burke’s work, though it proves fundamental to this research.⁵⁴

55 Burke, *A philosophical enquiry into the sublime and beautiful* 130.

56 James Williams, *Egalitarian Sublime: A Process Philosophy* (Edinburgh: Edinburgh University Press, 2019), 38.

57 Burke, *A philosophical enquiry into the sublime and beautiful* 58.

58 Ibid.

59 Ibid., 46.

Critical distance

Burke constructs the sublime as resulting from negative production of harm: harm which does not actually eventuate though is close enough to almost feel. This negative production is allowed via the critical distance that Burke establishes as central to the sublime. A critical distance dictates that no actual harm may eventuate through a necessary degree of removal. However, the distance cannot be too great as the entity that may harm us is reduced in its terrible nature when further away as the potential danger cannot manifest. We might think of an encounter with a bear in the woods: stumbling right upon it would horrify as at this distance it could decapitate you with one swing of its paw, but if we were to see one cross the trail in front of us at a close, yet safe distance, the distance allows for such an altercation to be avoided and instead we are in awe of its scale, muscular magnitude and, its potential danger. In contrast, we may view the same bear through binoculars at a greater distance where it is visually larger thanks to magnification though we are entirely removed from any physical encounter with it, leaving no room for terror.

Distance allows Burke to draw a line between pain and terror which he argued were previously necessarily dependent on each other. Burke makes the distinction that pain is first encountered by the body as physical harm which then operates on the mind, whereas terror operates via the opposite direction: that “terror generally affect[s] the bodily organs by the operation of the mind suggesting the danger...”⁵⁵ Real harm cannot be allowed to manifest upon the subject for it to be sublime, but the non-eventuating possibility must be present. Tension is established within the subject whereby the mental faculties, passions and nervous system are held arrested, incapable of acting. The tension is inevitably released leaving us in a precarious balance between the idea of pain and feeling of delight at having not been harmed – the sublime.⁵⁶

Terror

“Whatever is fitted in any sort to excite the ideas of pain and danger, that is to say, whatever is in any sort terrible, or is conversant about terrible objects, or operates in a manner analogous to terror, is a source of the sublime; that is, it is productive of the strongest emotion which the mind is capable of feeling.”⁵⁷

Burke regards terror as fundamental to any sublime experience, whether literal or figurative. He argued terror is “in all cases whatsoever, either more openly or latently the ruling principle of the sublime.”⁵⁸ Terror itself is intrinsically linked to the aforementioned critical distance, as without which it would not be capable of existing and incapable of producing the delight that follows. For a sublime experience to unfold, a terrifying entity must be kept at a distance and not transition into pain by pressing too close.⁵⁹ How we gain pleasure from horror movies which excite the visceral material of our sensory-motor systems operates on the same mechanism – the distance from actual harm allows

60 Vanessa L. Ryan, “The Physiological Sublime: Burke’s Critique of Reason,” *Journal of the History of Ideas* 62, no. 2 (2001): 276.

61 Burke, *A philosophical enquiry into the sublime and beautiful* 57.

62 Ibid., 32.

63 Ibid., 133-34.

64 Williams, *Egalitarian Sublime: A Process Philosophy*, 39.

65 Roncken, “Shades of the Sublime,” 91.

for terror to arise as a separate emotion. Terror, and therefore the sublime, can be experienced outside of natural entities, though as Vanessa Ryan notes it involves a difference in degree and not kind, though not necessarily towards a lesser or imperfect degree.⁶⁰ Further, Burke argued that the terrible, and therefore the sublime, is not restricted to encounters with excessive scales, magnitudes, or the infinite, which we will find later in Kant.⁶¹

Painful pleasure

When experiencing the sublime, Burke argued that we find pleasure in both the sense of terror but also the painful exertion our bodies and minds undergo to comprehend such an event. Initially, he separates pain from pleasure, leaving neither necessarily dependent on the other so that mixing may occur.⁶² In doing so he allows for pleasure to be found in pain and not the negative presentation of pain as was argued throughout the 18th century. However, as pain results from actual harm, Burke translates this link to terror – non-eventuating harm that the body and mind nonetheless represent similarly. For Burke, this serves two purposes for the subject: first, it involves exercising of the “finer organs”, both physical and mental, which without occasional exertion wither and decompose. Second, exercise of this sort presents to the subject its limits in the world concerning the power of nature.⁶³

A Creative Encounter?

Burke’s sublime primarily revolves around the subject’s own sense of self-preservation in response to a non-eventuating threat, creating a series of changes within the subject’s psychological and physiological systems. It relies on real encounters with nature or other forms of representation which can instigate the same forms of response. Burke is notable for opening up the sublime in its causes, allowing sensations such as smell and noise as causes, but also his alertness to the “expression of power in sublime architecture”, something that previously had not been incorporated and would later be discarded by Kant.⁶⁴ Opening the sublime to a greater series of causes and sensations, Burke allowed nature to act as an exemplar for man-made creations that elicit similar responses. Paul Roncken describes this as Burke “awakening a creative authenticity” in response to the power of nature that artists, designers, and writers must rise to the challenge and embrace in response to an increasingly hedonistic society.⁶⁵

66 Kant, *Critique of judgment*, 123, §28 - 264. Emphasis mine.

67 Gilles Deleuze, *Cinema 2: The Time-Image*, trans. Hugh Tomlinson and Robert Galeta (Minneapolis: University of Minnesota Press, 1997), 157.

68 Roncken, “Shades of the Sublime,” 53.

69 Faruquee, “The Kantian Sublime: Why Care?”

70 Katharine Wolfe, “From aesthetics to politics: Rancière, Kant and Deleuze,” *Contemporary Aesthetics* 4, no. 1 (2006): 6; Roncken, “Shades of the Sublime,” 53.

71 Faruquee, “The Kantian Sublime: Why Care?”

72 Roncken, “Shades of the Sublime,” 53.

73 Kant, *Critique of judgment*, 103-05, §25.

74 Malcolm Budd, *The Aesthetic Appreciation of Nature: essays on the aesthetics of nature* (Oxford: Clarendon Press, 2003), 69. Kant, *Critique of judgment*, 244-45.

Immanuel Kant – Mathematical and Dynamic

“Hence sublimity is contained not in any thing of nature, but only in our mind, insofar as we can become conscious of our superiority to nature within us...”⁶⁶

“In fact, what constitutes the sublime is that the imagination suffers a shock which pushes it to the limit and forces thought to think the whole as intellectual totality which goes beyond the imagination.”⁶⁷

Kant’s model of the sublime remains the primary touchstone on the sublime within disciplinary discussions. Modern attempts to revisit the sublime lean heavily on his work, particularly the *Critique of Judgment* (1790) where his articulation of both the sublime and the beautiful is most thoroughly worked through.⁶⁸ Contrasting with Burke’s, Kant’s enquiry was less interested in the experience of Nature itself and more how we form knowledge from experience: the sublime being an exception as that which cannot be fully known through experience, as it escapes the grasp of the faculties. This invokes a moral and ethical response within the subject upon realising the limits of their faculties, but also that both reason and moral power are superior in response to the sensible. In doing so, Kant shifts the sublime’s origin from within the object to within the subject’s mental faculties alone.⁶⁹ Doing so emphasises the subjective appearance of entities, in particular the appearance of an entity to one person or another. The subject determines the sensible nature of an entity that instigates a sublime experience, that sensibility is *for us*, in the ‘eye of the beholder’.⁷⁰ This significant emphasis being placed on the subject moves the sublime away from the world towards, almost exclusively, the interiority of the subject’s mental processes, deferring away from the power of Nature or relation. The sublime becomes a subjective experience knowable to that subject in that instance – un-sharable or objectively knowable.⁷¹ By bringing it *into* the subject, Kant shapes the sublime into a new role which Roncken describes as “a sensational phenomenon that proves humans are capable of overruling anything ‘unpresentable’ by their superior and imaginative minds.”⁷²

Mathematical Sublime

Despite Kant’s efforts to minimise sensation and external entities, they are still required to instigate these sublime events. Within the *Critique of Judgment*, we find two modes of the sublime, each with a different kind of phenomenon. First, we have the *mathematical sublime*, the most readily understood mode, and the most often referred to by designers. This mode relies on a perception of scale, immensity, number or magnitude which is seemingly infinite, beyond what the faculty of imagination can grasp.⁷³ When confronted with any object, our faculties estimate its extensive form in scale and magnitude against either a previously apprehended object or the body itself.⁷⁴ For example, this tree is roughly two-and-a-half times taller than my body, and this cliff face is eight times taller than the tree. At a certain point, the ‘scaling up’ of the extensive measure fails – one will struggle to aesthetically estimate the height of Mt Everest based on any known or perceivable

75 Timothy Morton, *Romanticism 11: Kant and the Sublime* (UC Davis2012), Lecture.

76 Gilles Deleuze, *Cinema 1: The Movement-Image*, trans. Hugh Tomlinson and Barbara Habberjam (Minneapolis: University of Minnesota Press, 1997), 53.

77 Ibid., 46.

78 Wolfe, “From aesthetics to politics: Rancière, Kant and Deleuze,” 10; Stephen Zepke, “The Sublime Conditions of Contemporary Art,” *Deleuze Studies* 5, no. 1 (2011): 76.

79 Zepke, “The Sublime Conditions of Contemporary Art,” 77.

80 Budd, *The Aesthetic Appreciation of Nature*, 69.

81 Deleuze, *Cinema 1*, 53.

82 Kant, *Critique of judgment*, 119-20. cf Burke’s critical distance in the *Inquiry*.

83 Ibid., 120.

84 Deleuze, *Cinema 1*, 53.

85 Kant, *Critique of judgment*, 120-21.

86 Budd, *The Aesthetic Appreciation of Nature*, 67,78-81.

measurement, it simply defies that logic. A similar example is the cosmos and its infinite scale. Infinity is important to Kant as it represents something that cannot be known. On infinity, Timothy Morton says: “you can think about *it*, you can directly experience *it*, but you can’t think *it*.”⁷⁵ He is describing a failing in the faculty of imagination to represent an object or measure to the subject. The imagination encounters its own limits and in the process faces annihilation, giving way to the faculty of reason which “forces us to conceive the immense or the measureless as a whole.”⁷⁶ The whole for Deleuze is identical to “movements as a whole, absolute maximum of movement, absolute movement” which the imagination “quickly exhausts its forces” in converting to a form knowable to the subject.⁷⁷ This is important as the mathematical sublime opens to engaging with more than just objects but matter, movements, and forces. The faculty of imagination fails in its synthesis, unable to bring the sensible into a synthesised whole based on a measure known to it.⁷⁸ Such a failure creates a pleasurable pain within the subject as it revels in both discovering its limits and something exterior which can instigate such an experience. As the imagination is incapable of forming an aesthetic synthesis, the faculty of reason steps in with its capacity to use ideas and concepts that can engage with the infinite beyond sensibility.⁷⁹ Malcolm Budd describes this as a “sense of superiority of one of our mental faculties (thought) over another (sensibility)” which ultimately is a rising sensation of pleasure in the affirmation of reason over Nature and sense.⁸⁰

Dynamic Sublime

The *dynamic sublime* operates as Kant’s other mode of the sublime, involving an overwhelming intensity as opposed to the overwhelming extensity found in the mathematical mode. Such an intensity must be raised to such a degree it is capable of “dazzling or annihilat[ing] our organic being” in its apprehension, examples of which Kant refers to are the extreme forces of nature (storms, erupting volcanoes, avalanches, etc).⁸¹ Here Kant makes a clear distinctive requirement of these forces: it must arouse *fear*, but we must not be *afraid* of it, just as we may fear God without being afraid of his power.⁸² Compared to these forces, our ability to resist them is insignificant or futile, a discovery of our physical limitations is found alongside an inability to develop an accurate aesthetic estimate of the “magnitude of nature’s *domain*.”⁸³ In response, the subject finds the thinking faculty of reason rising to the occasion through the discovery of a “supra-organic spirit which dominates the whole inorganic life of things”.⁸⁴ Reason again saves the subject through two means. First, it illustrates that its capacities are beyond those of nature as it holds infinity in its grasp, which makes every object and force in nature small in comparison.⁸⁵ Secondly, the subject is made aware of nature having the capacity to annihilate the subject yet has no capacity to strip its moral agency.⁸⁶ The dynamic sublime then is not sublime because it causes a sense of fear in the face of overwhelming intensities, but because it makes the subject aware that their faculties have capacities and strengths that nature cannot compare to. For Kant, nature is only called sublime because it forces the imagination to

87 Kant, *Critique of judgment*, 121.

88 Ibid., 123.

89 Zepke, “The Sublime Conditions of Contemporary Art,” 75.

90 Ibid.; Deleuze, *Difference and Repetition*, 144.

91 Zepke, “The Sublime Conditions of Contemporary Art,” 75-76.

92 James Williams, *Gilles Deleuze’s Logic of Sense: A Critical Introduction and Guide* (Edinburgh University Press, 2008), 51; Deleuze, *Difference and Repetition*, 321; Gilles Deleuze, “The idea of Genesis in Kant’s aesthetics,” *Angelaki: Journal of Theoretical Humanities* 5, no. 3 (2000): 63.

93 Zepke, “The Sublime Conditions of Contemporary Art,” 77.

94 Faruquee, “The Kantian Sublime: Why Care?.”

95 Ryan, “The Physiological Sublime: Burke’s Critique of Reason,” 268.

96 Faruquee, “The Kantian Sublime: Why Care?.”

97 Ibid.

98 “We must point to the sublime not in products of art (e.g., buildings, columns, etc.)...but rather in crude nature”. Kant, *Critique of judgment*, 109, §26 - 253.

99 Kant did acknowledge that Architecture can move the subject in a similar way to nature, but to a lesser degree. Kantian scholar Henry Allison suggests that architecture cannot literally be sublime, but it can “evoke a sense of the sublime”. Henry E Allison, *Kant’s theory of taste: a reading of the Critique of aesthetic judgment* (Cambridge University Press, 2001), 339.

100 Deleuze, “The idea of Genesis in Kant’s aesthetics,” 63. Likewise: Paul de Man, *Aesthetic Ideology* (Minneapolis: University of Minnesota Press, 1996), 87.

rise to the occasion, which in its struggles allows for “the mind to feel its own sublimity...elevat[ing] it even above nature.”⁸⁷ Kant then goes further to argue “sublimity is contained not in any thing of nature, but only in our mind”.⁸⁸

Limitations in Kant’s Sublime

Both modes within Kant’s sublime involve a failure in the aesthetic synthesis of an exterior entity which is resolved by the faculty of reason and its supposed greater capacities over nature. For Stephen Zepke, relying on “ready-made faculties and relations” as *a priori* leads to failing to discover the “real and genetic conditions” of aesthetic perception and experience.⁸⁹ Moving beyond this requires beginning at the “passive intuition of sensation” before synthesis, or as Deleuze puts it: “transcendental empiricism is the only way to avoid tracing the transcendental from the outlines of the empirical.”⁹⁰ In doing so, according to Deleuze, Kant discovers that difference is the genetic condition of experience, most notably a difference between faculties and a repetition of difference between the super-sensible and the sensible.⁹¹ These differences result in what Deleuze later calls a “dissensus” or “harmony in pain”.⁹² This results in the moment where “the imagination is projected beyond its human” to reveal the super-sensible Ideas that condition it.⁹³

It is critically important to note that Kant’s model of the sublime contains the sublime strictly within the subject itself, almost at the expense of exterior objects or nature itself.⁹⁴ Whereas an overwhelming force of nature may instigate the experience of the sublime, its power is discovered through the subject’s affirmation of its freedom and autonomy over nature itself via reason.⁹⁵ This is unsurprising considering the transcendental approach to the sublime and aesthetics which actively seeks to only deal with possible experience at the direct expense of grappling with *actual* experience. Kant’s model downplays the sensible, largely abandoning it for whatever he can determine from the super-sensible.⁹⁶ In doing so, he pacifies and domesticates the sublime into a “rational Protestant vision... centr[ing] knowledge around the subject” and its ability to rationally perceive the world.⁹⁷ Interestingly, Kant excludes the sublime from being instigated by any source other than nature, removing art, architecture, and oration from this aesthetic experience.⁹⁸ What we find in Kant’s sublime is an affirmation of Reason above all else, both sensible and super-sensible – even the imagination is made to kneel and “admit that all its power is nothing in relation to a rational Idea.”¹⁰⁰

101 Jean-Francois Lyotard, “The Interest of the Sublime,” in *Of the Sublime: Presence in Question* (New York, NY: State University of New York Press, 1993), 128.

102 Jean-François Lyotard, *The Post-modern Condition: A Report on Knowledge*, trans. Geoff Bennington and Brian Massumi (Minneapolis: University of Minnesota Press, 1984), 78.

103 Paul Crowther, “The Kantian Sublime, the Avant-Garde, and the Post-modern,” *New Formations* 7, no. 1 (1989): 71; David B Johnson, “The post-modern sublime: Presentation and its Limits,” in *The sublime: From antiquity to the present*, ed. Timothy M Costelloe (New York: Cambridge University Press, 2012), 4.

104 “Jean-François Lyotard,” Internet Encyclopedia of Philosophy, accessed 10/12/2019, <https://www.iep.utm.edu/lyotard/>.

105 Johnson, “The postmodern sublime: Presentation and its Limits,” 3.

106 Kenneth Holmqvist and Jaroslav Pluciennik, “A Short Guide to the Theory of the Sublime,” *Style* 36, no. 4 (2002): 724.

107 Jean-Francois Lyotard, *Lessons on the Analytic of the Sublime : Kant’s Critique of judgment*, trans. Elizabeth Rottenburg (Stanford: Stanford University Press, 1994), 233.

108 Ibid., 231.

109 Johnson, “The postmodern sublime: Presentation and its Limits,” 35; Kleinherenbrink, “Short All Entities are Sublime: Chaos according to Deleuze.” 2. See also Lyotard, *Lessons on the Analytic of the Sublime : Kant’s Critique of judgment*, 147-53.

110 Lyotard, *Lessons on the Analytic of the Sublime : Kant’s Critique of judgment*, 239.

Jean-François Lyotard – Allure of the unrepresentable

“The prospect of knowledge, to which beauty still allows access, even if aporetically, is at one stroke effaced by the sublime.”¹⁰¹

“...to present the fact that the unrepresentable exists.”¹⁰²

The unrepresentable

After having fallen out of favour in the modernist period, the sublime made an invigorated reappearance in the latter half of the 20th century largely due to the work of the French philosopher and cultural critic Jean-François Lyotard. In constructing his theory of postmodernism, Lyotard employs the sublime as a means to interrogate the function and significance of contemporary avant-garde art.¹⁰³ Lyotard constructs an ontology of events in which the sublime is the most rapturous and impactful that art, design or nature can produce.¹⁰⁴ What we find in Presenting the Unrepresentable (1982), The Sublime and the Avant Garde (1985), The Interest of the Sublime (1993), and most extensively in Lessons on the Analytic of the Sublime (1994) is a sustained loyalty to Kant’s established structures of experience.¹⁰⁵ The disjunction in the ability between the faculties of imagination and reason to represent an exterior force/object remains the critical underpinning of Lyotard’s work. His work does not radically depart from Kant except for highlighting art over nature as the source of encounters with the sublime. Lyotard develops the negative presentation based on Kant’s sublime, leading to a sustained interest in presenting the unrepresentable.¹⁰⁶ This negative presentation follows the same processes of Kant where the imagination cannot present to the subject an adequate image of an object leading to reason stepping in: “The object that is presented to reason in the phenomenon is never ‘big’ enough with respect to the object of its Ideas, and for the imagination the latter is always too ‘big’ to be presentable.”¹⁰⁷ Similarly, Lyotard argued that the sublime is felt in the displacement of the object’s image by an Idea of absolute magnitude, a displacement of the sensible by the super-sensible.¹⁰⁸ Because of Lyotard’s reliance on Kant leading to a relatively unchanged model, the survey of his work here will be limited to what makes it unique or interesting concerning the contemporary sublime and its relevance to art and design.

Two sides – affectual (differend) and reason

Within Lyotard’s work on the sublime, we find a break from Kant in his notion of the *differend*. Lyotard identifies the differend, an irreconcilable difference between terms within the previously described disparity between faculties, finding its ultimate expression in the “irresolvable relationship between presentation and the unrepresentable”.¹⁰⁹ Lyotard suggests the sublime is a product of the “violence of [the] differend”, which cannot demand communication to thought.¹¹⁰ Drawing the sublime into relation with the differend presents an issue in reading Lyotard’s sublime: on one hand, we have his overtly Kan-

111 Theresa M Kelley, “Wordsworth, Kant, and the Romantic Sublime,” *Philological Quarterly* 63, no. 1 (1984). Woodward, “Jean-François Lyotard.” See also: Julie Gaillard, Claire Nouvet, and Mark Stoholski, *Traversals of Affect: On Jean-François Lyotard* (Bloomsbury Publishing, 2016); Woodward, “Jean-François Lyotard.”

112 Woodward, “Jean-François Lyotard.”

113 Deleuze, *Difference and Repetition*, 230; Gaillard, Nouvet, and Stoholski, *Traversals of Affect: On Jean-François Lyotard*; Woodward, “Jean-François Lyotard.”

114 Lyotard, *Lessons on the Analytic of the Sublime : Kant’s Critique of judgment*, 233,327. in Kleinherenbrink, “Short All Entities are Sublime: Chaos according to Deleuze.” 2. Emphasis mine.

115 Jean-Francois Lyotard, “Presenting the Unrepresentable: The Sublime,” *Art Forum* 20 (1982): 68.

116 Kleinherenbrink, “All Entities are Sublime: Chaos according to Deleuze.” 2.

117 Gilles Deleuze, *Francis Bacon: The Logic of Sensation*, ed. Bloomsbury Revelations, trans. Daniel W smith (London; New York, NY: Bloomsbury Academic, 2017).

118 Meyer, “Seized by Sublime Sentiments.”

119 Paul Crowther, *The contemporary sublime: sensibilities of transcendence and shock*, vol. 10, *Art and Design*, (Academy Group, 1995).

tian approach that places reason above all else, and on the other, the sublime is brought into contact with the differend, which Ron Katwan shows produces affects.¹¹¹ This may be negotiated through the sublime operating on two different registers: the first of which operates on the “ ‘primary processes’ of the body” (affects and libidinal intensities) and a second which operates within the “ ‘secondary processes’ of the conscious mind’.”¹¹² It is easy to read Lyotard’s notion of the ‘unrepresentable’ as “reason having big concepts” beyond the capacities of the imagination to represent, but this seems weak in relation to his significant emphasis on art’s role in the sublime. Yet the impact art has on us is sensory, its affectual capacities outstrip its intelligible capacities. Treating the differend as analogous to affects and intensities as others have suggested would suggest that Lyotard’s sublime operates beyond just the faculties.¹¹³ Lyotard identifies the sublime as indicating the existence of a super-sensible sphere that may be composed of virtualities or Ideas: “the mountain peak is a phenomenon that indicates that it is also *something more* than a phenomenon. [It is] a sign of a supersensible sphere.”¹¹⁴ The unrepresentability of this super-sensible sphere is the chief point of interest for Lyotard, the struggle to represent it leads ultimately to a “gratification of effort” even if there is failure and suffering.¹¹⁵ Avant-garde art’s mission was to present the unrepresentable through negative presentation, to paint around the figure, creating an encounter that appeals to the faculties of reason and imagination incommensurably.¹¹⁶

The unrepresentable in art – an attractive notion for designers

Lyotard’s negative presentation and the challenge of ‘presenting the unrepresentable’ has struck a chord with both artists and designers by giving a name (the sublime) to the forces with which they are actively creating, or the resultant forces. In terms of painting, this is most evident in the work of Paul Cézanne, Mark Rothko, Barnett Newman, and perhaps most viscerally in Francis Bacon.¹¹⁷ Lyotard’s sublime is readily available to artists and designers without necessarily needing a great degree of critical insight into its operations or technicalities. It can be used to explain or describe an experience of feeling something hidden in artworks or landscapes, an unseen yet almost tangible force, as landscape architect Elizabeth Meyer describes in her account of Bloedel Reserve.¹¹⁸ Several accounts of such an approach exist in art discourse, both critical and supportive, notably a strong appearance in an issue of Art and Design dedicated to the sublime edited by Paul Crowther.¹¹⁹ The work of abstract expressionists was not restricted to what was presented on canvas as an artefact, but as Lyotard suggests, such artefacts are proof in extension of forces beyond the sensible, presenting something unrepresentable by painting around such forces. This seems to be an attractive and graspable concept for creators that expands the language through which they can articulate their work and the degrees of creativity itself: just what manner of forces can be engaged with through negative presentation, how far past the figural can art or design push. Whereas artists were engaging with these forces in a sense significantly closer to the affectual, it was understood and

120 Most notably Linda Pollak. Pollak, “Sublime Matters.”; Pollak, “Matrix Landscape.”

121 This dimension of a contemporary landscape architectural sublime will be explored further in Stratum 2.

122 Jean-Francois Lyotard, “The Sublime and the Avant Garde,” *Paragraph* 6, no. 8 (1985): 4.

123 Ibid., 2; “A brief history of the notion of the sublime,” accessed 20/06/2018, 2018, http://www.lukewhite.me.uk/sub_history.htm.

124 René van de Vall, “Silent Visions: Lyotard on the sublime,” *Art & Design* 10, no. The Contemporary Sublime: Sensibilities of Transcendence and Shock (1995): 71.

125 Ibid.; Lyotard, “The Sublime and the Avant Garde,” 10.

126 Lyotard, “The Sublime and the Avant Garde,” 205,06; van de Vall, “Silent Visions: Lyotard on the sublime,” 71.

127 White, “A brief history of the notion of the sublime.”

128 Ibid.

employed in a different sense by some prominent landscape designers. Here Lyotard’s unrepresentable sublime was appropriated as the hidden flows and mechanisms of (natural) ecologies which certain forms of designing sought to make present via form or making vivid the sense of those processes.¹²⁰ In doing so, they focused on the Kantian dimension of Lyotard’s sublime, eschewing the affectual dimension of the differend.¹²¹ We will explore this dimension of a contemporary landscape architectural sublime further in Stratum 5.

Temporality in the sublime

“The inexpressible does not reside in an over there, in another words, or another time, but in this: in that (something) happens.”¹²²

Lyotard’s notion of ‘event’ can be found within his reworking of Kant’s thinking, making temporality a component of the postmodern sublime. For Lyotard, the sublime involves a feeling of the subject being stuck between the here and now, with the question that looms over them asking ‘is it happening? will it happen?’ Lyotard formulates temporality by shifting Barnett Newman’s notion of ‘now’ towards Martin Heidegger’s event which is not something that has passed, can be named or recognised, but is closer to a hovering temporal question around our subjectivity.¹²³ René van de Vall describes the sublime as: “the feeling not of what happens, but that anything happens at all... it indicates the ‘eventness’ of the event, and as such it is outside the temporal sequence.”¹²⁴ Here Lyotard connects to Burke’s use of terror: the threat of it that does not happen.¹²⁵ Art, for Lyotard, can threaten to cause all happenings to cease forever – the annihilation of the subject – (pain), and to provide reassurance by evidencing that something is happening by its very existence (pleasure).¹²⁶ This creates what Luke White describes as a dual anxiety and a quickening based on Burke’s established self-preservation motivations: “What if nothing happens (to me) ever again?”¹²⁷ In the event’s temporality, we find Lyotard’s ultimate employment of the sublime – a challenge to go beyond safety in (re)presentation, to continuously experiment with and against classical standards through whatever means necessary: a challenge to live in the unfamiliar, the terrifying and unrepresentable.¹²⁸

Conclusion

Within landscape architectural discourse, philosophical works by Burke, Kant, and Lyotard stand as the most prominent points of reference when discussing the sublime. However, as this stratum has outlined, there are aspects of their philosophical models that are weakly suited to landscape design practices or have been misunderstood by contemporary designer-thinkers. As shown here, the predominant reading of Burke results in highlighting a ‘psychological sublime’ based on a non-eventuating threat, often obscured or beyond comprehension. Kant’s two modes of the sublime (mathematical and dynamic), whilst offering something useful in understanding aesthetic synthesis, nonetheless fall back on Reason rescuing the subject in the face of the faculty of imagination’s failure or an overwhelming display of nature’s power. For Kant, the sublime is proof that Reason, the super-sensible faculty, has infinite power over nature. Lyotard, following Kant, builds on this by relating the sublime to post-modern art. Here he finds that the sublime emerges in the presentation of the unrepresentable – giving life to the forces of art and the world by painting around using negative presentation.

Contemporary landscape architectural discourse on the sublime has heavily relied on the work of these three philosophers. It does so by almost only focusing on the psychological aspects of the works presented here, eschewing Burke’s physiological sublime and Lyotard’s notion of the differend entirely. The following stratum will explore how this thinking has unfolded within the discipline, how the sublime has been appropriated by SBD discourse to describe the infinite scale of unrepresentable ecological systems. Burke’s sublime will return in Stratum 5, where this research addresses its physiological dimensions to conceptualise the sublime as an encounter with intensity.

Stratum 2

On the Sublime in Landscape Architecture

31	Introduction
31	The Emergence of the Sublime
34	Early Landscape Design's relationship to the Sublime
42	The Techno-Natural Sublime
46	Contemporary Landscape Architecture and the Sublime
59	Conclusion

Fig 3.05. View of Horokiwi Quarry from haul road. 2017.

129 The economics of landscape gardening shifted at the end of the 17th century, driving a change from the ordered garden to the park-scapes which was less costly to maintain but could also have its forestry felled for wartime uses. David Brontë Green, *Gardener to Queen Anne* (Oxford University Press, 1956), 65-67; John Dixon Hunt and Peter Willis, eds., *The Genius of Place: The English Landscape Garden 1620–1820*. (Cambridge, MA: MIT Press, 1988), 18; Christopher Hussey, *English gardens and landscapes, 1700-1750* (London: Country Life, 1967), 27; David C Streatfield, “Art and nature in the English landscape garden: design theory and practice, 1700–1818” (paper presented at the Landscape in the Gardens and the Literature of Eighteenth-Century England. Papers Read at a Clark Library Seminar, 18 March 1978, 1981), 3-5.

130 Ashfield and de Bolla, *The Sublime: A reader in British eighteenth-century aesthetic theory*, 18-19.

131 Most notably: Joseph Addison, “The Spectator No. 10,” *The Spectator* 1, no. 10 (Monday, March 12, 1711 1711); Joseph Addison, “The Spectator. No. 412,” *ibid.* 2, no. 412 (Monday, June 23, 1712 1712); Joseph Addison, “The Spectator No. 418,” *The Spectator* 2, no. 418 (Wednesday, June 25, 1712 1712); Joseph Addison, “The Spectator, No. 414, June 25, 1712,” *The Spectator*, ed. Donald F. Bond (Oxford: The Clarendon Press, 1965) 3 (1965); Anthony Ashley Cooper Shaftesbury, *Shaftesbury: Characteristics of Men, Manners, Opinions, Times* (Cambridge, UK: Cambridge University Press, 1999).

Introduction

The sublime has been a fundamental part of landscape architectural practice since its beginning. However, throughout the 20th century, this relationship has been set aside and almost entirely erased with the advent of SBD. This research aims to revisit and revive the concept and experience of the sublime as being central to the practice of landscape architecture, beyond a mere visual or subjective account that struggles to lead to serious designing. To do this, we must first unpack the work of those who originally grappled with the idea through practice and wrote on the landscape sublime. The discipline has had a long and fluctuating relationship with the sublime. Its emergence as an aesthetic category occurred concurrently with landscape architecture emerging as a series of practices distinct from architecture or other design fields. This stratum will summarise this relationship from the perspective of both practice and theory by discussing how Uvedale Price and Richard Payne Knight engaged with the sublime in the 18th century. Following this, we will turn to Olmsted’s mid-19th century Emerald Necklace in Boston as an example of changing fashions in the sublime. Olmsted’s technological alternative would later influence 21st century forms of designing. Lastly, a series of contemporary landscape architectural designer-thinkers who have offered contributions on the sublime will be discussed, before turning to how their theory is best able to be operationalised by design practices.

The Emergence of the Sublime

The sublime has played a role in the theory and practice of landscape design/architecture since it emerged as a distinct spatial-design discipline in the 18th century. The emergence of the sublime as a spatial aesthetic coincided with multiple shifts in economics that allowed it to flourish through active experimentation instead of abstract theorisation.¹²⁹ Until the late-19th century the sublime, and designed landscapes in general, were the realm of the wealthy and privileged. We can see this in the initial accounts of a landscape sublime from those who embarked on The Grand Tours of Europe in the late-17th/early-18th century. Before this, we see the sublime generally restricted to literature and oration through the revival of Longinus’s work which showed the ability for language to elevate one’s being.¹³⁰ Longinus, whose exact identity remains unclear, was a classical Roman rhetorician who described the sublime as an oratory experience with greatness. It was not until Anthony Ashley-Cooper, Third Earl of Shaftesbury, and Joseph Addison’s writings on the aesthetics of nature and the types of experiencing in the presence of it that allowed for the translation of Longinus’s sublime from rhetoric to nature.¹³¹ *The Spectator* written by Addison and Richard Steele, alongside other publications and lectures, allowed a growing discourse of aesthetics of the sublime to gain a foothold in 18th century Britain.

132 Charles Quest-Ritson, *The English garden: a social history* (David R. Godine Publisher, 2003), 119.

133 Paul Fussell, “The Eighteenth Century and the Grand Tour,” in *The Norton Book of Travel*, ed. Paul Fussell (New York & London: Norton & Company, 1987), 129.

134 John Dixon Hunt, *Gardens and the picturesque: studies in the history of landscape architecture* (MIT Press, 1994), 4.

135 Lynn Poland, “The Idea of the Holy and the History of the Sublime,” *The Journal of Religion* 72, no. 2 (1992).

136 E.N. Hooker, ed., *The Critical Works of John Dennis*, 2 vols., vol. 2 (Baltimore: John Hopkins University Press, 1939), 380.

137 Ashfield and de Bolla, *The Sublime: A reader in British eighteenth-century aesthetic theory*, 1-2.

With the primary consumers of this material tending to be wealthy and educated, the sublime and the beautiful became fashionable notions leading them to find their place in the practices of artists, writers, poets, landscape designers, politicians, and orators. Initially, the Grand Tour and the imagery it invoked stood as the primary reference point.¹³² Those who produced some form of representation of the landscapes they encountered would often be lauded upon their return.¹³³ Not just because something unfamiliar had been captured, but because in doing so their terrifying nature had been annexed under the concept of the sublime. According to John Dixon Hunt, this practice still allowed for the forceful nature of the landscape but “subsumed and managed [it] culturally”.¹³⁴ The Swiss Alps, in particular, stood out for many as they disrupted many of the previously held ideas on landscape aesthetics as metaphorical examples of The Fall.¹³⁵ John Dennis writes of his encounter at the Alps as one that displaced his understanding of landscapes that was “a delight that is consistent with reason” with something entirely different, “a delightful Horror, a terrible Joy”.¹³⁶ Dennis brought this back in the form of writings published as essays or journal articles which were read by many in the various coffee houses scattered throughout British cities. Others produced artworks during their journey either as commissioned works or for their delight and appreciation of the scenery when back home.

The introduction of the sublime into educated circles during the 18th century accompanied the rise of the Enlightenment citizen. This setting free of knowledge from the Church allowed a new form of subjectivity to emerge, one cut loose from the guarantees of religious certainty, and hungry for new insights about *what it means* to be a subject.¹³⁷ The

Fig 3.06. *An Avalanche in the Alps, 1803*, Philip James De Loutherbourg. Presented by the Friends of the Tate Gallery 1965. © Tate. CC-BY-NC-ND 3.0 (Unported).

138 Ibid., 1. Emphasis mine.

139 Ibid., 9.

140 Ibid.

141 William Smith, “Dionysius Longinus on the sublime (1743),” in *The Sublime: A Reader in British Eighteenth-Century Aesthetic Theory*, ed. Andrew Ashfield and Peter de Bolla (Cambridge: Cambridge University Press, 1996), 23.

142 John Baillie, “An essay on the sublime (1747),” *ibid.*, 88,89.

143 Burke, *A philosophical enquiry into the sublime and beautiful* 64.

144 James Beattie, “Dissertations moral and critical (1783),” in *The Sublime: A Reader in British Eighteenth-Century Aesthetic Theory*, ed. Andrew Ashfield and Peter de Bolla (Cambridge: Cambridge University Press, 1996), 182.

145 Hugh Blair, “Lectures on rhetoric and belles lettres (1783),” *ibid.*, 213.

146 Kant, *Critique of judgment*, 121, §28.

unfolding changes of the Enlightenment allowed this question of subjectivity, “*what is it that moves me?*” to be articulated through a vast range of discursive fields. Andrew Ashfield and Peter de Bolla, both cultural historians, note that “...it fell to this period, in particular, to articulate the *complexities* of affective experience...” through the sublime.¹³⁸ They further note that there are three distinct formulations on the matter: 1) focusing only on the experiential where a set of qualities are said to be inherently within an object, that in turn “summon up some shape or form notions of elevation or grandeur”.¹³⁹ This is perhaps the most recognisable of the sublime traditions, the objects typically being gargantuan, distant, obviously terrifying, indistinct, etc. 2) objects are displaced to attend to affects (typically psychological, although some have written of the physiological), placing the sublime within the subject. This approach seeks to clarify the sensations in the presence of objects that have the above qualities; 3) the analytic of the sublime becomes itself the focus of inquiry: a question of how the objects and affects are produced by the analytic.¹⁴⁰ In other words: three traditions consisting of the sublime experience produced by the object, by the subject, and by literature. Regardless of the approach, there is a general and consistent acceptance that the experience of the sublime involves a shift in the subject’s power:

“power of raising the passions to a violent and even enthusiastic degree.” Dionysius Longinus tr. William Smith, 1743¹⁴¹

“every person upon seeing a grand object is affected with something which as it were extends his very being...hence comes the name of the sublime to every thing which raises the mind to fits of greatness...and gives her a lofty conception of her own powers...vast objects occasion vast sensations, and vast sensations give the mind a higher idea of her own powers” John Baillie, 1747¹⁴²

“I know of nothing sublime that is not some modification of power.” Edmund Burke, 1757¹⁴³

“we are conscious of something like an expansion of the faculties...this energy of the mind is pleasing, as all mental energies are when unaccompanied with pain...In contemplating such ideas or objects, we are conscious of something like an expansion of our faculties, as if it were exerting our whole capacity to comprehend the vastness which commands our attention.” James Beattie, 1783¹⁴⁴

“Pleasures of the Imagination...consist[s] in a kind of admiration and expansion of the mind; it raises the mind much above its ordinary state; and fills it with a degree of wonder and astonishment, which it cannot well express.” Hugh Blair, 1783¹⁴⁵

“Hence nature is here called sublime [erhaben] merely because it elevates [erhebt] our imagination, [making] it exhibit those cases where the mind can come to feel its own sublimity, which lies in its vocation and elevates it even above nature.” Immanuel Kant, 1790¹⁴⁶

147 Karen R Jones and John Wills, *The invention of the park: from the Garden of Eden to Disney’s Magic Kingdom* (Polity, 2005).

148 Green, *Gardener to Queen Anne*, 65-67; Hussey, *English gardens and landscapes, 1700-1750*, 27; Timothy Mowl, “Design,” in *A Cultural History of Gardens in the Age of the Enlightenment*, ed. Stephen Bending (London, UK: Bloomsbury Academic, 2016), 35; Quest-Ritson, *The English garden: a social history*, 136-40; George B. Tobey, *A history of landscape architecture: the relationship of people to environment* (New York: American Elsevier Pub. Co., 1973), 128.

149 Joan Bassin, “The English Landscape Garden in the Eighteenth Century: The Cultural Importance of an English Institution,” *Albion: A Quarterly Journal Concerned with British Studies* 11, no. 1 (1979); Streatfield, “Art and nature in the English landscape garden: design theory and practice, 1700–1818.”

150 Christophe Girod, *The Course of Landscape Architecture: a history of our designs on the natural world, from prehistory to the present* (New York: Thames & Hudson, 2016), 204. Joan Bassin notes that in this period the scale and importance of the garden drastically expanded whereas the opposite occurred for the architectural objects of the estate. Bassin, “The English Landscape Garden in the Eighteenth Century: The Cultural Importance of an English Institution,” 23.

151 Addison, “The Spectator, No. 414, June 25, 1712.”

Early Landscape Design’s relationship to the Sublime

As these philosophical accounts of the sublime were developed throughout Britain, and in a different form in France, the design and management of the gardens and estates of those who went on the Tour were drastically changing. As noted by Karen Jones and John Wills, England in the 18th century was undergoing an economic shift towards urban centres and the establishment of commercial trade corporations. Internally this allowed for wealth generation to shift away from agrarian sources, with this previously productive land now available for other uses.¹⁴⁷ Both maintenance and construction costs also led to a shift in the design of these gardens in the already established estates of nobility as well as those transitioning land-uses.¹⁴⁸ The combination of shifting land economics, societal changes via the Enlightenment, and the fascination with landscape encounters led to the development of the ‘English Garden’ style. This style differed radically from the ordered and rational gardens of the 17th century which reflected the understanding of the subject being infinitely lesser than the universe (God). Gardens of this earlier style incorporated orthogonal and symmetrical layouts that distorted the sense of scale and scope in relation to the subject’s perception of space.¹⁴⁹ Landscape architecture, not architecture, was best suited to address the relationship to nature through creative works.¹⁵⁰ Addison was particularly critical of the use of vegetation in formal gardens, writing that “Our trees rise in Cones, Globes and Pyramids. We see Marks of the Scissars on every Plant and Bush...I would rather look upon a Tree in all its Luxurancy and Diffusion of Bough and Branches than when it is cut and trimmed into a Mathematical Figure”.¹⁵¹

Following this period of ‘rational’ styled gardens, the mid-18th - early 19th century involved constant *aesthetic experimentation* where land-

Fig 3.07. *Mer de Glace, in the Valley of Chamouni, Switzerland. 1803. J.M.W. Turner. Presented by the Yale Centre for British Art.*

152 David Streatfield notes that the incorporation of vast wooded areas in the gardens and parks of this area was also economically driven. The period following the English Civil War (1642–51) left much of the country stripped of quality woodland used for timber, which was replaced partially by these designs. Streatfield, “Art and nature in the English landscape garden: design theory and practice, 1700–1818,” 5.

153 Addison, “The Spectator, No. 414, June 25, 1712.”; Hunt and Willis, *The Genius of Place: The English Landscape Garden 1620–1820.*, 139.

154 “Great Thinking Machines,” *Lotus International* 30 (1981): 3; Girot, *The Course of Landscape Architecture*, 201,04.

155 Tobey, *A history of landscape architecture: the relationship of people to environment*.

156 Mowl, “Design,” 42.

157 John Dixon Hunt, “Emblem and expressionism in the eighteenth-century landscape garden,” *Eighteenth-Century Studies* 4, no. 3 (1971): 288; William Gilpin, *A dialogue upon the gardens of the Right Honourable the Lord Viscount Cobham, at Stow in Buckinghamshire* (London: printed for B. Seeley, Bookseller in Buckingham, and sold by J. and J. Rivington, in St. Paul’s Church-Yard, 1748); Tobey, *A history of landscape architecture: the relationship of people to environment*, 135; Girot, *The Course of Landscape Architecture*, 201.

158 The capitalisation separates the Picturesque as an aesthetic category from the picturesque as a painterly quality.

159 Malcolm Andrews, *The Search for the Picturesque: Landscape aesthetics and tourism in Britain* (Stanford: Stanford University Press, 1989).

160 Hunt, *Gardens and the picturesque: studies in the history of landscape architecture*, 107.

161 Michael Charlesworth, “Types of Gardens,” in *A Cultural History of Gardens in the Age of the Enlightenment*, ed. Stephen Bending (London, UK: Bloomsbury Academic, 2016), 66.

162 Michael Symes, *Observations on Modern Gardening*, by Thomas Whately : *An Eighteenth-Century Study of the English Landscape Garden* (Suffolk: Boydell & Brewer, 2016), 91.

scape designers were actively engaging with the discourse of the sublime and the beautiful, experimenting with how it may be evoked via designed form. Such gardens grew in scale, involving massed woodlands, open lawns, and expanding to incorporate geological formations of interest.¹⁵² They involved what Addison describes as “artificial rudeness”, which Dixon Hunt attributes to a desire for encounters with the Sublime in the landscape.¹⁵³ These early landscape designers were approaching how to design with the sublime afresh, actively testing, recording, and discussing their findings: an experimental design-led approach.¹⁵⁴ Initially, this experimentation unfolds in the parks that we can more readily attribute as an aesthetic of the beautiful. This approach includes the work of William Kent, Charles Bridgeman, Alexander Pope, and Capability Brown, alongside several other amateur designers. George Tobey notes that of these, Alexander Pope was the first to consciously create a dialogue between design and the emerging aesthetic theory of the beautiful and sublime.¹⁵⁵ Though much of the designed landscapes and discourse around them focused on the beautiful, they nevertheless expressed a shift in sensibility towards the complex relationship between the now non-religious subject and the world.¹⁵⁶ Works of this era also signify a shift away from symbolism towards the expressive power of landscape itself. Similarly, they also show a move away from supreme control of the land to active participation with its forces.¹⁵⁷

It is not until the written and designed works of Uvedale Price and Richard Payne Knight appeared in the 1790s that we find experimentation with the idea of the Picturesque, and therefore sublime aesthetics. The Picturesque, noted by its capitalisation, is an aesthetic sitting between the beautiful and the sublime that combines elements of both.¹⁵⁸ It is also separate from the description of a scene being ‘picturesque’ because of its similarity to painted or drawn media – it is a bodily encounter with a landscape.¹⁵⁹ This second sense, *picturesque*, as Dixon Hunt points out, has little interest in the landscape itself.¹⁶⁰ As Michael Charlesworth notes, evidence of designed landscapes attempting to engage solely or largely with the sublime is extremely unusual, with Hawkstone Park as a rare example.¹⁶¹ Michael Symes notes that it was not till the 19th century that these landscapes began to be discussed specifically for their sublime qualities, for it took some time for their wild and unruly state to unfold from their “zenith” of the mid-late 18th century.¹⁶²

163 Symes notes that whilst he had opportunity to visit gardens such as Hackfall, Hafod, and Hawkestone, their character had not fully developed and perhaps he saw it as more productive to discuss the natural examples of The New Weir, Middleton Dale, Matlock, and Dovedale. Ibid., 91–106.

164 John Dixon Hunt, *Site, Sight, Insight: Essays on Landscape Architecture* (University of Pennsylvania Press, 2016), 69; Clemens M Steenbergen, Wouter Reh, and Gerrit Smienk, *Architecture and landscape: the design experiment of the great European gardens and landscapes* (Birkhäuser Basel, Boston, Berlin, 1996), 251.

165 Symes, *Observations on Modern Gardening*, by Thomas Whately : *An Eighteenth-Century Study of the English Landscape Garden*, 91.

166 Ibid., 96,100,03.

Though the qualities of these parks would take some time to transition into something regarded as sublime, designers such as Thomas Whately were recording their thoughts on pre-existing landscapes to turn towards later designs.¹⁶³ In *Observations on Modern Gardening* (1770) Whately describes in detail how the elements of a landscape come together to form a certain aesthetic or experience in an encounter, not how they are arranged in a scenic manner.¹⁶⁴ He plays close attention to the sublime nature of certain masses and arrangements of rocks as they stand outside our common encounters in the world, beyond what is readily known by common-sense: “mere rocks, unless they are peculiarly adapted to certain impressions, may surprise, but can hardly please; they are too far removed from common life...more horrid than terrible”.¹⁶⁵ In speculating how one might design with rocky landscapes to elicit experiences of the sublime Whately goes into some detail: the necessity for both height and width, removing vegetation, adjusting perception of scale via earthworks and vegetation, erosion, vegetation growing from crevices, and the inclusion of various rock types.¹⁶⁶ Whately’s account is entirely practical, even going so far as to

Fig 3.08. “Switzerland”. Guillaume Vachey. 2019. <https://flic.kr/p/2gAzGNB>. CCO 1.0. Edited by Author to greyscale.

Fig 3.09. The attributes Price attributes to a planting of fir trees arguably can be felt through the use of just a photograph. “Red Fir Forest”. David Prasad. 2012. <https://flic.kr/p/cyDND3>. CC BY-SA 2.0

167 In this, Symes notes that his interest in insitu rocks was a novel one, likely leading to its key role in Picturesque gardens. Ibid., 232.

168 Ibid., 9.

169 For further exploration of Burke’s work see Stratum 1 and 5.

170 Uvedale Price, *Essays on the Picturesque, as Compared with the Sublime and the Beautiful* (London: J. Mawman, 1796), 68.

171 John Dixon Hunt, *The picturesque garden in Europe* (London: Thames & Hudson, 2002), 72.

suggest how a designer directly achieves these alterations, as well as providing detailed accounts of various landscapes so that the reader has a reference point to be employed in their work.¹⁶⁷ His account of these landscapes and his observations are often highly personal and at times emotional, breaking with the scientific regime of the period, suggesting that the experience and power of these landscapes cannot be reduced to objective material.¹⁶⁸

Uvedale Price’s Sublime

Uvedale Price’s *Essays on the Picturesque as Compared to the Sublime and the Beautiful* (1796) builds upon Edmund Burke’s *Enquiry*, itself innovative for separating the two aesthetic categories.¹⁶⁹ Price introduces the Picturesque as a third category that is both distinct from, yet readily includes mixing of, the sublime and the beautiful.¹⁷⁰ In this essay, we find Price’s comments on attributes of the sublime: the “power of dimension”, infinity being “one of the most efficient causes”, uniformity “often being the cause of it”, and its departure from the readily known content of that which is beautiful. Price’s work, alongside that of Payne Knight, is valuable because it involves both critical and practical theorisation on the Picturesque made possible by their active experimentation on their estates, allowing them to be design and cultural critics.¹⁷¹ Price talks little of painting or literature in relation to the sublime or the Picturesque, instead calling on examples from the natural world which are experimented on or taken as referential examples. He also moves his understanding of these aesthetic categories beyond a

172 Price, *Essays on the Picturesque*, 207-08.

173 Ibid., 286.

174 Ibid., 287.

175 Hunt, *The picturesque garden in Europe*, 72.

176 Ibid.

177 Dabney Townsend, “The picturesque,” *The Journal of Aesthetics and Art Criticism* 55, no. 4 (1997): 366,73.

178 Ryan, “The Physiological Sublime: Burke’s Critique of Reason.” See Stratum 5

179 Townsend, “The picturesque,” 373.

180 Ibid., 373-74.

181 Richard Payne Knight, *The Landscape: a didactic poem* (1794); Richard Payne Knight, *An Analytical Inquiry into the Principles of Taste* (T. Payne, 1806).

restriction to sight, encompassing all the senses – of which we must include proprioception, as movement is critical to its experience.¹⁷²

Part II of *Essays on the Picturesque* contains Price’s practical notes on how a designer can apply the theoretical contents discussed within Part I. Here we find an example useful to our discussion on the sublime: the effect of density in a fir plantation on experiencing the sublime. Price describes practically how the density of trees affects their perception. Planting saplings close together quickly gives the appearance of natural wood, and if not managed and thinned the wood takes on sublime qualities:

*they are consequently all drawn up together, nearly to the same height; and as their heads touch each other, no variety, no distinction of form can exist, but whole is one enormous, unbroken, unvaried mass of black. It’s appearance is indeed so uniformly dead and heavy, that instead of those cheering ideas which arise from the fresh luxuriant foliage, and the lighter tints of deciduous trees, it has something of that dreary image, that extinction form and colour...*¹⁷³

Price contrasts this example of sublime planting with that of a varied evergreen plantation which he attributes to both the beautiful and the Picturesque. Following this, he makes an interesting distinction: it is not variety or diversity of objects/types that differentiate these aesthetics, but is instead “their effects when combined together; in diversity of composition, and of character” that holds value.¹⁷⁴ Four species work better than 200 as the latter produces a “sameness of a different kind”.¹⁷⁵

Price argued that these aesthetic experiences were the cause of an objective factor that is determined by several external objects and is later cultivated and grown by subjective taste.¹⁷⁶ Dixon Hunt notes that because of this, it is less subjective and more readily known beyond the individual.¹⁷⁷ Price’s model of the sublime (via the Picturesque) builds from Burke’s argument that these aesthetic experiences can be identified and understood via a series of casual relationships.¹⁷⁸ Dabney Townsend concludes that because of this link to Burke’s typical psychological reading of the sublime, Price also takes the same position. Though as we will see later, the oft-assumed psychological model attributed to Burke is likely less important than his writing on the physiological.¹⁷⁹ Townsend suggests that Picturesque through Price relies on association, emerging entirely from “the activity of the mind”.¹⁸⁰ He highlights Price’s attempt to determine the efficient causes of these experiences by external phenomena objectively, different from his contemporaries, most notably Richard Payne Knight.¹⁸¹

Richard Payne Knight and the Sublime

Price’s main contemporary, close friend, and neighbour, Richard Payne Knight, also experimented with the Picturesque via theory and practice, notably through his texts *The Landscape: a didactic poem* (1794) and *An Analytical Inquiry into the Principles of Taste* (1806).¹⁸² Where-

182 Hunt, *The picturesque garden in Europe*, 72.
183 Ibid., 89.
184 Andrew Ballantyne, *Architecture, landscape and liberty: Richard Payne Knight and the picturesque* (Cambridge: Cambridge University Press Cambridge, 1997), 149.
185 Knight, *An Analytical Inquiry*, 383-4. in Ballantyne, *Architecture, landscape and liberty*, 150-51.
186 Ballantyne, *Architecture, landscape and liberty*, 151.
187 Ibid., 190,61.
188 Ibid., 149.
189 Knight, *The Landscape*, 38-39.
190 Ibid., 52.
191 Kelley, “Wordsworth, Kant, and the Romantic Sublime,” 131.
192 Knight, *An Analytical Inquiry*, 55-56,370-71.

as Price located the processes of these experiences as a relation between a subject and an exterior object, Knight put them entirely within the mental processes of the human mind.¹⁸³ Knight argued that such experiences are entirely subjective as they are entirely a “matter of individual perception”.¹⁸⁴ He constructed this by eschewing causal relations in space-time that Burke and Price embraced for the association of ideas and the pleasure this may bring the subject.¹⁸⁵ Whereas Price was respectful of Burke’s work, we find in Payne Knight’s *Inquiry* less positivity and respect, attributing its impact more to the name of the author than its content.¹⁸⁶ Knight finds little value in attempting to classify an object into any one aesthetic category, finding the idea absurd and ridiculous, even unphilosophical.¹⁸⁷ Knight’s initial work *The Landscape* is, as Andrew Ballantyne describes, “a handbook of associations” which are intended to call forth certain emotions in the subject based on their background, as taste, for Knight, is based entirely on one’s past relations to geography and culture.¹⁸⁸ Though this text is largely at a surface level about landscape design, it intends its true content to supplement Price’s work by delving into an aesthetic discussion of religion and politics.¹⁸⁹ This is equally true in *An Analytical Inquiry*, in which he writes even more generally on aesthetics than in the book’s predecessor. On the sublime, Knight writes little in terms of landscape design. However, in *The Landscape* we find two notable mentions:

So the rude gazer ever thinks to find
The view sublime, where vast and unconfined.
‘Tis not the giant of unwieldy size,
Piling up hills on hills to scale the skies,
That gives an image of the true sublime,
Or the best subject for the lofty rhyme;
But nature’s common works, by genius dress’d,
With art selected, and with taste express’d;
Where sympathy with terror is combined,
To move, to melt, and elevate the mind.¹⁹⁰

And in low filth, which foul disgust excites,
Finds the sublime, which awes and yet disgusts.¹⁹¹

Here we find the two predominant modes of the sublime that Knight employs within his theories and in the Picturesque. Both are common positions during the 18th-century English tradition: the perception of unfathomable scale in the landscape beyond recognition leads to an elevation of the subject via awe; and that which we find terrifying and disgusting yet beyond being able to harm us instead gives a feeling of awe. There is nothing in such encounters that is inherently sublime, for Knight there is no sufficient or necessary cause for sublimity at all.¹⁹² Knight translates the sublime into a personal experience based on association: some may find the raging sea sublime as it does not strike them with *fear* but instead terror – though this may leave them at any moment at which point any pleasure dissipates.¹⁹³

193 Ballantyne, *Architecture, landscape and liberty*, 149.
194 Ibid.
195 Ibid.
196 Ibid.

Ballantyne offers a useful insight into Knight’s approach to landscape design in relation to the sublime and the Picturesque, as Knight’s texts themselves are not as practical or inherently useful as his contemporaries. Knight differentiates between the mechanical skill of the painter and gardener and the acquired taste of an educated gentleman of the period. Much of his critique of the successful landscape designer Capability Brown lies on the foundation that Brown applied his skill in a mechanical, reductive fashion.¹⁹⁴ From Knight’s perspective, Brown did not have a liberal education and was incapable of developing work that allowed for subjects to adequately associate ideas with a landscape. Whereas Brown heavily modified a landscape through design, Knight instead altered sparingly only to enhance an existing character, leaving many of the modifications over time to occur through landscape processes.¹⁹⁵ Knight considered that Brown delivered an inappropriate (physiological) response via the landscape, whereas in his theory appropriate (psychological) responses were derived from one’s taste (background, culture, gender, class, education, etc.).¹⁹⁶ Knight’s conception of landscape aesthetics was permanently entwined in religion and morality, leading his sense of landscape sublimity to always be a subjective and mental one.

Ballantyne points to the examples of Knight’s estate at Downton and the Lake District where noted poet on the sublime William Wordsworth grew up. The former involves “a human scale of involvement” whereas the latter contrasts with “sublime indifference”.¹⁹⁷

Fig 3.10. “Plan of Portion of Park System from Common to Franklin Park”. Olmsted and Eliot Landscape Architects. 1894. <https://iiif.lib.harvard.edu/manifests/view/ids:3043353>. Provided by Harvard University.

197 Andrews, *The Search for the Picturesque*, 44.
198 Ibid., 45.
199 Ibid., 44. Emphasis added.
200 Barbara Maria Stafford, "Rude Sublime: The Taste for Nature's Colossi During the Late Eighteenth and Early Nineteenth Centuries," *Gazette Des Beaux-Arts* 87 (1976).

The 18th Century Landscape Sublime

Despite the differences between Price and Knight, they both represent active attempts to develop a practical sense of landscape aesthetics of the sublime (and by extension the Picturesque) through creation itself. The sublime presented a challenge to these designers in how it could be brought into the space of the designed garden. This tended to exclude the literal scales of infinity and ceaseless uniformity, also ruling out the sublimity of extreme weather events. Given a garden's spatial and temporal extents which inform certain limitations in the designer's immediate actions, Price, Knight, and other designer-thinkers were forced to turn their attention to landscape elements that could more readily be assembled or edited into something sublime. Therefore, we find rocks being such a central part of these gardens as they disrupt the individual due to the deformity, scale, extent, and materiality. Constructed grottos or altered rocky outcrops feature heavily, particularly in Hawkestone, designed by the Hill family during the 18th century, which features multiple examples. Malcolm Andrews attributes rocky, mountainous scenes as the most sublime in these 18th and 19th century landscapes.¹⁹⁸ He further writes that " 'agreeable horror' and 'pleasing melancholy' are nourished by images of decay, by monstrous, broken, and irregular forms, in both natural scenery and the works of man."¹⁹⁹ This *agreeable horror* and *pleasing melancholy*, as we saw prior, is a hallmark of Burke's sublime. Andrew makes one further comment on the sublime as approached by these designers: it was experienced as a "seiz[ing of] the mind *before* it can collect its thoughts".²⁰⁰ By this, he does not mean a violent interruption but an almost wilful letting go of ready-made ideas. Here he turns to an essay by Barbara Stafford that suggests that we can recognise the sublime as *chaos*; a letting go of control and moving beyond our common sense to open to something greater.²⁰¹

Fig 3.11. "Franklin Park (Scarboro Pond)". Ed Lyons. 2016. <https://flic.kr/p/MqbgfB>. CC BY-NC 2.0.

201 See the following for commentary on British aesthetic tourism. Andrews, *The Search for the Picturesque*.
202 Nye, *American technological sublime*.
203 Ibid., 1.
204 Ibid., 3.
205 Raymond J O'brien, *American sublime: Landscape and scenery of the Lower Hudson Valley* (New York, NY: Columbia University Press, 1981), 106. cited in Nye, *American technological sublime*, 3.
206 Nye, *American technological sublime*, 8,12-13. See also Elizabeth McKinsey, *Niagara Falls: Icon of the American Sublime* (Cambridge University Press Cambridge, 1985), 251.
207 Nye, *American technological sublime*, 8.

The Techno-Natural Sublime

The 19th century saw a change in aesthetic taste, theorisation, and designerly practice where the picturesque took a thorough hold in both British, European, and later American culture. The translation of this largely British aesthetic concept of the sublime, beautiful, and the Picturesque to the frontier landscape of North America led to a renewed interest in both thinking and application. Just as the interest in the picturesque created a robust tourism industry in Britain, in large part because of William Gilpin's guidebooks, the vast and varied landscapes of the fledgling United States of America fostered an interest in tourism for the sublime.²⁰² David E. Nye describes the application of the idea of the sublime to the frontier landscape in *American Technological Sublime* (1996).²⁰³ He suggests that the American landscape is so Sublime that "had no theory of the sublime existed, Americans would have been forced to invent one", and by the 19th century could no longer be considered a copy of its European counterpart.²⁰⁴ This aesthetic concept was a vital component of the fledgling nation's identity as it modelled itself after the ancient democracies of Rome and Greece, with both the objects of experience and the experience itself being held high as ideals of the State.²⁰⁵ These ideas were also slower to arrive in the United States, creating a lag in aesthetic thinking compared to Europe which in turn led to different forms of tourism.²⁰⁶

Whereas the picturesque tours of Britain occurred before mass transit, the American Sublime tours coincided with the development of vast canal and rail transport systems, ferrying masses of people on frequent timetables. Visitors to Niagara Falls struggled to experience such a sublime landscape, beaten out by crowds of people or having the encountered lessened by the increasing amount of visual representations available to the public.²⁰⁷ The emergence of the American Sublime is a time where scenes of extraordinary experience are readily reproduced and distributed, leading to what Nye calls the "popular sublime". This created a cultural hunger for the next discovery of sublime experience, which over the 19th century transitioned from natural scenes to technological marvels such as the railroad system, bridges and skyscrapers, and the electrified city.²⁰⁸

There is nothing necessarily novel at the fundamental level within Nye's model of the American sublime. It still involves the traditional hallmarks of wondrous elevation and awe felt by the subject in the face of a scene that vastly outstrips their ability to comprehend its scale, uniformity, or magnitude. So, in this area we will not address Nye's text, instead, we will focus on a single key aspect that relates to this research: the translation of the technological sublime to designed landscapes.

208 Whilst there were large parks emerging in urban centres in Europe, these were often botanical or sensory gardens, with the few exceptions such as Parc des Buttes Chaumont and Birkenhead.

209 Meyer, "Landscape Architecture as Modern Other and Postmodern Ground," 26.

210 Ibid.

211 Anne Whiston Spirn, *Constructing nature: the legacy of Frederick Law Olmsted*, Uncommon ground: Rethinking the human place in nature, (New York, NY: W.W. Norton & Co, 1996), 104.

212 Phil Birge-Liberman, "The ghost of Olmsted: Nature, history & urban park restoration in Boston's Emerald Necklace" (Syracuse University, 2014), 178.

213 Ibid., 179.

214 Ibid., 180-85.

Olmsted and Technological Sublime Landscape

The large public works designed by Frederick Law Olmsted provide us with excellent examples to discuss how the technological sublime was translated to the design of landscapes, particularly large urban parks in major cities. This is an important distinction as it inherently involves a great degree of publicness which was lacking in the estate gardens of Britain.²⁰⁹ We can find the best example of this in the Emerald Necklace, Boston. The Emerald Necklace is a series of interconnected parks approximately 4500m² that began construction in the 1870s following Olmsted's success at Central Park, in New York City. The project was as ambitious as Central Park, requiring the city to acquire land through eminent domain, clear houses, and reroute sewage and storm-water networks to create enough space for the park and its water management systems. Whereas Olmsted at Central Park had laid an intricate drainage scheme and masterfully manipulated topography and vegetation in the creation of a seemingly natural image; at the Emerald Necklace Olmsted instead created what Meyer terms a "cyborg landscape" – a hybrid of man-made and natural systems that were primarily infrastructural.²¹⁰ The primary motivation for the scheme was not the creation of public space but instead to manage flood-control systems and improve water quality within the city in the form of a park. Meyer describes it as a "hybrid of machine and organism, engineering and landscape design".²¹¹

Fundamentally, the Emerald Necklace was neither visually nor functionally designed for its inhabitants. We could argue that it is the prototype for what will later emerge as Landscape Urbanism, despite being dressed in the visual trappings of the 19th-century park. The Emerald Necklace is fundamentally a project driven by the design of (natural) ecological systems as a form of urban infrastructure by marrying landscape design to civil engineering. The scheme relied on the partial diversion of the Muddy River through a series of designed salt marshes from the nearby harbour, allowing for floodwater retention and eventual release instead of leaving the city's impervious surfaces to be inundated. In doing so, Olmsted created the first man-made wetland system, a technological feat at the time.²¹² This was paired with a system of hidden conduits that diverted the remaining water from the Muddy River and Stony Brook to the adjacent Charles River, which allowed for a *civic* infrastructure to complement its *natural* counterpart.²¹³ The salt marsh system is highly controlled through the use of tidal gates and bypass conduits, along with precisely managed topographical levels to ensure it can manage predicted flood levels.²¹⁴ Alongside the infrastructure laid out by Olmsted, he also meticulously designed and managed the introduction of natural flora and fauna ecologies to complement the water management scheme. As the purification of water was critical to the scheme, Olmsted implemented what he had learnt from pre-existing New England salt marshes, planting a range of native species for functional and aesthetic purposes.²¹⁵ Anne Whiston Spirn describes this as a "landscape system" designed to accommodate the ecological flows of the city, public life, flora, fauna,

215 Spirn, *Constructing nature: the legacy of Frederick Law Olmsted*, 104.

216 Ibid.

217 Ibid., 111.

218 Nye, *American technological sublime*, 15-16, 22, 23.

219 "American Steam Navigation," *Hunt's Merchant's Magazine* 1841, 14. cited in Nye, *American technological sublime*, 38.

220 Nye, *American technological sublime*, 43.

221 Ibid.

222 Each of these forms an entire chapter of discussion in Nye's text.

223 Spirn, *Constructing nature: the legacy of Frederick Law Olmsted*, 104.

224 Ibid., 104-07.

225 Contemporary thinkers within SBD discourse make this argument about projects such as Fresh Kills. See: Pollak, "Sublime Matters."; Pollak, "Matrix Landscape."

and the wider landscape.²¹⁶ This was a far cry from what the city's civil engineer intended to implement in the form of a concrete flood basin.²¹⁷ That a designed landscape could achieve the same, arguably better, result was groundbreaking alongside the added benefits of it being parkland. Spirn reminds us that fundamentally Olmsted was a designer of *processes* which is reflected in his designs, preceding contemporary trends by over a century.²¹⁸

Why might we regard the Emerald Necklace as an example of an American technological sublime? Nye places great emphasis on novelty in the experience of the sublime, and so when many of the natural examples are heavily reproduced in media or frequently visited, the effect is lessened.²¹⁹ He suggests that as examples of the natural sublime in America lost their cultural impact, they began to be rapidly replaced by technological innovations. Here we have an important shift: the sublime was no longer evoked by something pre-existing, but by the continuous production of novel technology. The Erie Canal, 300 miles long, linking Albany to Buffalo, quickly became a tourist destination and an icon of American supremacy. The entire nation celebrated its opening in October 1825 as a technological feat beyond what any had considered previously. A journalist described it as "the crowning victory of mechanical philosophy of this nineteenth century."²²⁰ Technological achievements became a central piece of the national identity, and to celebrate them as public was to participate in a collective achievement beyond the measure of any one person. Here the sublime diverges significantly from its European counterpart: less a communion with nature, it became an experience of technological marvel *organised* for the public and the nation.²²¹ Nye writes: "the America sublime transformed the individual's experience of immensity and awe into a belief in national greatness."²²² In this, he uses several examples: railroads, architectural feats, industrial complexes, electricity, atomic technology, and space flight.²²³ Each of these is a technological feat celebrated as a shock that shows that everything that came before is immediately obsolete; each one celebrated as collective.

Returning to the Emerald Necklace, both Spirn and Meyer describe it as a technological marvel of landscape process design. The residents of Boston were aware of the rank landscape that existed as the Back Bay prior to Olmsted's transformation. That such a drastic change was possible shook the public's imagination, even more so when its flood management capabilities were realised in practice.²²⁴ Olmsted's design was so radically shocking to both the public and designers because it was an entirely new form of landscape design that yielded new techniques and knowledge with no prior built precedent.²²⁵ In the context of 19th-century American culture, we can regard Olmsted's scheme as a technological innovation, celebrated for its sublime infrastructural impact. That a designer could transform the undesirable Back Bay into a thriving ecology was unheard of, let alone its infrastructural capacities. Ecological process design for the first time became a technological feat – in this case, a sublime one.²²⁶

Fig 3.12. (Clockwise from top left) Bloedel Reserve. Meyer, Elizabeth K. "Seized by Sublime Sentiments." 32, 35, 36.

226 Kelly Shannon, "From theory to resistance: Landscape urbanism in Europe," in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 141.

227 Linda Pollak's writing on Fresh Kills in the mid-2000s perfectly highlights this shift towards treating the sublime as a conscious/reason driven experience Pollak, "Sublime Matters.," Pollak, "Matrix Landscape."

228 Greet De Block and Vera Vicenzotti, "The effects of affect. A plea for distance between the human and non-human," *Journal of Landscape Architecture* 13, no. 2 (2018).

229 Whilst Lyotard rarely uses the term affect the following are read as analogous: figure and figural, unbound intensities, and différend. Gaillard, Nouvet, and Stoholski, *Traversals of Affect: On Jean-François Lyotard*; Woodward, "Jean-François Lyotard."

230 See Shannon, "From theory to resistance: Landscape urbanism in Europe."

231 "Editorial Ethics / Aesthetics," *Journal of Landscape Architecture* 7, no. 2 (2012/12/01 2012); Ellen Braae and Lisa Diedrich, "Site specificity in contemporary large-scale harbour transformation projects," *ibid.*, no. 1; Ellen Marie Braae, *Beauty redeemed: Recycling post-industrial landscapes* (Birkhäuser Verlag GmbH, 2015); Ellen Marie Braae, "Approaching the 'As Found,'" in *Pamphlet Delta Dialogues* (gta Verlag, 2017); Claramunt and Mosbach, "Nature of a Landscape Project.," Claramunt and Mosbach, "Editorial.," Barbara Prezeli, "Towards and aesthetic of affect for landscape architecture/urbanism" (Beyond ism: the landscape of landscape urbanism, Alnarp, Sweden, Swedish University of Agricultural Science: Department of Landscape Architecture, Planning and Management, 2016); Maria Hellström Reimer, "Unsettling Ecosystems: aesthetic performances for sustainable futures," *Journal of Landscape Architecture* 5, no. 1 (2010); Rudi van Etteger, "Beyond the visible: prolegomenon to an aesthetics of designed landscapes" (PhD Wageningen University, 2016); Rudi Van Etteger, Ian H Thompson, and Vera Vicenzotti, "Aesthetic creation theory and landscape architecture," *Journal of Landscape Architecture* 11, no. 1 (2016).

The technological sublime in the form of designed landscapes would not present itself (with any sustained rigour) again in design discourse until the beginning of the 21st century when landscape processes became the dominant form of design and discourse within the landscape architectural discipline. We can think of the work exhibited by those within SBD as forming a new *American techno-natural sublime*, where technology operationalises natural processes at scales that are presentable to the public. Schemes such as the Fresh Kills Park, Living Breakwaters, and a multitude of brownfield projects unfolding across China all exemplify designers 'presenting the unrepresentable' processes and flows of various ecologies that create a sense of social and cultural amazement at their extent and magnitude, whether or not intentional. The formation of the technological sublime as a fundamentally American concept has allowed for much of the predominant SBD discourse to emerge from schools along the American east coast, where most of the 19th century infrastructural and technological monuments were established. This is in part why SBD, and in particular, Landscape Urbanism, has been regarded as largely a North American body of discourse, though one that has affected practice internationally.²²⁷

Contemporary Landscape Architecture and the Sublime

Contemporary ideas on the sublime within landscape architectural discourse have remained remarkably ill-defined in how they are both conceptualised and argued. This is likely in part because of a lack of close attention paid to the original writings from the 18th and 19th centuries. A general theme seems to exist of relying on the work of Burke or Kant in this matter. In examples where the sublime has been recently discussed within the discipline, it is almost exclusively reduced to examples of the mental faculties struggles to comprehend the scale of systems.²²⁸ There has been some interest in the sublime by those outside of the SBD oriented practices, although again it has perhaps not been examined closely.²²⁹ For example, in their argument against Meyer's turn to affect, De Block and Vicenzotti suggest a shift towards a post-modern sublime based upon the work of Lyotard and Timothy Morton, yet they seemingly either misinterpret or do not appreciate the employment of affect under various names throughout Lyotard's writing.²³⁰ In the opening two decades of the 21st century, there has been significantly greater attention paid to aesthetics, the sublime in particular, by those operating within the European academic context, possibly in part due to the different way in which SBD unfolded in that geopolitical arena.²³¹ The techno-scientific dominance seen in programmes in North America has not been translated to Europe to the same degree. Despite this, landscape-aesthetic oriented practices and domains of knowledge have still seen a downturn and lack of attention over this period as highlighted by several Scandinavian and Western European academics.²³² In this context, there has been a return of interest in the aesthetic of the sublime as a critical response to SBD discourse, emerging in different forms from different backgrounds. Elizabeth Meyer's essay "Seized by Sublime Sentiments: between terra

232 These two projects both attempt to operationalise the sublime through different means. Meyer is fundamentally aesthetic and deals with real landscape examples whereas Roncken is significantly closer to *SBD* discourse and does not address its fundamental issues in relation to site aesthetics.

233 Meyer, “Seized by Sublime Sentiments,” 20.

234 Ibid., 7.

235 Ibid., 11.

236 Ibid.

237 Though Lyotard rarely talked about landscapes, Meyer bridges this by referring to the original 18th and 19th century discourse on landscape sublimity.

238 Meyer, “Seized by Sublime Sentiments,” 15.

239 Meyer continues this use of aesthetics alongside ethical and moral action throughout the next two decades. Meyer, “Uncertain Parks: Disturbed Sites, Citizens, and Risk Society.”; Meyer, “Sustaining beauty: The performance of appearance.”; Elizabeth K. Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto,” in *Values in Landscape Architecture and Environmental Design: Finding Center in Theory and Practice*, ed. M Elen Deming (LSU Press, 2015).

240 Meyer, “Seized by Sublime Sentiments,” 19.

firma and terra incognita” along with the writing of Paul Roncken, Linda Pollak, Maria Hellström are important texts in this regard.

Elizabeth Meyer – Perceiving Unpresentable Processes

Meyer’s essay “Seized by Sublime Sentiments” (1998) remains arguably the most robust attempt within landscape architectural discourse to address the sublime through contemporary means.²³³ This essay was published as part of an edited celebration of Richard Haag’s work and looks specifically at Gas Works Park (1971–88) and Bloedel Reserve (1979–84), both located in Seattle. Conducting on-the-ground fieldwork at both parks, Meyer discovers that in both cases there is ‘something more’ to the landscape, something that escapes immediate perception. Through Lyotard’s work, she identifies this as the sublime, specifically the sublime of ‘deep time’ or the *longue durée*.²³⁴ Bloedel Reserve receives greater attention in her account as here she finds that “terra firma gives way to terra incognita; that which is visible is challenged by the invisible.”²³⁵ Here she finds that the landscape evokes an experience of the sublime, awe followed by fear, an unsettling experience that involves the landscape and the visitor coming together.²³⁶ Meyer emphasises that this sublimity is not just within the faculties of the subject, it involves a mixing of the landscape and subject producing an action; the landscape does things to the visitor.²³⁷

Meyer identifies in Bloedel Reserve (more so than Gas Works) the unpresentable forces that Lyotard had argued to be sublime.²³⁸ In this, she suggests that the unpresentable disrupts spatial perception by introducing a visceral perception of time, by which she means a bodily experience of open-systems processes and flows which she terms the *longue durée*, extending experience beyond space and the now out towards the milieu of the world.²³⁹ This suggests that the sublime is both a bodily experience, and an entry point into something larger, giving it moral and ethical utility. The water table that rises to the ground during the forest sequence at Bloedel is the same at Gas Works; the latter historically leaching contaminants into a system whose scale in space and time escapes our ability to represent it. Experiencing this sublimity allows for an opening up to environmental concerns through sensation instead of relying on factual knowledge.²⁴⁰ Meyer describes this sublimity at Bloedel as an experiencethat is “dispersed and episodic” where the “movement of the body unfolds the content of the work”.²⁴¹ This marks a significant component within Meyer’s description of the sublime as it moves it beyond just mere visual apprehension of an external object, and it being an experience driven through bodily encounter with the world and not purely the work of reason. Meyer does not exclude reason or thought, as shown through her employment of Lyotard’s model, yet she suggests that sensation, movements, and encounters in the shiftiness of landscapes must be considered seriously. At Bloedel the high water table creates a moss garden that oozes with moisture, present with every step, creating new forms of movement through connecting footsteps to the invisible flows of the far-reaching subterranean hydrology. Meyer also draws links between objects in

241 Ibid., 8.

242 Ibid., 19-20.

243 Ibid., 28.

244 Ibid., 11.

245 Ibid., 28.

246 Roncken, “Shades of the Sublime,” 91.

247 Ibid.

248 Ibid., 18.

249 Ibid.

250 Ibid., 261-62.

the designed landscape that express temporality beyond our ability to immediately know. Bloedel was previously commercially logged which Haag used to his advantage through design, leaving behind remnants through selective editing as well as highlighting other areas such as an alder grove that grew out of an area that burnt down in 1910.²⁴²

Meyer argues that these remnant objects act as mnemonic devices that are in effect examples of spatialised time, their extensity marking an intensity that we cannot fully know, yet we feel it. The large stumps left behind from the forestry period leaves Meyer in awe at the scale of time that this tree would have witnessed, embedding the thickness of time into extensive space.²⁴³ They make present the unpresentability of time, and in doing so leave us caught between awe and terror in the presence of a force that extends infinitely beyond our own being. For Meyer, this aspect of the sublimity present at Bloedel is much more pressing than the presentation of already existing ecological processes as the *longue durée* brings forth the infinite scale of time and the problem of binary oppositions such as ecology/culture.²⁴⁴

In bringing forth this post-modern sublime, based on Lyotard but appropriated for landscape architectural means, Meyer affirms the importance of landscape aesthetic sensibility in the design process. This form of the sublime was both critical of and echoed many of the same concerns that Meyer later had concerning the emerging SBD discourse at the time; particularly the desire to move past form as the key means of design outcome and to represent the unpresentable ecological processes and flows of a site.²⁴⁵ It demonstrates that there is no prerequisite of a certain extensive scale if it disrupts our ability to conceive of intensive bounds or limits.²⁴⁶

Paul Roncken – Sublime Landscape Machines

*“The structure of the sublime is, therefore, best categorized as an experiential sequence: a sensational drift aggravated by mental forces such as internal conflict or stress...”*²⁴⁷

Roncken’s doctoral thesis (2018) on the sublime presents the most contemporary disciplinary investigation on the matter, though it differs greatly with the work of this researcher.²⁴⁸ Roncken focuses his investigation on the sublime as a “negative aesthetic”.²⁴⁹ He describes a renewed societal interest in “wrong” or “ecologically degraded” environments which draw links towards experiences of the sublime.²⁵⁰ His research seeks to “derive specific landscape expressions to ‘better understand ‘negative’ aesthetics” in order to unpack the experiential structure of the sublime, largely through a historical and contemporary theory analysis alongside three student project case studies.²⁵¹

Roncken’s account of the sublime builds on the work of Longinus, Burke, Kant, and Thomas Weiskel, through which he determines

Fig 3.15. (Top) Dredge Landscape Park schematic plan. Roncken, "Shades of sublime". 244.

Fig 3.16. (Bottom) Dredge Landscape Park birds-eye perspective. Roncken, "Shades of sublime". 240.

Fig 3.13. (Top) Saline Landscape scheme birds-eye perspective. Roncken, "Shades of sublime". 239.

Fig 3.14. (Bottom) Saline Landscape saltmarsh dynamism diagram. Roncken, "Shades of sublime". 240.

Fig 3.17. (Opposite) Dredge Landscape Park perspective imagery. Roncken, "Shades of sublime". 245.

Fig 3.18. (Top) Ems Full Hydrig birds-eye perspective. Roncken, "Shades of sublime". 250.

Fig 3.19. (Bottom) Ems Full Hydrig oilrig structures. Roncken, "Shades of sublime". 249.

Fig 3.20. (Top) Ems Full Hybrid development diagram. Roncken, "Shades of sublime". 252.

Fig 3.21. (Bottom) Ems Full Hybrid tidal polder transect. Roncken, "Shades of sublime". 253.

251 Ibid., 263.

252 Ibid., 90-91, 116.

253 Ibid., 133.

254 Ibid.

255 Ibid.

256 Feeling is used here based on Eric Shouse's definition. Eric Shouse, "Feeling, emotion, affect," *M/C Journal* 8, no. 6 (2005).

257 Robert Gifford, "Environmental psychology matters," *Annual review of psychology* 65 (2014): 560.

258 Roncken, "Shades of the Sublime," 275.

259 Ibid., 202.

260 Thinkers of note in this area are Derrida, Kristeva, Deleuze, and Deleuze and Guattari.

261 Roncken, "Shades of the Sublime," 279-81.

262 Gilles Deleuze, *Nietzsche and Philosophy*, trans. Hugh Tomlinson (New York, NY: Columbia University Press, 1983), 4.

263 Brian Massumi, *A User's Guide to Capitalism and Schizophrenia: Deviations from Deleuze and Guattari* (MIT press, 1992), 10-11.

that the sublime is a "creative act of imagination and identification" during which "sensations are processed but are not yet resolved."²⁵² His account of these four thinkers is thorough and draws many of the disparate threads together into a cohesive description. Through this synthesis, Roncken determines that the experience of the sublime involves sensation as pre-conscious activity of the body that fails to be processed by cognition into something we can derive meaning from.²⁵³ Through Weiskel, this is described as "a breakdown of experiential habit" that momentarily disrupts the subject.²⁵⁴ Roncken provides further elaboration on this: "it may even be nothing more than a habit-breaking affect that awakens the creative capacity of an audience or individual".²⁵⁵ Roncken seems to be suggesting that landscape design's role is to develop styles or techniques to break experiential habits.²⁵⁶

In his argument, Roncken places a significant emphasis on the 'meaning' of a given landscape which appears to be a socio-cultural sense of meaning driven by subjective experience and recollection of feeling.²⁵⁷ Here he borrows from environmental psychologist Robert Gifford who suggests that an individual finds meaning in a place by finding similarities between it and their self through memories, values, thoughts, and preferences.²⁵⁸ Roncken offers this more succinct definition: "a sense of place enabling a sense of self", a process that the sublime breaks and demands a creative response.²⁵⁹ Further, he writes: "at the root of every sublime landscape is a disorder...one cannot rely on associations, only on immediate references...remembered facts or patterns".²⁶⁰ Roncken's use of 'meaning' and this latter example of 'immediate references' is concerning given the aesthetic material of the research. Whereas contemporary philosophy since the mid-20th century has moved past any sense of 'meaning' as it relates to semiotics, Roncken seemingly holds fast to it.²⁶¹ This approach to socio-cultural meaning and landscape is not unique within the discipline (another argument entirely), yet seems counter to Roncken's approach to determine precise causes of the sublime.²⁶² There seems to be little if any critical exploration of 'meaning' itself, with the argument presupposed on 'meaning' being the strongest or most beneficial relationship between a subject and environment, in turn making it the designer's obligation to craft.

To think 'meaning' more productively in terms of designing we might turn towards Brian Massumi's 'Meaning is Force' in *A User's guide to Capitalism and Schizophrenia* in which he writes: "meaning is precisely that: a network of enveloped material processes. 'A thing has as many meanings as there are forces capable of seizing it'²⁶³...meaning is: more a meeting between forces than simply the forces behind the signs...meaning is the encounter of lines of force, each of which is actually a complex of other forces."²⁶⁴ Massumi here uses 'meaning' as a substitute for Deleuze's 'sense' due to how attuned we are to it. Sense is the pulling forward of all past affectual empowerments in relation to a current and anticipated situation to determine its significance and possible actions. This is a distinctly different 'meaning' than the semiotic version employed by Roncken.

264 Paul A. Roncken, Sven Stremke, and Maurice P. C. P. Paulissen, “Landscape machines: productive nature and the future sublime,” *Journal of Landscape Architecture* 6, no. 1 (2011).

265 Ibid., 71.

266 Ibid. See Connolly’s doctorate for elaboration on abstract representational space in landscape design. Connolly, “An affirmative open systems conception of how to design landscape.”

267 Roncken, Stremke, and Paulissen, “Landscape machines: productive nature and the future sublime,” 72.

268 Roncken, “Shades of the Sublime,” 199.

269 Ibid., 200.

270 Ibid., 222.

271 Ibid.

In both his doctorate and in the article “Landscape Machines: productive nature and the future sublime”, Roncken employs this sense of the sublime in a way that seems counter to his ambitions.²⁶⁵ ‘Landscape machines’ are highly techno-science oriented design assemblages, focusing on literal mechanistic or ecological processes oriented towards production, input/output, flows, and efficiencies.²⁶⁶ Roncken, Stremke, and Paulissen equate these machinic processes to Olmsted’s work, notably the Emerald Necklace – though seem to fail to grasp that those works were designed in an ‘on-the-ground’ manner, contrary to the abstract-representational-space construction of these ‘landscape machines’.²⁶⁷ Whereas Olmsted’s work was highly aesthetically driven in its design process, the works proposed here are focused on “demand[ing] the utmost of our intellect and our biotechnological capacity to maintain and nurture”²⁶⁸ These are quite literally machines that pay little attention to human and social aspects of the landscape. Roncken later calls these investigations “serious landscaping” because of the need to embrace the aesthetic dimensions, yet this does not appear to have been done to the level of rigor that the research seems to require.²⁶⁹ Further, he commits to “fully understanding why and how humans interact with landscapes”, yet we can find little evidence of this.²⁷⁰ The sublime is explored through design by engaging with self-organising open systems, as opposed to objects, yet does not appear to embrace the human-organism aspect of these systems, stumbling into the same issues that SBD has not addressed over the past two decades.²⁷¹

Roncken argues that he is constructing a “performing sublime”, as opposed to its merely visual or scenographic past.²⁷² However, it appears from the three examples presented in his doctorate that this conceptualisation of a ‘performing sublime’ is entirely divorced from both life-on-the-ground and how human organisms interact with their environment. This is troubling considering the earlier emphasis that he had placed on determining the specificity of experience and his intention to discover just what breaks ‘experiential habit’. Three projects are presented: 1) a landscape machine that works with aquaculture systems to create ecological restoration; 2) a landscape machine actively built by dredging mechanics to form a continuously evolving park and eventual habitat formation, and 3) a landscape machine that restores an estuarine environment through highly technical processes. Three points are immediately apparent after surveying these projects.

Firstly, it must be made clear that in his description of these projects, Roncken mentions the ‘*sublime*’ only once – pointing towards the ‘sublime intentions’ of the first project that are supposedly evident by an aerial perspective showing the scheme. The experiential aspects of these designs are barely mentioned at all, and only in a very speculative manner. It appears that these schemes do not engage with the pre-existing or ‘real’ landscape at any stage of the design process. Secondly, these schemes do not seem to significantly progress past practices established by SBD in the previous two decades. All three case studies focus their drawings on either portraying the complexity

272 Ibid., 254.

273 Ibid.

274 Ibid., 256.

275 Pollak, “Sublime Matters,” 58-59; Pollak, “Matrix Landscape,” 93-95.

276 Pollak, “Sublime Matters,” 59; Pollak, “Matrix Landscape,” 96.

277 Pollak, “Sublime Matters,” 61.

of the various technical and natural systems employed or showing the sheer scale of the scheme from aerial imagery. Both of these types of representation are likely intended to display how ‘serious’ this landscaping is by showing how the designer has engaged with techno-science self-organising processes, which Roncken applauds in his discussion of these projects.²⁷³ Roncken argues that the sublime is articulated through an “almost inconceivable complexity and ‘simple’ [ecological process] initiating mechanisms”, not spatio-temporal relationships between an organism and its environment.²⁷⁴ His idea of the sublime being a ‘negative aesthetic’ appears, via the documentation and its annotation, to be largely articulated as a ‘graphic’ one. The drawings portray ‘non-standard’ landscapes as being parks or part of public life through drawings, yet without any connection to how these landscapes are *actually* experienced or what *actual* forms of sociality will occur within and without them.

Third, Roncken applauds the ability of these projects to push landscape design practice. This claim is in doubt when looking at the disciplinary trends of the past two decades. Let us remember that Roncken uses these projects as examples of design practices that can instigate this break in ‘experiential habit’. Yet we see that these practices are held as exemplary in the development of a “complex narrative of technological, chemical and ecological understanding”.²⁷⁵ Arguably, these practices are entirely commonplace within the contemporary discipline, especially those who practice in the landscape urbanism realm. It would seem that no practices have been developed within the selected projects or Roncken’s research that addresses the sublime *aesthetically*.

Linda Pollak – Rationally understood ecological sublime

Linda Pollak offers two pieces of writing on the sublime: *Sublime Matters: Fresh Kills* (2002) and “Matrix Landscape”, both focusing on Fresh Kills Park. In both accounts, she discusses the sublime as it relates to contemporary landscape design as a largely American affair with its links to expansionism and extensive scale.²⁷⁶ For Pollak, the sublime involves the incommensurable scale of space and time, and its ability to present the unrepresentable.²⁷⁷ In the case of Fresh Kills, the subject of both pieces of writing, what escapes thought and representation are (natural) landscape processes which have been arranged by the designers. She writes: “[to] engage with the sublime...has to do with the role of landscape ecology...in terms of the sublime, this ecological approach offers a means of addressing something too large or complex to even begin to be comprehended as a totality.”²⁷⁸

Here Pollak is arguing for a sublime that is strictly *not* aesthetic, but instead entirely intellectual. There is a distinction and subtlety that is present in Kant’s version of the incommensurable that is not in Pollak’s writing. Whereas Kant’s object defies our ability to think in totality to viscerally experienced as something alien or other; the ecological processes that Pollak discusses are not experienced in the same way, and in reality, are barely experienced at all - only the ripples of their hidden

278 Reimer, “Unsettling Eco-scapes: aesthetic performances for sustainable futures,” 29.

279 Ibid.

280 Ibid., 35.

281 Ibid., 36.

282 Hellström, “*Rappel au désordre: Architectural Aesthetics Between the Performative and the Sublime.*”

283 Ibid., 20.

284 Ibid.

285 Ibid.

actions. The only way we can, therefore, encounter those processes is via either a spatialising of them - which reduces them to a defined, thinkable object, or an intellectual conception of them which is strong tends *not* to be an aesthetic encounter.

Pollak’s conceptualism of the sublime as it stands now does not lend itself to concrete engagement via design. Embracing these connections seems to be a way forward in engaging with it in a designerly manner. Instead, Pollak’s writing reads as an attempt to re-purpose the sublime as an entirely techno-science concept to legitimise the extensive engagement with systems-design. It is worthwhile to include this argument as it does represent an argument within SBD that appropriates Lyotard’s sublime as an analogy for ecological processes (the unrepresentable). However, Pollak does not go far enough to make it something that designers can employ as a concrete, or even strongly technical, purpose – in fact, it runs counter to the original writings on the matter.

Maria Hellström Reimer – A Deleuzian Landscape Sublime?

Two articles by Maria Hellström Reimer also engage to some degree with the sublime in terms of contemporary landscape design. The most recent, “Unsettling Eco-scapes: aesthetic performances for sustainable futures” (2010) does so in a more limited manner and on a similar trajectory to Roncken.²⁷⁹ In this book, Hellström Reimer argues that the sublime is a negative aesthetic that evokes a pleasure not from order and rationality, but from violence and pain by broken categories and expectations.²⁸⁰ In doing so she also articulates the important role that aesthetics have to play in post-SBD landscape design practices, citing Meyer as a crucial example to follow.²⁸¹ Ecological design is not enough to create sustainable designs and instead must grapple with the social and aesthetics; the sublime is a critical part of this.²⁸² Whilst the sublime here is not delved into as part of the practice itself, Hellström Reimer affirms that it already plays an important role in landscape design.

Her prior article “*Rappel au désordre: Architectural Aesthetics Between the Performative and the Sublime*” (2006) offers a more concrete entry point on how the sublime can be operationalised by designers.²⁸³ She suggests that the sublime has been side-lined in 20th century discourse because it has been seen as a “politically compromised form of megalomania” due to its etymological connections to height and loftiness.²⁸⁴ To bypass this, she turns to Lyotard whose sublime is not lofty but the “everyday level of the unexpected encounter...an upfront confrontation with the World, a horizontal encounter, discomfiting and agitated rather than contemplative and pleasurable.”²⁸⁵ Further, it “agitates a fundamental insufficiency calling for the interaction with the ‘raw’ realm of Otherness.”²⁸⁶ Here the sublime is described as an encounter with a force that agitates our being by being something Other, it presents an uncertainty in our response to it. By suggesting it is a ‘horizontal encounter’ Hellström Reimer is arguing that the sublime does not emerge from any transcendent realm or via reason but from the

286 Ibid.

287 Ibid., 21.

288 See Deleuze, *Difference and Repetition*.. It appears that Hellström Reimer is using such terms in the Deleuzian sense, which is affirmed by her later work. Maria Hellström Reimer, “Cut-Make-and-Trim: Fast Fashion Urbanity in the Residues of Rana Plaza,” *Deleuze and the City* (2016).

289 Robert Smithson, “Frederick Law Olmsted and the Dialectic Landscape,” in *Robert Smithson: The collected writings*, ed. Jack Flam (Berkeley: University of California Press, 1996), 118-19.

flatness of (ecological) relations between entities. It is not determined by a thinking subject, nor does it emerge from the faculties. Instead, as Hellström Reimer writes: “the sublime opens up a sphere of events, of striking difference, of all singularities and deviating phenomena that ‘culture’, as normative aestheticization tends to oppress.”²⁸⁷

Here we find several important points. First: “the sublime opens up a sphere of events”. The sublime is no single object or operating within the mind. It involves any number of events in a pluralism of space and time. Events are temporal and involve any number of parts or relations required for it to occur. Second: “of striking difference, of all singularities, and deviating phenomena”. Hellström Reimer later argues that the sublime can be understood through differentiation.²⁸⁸ Singularities are expressions of the world, a monad if we follow Leibniz. They are expressions of difference itself – not ‘difference from the same’ but ‘difference-in-itself’.²⁸⁹ Hellström Reimer is arguing that the sublime is experienced via difference, through singularities, which we experiment with through perception and movement. Third: “that ‘culture’ as normative aestheticization tends to oppress.” Here we see that the sublime escapes common sense, and habit. It also escapes representation, calling forth the same argument that Robert Smithson put forward in his discussion of Central Park, NY.²⁹⁰

Hellström Reimer’s approach to the sublime here is perhaps the most interesting and useful in that it begins to engage with process/open-systems oriented philosophy. This differentiates it from others who focus on Kant or Lyotard which tends to focus on the object or the subject’s response to an object, an approach arguably better suited to architecture and not the wildly varying and distributed relations embodied in landscapes. It also points towards a Deleuzian approach to the sublime built on ecological relations between an organism and its environment beyond just extensity.

290 This is also important as it appears to be an incredibly rare example of a landscape architect engaging with the *aesthetic* dimension of Deleuze's writing.

Conclusion

This stratum has surveyed the sublime as it emerged in the 18th century as a central component to the fledgling discipline of landscape architecture. This was necessary to situate the sublime as an encounter to the design of landscape. Returning to the original thinkers has proven useful as they saw the sublime afresh, their struggles and thoughts recorded in a fashion that is often not inhibited by other material. We can see this in the case of the earlier thinkers on the sublime (Baillie, Burke, Beattie, Blair, Kant) who all tended to agree that the sublime involves an increase in one's power emerging out of an encounter. Following this we turned to the works of Uvedale Price and Richard Payne Knight, the noted landscape designers of late 18th–early 19th century Britain. Whilst their arguments turned away from the sublime toward the Picturesque, we can still readily find their thoughts on the sublime, or infer it based on the construction of the aesthetic models. Price is useful here as he continues Burke's mission to determine causes of aesthetic experiences through landscape design. What we find in the work of Knight is anti-Burkian rhetoric, shifting the sublime from pre-personal relations to the subjective mind of the individual. Further, he eschews 'design moves' in favour of ecological processes and the hand of temporal decay. In this, we find hints of what emerged as a 21st-century design aesthetic as it relates to sublime. The works of Olmsted established a technological sublime – most notably through the Emerald Necklace in Boston, though many of his works were technologically exceptional. Through Nye's interpretation, we can see how this form of landscape technological sublime emerged from the particularity of the American psyche and that it requires continual renewal and novelty to maintain its impact. Lastly, we turned to four contemporary landscape architectural designer-thinkers who present varying models of the sublime based on different philosophies. Meyer puts forth the most evocative account based on her experiences at Bloedel Reserve and the work of Lyotard, though it restricts the sublime to (natural) ecological processes and the thinking of the subject. Roncken's sublime has potential and yet falls into the traps of SBD discourse and practices. He argues that the sublime is a "habit-breaking affect that awakens the creative capacity of an audience or individual" and that his research aims to determine the precise relations of such an experience. Unfortunately, this does not unfold, and the major case studies of his doctorate do not engage with the sublime as he describes. The work of Linda Pollak is included here as it exemplifies a trend with SBD discourse to reduce the sublime to an intellectual movement and *not* an aesthetic experience by considering the scale of ecologies infinitely larger than the subject.

Lastly, the work of Maria Hellström Reimer offers a promising and novel take on the sublime by drawing links between landscape design and the philosophy of Deleuze.²⁹¹ Here she paints a picture of the sublime being a series of events, involving many parts or relations as far as they contribute to a difference felt by the subject. Further, her writing involves that which representation and culture tend to suppress, that

which is intensive, pre-personal, and involuntary – the realm of affects. This points towards the sublime being an encounter that can best be explored through Deleuze's philosophy, especially if we keep in mind Roncken's 'habit-breaking affect' determination. The findings of this stratum and what follows will be brought forward in Stratum 5 and 7 to formulate an account of the sublime that can be operationalised through and by design practices.

Fault 1

The Ramble, Central Park, NYC

Fig 4.22. The Ramble, Central Park, NYC.

292 Robert Smithson, "Frederick Law Olmsted and the Dialectic Landscape," in *Robert Smithson: The collected writings*, ed. Jack Flam (Berkeley: University of California Press, 1996).

293 *ibid.*, 126-27.

This Fault contains a case study of *The Ramble*, an area within Central Park, New York. In 2017 I spent an extended period of time conducting fieldwork throughout the whole park but was always drawn back to The Ramble. The drawings and text that follow this introduction are included here as an example of an *expressive account* of a landscape-doing – affects produced between an organism and its environment. This landscape is a particularly useful example as it is both well known within the discipline and likely to have been visited by those reading this document. The forms of representation (drawings and text) should produce a resonance within the reader between their own experiences and what is being expressed here – allowing a quick 'way in' to how this research describes and engages with the sublime as a landscape event.

Robert Smithson in his essay "Frederick Law Olmsted and the Dialectic Landscape" describes the picturesque dimensions of Central Park as emerging out of a fluctuation between the sublime and the beautiful.²⁹² The elements of the park we might call beautiful are more readily identifiable and describable; however, those sublime dimensions inherently tend to escape such accounts. Smithson talks through a brief account of The Ramble as one such example, describing it as a labyrinth that "out-labyrinthed labyrinths" where one can "walk aimlessly and idly".²⁹³ Situated more-or-less in the middle of Central Park, The Ramble plays a role that is the antithesis of the larger landscape, offering something else to the everyday of Manhattan. Instead of experiencing the hyper-public intensity and connectedness of the larger Park, what is found in The Ramble is a slowing down, a break from the world, a place and time separate from the rest where you can sink back into your own thoughts and just wander and move without thought.

Despite its location within Central Park, The Ramble sits outside the predominant movements and flows – everything seems to skirt around it. This leads to this densely forested peninsula upon a lake to escape the attention of most who visit the Park. Bracketed on either side by West and East Drives and hemmed in at the north by the sunken 79th Street and The Lake to the south, it is a relatively closed off and isolated landscape. Central Park's most popular attractions are located in the immediate or nearby vicinity, which produces a thrum of activity and life all around where the opportunity to share in the feeling of a massive publicness can be enjoyed. Despite being highly visible for much of the area south of 79th Street, due to Olmsted using The Lake to create a vista across to it, The Ramble escapes the eye of those participating in the wider Park. The dense and often dark vegetated massing of the peninsula recedes back from the eye and offers no visual avenue in for those on the outside. The Lake effectively separates the peninsula from the most public and traveled movement routes, save for two small bridges which are typically discovered unexpectedly. Even the smaller paths that provide access in the north seem to willingly skirt along the edges, offering no window into what lies within.

294 Charles E Beveridge, "Olmsted: His essential theory," (2002). <https://www.olmsted.org/the-olmsted-legacy/olmsted-theory-and-design-principles/olmsted-his-essential-theory>.

The following account unpacks what concrete spatio-temporal relations are involved in the labyrinthine nature of The Ramble which produces an internal area where all sense of time and space is muddled or lost. Given that Olmsted was consciously designing in ways to affect the unconscious mind of those experiencing his parks, we can clearly see this is an example of this under-appreciated dimension of his practice.²⁹⁴ Finally, whilst this case study does not progress into the realm of design, it should be readily apparent when reading it how adjustments in different relations could extend, multiply, diminish, or destroy certain affects and encounters.

The Ramble.

It sits just south of Central Park’s mid-point. The park itself is at the centre of Manhattan. The centre of life within the city. Central Park acts as a zone of escape within the megacity – an area where the intensity of New York seems to fade away or flip into something else – something slower and more public. The Ramble is the centre of this slowing. Even though it is bounded by both the West and East Drives, there is little sense of it as a destination or even as a feature within the park. It just feels different. Removed. Outside the life of the park. Robert Smithson describes it as a labyrinth that “out-labyrinthes labyrinths”.²⁹⁵ No major, or even strong minor, routes flow through The Ramble. It’s somewhere you go to feel a specific sense of removal from the city. The peninsula-esque landform somehow escapes being captured by the rythms of the park.

In comparison with the rest of the park, The Ramble is much less visited. Those who do come here seek something more, and by more I mean less structured, programmed, touristy. It would appear that those who enter The Ramble are those who perhaps saw this forest from afar and felt that this place had something to offer them; a place of quiet and respite, mystery, solitude away from the masses of people present elsewhere, or simply the opportunity to be within a more ‘naturalistic’ setting. This isn’t a place one just finds themselves in, it pulls those in who sense some potential.

295 Robert Smithson, “Frederick Law Olmsted and the Dialectic Landscape,” in Robert Smithson: The collected writings, ed. Jack Flam (Berkley: University of California Press, 1996), 126-27.

Fig 4.23. The Ramble location within Central Park.

A number of entrances surround the edges of The Ramble. Each has a different significance, or sense, within the larger system of the park. Most are less significant, removed from the predominant flows on the West and East Drives – obscured by vegetation, structures, or park maintenance.

Two main entrances are different – they suggest that there is something special or hidden here.

Fig 4.24. Entrance points around The Ramble.

Several hyper-public areas surround The Ramble, leaving it in something like an eddy – a quiet spot surrounded by activity. The Bethesda Terrace faces directly towards the dark, dense forest of The Ramble. Compared to each other, we can see that each offers something significantly different than forested peninsula. Each is wide open, sunny; people can be seen all around you. You go there for a connection to a sense of publicness.

Fig 4.25. Attractors around The Ramble.

13 days were spent in Central Park conducting fieldwork to learn something about this landscape. 13 days and there are parts of park I still didn't discover. 13 days and it feels like there are parts in The Ramble that remained a mystery.

The Ramble grabbed my attention early on. It drew me in through its contrast to the wider landscape. Somehow its local everydayness made itself known to this foreign investigator.

There was something about this area that seemed to make you completely lose sense of time and direction – a real mixing up of your experience.

Denial of reference to the exterior situation.

After extended fieldwork sessions what slowly became to be revealed was this zone, of varying intensity, where the whole world slows down, where you lose yourself in your thoughts, and just move.

In these zones it's only movement, your body just keeps moving.

The intensity increases toward the centre, bounded by less intense areas to the periphery.

This study unpacks what comes together to produce this slow zone.

Area within The Ramble where the world slows down
1:1500 @ A2

It felt like there were three levels within The Ramble – the lake edge, the dense, maze-like centre and the slightly more open top section where you can find some grassy openings.

There are three distinct levels with the topography, each one flattening out sharply after the slope that preceded it.

The paths move up these series of slopes, drawing movement up from the flatter lake edge to the interior 'plateaus'.

Within The Ramble your view and sense of space is heavily constrained. Bounded in on all sides.

Even what is in front of you is constrained as the path curves around corners.

The lake edge offers the only large views. But even these shift and are removed by the vegetation as you move.

Having your spatial perception constantly changing, flipping around based on your direction creates a rapid sense of 'spacelessness' once you are on this middle plateau.

Based on recording the conditions as I moved through, the vegetation is mapped based on its ability to constrain the sense of spatial extent via density and darkness.

The vegetation changes drastically within The Ramble's interior.

A patchwork of different species and plant communities.

The result is remarkable.

This isn't an ecology of species.
It is an ecology of perceiving.

Wall-like Vegetation

Dense but see-through-able

No/Little understory

Vegetation Structure within The Ramble

1:1500 @ A2

Fig 4.29. Vegetation density within The Ramble.

Fig 4.30. Vegetation density imagery.

Relative shifts in vegetation and spatial perception

Areas where the topography strongly shifts your spatial perception

1:1500 @ A2

Fig 4.32. Topography-influenced spatial perception.

You take a corner and suddenly there is another. You can double back on yourself and not even know it. The landscape looks completely different from another angle, even if you had passed through there three times before that day.

It feels like an endless maze of pathways and intersections stacked atop each other.

The intersections within the middle plateau are so tightly stacked atop each other that it feels like you're constantly shifting direction. You don't consciously make decisions after a while,

instead your body just moves – following the topography and what you can see.

The Ramble quickly gets you spun around when you're moving within it.

25m radius circles drawn to represent 20 second walking time. Bolder circles represent a radius where at least 2 intersections fall within that radius

Density of Path Intersections and direction decision making

1:1500 @ A2

These mappings began on site through plan-based and photographic documentation. These were then sharpened up as several analogue A1 drawings on drafting film, later transferred to a digital format.

It became clear that the movement from the lake edge up to the middle plateau where the slow zone predominantly occurred needed further investigation...

Fig 4.34. Transect locations with the Ramble study.

Fig 4.35. (Top) Ramble transect 01 - section inset.

Fig 4.36. (Bottom) Ramble transect 01 .

The first of two transect began with onsite documentation. Several long and cross sections through the path began to document the shifts from the edge to the interior.

Just as with the mappings, this was expanded later in the studio via on-site documentation studies and other material.

It crosses a low-key bridge over the lake, taking you through a short stretch along the water's edge before directing you towards the interior.

Here you find that the path has been cut through a large piece of glacial schist, with a stone footbridge crossing above.

Fig 4.37. Onsite documentation within The Ramble.

Moving from the main circulation
of Central Park

Emerging from long
green tunnel

Views of the Manhattan skyline and
lake unfold ahead of you as the vege-
tation thins out

Number of people sharply drops as you
leave the West Drive

View of Midtown contrasts
with the scenic lake

Lake and vegetation focuses attention towards
the built skyline and the long view

Vegetation abruptly closes
on the sides and front

Space much more enclosed but with
slight views out to the lake

S_02

Vegetated 'windows' created by thin
tree trunks allow a certain framed
view out to the city

Walls twice as high as you, completely
enclosing the space

S_03

Turning the corner, the rock mass
immediately rises up on both
sides and pushes into the body

Fig 4.38. Ramble transect 01 - Section (A).

s high as you, completely
osing the space

S_03

corner, the rock mass
y rises up on both
ushes into the body

Rock bridge looms ahead
blocking what lies beyond

S_04

Sudden expansion in space,
topography and vegetation
push far out

Topography warps, folds and shifts
in all directions around you

S_05

Thin tree trunks with high
canopy exaggerates the
topography

Moving up the slope between
rising topography

Intersection point with no
sense of any direction

Path turns to stairs focusing attention
back on the bodies movement

S_06

Vegetation becomes denser and
darker as the path continues

S_07

Fig 4.39. Ramble transect 01 - Section (B).

s high as you, completely
osing the space

corner, the rock mass
y rises up on both
ushes into the body

**Rock bridge looms ahead
blocking what lies beyond**

Sudden expansion in space,
topography and vegetation
push far out

**Topography warps, folds and shifts
in all directions around you**

Thin tree trunks with high
canopy exaggerates the
topography

Moving up the slope between
rising topography

**Intersection point with no
sense of any direction**

Path turns to stairs focusing attention
back on the bodies movement

**Vegetation becomes denser and
darker as the path continues**

and the whole
up above you

d collapses and is pushed
n by the topography and
up from the ground

om lush vegetation and
ll on either side

**Bridge compresses the space
further by not revealing what
lies ahead - Anxiety creation despite
not being interested in a destion**

**Movement slows right down, walking
carefully, tentatively**

**Sudden release of pressure
as you move past the bridge**

Attentiveness moves out to the shifting
topography - can feel how it shifts ahead
and beneath you

**Complete loss of any internal
and external relations**

Have to make a decision with
no destination in mind

**Slope pulls you up hill
away from the
imposing rock mass**

Vegetation closes in on the right,
pushing the body against the rock

**Fluctuation between feeling the power of
the exposed topography and the vegetation
cutting off its relation to the body**

**Beginning to just walk on
cruise control now**

World gets you sink back into
your thoughts as it moves you
through effortlessly the
twisting and turning
landscape

Fig 4.39. Ramble transect 01 - Section (B)

Moving along the West Drive you get a glimpse of the bridge going across the little bit of lake that you can see. It's much lower than you and its direction is unclear – just disappearing off into the heavily vegetated area beyond.

As you cross the bridge you almost immediately feel like you've left the park behind. You don't feel like you're in a massive landscape at all, everything is closed in around you. The views of the lake pull you around to the path that follows the water's edge. The intermittent glimpses across the lake create a sense of alternating relation between the close and far reference points. Each time it opens up you stop and look out, just looking at what lies beyond.

The rising topography on the left pushes your attention out toward the lake and skyline beyond.

Fig 4.40. Ramble transect 1 study assemblage (A).

The path quickly turns left, at which point you immediately lose, and forget, any sense of what exists outside your immediate surrounds. Immediate enclosure on what feels like all sides and directions.

The topography folds in around the path. Its form or and surface is hidden by dense low-lying vegetation except for the rising slab of schist in front. It emerges out of the side of the path, reaching up to stone bridge which blocks the view of what is beyond.

Everything beyond the vegetation and bridge is completely obscured from view.

The tiny sliver of some sense of opening beyond the bridge pulls you in as the rising topography and vegetation breaks your relationship to what happened before. The sense of mystery, enclosure, and privateness – even though can't feel it yet – seems like an obvious potential.

Walking slows to a crawl through this crevice – tentatively and anxiously

Fig 4.41. Ramble transect 1 study assemblage (B).

You're pulled forward by a sense of curiosity in what lies beyond the bridge.

There is a sense of building tension or anticipation as there is no hint what lies beyond. All that is available is the sliver of view that unfolds as you approach the opening.

The slopes on both sides have become much steeper and now feel like they're almost pressing up against you – looming over the slim area between.

As you approach this point, about 4m from the bridge, you're held still for just a moment. Feeling squeezed on the sides, and blocked on the front, you stop and without thinking, decide that there is something beyond this point worth going to. Even though you don't know quite what it is.

The rock mass overpowers everything else...entirely **arresting the body** bringing it to a near stop

Fig 4.42. Ramble transect 1 study assemblage (C).

Emerging out from beyond the bridge you're immediately hit with a sense of 'constrained openness'. The sheer contrast of what you were experiencing only a few steps prior, to what this space is sort of shocks you.

Path options lie ahead but the topography pulls you up the hill

Vegetation wall ahead focuses attention to the sides

Thin, single tree trunks across the topography give expression to its shifting and warping form

Attentiveness reaches out to the topography shifting around you

Pressure from the crevice released as the landscape pushes away from the body

Vegetation pushes far back, exposing the shifting surface of the topography

Here you can feel the topographical shifts, it doesn't press into you but instead unfolds like a surface out the sides and ahead.

Several path options lie ahead, though it feels like you should follow the slope up to the right where the vegetation seems to thin and become more open – where you can see what is around you more.

Fig 4.43. Ramble transect 1 study assemblage (D).

Heading up the right-hand path, things aren't quite what you expected. The vegetation quickly becomes denser on your right, but maintains its expected thinness towards the left.

It feels like you're markedly higher here now than you were just previously at the bridge. The sense of space immediately feels wider than before.

The path ahead doesn't seem to lead anywhere in particular, just keeps winding and hiding its direction.

Time seems to slow. Your body orients back and forth from the dense and thin vegetation on either side. But what lies ahead very rarely seems relevant.

It'll come when we get there.

Just keep on moving.

Vegetation fades back leaving the topography dominant

The **weight of the exposed rock** draws the body and its attention towards it - so otherworldly

Topography rises up dramatically and is exaggerated by the thin single **tree trunks** meeting the shifting ground plane

Dense wall of vegetation **pushes** the body and attention to the warping and shifting topography

Fig 4.44. Ramble transect 1 study assemblage (E).

You keep moving. Not sure how far you've come or how long it has taken.

The topography and vegetation continues to shift, often radically flipping in steepness or density. It distorts your sense of space and direction as you struggle to find any consistent reference point or rhythm.

As you approach the intersection ahead you don't even think about where it may lead you, what each option has to offer, or where you're going in a larger sense.

You just keep on moving.

This far, not all that far in the larger sense, into The Ramble has already spun you around in space and time. It's a labyrinth of constant variation in all directions.

Fluctuation between vegetation and topography **shifts attentiveness** around from fore to middle ground

Exposed rock becomes apparent

Fig 4.45. Ramble transect 1 study assemblage (F).

Fig 4.48. Ramble transect 02 - Section (A).

S_02

S_03

S_

Understory disappears

Darkness beneath

Slope increases in gradient

Vegetation pushes out

Large open

Feel like you're part of something larger

Sense of sudden enclosure

Topography/rock begins to rise up on the side

Things start to open up a bit

Tunnel like enclosure

**Feels as though
down - space**

Coming from the publicness of the larger Park

Big views of the city

Darkness

**Can feel the topography
slipping into the lake**

More attentive to the immediate landscape and not the wider

Things begin to slow down

Slope pulls the body up instead of flat lake path

'Sink' back into yourself with the effort to walk up the slope

Atten
com

**Feel alone, away from
the public - connected
to landscape**

Darkness pulls you through into it as you lose sense of depth

Vegetation abruptly rushes in cutting of external relations

Attentiveness shifted towards the wider landscape and city

**Tend to be oriented towards
wanting something quieter
than the ultra-public Park**

Fig 4.48. Ramble transect 02 - Section (A)

Fig 4.49. Ramble transect 02 - Section (B).

Fig 4.49. Ramble transect 02 - Section (B)

The darkness of the vegetation and slope ahead of you pushes you towards the right, following a path that runs along the edge of the lake. As soon as you take this path the topography on your left rises up, exposing the glacial schist rock the entire landscape is built on. As the topography rises up it begins to feel as if it is sliding down into the edge of the lake, which cannot see but you can feel it just beyond the vegetated edge. Trees either side arch over the path creating a tunnel-like effect, restricting your attentiveness to the smaller material and bodily shifts present. The topography and vegetation press into the body creating a closed-in world.

Vegetation immediately encloses the space

Density and darkness of the vegetation removes most external relations

Shifting from long view and form to texture and visceral qualities

The vegetation looms over and all around you, pushing you onward

Immediately lose the sense of the publicness of the Park

A Y intersection follows, offering the flat coastal path or steep gradient that appears to lead into the heart of The Ramble. The slope pulls you up; it is the only option that seems right. The question of what lies at the top, to discover what The Ramble has to offer, may be answered soon. Very quickly the vegetation surrounding you changes. The understory fades away, being reduced to a few scattered shrubs and ground covers. The trees become less dense and more singular trunking, with their foliage higher than before, creating a consistent canopy high above. The effort required to walk up this path becomes noticeable, not a great exertion but enough effort that it gets you to sink back into your thoughts and become aware of them and how your body moves through this space. Things begin to slow down now, a shifting in your attentiveness and mindlessness of your movements and actions.

Topography and rock mass rise
up on your side

Immediately less people
around you now

Enclosed canopy focuses
you on your immediate
surroundings and relations

Intermittent view of the wider
landscape no longer
interesting or arresting

Vegetation and topography create a
tunnel – **pushing** you forward

Variety in topographical, **textural** and
visceral qualities forces attentiveness to these

Topography **presses into the**
body, drawing attention to it.

Can **sense** the lakes edge but not
see it...uneasy feeling

As you continue up the path the vegetation continues to push back and under and the mid-story becomes sparse. The single trunking trees scattered across the topography give expression to the shifting and warping slope that you're traversing. It feels like you're walking on a shifting surface, not sure where it goes or what lies ahead, exacerbated by the gradient of the path concealing what lies ahead. This attentiveness to the body and topography becomes the centre of your attention. By now you've left all traces of the massively public realm behind. The noise of the Park has entirely faded away leaving only footsteps and rustling of the foliage. Any relations to the external realm of The Ramble have been destroyed – and any relations to this interior space are constantly being destroyed and created as you move through this continuously shifting landscape.

Fig 4.52: Ramble transect 2 study assemblage (C).

The topography and the path begins to flatten out to the degree that the effort required to walk is not noticeable. Now you're just walking on cruise control – just moving with no thought – no destination or expectation. Whatever the world promised at the end of this steep path is no longer relevant or required. Here the canopy begins to drop in height to just above eye level, drawing the eye out to scan across this interior room created between topography and canopy. The warm, red leaf litter opens this space up even further, pulling attentiveness away from the body. The 'slowness' increases in intensity here, it's about just moving, just being in this space.

Vegetation pushes out revealing the sloping topography

Path gradient flattens out

Topography shifts all around you, revealing or cutting off perception of whats ahead

Little effort to walk now - attentiveness shifts to the shifting topography and vegetation beneath the canopy

You and the tree trunks and the canopy and the shifting topography

Just moving - cruise control - No destination or expectation

Left the public park behind entirely now

Canopy begins just above eye level – can scan and take in everything underneath

Warm, red leaf litter opens up the groundplane and draws the eye out

Vegetation pushes back far enough that it is largely no longer perceived as texture - form gives expression to the shifting topography

Can feel the topography slipping and falling away to the right

Eventually, the vegetation closes in again, bringing with it the density and darkness of the previous vegetated walls. All sense of the topography is lost, shrouded by foliage. Again, your world entirely collapses in on itself, shifting attentiveness towards the changes in foliage, the different textures and forms, the degree to which you can peer through, etc. As you progress through this vegetated corridor an intersection reveals itself ahead, but with no sense of any destination or expectation of what might be found, you just keep moving on cruise control, feeling your attentiveness and relations shift around you.

Sense of the topography drops off as the vegetation closes in

Opening canopy allows the upcoming intersection to be seen

Fluctuation in the connectedness between body, vegetation and topography

Attentiveness closes in to the body again as the wider landscape shrinks

Topography is perceived as flat - continuing to just move on cruise control

World closes in around you again, restricted by density and darkness of the vegetation

Vegetation begins to close back in sharply

Stratum 3

‘Systems-Based Design’ and the relation to the pre-existing

127	Introduction
127	Open-Systems Thinking and Design Practices
133	Datascapes
142	An Aesthetics of Flux
146	Conclusion

Fig 5.55. Remnant marks from extraction machinery on Main Bench.

296 Systems-Based Design (SBD) will be used to describe the wider disciplinary interest and practices embodied by these different terms. Where relevant, each individual term/movement will be used in the discussion of what is specific to it within the discipline.

297 Penelope Allan, “Feeling indeterminate: the experience and design of big landscapes” (Doctor of Philosophy in Landscape Architecture RMIT University, 2017); George Baird, “Ideology Wars Redux: A Commentary on Landscape Urbanism And the New Urbanism,” Log, no. 32 (2014); Burley, “The Emergence of Landscape Urbanism: A Chronological Criticism Essay.”; Connolly, “An affirmative open systems conception of how to design landscape.”; Andres Duany and Emily Talen, Landscape Urbanism and its Discontents: Dissimulating the Sustainable City (New society publishers, 2013); Karl Kullmann, “The landscape of things,” Journal of Landscape Architecture 13, no. 1 (2018); Barbara Prezlj, “Unfamiliar Territory” (Master of Landscape Architecture TU Delft, 2016), <http://resolver.tudelft.nl/uuid:9a79ad27-6d9f-4d68-9648-5832d0edd8cd>; Julian Raxworthy, “Novelty in the entropic landscape: Landscape architecture, gardening and change” (Doctor of Philosophy The University of Queensland, 2013); Ian Thompson, “Ten tenets and six questions for landscape urbanism,” Landscape Research 37, no. 1 (2012); Van Etteger, Thompson, and Vicenzotti, “Aesthetic creation theory and landscape architecture.”; Vera Vicenzotti, “The Landscape of Landscape Urbanism,” Landscape Journal 36, no. 1 (2017). Meyer, “Sustaining beauty: The performance of appearance.”; Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto.”

298 Bruno Latour, Reassembling the social: an introduction to actor-network-theory (Oxford, New York: Oxford University Press, 2005).

Introduction

Landscape Urbanism, Process Discourse, Open Systems Design, Ecological Landscape Architecture.²⁹⁶ All these terms denote the largest shift the landscape architectural discipline has undergone since its formation. Landscape Urbanism is the most readily recognised of these terms for practitioners and academics. It is also the most provocative, most visionary, and most future-oriented, presenting itself enticingly. The forms of representation used are constructed with a level of craft that portrays a certain authority, suggesting a resolved possibility. Through this use of representation, a narrative has been constructed around Landscape Urbanism and SBD in general which asserts this is a *serious* form of designing that contends with the complexities of the world and all of its various dimensions. This narrative has recently been critiqued by those who argue that SBD fails to engage with life on the ground, aesthetics, the social, and other experiential aspects of landscape.²⁹⁷

Contemporary practice is best understood through what it produces and what was set in motion to bring it to this point. Landscape architectural practise is embedded within a context or design culture that both feeds off itself and pulls in whatever is relevant from the outside. Shifts in wider society tend to instigate shifts within design practice, which itself creates shifts in society. The full course of SBD has not yet been charted. Because of this, it is difficult to recount all the factors at play, as these only become perceivable in hindsight. Bruno Latour talks of ‘following the actors’ to rebuild an image of a social network to account for why things happen.²⁹⁸ Doing so for the current state of landscape architecture would involve a dedicated piece of research itself, an ongoing genealogy of sorts. Though this is not the goal here, it is useful to unpack the network of relations and actors present. This brief stratum seeks to introduce the major bodies of practice and thought that have influenced SBD to have a predominantly ‘techno-science’ approach to open-systems thinking in design. This approach has been heavily influenced by Manuel DeLanda’s reading of Deleuze, and Deleuze and Guattari’s work – central to SBD’s theoretical foundations – which downplays the aesthetic dimensions of their philosophy. The account here will provide some context as to why landscape aesthetics, the encounters between designer and site, has been paid little attention in dominant discourse. In exploring this, several practices or notions will be grouped into three bodies, where they will be briefly unpacked: open-systems thinking, datascares, and an aesthetics of flux.

Open-Systems Thinking and Design Practices

McHarg’s notion of scientific systems

It is worth remembering that the formation of SBD, namely landscape urbanism, was driven in part by an emergence of techno-science oriented form of architectural thought and practice, appropriating a certain form of Deleuze and Guattari’s work. This, along with a general

299 This is largely attributed to Koolhaas, MVRDV, Alex Wall, Ciro Najli, and Mohsen Mostafavi, amongst others.

300 Connolly, “An affirmative open systems conception of how to design landscape,” 148 - note 396.

301 Though there has been some cross-influence, Corner for example being influential in architecture.

302 Ian L MchHarg, Design with nature (New York: American Museum of Natural History New York, 1969).

303 Ian L MchHarg, A quest for life: An autobiography (New York: John Wiley & Sons, 1996), 161.

304 Creative Fitting is a term MchHarg invented to describe the relationship between employing data in the design process and the outcomes which continued to adapt and evolve due to their foundation on scientific principles.

305 Anne Whiston Spirn, “Ian MchHarg, landscape architecture, and environmentalism: Ideas and methods in context,” in Environmentalism in landscape architecture, ed. Michel Conan (Washington, D.C.: Dumbarton Oaks Research Library and Collection, 2000), 112.

306 James Corner, “Ecology and Landscape as Agents of Creativity,” in Ecological Design and Planning, ed. George F. Thompson and Frederick R. Steiner (New York: John Wiley & Sons, 1997), 84.

307 Ibid., 90.

308 Berry, Michael Victor. “Regular and irregular motion.” In AIP Conference proceedings, vol. 46, no. 1, pp. 16–120. AIP, 1978. Cited in Sanford Kwinter, “Landscapes of Change: Boccioni’s “Stati d’animo” as a General Theory of Models,” Assemblage, no. 19 (30/01/2010 1992): 59.

shift towards landscape practice as a form of urbanism, led to architectural ways of thinking and doing being translated to landscape architecture.²⁹⁹ The introduction of this knowledge underwent little to no critique in its initial translation and in doing so was largely adopted ‘as is’ from architecture.³⁰⁰ This is due in part to the fact that the initial momentum within SBD came from architects seeking to move beyond objects when dealing with the urban as they were being influenced by French philosophy appearing in American East Coast architecture programmes.³⁰¹

However, prior to this, we have the influential work of Ian MchHarg developed at the University of Pennsylvania throughout the latter half of the 20th century. MchHarg’s work proved fundamental in establishing that landscape ecologies could be both represented and designed with, culminating in the seminal book *Design with Nature* (1969).³⁰² Here it was the role of science to explain how the world works: “scientific expositions amplified the understanding of the miraculous in nature. No scriptural description of the supernatural could remotely compare to the scientific view.”³⁰³ MchHarg argued that nature and culture could only be brought harmoniously together and integrated through science. Science revealed the truth about a given landscape through its knowledge of ecology, geology, hydrology, and human statistics, leaving designing to operate in a “creative fitting” exercise where the best ‘fit’ for a certain activity or entity was determined by overlaying biophysical layers.³⁰⁴ However, MchHarg employed ecology in this sense such that it became the true point of reference for designers by merging “ecology as a science (a way of describing the world), ecology as a cause (a mandate for moral action), and ecology as an aesthetic (a norm for beauty).”³⁰⁵ This approach drove a wedge between *nature* – the concept of the natural world, of fauna and flora, and *Nature* – described by James Corner as “the amorphous and unmediated flux that is the ‘actual’ cosmos.”³⁰⁶ By externalising environments and making them an abstract ideal, MchHarg’s method places it into the same dichotomy of subject/object, unintentionally devaluing it to being regarded as a mere resource, commodity or system.³⁰⁷ Within a wider techno-science privileging of the rational, ideas of ecology are reduced to the quantitative, metric, flows, and measurable change over time.

Beyond scientific systems

Central to SBD is the notion that the world is constituted by a series of nested open systems, “continually leaking information to one another in such a way as to link them across a single ‘continuum of influence.’”³⁰⁸ Communication and exchange of matter occurs both internally and externally, allowing the transformation of the bodies within it and also of the system itself. Architectural theorist Sanford Kwinter’s translation of how the physical sciences regard these systems remains influential in the narrative of open-systems design thinking. The illustration included in his essay “Landscapes of Change” (1992) shows a series of actors (pegs) randomly scattered across a field, each connected to an above surface via a relational force (guy rope) and to other relations.

309 Ibid., 62.

310 Interestingly their work, particularly Mille Plateaux, was not well received in France upon initial publication in 1968. “In France, of course, with its long history of over centralization and bureaucracy, Deleuze and Guattari’s theories were pure science fiction. But on the other side of the Atlantic, they were uncannily realistic: New York, as it moved toward the 1980s, was the laboratory of capital and a natural destination for the two theorists, even though they’d never set foot in the city.” Sylvère Lotringer, “Better than life.(My ‘80s),” Artforum International 41, no. 8 (2003). cited in Brott, “Deleuze and ‘The Intercessors,’” 139.

311 Rem Koolhaas, Delirious New York: a retroactive manifesto for Manhattan (New York, NY: The Monacelli Press, LLC, 1994).

312 Emphasis mine. Ibid., 293.

313 Michael Feher and Sanford Kwinter, eds., Zone 1/2: The Contemporary City (New York, NY: Urzone Inc, 1985), 11.

314 John Rajchman, interview by Simone Brott in Brott, “Deleuze and ‘The Intercessors,’” 143.

315 Lewis Mumford, The city in history: Its origins, its transformations, and its prospects (New York, NY: Houghton Mifflin Harcourt, 1961), 29.

Any change in force across either the surface or guy rope drastically changes the entire system; in turn, the folded surface as seen from above is only semi-stable, conditioned by the relations occurring beneath.³⁰⁹ This form of physical sciences oriented thinking offers a form of legitimacy alongside allowing a dialogue between the language of design and science.

In *Deleuze and ‘The Intercessors’* (2010) Simone Brott describes the relationship between architecture and Deleuze and Guattari in the 1970s – largely within New York via the publications *Semiotext(e)* and *Zone* – and how their ideas were appropriated to describe conditions unique to the urban.³¹⁰ During the same period, Rem Koolhaas was developing *Delirious New York* (1978), which set the tone for the later architectural interest in urbanisms.³¹¹ Here he celebrated New York’s seemingly random occurrences: “The Metropolis is an *additive machine*, from which there is no escape...its existence has become like the Nature it has replaced: taken for granted, almost *invisible*, certainly *indescribable*.”³¹² Describing it as a *machine* is perhaps the beginning of the Deleuzian language and modes of thinking creeping into mainstream architectural thinking. Koolhaas was exploring a new form of urban aesthetics centred around rethinking the urban as having something like its own subjectivity, which was furthered by others in *Zone 1/2* (1985) where Deleuze and Guattari’s “City-State” essay was present. Kwinter and Michael Feher in the foreword describe the project at the time (not just of *Zone*) as “trac[ing] a genealogy of the city and [developing] analytic models based on its power to affect.”³¹³ However, as John Rajchman notes in his interview with Simone Brott, the larger discussion was not interested in aesthetic but instead towards science and the quantitative: “The *Zone* people, for me, didn’t think the problem of psychoanalysis was very important. They were very fascinated by science and the biophysical dimension of Deleuze...a focus on scientists and techno-scientists is what they found interesting”.³¹⁴

Kenneth Frampton, Peter Eisenman, Richard Serra, Daniel Libeskind, and Koolhaas all took part in *Zone 1/2* to varying degrees, but it is the later work of Koolhaas which, in its own way, exemplify the rhizomatic thinking being introduced by Deleuze and Guattari. *S,M,L,XL* (1995) furthered the project of *Delirious New York* in trying to account for the forces of capitalism at play in shaping urban life and architecture, and how the design projects of Koolhaas’s Office of Metropolitan Architecture (OMA) attempted to harness those forces. Similar to Lewis Mumford’s *The City in History* (1961), the book attempts to describe how “complex and unstable pattern[s]” that constitute cities are driven by spatial configurations leading to emergent transformations and interactions.³¹⁵ Whilst Mumford was documenting cities as they developed throughout history, the language used and the discovery of the urban being autonomous is in line with what Koolhaas describes in the metropolis of New York.

316 Sanford Kwinter provides an introduction to Koolhaas’s larger article in which he describes the methodological tendencies imbued in four of OMA’s projects. Rem Koolhaas, “Urbanism after Innocence: Four Projects: The Reinvention of Geometry,” *Assemblage*, no. 18 (1992): 85.

317 Kwinter in *ibid*.

318 Rem Koolhaas and Bruce Mau, *S, M, L, XL* (New York: Monacelli, 1995), 969. This essay was also reprinted in *Design Quarterly* in 1995. Rem Koolhaas, “Whatever Happened to Urbanism?,” *Design Quarterly*, no. 164 (1995).

319 Frampton draws these conclusions from Peter Rowe’s *Making a Middle Landscape* Kenneth Frampton, “Toward an urban landscape,” *Columbia Documents of Architecture and Theory* 4 (1995): 89-90.

An urbanism-oriented notion of open-systems

Koolhaas’ *Delirious New York* describes – for perhaps the first time in this level of detail – where the forces of capitalism, planning, space, architecture, and time come together to produce the indeterminacy of the urban and Nature. These forces are always in motion, ready to interact with each other, creating new ecologies and realities. OMA sought to grapple with these forces through design in a way beyond what metrics alone could tell them. Kwinter describes OMA’s method as *not designing*, it is to *never design*, but rather “unleashing, triggering, or capturing larger and already existing processes.”³¹⁶ Koolhaas and OMA were trying to work with the complexities of the world by engaging with the “material fact, the economic reality, or the technological brutality of rampant infrastructure systems...” which come together to produce, alter, or steer those processes.³¹⁷ This is further echoed by a short essay in *S,M,L,XL* by Koolhaas entitled *Whatever Happened to Urbanism* where he argues for a new form of urbanism:

*...it will not be based on the twin fantasies of order and omnipotence; the staging of uncertainty; it will no longer be concerned with the arrangement of more or less permanent objects but with the irrigation of territories with potential; it will no longer aim for stable configurations but for the creation of enabling fields that accommodate processes that refuse to be crystallized into definitive form...*³¹⁸

Koolhaas here signals a definitive shift in thinking on urbanisms as not being led by the objects of architecture, but the field or surface of landscape, by leading it with ‘territories of potential’. At the same time, Kenneth Frampton was also arguing for architecture to look beyond the object and engage with the concept of regionalism. Frampton, an English architect and architectural historian, sought to resist the universalisation and flattening of cultures by capitalism by building upon the philosophy of Paul Ricoeur. In the well-recognised essay *Towards a Critical Regionalism: Six Points for an Architecture of Resistance* (1983), Frampton turns to the efficacy of architecture to combat the homogenising forces of modernisation. Although the essay suggests that the solution emerges as architectural form, it suggests looking beyond form is necessary. The examples of light conditions, context, and especially the creation of topographical forms either creating or erasing “absolute placelessness” suggest that form alone cannot oppose the universal technique of modernisation.

In 1995 Frampton shifted from approaching the problems of regional specificity via an architectural lens to one of landscape. He writes in *Toward an Urban Landscape* that “The dystopia of the megalopolis is already an irreversible historical fact” and that to combat its homogenising forces “priority should now be accorded to landscape, rather than to free-standing built form”.³¹⁹

Fig 5.56. McHarg's Staten Island Mapping. Ian L. McHarg, *Design with Nature*, 106.

Fig 5.57. McHarg's Staten Island Mapping. Ian L. McHarg, *Design with Nature*, 114.

320 Charles Waldheim points out the weird contradiction in placing Koolhaas alongside Frampton given “strangely convergent positions” of their thoughts on capitalism. Charles Waldheim, “Landscape as Urbanism,” in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York, NY: Princeton Architectural Press, 2006), 42.

321 Kenneth Frampton, “Megaform as Urban Landscape,” (Ann Arbor, Michigan: University of Michigan, A. Alfred Taubman College of Architecture + Urban Planning, 02/12/1999), Lecture. https://taubmancollege.umich.edu/pdfs/publications/map/wallenberg1999_megaform.pdf; Shannon, “From theory to resistance: Landscape urbanism in Europe.”

322 James Corner, “Terra Fluxus,” *ibid.*, 23.

323 Czerniak is both an Architect and Landscape Architect.

324 Raxworthy, “Novelty in the entropic landscape,” 53.

325 Christopher Hight, “Portraying the Urban Landscape: Landscape in Architectural Criticism and Theory, 1960-Present,” in *Landscape Urbanism: a manual for the machinic landscape.*, ed. Mohsen Mostafavi and Ciro Najle (London: Architectural Association Press, 2003), 27.

326 Corner, “Ecology and Landscape as Agents of Creativity.”; James Corner, “The Agency of Mapping: Speculation, Critique and Invention,” in *Mappings*, ed. Denis Cosgrove (London: Reaktion Books, 1999); James Corner, “Eidetic Operations and New Landscapes,” in *Recovering landscape: Essays in contemporary landscape architecture*, ed. James Corner (New York: Princeton Architectural Press, 1999); Corner, “Terra Fluxus.” Charles Waldheim, “Aerial Representation and the recovery of landscape,” in *Recovering Landscape: Essays in Contemporary Landscape Architecture*, ed. James Corner (New York: Princeton Architectural Press, 1999); Waldheim, “Landscape as Urbanism.”

Like Koolhaas, Frampton is signalling the need to look beyond the object when engaging with the urban.³²⁰ Crucially, it is in the conclusion that we get a sense of where the landscape ecological thinking – inherited from McHarg – is reappearing in design discourse:

*I would submit that instead we need to conceive of a remedial landscape that is capable of playing a critical and compensatory role in relation to the ongoing, destructive commodification of the man-made world. Architecture must assume an ecological stance in the broadest possible sense... [and] that landscaped form as the fundamental material of a fragmentary urbanism is of greater consequence than the freestanding aestheticized object.*³¹⁵

Frampton’s argument for the landscape, and topography in particular, as central to new urban forms and ways of life is perhaps the key staging point from which the conceptual experimentation of Landscape Urbanism expands. In coining the term “megaform”, Frampton is attempting to give expression to how topographical transformations can affect the life of the city beyond what architectural objects are capable of; in other words, a landscape-driven urbanism. Two years after the publications of Koolhaas’ *S,M,L,XL* and Frampton’s *Toward an Urban Landscape*, the simmering rhetoric on urbanism as landscape culminated in the 1997 Landscape Urbanism symposium and exhibition, which Corner notes as being a moment of a truly hybrid practice.³²² Different forms of ecological thinking meshed, merged, and created new conceptions of what ecology is from this point by marrying the rational ‘natural’ ecological thinking of McHarg to the new forms of urban and social processes being uncovered by architects such as Koolhaas, Alex Wall, Linda Pollak, and Julia Czerniak.³²³ The outcome of this marriage is a shared interest in the processes of both natural and social/artificial ecologies and how urbanisms may appropriate these.

Datascapes

*“Ecology has become an algorithm.”*³²⁴

Objective and autonomous design processes

SBD discourse promotes a narrative that prior to its introduction, the discipline of landscape architecture was largely only interested in the visual and scenographic aspects of landscape. This narrative suggests that the picturesque past relied on visual composition and the designer’s subjectivities to produce landscape forms and scenes that caught the public’s attention, but *did* nothing; a “problematic past” if we are to believe Christopher Hight.³²⁵ Early SBD thinkers such as Charles Waldheim and Corner were especially concerned with how to go beyond the visual and engage with ‘how things really work’.³²⁶ With digital tools becoming more advanced and increasing in use throughout the 1980–90s, new forms of data recording and analysis allowed the world to be understood beyond the visual in more depth and complexity. It is worth nothing that the spatial display of this data was novel and compelling to designers who felt that they could see what was previously hidden

327 Susan Herrington, “The nature of Ian McHarg’s science,” *Landscape Journal* 29, no. 1 (2010): 13.

328 James Corner, “A discourse on theory II: Three tyrannies of contemporary theory and the alternative of hermeneutics,” *ibid.* 10, no. 2 (1991): 117.

329 Richard Weller, “An art of instrumentality: Thinking through landscape urbanism,” in *The landscape urbanism reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 81.

330 Raxworthy, “Novelty in the entropic landscape,” 49.

331 Mohsen and Najle’s edited book *Landscape Urbanism: a manual for the machinic landscape* explicitly does this in the title alone before one even opens the book.

332 Robin Dripps, “Groundwork,” in *Site Matters: Design Concepts, Histories, and Strategies*, ed. Carol J. Burns and Andrea Kahn (New York: Routledge, 2005), 71.

333 Corner, “The Agency of Mapping,” 251.

334 Corner, “A discourse on theory II: Three tyrannies of contemporary theory and the alternative of hermeneutics,” 117.

335 *Ibid.*, 118.

336 Corner, “Terra Fluxus,” 28.

and beyond design. With data now available to designers, a seemingly objective view appeared of how a landscape could be derived based on the systems in which they are situated, operate and function in ecologically. The ‘objective’ position associated with data allows a defensible position from which it could generate design. McHarg’s overlay mapping, prior to datascaping, operated in such a way that would later be critiqued for being overwhelmingly positivist.³²⁷ Such methods of designing become closed off by only engaging with their material in “the realm of the objective and effectively suppress[ing] or exclud[ing] any sort of imaginative vision or speculative free will.”³²⁸ Arguing for further interest in this use of data, Richard Weller claims “the design process becomes a question of computation, not semiotics, a question of negotiating statistical limits, not hermeneutic intrigues”, suggesting its ability to make designing credible.³²⁹

The designer’s allegedly subjective design methodology of composition was emphatically pushed aside in favour of the transparent and replicable methodology of computation and computational automatism. This desire to move towards objectivity further pushed the design process away from composition and intuition, edging ever closer to an “automatist model, driven by the computer.”³³⁰ The machine-like operation of this process is then translated to the landscape itself, eroding further aspects that cannot be reduced to computational function.³³¹ In doing so, the “special repository” of clues embedded within landscapes are disregarded or presented as being neutral for the (at times) abstract overlaying of data-driven structures and organisation.³³² Corner’s mapping techniques as originally envisioned would provide the necessary mediation between subjectivity and objectivity. They would do this through the extraction and plotting methodology which does not discriminate based on data source. Imaginative aspects of the landscape discovered by the designer are able to be harnessed through instrumentality similarly to other forms of knowledge. Corner saw this as critical to moving past a constructed history of the discipline’s alleged scenographic past, in order to fully engage and play a provocative role in the neo-liberal culture of the 21st century.³³³

Process over form (and built output)

Writing in 1991, Corner was already consciously aware of an unfolding practice that was more interested in design processes than the outputs. He writes: “The data themselves are privileged as the source and destiny of project...The final product never seems to be quite so significant as the process.”³³⁴ The design products of these process-focused interests tend to become self-referential and closed off from exterior relations, revelling in their efficiency but unable to engage with the “poetries of place.”³³⁵ In *Terra Fluxus*, Corner affirms the primacy of process within a Landscape Urbanism practice but does not exclude the importance of form in designed and built works – form is not interesting in itself, but for “the processes that flow through, manifest, and sustain it.”³³⁶ However, within the work produced by the programmes at the University of Pennsylvania, the Architectural Association and

Fig 5.58. Windmill Topography. James Corner, *Taking Measures across the American Landscape*, 83.

Fig 5.59. Hoover Dam and the Colorado River. James Corner, *Taking Measures across the American Landscape*, 73.

337 Raxworthy, “Novelty in the entropic landscape,” 38-39.

338 Ibid., 39.

339 “Intro,” AA School of Architecture: Digital Research Laboratory, accessed 12/02/2019, <http://drl.aaschool.ac.uk/about/>.

340 Connolly, “An affirmative open systems conception of how to design landscape,” 118.

341 Patrik Schumacher, “The Dialectic of the Pragmatic and the Aesthetic - remarks on the aesthetics of data-scapes,” in 150 Year AA Celebrations (Architectural Association, London, 1997), Lecture. <http://www.patrikschumacher.com/Texts/aesthetics.htm>.

later the Graduate School of Design at Harvard, it is evident that processes employed for designing have taken priority over what they considered ‘traditional’ built or proposed form. Here, when form was given attention, it tended to involve computational arrangements of buildings, mesh-like landscapes, or parametric facades. Problematising design process via representation, the post-modern era of architecture and landscape architecture shifts away from being tied to the project-delivery process involving documentation and maintenance.³³⁷ This approach to the design project highlights its generative ability to create novelty at the expense of other forms of material, so much so that, as Julian Raxworthy suggests, the drawings employed are arguably not representations at all. Drawings within the design process are a projection of something not yet in existence but provide the means to bring it into being. However, as Raxworthy argues, with contemporary practice’s tendency to become engrossed with design-generative processes, these drawings have become mere visualisations.³³⁸

The work presented in Ciro Najle’s and Mohsen Mostafavi’s *Landscape Urbanism: A Manual for the Machinic Landscape* (hereafter referred to as *Manual*) clearly gives priority to the iterative processes of design and its ability to generate numerous series of alterations via adjusting different parameters. The ability to produce design iterations is central to how most designers work as it allows the significance of each shift to be referenced against another, building upon the potentials of each before it. What tends to happen within such a process-oriented approach is that the parameters are shifted to test the process itself and not the design outcome. This is not unlike the parametricism seen within architecture in the last three decades spearheaded by Patrick Schumacher amongst others. Schumacher also founded the Digital Research Laboratory at the AA, which focuses heavily on the use of digitalia and ecologies of data, which no doubt has played a role in cross-pollinating the methods and agendas within design processes.³³⁹ Peter Connolly refers to this relatively closed-off system as *partitioning*, in which systems of representation operate within abstract space, allowing the division of spatial realms from one another.³⁴⁰ In effect what is being designed or experimented with in abstract space has no (direct) relation to anything else, although some cross-referencing may occur between realms if the representational machine is strong enough. Architecture as a discipline has developed an aesthetic body of knowledge based almost entirely upon this abstraction that allows expansive, but grounded, iteration through aesthetic functioning of programme.

Schumacher describes the ability for an architecturally “trained eye” to read off the plan all the social and spatial interactions provided by a historically built up “aesthetically condensed intelligence.”³⁴¹ For example, looking at a hospital’s floor plan, it is clear to a designer how the space and function of the projected form provided by linework will function. Hallways are read thus: assumed white and brightly lit with large double doors either side leading to rooms. This is commonly understood as programme, an “economical substitute for experience” as

342 Ibid. See the following for further exploration on programme: David van Zanten, “Quatremère de Quincy and the Invention of a Modern Language of Architecture by Sylvia Lavin,” (The Society of Architectural Historians, 1996).

343 Schumacher, “The Dialectic of the Pragmatic and the Aesthetic - remarks on the aesthetics of data-scapes.”

344 See Chapter 14 (1440: The Smooth and the Striated) in *A Thousand Plateaus* for their exploration of such spaces. Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (London: Continuum, 2004).

345 Weller, “An art of instrumentality: Thinking through landscape urbanism,” 79.

346 Corner, “Ecology and Landscape as Agents of Creativity,” 102.

Schumacher puts it.³⁴² This aesthetic translation works for architectural design as it can immediately operationalise this aesthetic-intelligence and work it into form. Fundamentally, as Schumacher points out, this relies on spatial-bodily relations, both experienced and learnt.³⁴³ Landscape design, however, tends not to function in the same manner. Attempts to partition the landscape in the same way to allow rapid experimentation and iteration often falls back upon what can be represented in abstract space, typically the purely extensive or non-affectual dimensions such as quantities, flows, and systems. This can be seen throughout the work of OMA, West 8, the students at the AA, and other prominent practitioners and institutes, most of which rely on the iterative difference of these metric and quantitative systems. Most struggle to bring a landscape’s affectual dimensions into abstract representational space and operationalise them in a similar way. The intensive or affectual (smooth space for Deleuze and Guattari) structure of a given landscape resists domestication, unlike the extensive structure of the world (striated space).³⁴⁴ Partly due to the struggle of bringing the affectual and intensive into abstract representational space, processes of change in time and space are fetishised and given priority in the design project. This has led to a certain mastery of this way of designing over the past two decades. Simulations of changing ecological processes, flows, and changes in space have been shown to shift how landscapes are designed and conceptualised by emphasising the differences produced by various types of processes. However, this inability to bring the affectual into abstract space and therefore highlight these processes has created an assumption over time that what is being engaged with is the ‘proper’ method to design landscapes.

Medium of Design Becomes Process

It is generally considered that SBD is more interested in ‘what things do’ instead of ‘what things look like.’ Richard Weller summarises this by championing “an ecological modernity, an ecology free of romanticism and aesthetics.”³⁴⁵ Designers have become increasingly aware and adept at engaging with processes which constitute ‘what things/landscapes do’. These processes are the intended design outcome rather than form or spatial configurations. There is nothing wrong with designing processes, quite the opposite. Open-systems thinking in design, particularly that which borrows from Bergson, Whitehead, Deleuze, and Deleuze and Guattari, highlights the fact that the world is not composed of relatively static objects and subjects, and that time and change is far more complex than what we initially perceive it as. But as noted above, what can be brought into abstract representational space tends to be (but not exclusively) only extensive and quantitative, devoid of the intensities that constitute the world. Arguing for a new ecological approach for landscape architecture, Corner suggests that designers should be less interested in built form and more oriented towards “the design of ‘processes’, ‘strategies’, ‘agencies’, and ‘scaffoldings’”.³⁴⁶ Each of these will have some form associated with them to exist in extension – and would hopefully still be designed with their use as public space fit for urban life – but the clear and provocative

FRESH KILLS PARK

Habitat Diversification Over Time

- 1 Section 314 - North Mound
 - 2 Section 2/8 - South Mound
 - 3 Section 6/7 - East Mound
 - 4 Section 1/9 - West Mound
 - 5 DSNY Staten Island waste transfer station
 - 6 DSNY construction staging area
 - 7 DSNY Staten Island District 2 Garage
 - 8 Stormwater basin
 - 9 DSNY construction operations area
 - 10 DSNY landfill gas and purification system
 - 11 DSNY Staten Island District 3 Garage and Borough Repair Shop
 - 12 DSNY leachate treatment plant
 - 13 DSNY LFG flare station
- FKL site boundary
- Solid Waste Management Unit boundary

FRESH KILLS PARK

Habitat Diversification Over Time

0 - 15 YEARS
early stages: preliminary plantings related to existing biomass and habitat

15 - 30 YEARS
developed stages: overlapping inter-plantings and "spread" of seed bank and species, establishing stratified habitat communities and diverse ecological matrices

Fig 5.60. (Opposite) Freshkills Habitat Development plan and section. Field Operations, Freshkills Park: Draft Master Plan, 31–35.

Fig 5.61. (Top) Freshkills Past and Present Field Operations, Freshkills Park: Draft Master Plan, 11.

Fig 5.62. (Bottom) Freshkills Development Staging Plans. Field Operations, Freshkills Park: Draft Master Plan, 31–35.

347 Meyer, “Sustaining beauty: The performance of appearance,” 9.

348 Raxworthy, “Novelty in the entropic landscape,” 56.

349 Connolly, “An affirmative open systems conception of how to design landscape.”; Hellström, “Rappel au désordre: Architectural Aesthetics Between the Performative and the Sublime.”; Kullmann, “The landscape of things.”; Meyer, “Uncertain Parks: Disturbed Sites, Citizens, and Risk Society.”; Meyer, “Sustaining beauty: The performance of appearance.”; Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto.”

shift to explicitly designing processes first is a profound change in the aesthetic relationship to landscape. It furthers the division between ‘mere form’ and ‘the real workings of the world’ represented by processes that Corner and others have attempted to translate from late 20th-century French philosophy. Meyer in her manifesto, *Sustaining Beauty*, recalls correcting a reviewer attending a design studio critique at the GSD over the outright dismissal of aesthetics: “he equated beauty and aesthetics with the visual and the formal, and in doing so rendered them inconsequential...He did not think that beauty mattered, or realise that appearance could perform.”³⁴⁷ The fact that aesthetics needs to be defended, or at least its importance re-corrected, indicates an issue within the discipline.

The narrative surrounding historical landscape design is that only the visual – or the ‘image of landscape’ – was dealt with. Humphry Repton’s Red Books are often cited as the prime example, showing ‘mere’ visual compositional differences. Whereas the works shown in the *Manual*, alongside projects produced by the GSD, University of Pennsylvania, the AA, and prominent landscape urbanist design firms, such as STOSS, all declare that the medium they work with is not the visual scene, form, or encounters of landscape, but the processes that constitute it. In contrast to more recent thinking on open systems and landscape processes, this form of process-based design medium has been scientifically driven and not understood by a human-involved bottom-up reading of the landscape in question. It reduces topography to mathematical abstractions; movements and desires to numbers and lines; and space flattened to the supposed gestalt view of the plan. This approach to quantifiable process limits the design project to the potential that computer modelling can leverage at the expense of specificity and singularities.³⁴⁸ Orienting the medium of landscape design towards processes is inherently a positive step forward and a powerful one, *if* it is able to engage with the world as a whole and not just the quantifiable or metric. However, as it currently stands, the predominant streams of thought and practice around SBD remain unable to shift away from *scientifically* oriented landscape processes and to open up design projects from the outset to *aesthetic* landscape processes. To do so, as argued by Meyer, and others, shifts not only the experience of those designed landscapes but also offers the potential for real and powerful ethical differences in society.³⁴⁹

350 Kwinter, “Landscapes of Change,” 58.

351 Ibid.

352 Ibid.

353 “A singularity in a complex flow of materials is what makes a rainbow appear in a mist, magnetism arise in a slab of iron, or either ice crystals or convection currents emerge in a pan of water.” *ibid.*

354 Henri Bergson, *Matter and memory*, trans. Nancy Margaret Paul and W Scott Palmer, 8th ed. (New York, NY: Zone Books, 2004); Gilles Deleuze, *Bergsonism*, trans. Hugh Tomlinson and Barbara Habberjam (New York, NY: Zone Books, 1991). Deleuze and Guattari, *A Thousand Plateaus*; Gilles Deleuze and Felix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia*, trans. Robert Hurley, Mark Seem, and Helen R. Lane (Minneapolis, Minnesota: University of Minnesota, 1983).

An Aesthetics of Flux

Change – difference and diversity

Central to discussions within SBD is the movement away from Cartesian representational space towards a model that aims to express and engage with change and difference. In *Landscapes of Change*, Kwinter notes that a Cartesian system allows nothing other than linear models of change within a system, condemning it to a “perpetual self-identity.”³⁵⁰ Kwinter highlights the potential in rethinking change, more specifically *change via process* and *change in process*. Change implies difference, a difference between what occurred before, what occurs now, and what might occur in the future. Under the Cartesian model, these changes all exist within the same datum under the same quantitative scheme – strictly quantitative, never introducing change in quality. Calculus grid-systems cannot fully model the changes across it as it restricts these systems to the tracking of bodies against a disinterested and inert quantitative mathematical space.³⁵¹ Instead, Kwinter (following a series of mathematicians) suggests the possibility of topology in design thinking through introducing singularities that have the capacity to “introduce real discontinuities.”³⁵² Singularities are, using Kwinter’s description, “critical values or qualitative features that arise at different points within the system depending on what the system is actually doing at a given moment or place.”³⁵³ This shifts form (and the world) as being inherently stable to transforming continuously, and what we recognise as form being a moment of stability arising from a qualitative shift. This aligns with what Koolhaas describes in *Delirious New York* and later in *S,M,L,XL* in regard to urban life and, when married with the ecological thinking stemming from McHarg, suggests a way to construct new possibilities through the ability for systems to change themselves, and for designers to work with and instigate specific changes. Much of this thinking is based upon the work of Henri Bergson – whose theory of duration argued for a continuum of change across time in the past, present, and future – and the notion of multiplicities, which was later developed by both Deleuze and his collaborative work with Guattari.³⁵⁴ However, this line of work stops short of how duration interacts with organic life and affects.

Change over time

An interest in the contrasting indeterminacy of landscape compared to the static nature of buildings fuels much of the theory and practice development with SBD. Central to this contrast is the temporality of landscapes embodied in their ability to change through a multitude of concurrent spatial and temporal scales. Whereas buildings are (relatively) static, landscapes are the fields upon which social, economic, biological, and technical processes unfold. Vegetation grows, seasonal climates change, phytoremediation heals damaged soils, wind and water erodes rock into a new form, different social activities play out across a park in response to the staging of different programmes. These and a seemingly infinite degree of processes of change have the ability to be designed in a more-than-human ecological sense. This change-

355 Julia Czerniak, “Challenging the Pictorial: Recent Landscape Practice,” *Assemblage*, no. 34 (1998): 110.

356 Corner, “Terra Fluxus,” 29.

357 Anita Berrizbeitia, “Re-placing process,” in *Large Parks*, ed. Julia Czerniak and George Hargreaves (New York, NY: Princeton Architectural Press, 2007), 178.

358 Raxworthy, “Novelty in the entropic landscape,” 57. Raxworthy suggests that this is a fundamental representational issue to Landscape Urbanism, even going so far as to question Ciro Najle’s understanding of the functions of ecology at the time of the *Manual*’s publishing (56).

359 Julia Czerniak, “Appearance, Performance: Landscape at Downsview,” in *Downsview Park Toronto* (Munich: Prestel Verlag, 2001), 16.

360 Given the obvious Deleuzian influence of early SBD thinking it is strange that his notion of life is almost immediately abandoned and not picked up again.

361 Meyer, “Seized by Sublime Sentiments.”; Meyer, “Uncertain Parks: Disturbed Sites, Citizens, and Risk Society.”; Meyer, “Sustaining beauty: The performance of appearance.”; Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto.”

362 Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto,” 36.

ability became embodied in SBD practice by the idea that landscape *is* process, opposing it to being previously understood and designed as a pictorial and disinterested scene.³⁵⁵ Change is both analysed and instigated by identifying the ecological actors and following the effects they produce in their interactions with other actors. These interactions and what they produce may initially seem random or chaotic but, as Corner suggests, they are “highly structured entities that comprise a particular set of geometrical and spatial orders.”³⁵⁶ Time runs as a narrative throughout these interactions, allowing past, present, and future relationships to be organised in the same moment. The emphasis placed on interactions demands that the material of design shifts from form to process, specifically processes of change across varying temporal scales.³⁵⁷ The processes of landscape tend to be reduced to a focus on the metric or given by external, often scientific, sources. However, because of the pace of natural systems compared to ‘human systems,’ there remains a void between the reality of this changeability and the simulations produced in the design process.³⁵⁸

Terms such as ‘emergence’, ‘flux’, ‘mutation’, ‘indeterminate’, and ‘adaptation’ all exemplify the interest in how landscapes change. These terms remain almost intentionally vague and general as if caught in a space of flux themselves. The highly influential 1999 competition entries for Downsview Park in Toronto saw a noticeable shift in design practices and language towards these terms. This was driven in part by the brief, but also by a shared excitement in the design teams, and wider disciplines, to address the questions raised in the Parc de la Villette competition nearly 20 years earlier. Czerniak notes that from the Downsview entries, those that provided a “provisional design” were of more interest than those that designed specific form, further signalling that the field of landscape architecture had shifted towards a process-based practice.³⁵⁹ Much of the representation within these schemes relies on the display of change across time through the use of complex custom graphic systems. Under this model, change over time relies on the difference of each state within a series where each state is understood effectively in relation to the extensive coordinates of an abstract space, as if these were discrete units removed from their situation. It reduces difference to a difference in function, often a biophysical notion of function like the ability for saltwater wetlands to absorb storm-surge, or the phytoremediation processes of a grassland. Approaching change and difference in this way quickly separates it from life and intensities even if it connects to the aesthetic-efficiency or indeterminacy of programme.³⁶⁰ This is not to say that such systems cannot connect to life and create new social, moral, and ethical connections to the world through change, much like Meyer has suggested.³⁶¹ In order for this to become reality, it must, as Meyer suggests, move beyond a Kantian disinterest and build the necessary bridges between design, aesthetics, politics, ethics, and the sciences.³⁶²

363 Czerniak, “Challenging the Pictorial: Recent Landscape Practice,” 119.

364 Ibid.

365 Ibid.

366 Stan Allen, “Infrastructural Urbanism,” in *Points + Lines: diagrams and projects for the city* (New York: Princeton Architectural Press, 1999), 52. cited in Julia Czerniak, *Downsview Park Toronto* (Munich: Prestel Verlag, 2001), 16.

367 Pollak, “Matrix Landscape,” 111,13.

Performativity

*“As presented, pictorial landscape favours appearance over function....”*³⁶³

In *Challenging the Pictorial*, Czerniak is highly critical of past approaches to landscape design that relied on viewing the landscape as pictorial, neglecting, she argues, its temporal, process, and experiential qualities.³⁶⁴ This argument rests on an exaggerated dichotomy between past and proposed practices. It would be naïve, for example, to think that Olmsted was neglecting the temporal and scientific aspects of Central Park or the Emerald Necklace, or Joseph Paxton somehow failed to engage with the experiential dimensions of Birkenhead Park as he explored its design. Perhaps it is not merely the fact that Czerniak and others view past landscapes as a picture but that they see them as something static and form based. She follows the previous argument with this to pose a binary opposition: “Alternatively, to view landscape as a process embraces chance, change, and circumstance within a spatial continuum.”³⁶⁵ Is it possible that perhaps the genuine desire here is for the spatialising of process as form instead of implicit processes or change hidden behind form itself? Czerniak’s introduction to *Downsview Park Toronto* seems to suggest that this is the case as she brings up that many of the competition entries formed their proposals by highlighting ecological systems and their performance. She quotes architect Stan Allen to describe the performance of these ecologies as the central “material practice” for landscape architecture in the effort to further distinguish form from ecology and process.³⁶⁶

Explicit performativity of landscapes is quickly tied to natural ecological performance and the role it often has in the remediation of a site. These processes can take on form quickly via vegetation, topography, and water systems through relatively standard landscape typologies, i.e. wetland, grassland, forest, etc. Performance in this sense tends to not include humans or the social to the same degree. ‘Experiential and social performativity’ cannot be arrayed across a site in the same way that natural ecologies can without the same rigour being applied to their analysis as has been done to ecological systems by outside (non-design) bodies of knowledge. For example, in her analysis of the 2001 Freshkills Park competition proposals, Linda Pollak allocates only a short paragraph in 18 pages of writing to discuss the social possibilities of this park, and none of the drawings presented by Pollak engage with the social or experiential dimensions of any proposal.³⁶⁷ However, she applauds the use of a mathematical matrix to document the complex interactions between scales across time and space driven by the biophysical remediation processes. Pollak and the proposals themselves place a heavy focus on the natural ecological performance of the designed landscape in part because such an ambitious undertaking had never been done before. It is unfortunate that a major civic landscape in a mega-city has its public realm reduced to “new programs” and “new pathways” in the scheme, whereas six other layers of design are introduced for the remediation alone. Anita Berrizbeitia, in the

368 Berrizbeitia, “Re-placing process,” 196.

369 Chuihua Judy Chung et al., Harvard Design School guide to shopping (Taschen, 2001).

370 Grahame Shane, “The emergence of landscape urbanism,” in The Landscape Urbanism Reader, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 59.

371 Ibid.

conclusion of her discussion on Freshkills, again re-affirms the primacy of performance over such aspects as appearance, the visual, spatial, and experiential qualities. However, her statement that only now it has “facilitated the incorporation of complexity in design” through frameworks, performance, and changeability is problematic.³⁶⁸

Other forms of performativity have been explored but have not gained quite the same traction as the explicit ecological processes. Koolhaas’ studies on shopping malls undertaken whilst he was teaching at the GSD are one such example where the architecture and its surrounding infrastructure sets up a field of social interactions and activities.³⁶⁹ Corner’s insistence on the social and ‘imaginary’ aspects of landscape design stand out above other responses, even going back to the 1997 exhibition where his scheme for Greenport Harbourfront, Long Island, stood out amongst others for his attention to social performance.³⁷⁰ The project, which was based around the annual raising and lowering of the sailing ship *Stella Maris*, was for Graham Shane an example of “‘performative’ urbanism” for its preparation of a surface for spontaneous alongside programmed activities.³⁷¹

372 See the following for Meyer’s exploration of cyborg landscapes prior to the emergence of SBD. Meyer, “Landscape Architecture as Modern Other and Post-modern Ground,” 26-32.

Conclusion

This stratum has highlighted a series of characteristic theoretical positions and practice tendencies which have led to SBD, and its constituent movements, to defer from the aesthetic material of landscape – or if they do attend to it, it is in a techno-science manner. These positions and practices revolve around an interest in what landscapes do, inherited from Deleuze and Guattari’s work cross-pollinating American East Coast architectural discourse from the 1970s to the 1990s. Landscapes ‘doings’ tend to be viewed via optics which highlight the technical and/or scientific processes involving natural ecologies which are often hybridised into a cyborg form.³⁷² Recently this position on systems, process, and change, has been challenged by several academics who champion landscape aesthetics, largely via readings of Deleuze and Guattari that do not rely on DeLanda’s restrictive understanding of assemblages.

The limitations in SBD’s approach to landscape aesthetics that have been highlighted here signal that there are several significant tendencies that need to be overcome or bypassed for the discipline to grapple with the sublime. There is a serious need to engage with *real* landscapes via fieldwork in order to document and unpack the intensive structures of encounter, the social, and the political found there. Techno-science readings of landscape processes, particularly the fascination with (a limited sense of) change, struggles to do this. Stratum 4 introduces several bodies of research which critique SBD’s lack of aesthetic engagement with landscape. This builds on a shift where the aesthetic material of Deleuze, and Deleuze and Guattari’s writing has been further embraced by philosophical and design researchers, different from the problematic readings by those such as DeLanda.

Stratum 4

Contemporary Aesthetically Oriented Landscape Design Practices

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Fig 6.63. Owhiro Bay Quarry rock face.

373 Corner, “The Agency of Mapping.”

374 Peter Connolly, “Techniques for documenting urban assemblages” (The 54th International Conference of the Architectural Science Association (AN-ZAScA) 2020, Auckland, New Zealand, 2020).

375 Meyer, “Sustaining beauty: The performance of appearance.”; Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto.”

Introduction

Following the dominance of systems-based design (*SBD*) within academia and in some areas of practice, there has been a reaction to the exclusion of aesthetic knowledge within design processes and discourse. Whereas Corner and other early *SBD* writers engaged with the works of Deleuze and Guattari and other process-oriented philosophers, they tended to not rigorously engage with its aesthetic dimensions. A glaring example is Corner’s failure to introduce organism-environment affects within *The Agency of Mapping*.³⁷³ Despite citing Deleuze heavily, he does not engage with one of the central principles of Deleuze’s philosophy: how bodies (human and non-human) affect each other by entering into relations as part of an assemblage. It is this aspect of Deleuze’s writing which has seen an increase in interest within the landscape architectural discipline through various design schools around the globe. Deleuze, affect, and the body have made a comeback after nearly two decades of anti-theory, anti-aesthetic, and anti-Deleuze/Guattarian discourse. Research conducted at RMIT, Victoria University of Wellington, TU Delft, the University of Copenhagen, Swedish University of Agricultural Sciences, UC Berkeley, Wageningen University, ETH Zurich, and the University of Virginia (amongst others) has argued for the re-orientation of landscape architecture back towards engaging with aesthetics. Whereas the aesthetics of affect have been somewhat embraced in the humanities and social sciences, it has strangely been less so in the landscape architectural and architectural fields, in part because of the pre-dominant readings of Deleuze by Manuel DeLanda who has been influential in design and social science fields.³⁷⁴ The language and a selection of concepts from the process philosophers of the 20th century have become commonplace in both disciplines, but the role of the organism (primarily a human one) has largely been left out of the open system discussion. The (affectual) aesthetic relationship between a human organism and space has been shelved in place of measurable design thinking or visible form-generation. But as Meyer argues, it is precisely this relationship that can allow for truly sustainable change within society, alongside creating new experiences and forms of social exchange.³⁷⁵

The writings of Peter Connolly, Christophe Girot, Marc Claramunt, Catherine Mosbach, Elizabeth Meyer, Karl Kullmann, and Barbara Prezeli form a group of contemporaries for this research, based upon their explicit interest in the aesthetic relationship between designer and landscape and a wider aesthetic interest in social relations in space and time. In each case, the design practice methods related to this aesthetic relationship will be laid out and examined in relation to representations or built work where possible. This is necessary to build a sharper image of a growing body of argument within landscape architecture which needs affirmation but also critique where appropriate.

376 Meyer, “Landscape Architecture as Modern Other and Postmodern Ground,” 16.

377 Ibid.

378 Ibid.

379 Ibid., 31.

380 Ibid., 3.

381 Meyer, “Site Citations: The Grounds of Modern Landscape,” 94.

A brief return to the 1990s

Prior to the dominance of *SBD* in the 2000s, several landscape designer-thinkers operated an underappreciated stream of thought that highlights an unconnected, but shared concern for the role that aesthetic material should play in the design process. These individuals attempted to articulate how the singular nature of site is discovered as an unfolding encounter which the designer must rise to the occasion of. Here the contributions by Marc Claramunt and Catherine Mosbach, Christophe Girot, Elizabeth Meyer, Karl Kullmann, and Barbara Prezeli will be briefly explored.

Elizabeth Meyer – Unspoken languages

Much of Meyer’s writing has revolved around landscape aesthetics, both to argue for their inclusion and specifically how to engage with this material in the design process. In “Landscape Architecture as Modern Other and Postmodern Ground” she argues that certain approaches and forms of representation, suited to architecture, tend to force a deferral away from the site itself, leaving it “always visible, but never heard”.³⁷⁶ Meyer breaks with what she argues results from modernity, which restricts landscape to “a single plane - the vertical frame of the scenic view or the horizontal frame of the cleared site”.³⁷⁷ In this Meyer stresses both the encounter with landscape, but also an issue of representation. Even the use of ‘landscape’ throughout discourses of both architecture and landscape architecture is problematic whereby the feminine ‘landscape’ is opposed to the masculine ‘architecture.’ This gendered binary, which Meyer suggests emerges through modernist discourse, sets landscape aside as the object to be “viewed for its pleasure...unseen, inessential, and ignored...unstructured, soft, romantic - landscape for the architecture.”³⁷⁸ In response to this Meyer uses the term *site* to encompass the highly structured, essential, and impactful material that landscape architects work with as their medium.

Representation then becomes a critical aspect of Meyer’s recovery of landscape design, as it is only through representation (and this is not restricted to drawings, it also includes text, spoken word, film, models, physical materials) that the site itself can be designed with any rigour. “The site speaks prior to the act of design.”³⁷⁹ The site itself is always operating, speaking its own language, and producing intensities whether or not a designer is there. This then suggests that the site itself plays an active role in the design process which Meyer summarises as “the intersection of geometry and geomorphology, of past site and present project, requir[ing] a dialogue between the site as a speaking figure and the design intervention relative to the site.”³⁸⁰ That the site plays such a critical role in the unfolding process of the design project is precisely what differentiates this discipline from other spatial and engineering fields.³⁸¹

382 See the following for examples of this scholarly pursuit of digital design techniques: Christophe Girot, “Topology and Landscape Experimentation,” in *The New Landscape Declaration: a call to action for the twenty-first century* (Rare Bird Books, 2017); Christophe Girot and Ilmar Hurkkens, “Robotic Landscapes - nature, computation, and the design space of autonomous terrain modelling,” *Landscape Architecture Frontiers* 6, no. 2 (2018).

383 Girot, “Four Trace Concepts in Landscape Architecture.”

384 Ibid. , 65.

385 Ibid. , 61.

386 Ibid.

387 Ibid. , 65.

388 His later writing on immanence remains problematic, and not as strong or grounded as this earlier material. Christophe Girot, “Immanent landscape,” *Harvard Design Magazine* 36 (2013).

389 Claramunt and Mosbach, “Nature of a Landscape Project.”; Claramunt and Mosbach, “Editorial.”

390 Claramunt and Mosbach, “Nature of a Landscape Project.”; Claramunt and Mosbach, “Editorial.”

391 Claramunt and Mosbach, “Nature of a Landscape Project,” 55.

Christophe Girot – Trace Concepts

Christophe Girot’s recent work is oriented around the use of technological advancements in aerial survey and LIDAR mapping of complex landscapes in the effort to gain higher fidelity material to work with in the design process.³⁸² In 1999 he wrote “Four Trace Concepts in Landscape Architecture”, an essay which described a mode of aesthetic relationship that unfolds across time and space between designer and site.³⁸³

Girot argues that the French approach to landscape design involves a set of intuitive practices based on an encounter with site, which provides the material for design processes to experiment with, often without external criteria. The four concepts of *landing*, *grounding*, *finding*, and *founding* describe the unfolding nature of these practices. For Girot, the encounter with a given site is the principal driving factor for the outcome of that project, it is the genesis from which each subsequent decision and event is built upon and unfolds from.³⁸⁴ In contrast to the design processes of architecture, the landscape design process always develops from what pre-exists, drawing as much potential from the existing landscape in both perceptible and imperceptible form. In Girot’s words, “The important thing is that attention is always focused on what already exists in-situ.”³⁸⁵ For Girot, the importance placed on what already pre-exists allows for the designer to “carefully and knowledgeably assess what needs to be recovered”.³⁸⁶ This functions differently, as Girot points out, from the other forms of evaluation that would be associated with technical-scientific analyses of site.³⁸⁷ Whilst he does not use the term *milieu* in this essay, it is arguably a term better suited to describing the situation of pre-existing forces and entities that the four concepts attempt to grapple with. The importance of bringing forth Girot’s four concepts and their implications for a landscape architectural design practise is that for a designer to engage fully with their material (the pre-existing site) then it requires this aesthetic encounter. Only this encounter can lead on to articulating and developing the series of criteria that emerges through an immanent process, one that unfolds through active experimentation with and on the site itself.³⁸⁸

Marc Claramunt and Catherine Mosbach – Starting from Scratch

The essay “Nature of a Landscape Project” (1999), and the editorial for the ‘Embodiment’ issue of *Pages Paysage* (2002) by Marc Claramunt and Catherine Mosbach describes perhaps the most sophisticated and succinct account of how landscape designing unfolds.³⁸⁹ Claramunt and Mosbach bring out and make obvious some of the rawness involved in design that often gets covered over with other material.³⁹⁰ They posit that this form of landscape design machine, or assemblage (though they do not use this term), is highly intuitive and follows and feeds off what is perceived and discovered throughout it. For them, such an approach involves “starting from scratch...from the blank page of human experience”.³⁹¹ In this, the human is not a distanced perceiving subject. Instead, the human operates within an “ecology of the mind” – an interconnectedness between mind, body, and the world that can-

392 Ibid., 59. This term ‘ecology of the mind’ is likely borrowed from Gregory Bateson who was influential for Deleuze and Guattari. Steps to an ecology of mind: Collected essays in anthropology, psychiatry, evolution, and epistemology (University of Chicago Press, 2000). Claramunt and Mosbachs thinking here was developed for a seminar focused on Deleuze’s influence in landscape design.

393 Bergson, *Matter and memory*, 19.

394 Claramunt and Mosbach, “Nature of a Landscape Project,” 59.

395 Ibid. , 58.

396 Ibid. , 57.

not separate out each element.³⁹² In this way, they perhaps draw on the writing of Henri Bergson, who also described this relationship in *Matter and Memory* (1896): “the brain is part of the material world; the material world is not part of the brain...My body is, then, in the aggregate of the material world, an image which acts like other images, receiving and giving back movement”.³⁹³ Such an ecology of mind accounts for whatever is relevant to the specific experience and the wider project. They write that: “the exchange of these matters (grey matter, emotions, etc.) must avoid the risk of there being any ‘clotting’ which might stop the tide of physical, intellectual or emotional phenomena.”³⁹⁴

The notion of the landscape project unfolding through an ‘ecology of the mind’ suggests two important implications: 1) that the designer’s mind is inherently connected to whatever is relevant to the particular problem at hand, whether that is scientific knowledge or the memory of the encounter with site; 2) that these connections happen pre-consciously, before any forms of rational thought processes that fit such information is categorised or muddled by cliché. This second point is of most interest here, as it stands somewhat outside the normative discourse on the role of site within the landscape design process, which often demands a certain critical distance and Kantian disinterestedness. What Claramunt and Mosbach propose, however, is something radically different. They write that:

*To understand a milieu is one of the reflexes in a landscaping project: as though before using one’s brain, there had to be a primitive relationship between one and the landscape, reproduced by hand, or thanks to a camera, on paper through the act of drawing or of producing a picture. The relation to the landscape concerns the whole being and all the space that surrounds it. Interwoven with virtuality, with what is not immediately apparent, interwoven with time and vital energy, the visible and present space is subjected to everything which is not there, human memory, vegetal, mineral and animal memory.*³⁹⁵

Claramunt and Mosbach highlight that the body and brain of an organism have the agency to participate in the world, affecting and being affected by other entities, without the requirement of a rational mind making conscious decisions. Importantly, if this relationship exists before ‘using one’s brain’ then it cannot be dismissed as being merely subjective. For Claramunt and Mosbach then, the role of design is to “go beyond the alternative of the geometric and the human, the intelligible and the sensitive...it is not a case of considering the landscape in itself, but what is opposed to it and within it...thus we hope to render visible what is inherent to the landscape”.³⁹⁶

397 Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto,” 30.

398 Meyer, “Sustaining beauty: The performance of appearance,” 6.

399 Ibid., 7.

400 Ibid., 16.

401 Elaine Scarry, “On Beauty and Being Just,” (Yale University, 1998), Transcribed Lecture. https://tannerlectures.utah.edu/_documents/a-to-z/s/scarry00.pdf. cited in Meyer, “Sustaining beauty: The performance of appearance,” 18.

402 Scarry, “On Beauty and Being Just.” cited in Meyer, “Sustaining beauty: The performance of appearance,” 18.

403 Meyer attributes her introduction to affect/assemblage thinking to Peter Connolly, although gives no introduction or context to how this occurred or what aspects she has appropriated from his work.

404 Meyer credits this to discussions with Connolly, where after discussion she revised her initial arguments on aesthetics and affectivity in this text.

405 Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto,” 35.

Contemporary Aesthetic Design Practices

Elizabeth Meyer – Championing the beautiful and the sublime
In *Sustaining Beauty* and its follow-up, Meyer argues that landscape architecture practice and theory need to move beyond the predominantly science-oriented aspects of sustainable systems design and embrace aesthetics as an equal part of the practice.³⁹⁷ Her concern is that disproportionately attending to the technical dimensions leads to failure in creating substantial societal change. Aesthetic concepts such as the picturesque, the sublime and beauty are “rarely discussed in the discourse of landscape design sustainability and, if it is, dismissed as a superficial concern.”³⁹⁸ Meyer suggests that for design to be sustainable it must embrace this aesthetic performance by “connecting it to the body and poly-sensual experience.”³⁹⁹

Employment of affect thinking
Meyer’s writing constructs a line of argument around the importance of aesthetics within contemporary landscape design, namely its ability to compose novel experiences and therefore change societal attitudes. . In *Sustaining Beauty* relies on the works of literary scholar Elaine Scarry to provide the means to conceptualise how beauty can be performative. Nature is inseparable from us as beings, making it a fundamental part of human life.⁴⁰⁰ Cliché and common sense, however, remove us or establishes barriers to seeing Nature operate. Scarry’s argument, however, is that when an individual encounters the beautiful what occurs is a “radical decentering.”⁴⁰¹ Decentring suggests a connection to something greater, a disruption of the subject/object relationship which structures an encounter. This disruption, according to Scarry, allows for a moment of connection to something greater beyond just subject and object, a connection to Nature which is structured by a passage of time. It is not an instantaneous event that can be sliced into discrete frames, it relies on a before, a present, and a future. The event instigates a different relationship to Nature than the moment before and is carried forward via memory.⁴⁰² Meyer relies on imagery of disturbed landscapes to suggest its potential.

The second part of Meyer’s argument, “Beyond Sustaining Beauty”, sees a shift in how the specifics of this ethico-aesthetic relationship between society and environment are articulated via an engagement with affect-thinking.⁴⁰³ Employing affect thinking as the framework provides Meyer with an aesthetic structure that points toward how it may engage with design. Such a framework looks beyond the visual aspects of aesthetics and connects directly to its performance in the world. Meyer breaks with the traditional employment of Deleuze and Guattari’s work in SBD by embracing the aesthetic dimension of their writing.⁴⁰⁴ Following the thinking of both Nigel Thrift, and Connolly, Meyer argues that affect-thinking allows the possibility to understand experiences of the world as affectual exchanges between bodies, where “encounters between people and places are exchanges between emotions, agency and energy.”⁴⁰⁵ Similarly, she cites Gregory Siegworth and Me-

406 Gregory J. Seigworth and Melisa Gregg, The affect theory reader (Durham & London: Duke University Press, 2010), 1. cited in Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto,” 39.

407 SBD tends to only be interested in the latter, revelling in the techno-science capacities to create constructed ecosystems through sustainable landscape design. Meyer’s argument to pair this with aesthetics was provocative and timely.

408 Meyer, “Sustaining beauty: The performance of appearance,” 18.

409 Peter Connolly and Shaun Rosier, “Species of More-Than-Human Design and Design Thought,” *Kerb Journal of Landscape Architecture* 28: Decentring (2020).Forthcoming

410 Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto,” 48-49.

411 Projects that use a notational scheme to map social interactions are commonplace with SBD practice, though they struggle to move beyond interactions in extensive, cartesian space.

412 Raxworthy, “Novelty in the entropic landscape,” 38-70.

413 Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto,” 47-48.

lissa Gregg, introducing affect as the “visceral forces beneath, alongside, or generally *other than* conscious knowing, vital forces insisting beyond emotion – that can serve to drive us toward movement, toward thought and extension”.⁴⁰⁶ This explicit setting aside of conscious thought allows for a degree of freedom to explore affects in design. They cannot be reduced to taste or emotion, nor readily dismissed as something lesser by scientifically oriented modes of thinking in design discourse. Employing affect-thinking allows for the sensations felt by a body to be followed and traced, bypassing claims of subjectivity by showing how bodies enter relations with one another and form affects in response. This strengthens the critical role of aesthetics in landscape design practice, particularly the beautiful and the sublime which without concrete techniques could be dismissed as subjective or lacking rigour.

The notion of a public Sublime and Beautiful
Meyer argues that performative aesthetics can change thinking and action in both individuals and society. Landscape architects should employ the beautiful and the sublime as a force alongside eco-technologies for sustainable landscapes to have any long-lasting impact.⁴⁰⁷ Moving sustainability away from the technical realm of the physical and social sciences suggests that designers can be, and should be, significantly more empowered to engage with their medium to affect *real change* at a societal level. Part of this is the deconstruction of subject/object or human/environment dichotomies through the construction of specific experiences in designed landscapes. Scarry’s notion of ‘radical decentring’ forces an individual or group to remove themselves from an anthropocentric perspective that views landscapes as separate.⁴⁰⁸ We can see similar movements to this in emergent notions of more-than-humanness within landscape design discourse.⁴⁰⁹

Meyer argues for aesthetic experiences as an “entanglement that implicates the social” through our social and collective practices inhabiting landscapes.⁴¹⁰ Her ideas on the social differ from other contemporary notions as she favours closer attention to how collectives operate aesthetically compared to mapping bodies in extensive space to show interactions.⁴¹¹ As Raxworthy shows, SBD compresses temporal and social processes to an immediacy and fixedness not reflective of how such processes unfold in reality.⁴¹² Instead, Meyer argues collective sublime or beautiful encounters have the capacity to engage with practices of life through designed form’s ability to create change in a body. Design then alters the practices of everyday life not through metrics but through experience of change, a sensation of difference that echoes through individual and social practices.⁴¹³ This approach to a political form of aesthetics is introduced in *Uncertain Parks* and later in “Beyond Sustaining Beauty” through Felix Guattari’s ethico-aesthetics. Meyer seeks to operationalise aesthetics to connect the individual to something greater, whether that be a greater connection to a landscape, a sense of publicness, or a change in environmental attitudes. Parks aren’t restricted to recreation or ecological services but instead

414 Meyer, “Uncertain Parks: Disturbed Sites, Citizens, and Risk Society,” 75.

415 Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto.”

416 Félix Guattari, *Chaosmosis: An ethico-aesthetic paradigm*, trans. Paul Pefanis Bains, Julian (Bloomington & Indianapolis: Indiana University Press, 1995); Félix Guattari, *The Three Ecologies*, trans. Ian Sutton Pindar, Paul, First English Edition ed. (London New Brunswick, NJ: The Athlone Press, 2000).

417 As a first step it has merit and appears to have been written at a time much earlier than the publishing of the final essay.

418 Deleuze, *Francis Bacon: The Logic of Sensation*, 41. Cf. Lyotard’s version of the sublime being the unrepresentable forces of the world.

419 Ibid.

420 Cliff Stagoll in The Deleuze Dictionary describes ‘force’ as “any capacity to produce a change or ‘becoming’... Every force exerts itself upon others. No force can exist apart from its inter-relationships with other forces”. Parr, *The Deleuze Dictionary*, 111.

421 Meyer, “Uncertain Parks: Disturbed Sites, Citizens, and Risk Society.”

allow the formation of new collectives and experimentation with the everyday practices of life.⁴¹⁴ Public aesthetics allows the beautiful, the sublime, and other aesthetic notions to move beyond the confines of the individual and connect to something greater.

Relevance to this research project

Since the 1990s Meyer’s work has been a continued argument affirming the role of aesthetics within landscape architectural design practices. Her argument has run counter to a predominant SBD discourse, and, as she notes, received both significant critique and support within and beyond the discipline.⁴¹⁵ Meyer’s work has served as both a complementary commentary on the role of aesthetics in the design of landscape and centrally a provocation for thinking how aesthetics, particularly the sublime, has the potential to operate at a social level via design.

Meyer’s employment of affect-thinking has proved useful in some respects and left wanting in others. Connecting affect and societal/cultural change through designed landscapes is a valuable disciplinary contribution and suggests that SBD projects lack this ability to rigorously engage with social-aesthetics. Drawing links to those who have engaged with Guattari’s *Three Ecologies* and *Chaosmosis* allows affective potentials to strengthen this argument.⁴¹⁶ An aesthetics of affects allows moving away from generality towards specificity. “Beyond Sustaining Beauty” uses the Australian National Garden as an example of what this entails. Meyer’s account of her experience there is a useful first step toward in the direction of engaging with affect in a designerly manner. However, it does not go far enough to give expression to the affective encounter due to the reliance on written narrative and unedited photographs of the site.⁴¹⁷ Meyer’s attempt to give expression to those affects highlights the need for future design-research to employ a wider range of representation forms and techniques. As Deleuze notes, art, and arguably design drawings too, are not about “reproducing or inventing forms, but of capturing forces...to render visible forces that are not themselves visible.”⁴¹⁸ These forces are rendered across the body: “for a sensation to exist, a force must be exerted on a body”⁴¹⁹ Force here is affect, which suggests that design representation should reproduce, even if not fully, those affects to bring them to life on the page.⁴²⁰ Whereas Meyer lays the groundwork from which landscape can direct change at the societal level, greater attention is needed to engage with these landscape affects via design representation.

The connection between an on-the-ground aesthetics of affect and social aesthetics and change offers the opportunity to critically engage with the sublime at a public scale. Following Bertelson and Murphie, Meyer connects affect to a form of subjective pluralism and social ethics as a continuation of her work on the role of disturbed sites and sustainability.⁴²¹ An aesthetics of sublime affects could be approached at the scale of the body, and wider more-than-human political relations. Two novel research avenues within the realm of landscape architec-

422 ANT can itself be read as a reworking of Deleuze and Guattari’s assemblage theories. Latour freely admits the overt influence of them upon his work. Henning Schmidgen, Bruno Latour in pieces: An intellectual biography, trans. Gloria Custance (New York, NY: Fordham University Press, 2015), 6.

423 A Thing was a gathering performed by early Germanic peoples in Western and Northern Europe as a form of parliamentary assembly. As Kullmann points out, these Things would occur at specific points in the landscape where a “topographically prominent locations that often included megaliths, large trees, and springs.” Kullmann, “The landscape of things,” 58.

424 Ibid.; Karl Kullmann, “The Shape of Things: Re-imagining Landscape Parliaments in the Anthropocene,” (2018). <http://forty-five.com/papers/190>.

425 Kullmann, “The landscape of things,” 58-59.

426 Gisli Palsson, “Of Althings,” in Making Things Public, ed. Bruno Latour and Peter Weibel (MIT Press, 2005), op. Cit (note 6). in Kullmann, “The landscape of things,” 59.

427 Kullmann, “The landscape of things,” 66.

ture are highlighted: designers have not engaged with the question of a public/social sublime, defaulting to the lone subject; and the questioning what role does the sublime play in a more-than-human aesthetics such as the different forms of new materialism / speculative realism. Whereas Meyer places much greater emphasis on the role of the beautiful and aesthetics at the socio-political level, this researcher approaches the sublime at the bodily level first and then shifts outwards to the social.

Karl Kullmann – A Landscape of Things

Karl Kullmann, a landscape architect and academic at the University of California, Berkley has gained considerable traction within academia by positing a more ‘fleshed out’ conceptualisation of open-systems design thinking. He does so by employing what he terms *thing theory*, a reworking of Latour’s actor-network theory.⁴²² Central to this are Latour’s notions ‘*matters-of-fact*’ and ‘*matters-of-concern*’. The latter for both Latour and Kullmann signifies a shift in thinking from single moments or objects devoid from their constituent network of actors, towards highlighting the interactions between any number of actants. These notions suggest a re-orientation in what and how landscape architects design by focusing on *Things*. The etymological link is drawn between the use of thing as an object, and as a Nordic gathering at a significant landscape feature where political relations are created, destroyed, and argued. For Kullmann, the latter use of ‘thing’ holds promise in developing an aesthetically open design discourse and practice, establishing social collectives between human and non-human entities through the landscape itself.⁴²³

In both *The Landscape of Things* (2018) and *The Shape of Things: Re-Imagining Landscape Parliaments in the Anthropocene* (2018) Kullmann offers alternative modes of thinking about the societal role of landscapes by moving beyond the techno-science practices, towards a more aesthetic understanding of open-systems.⁴²⁴ Leveraging the work of Latour, Kullmann revisits the role of Nordic parliaments and the critical importance of landscape to these gatherings where ‘things-that-matter’ were discussed and acted upon. Linking the shift from these meetings (Things) as events in the landscape to being held within architectural objects under private land ownership, Things themselves lost their agency to deal with the messy nature of things-that-matter.⁴²⁵ This idea of ‘things-that-matter’ is semantically reduced to the physical objects or ‘things-as-matter,’ things with little agency of their own, lacking an autonomous connection and participation with the world.⁴²⁶

Kullmann’s research attempts to conceptualise a critical design theory that is oriented towards things-that-matter, engaging with their agency as autonomous entities. This involves active participation with landscape processes, “melt[ing] distance between humans and the environmental and social matters-of-concern in the Anthropocene.”⁴²⁷ Kullmann engages with various forms of design processes, including the role of aerial imagery, digital realism, and phenomenological accounts

428 Karl Kullmann, “Hyper-realism and loose-reality: The limitations of digital realism and alternative principles in landscape design visualization,” *Journal of Landscape Architecture* 9, no. 3 (2014); Karl Kullmann, “Dis/orientation machines: journeys into labyrinthine landscapes,” *Studies in the History of Gardens & Designed Landscapes* 38, no. 1 (2017); Karl Kullmann, “The Garden of Entangled Paths: Landscape phenomena at the albany bulb wasteland,” *Landscape Review* 17, no. 1 (2017); Karl Kullmann, “The drone’s eye: applications and implications for landscape architecture,” *Landscape research* 43, no. 7 (2018).

429 Bruno Latour, “A cautious Prometheus? A few steps toward a philosophy of design” (paper presented at the Proceedings of the 2008 annual international conference of the design history society, 2008), 12. cited in Kullmann, “The landscape of things,” 62.

430 Latour borrows the term ‘gatherings’ from Heidegger. Latour, “A cautious Prometheus? A few steps toward a philosophy of design,” 12.

431 Ibid.

432 Kullmann, “The Shape of Things: Re-imagining Landscape Parliaments in the Anthropocene.”

433 Kullmann, “Hyper-realism and loose-reality: The limitations of digital realism and alternative principles in landscape design visualization,” 21.

434 Kullmann, “The landscape of things,” 62.

435 Emphasis mine. Ibid., 64.

436 Kullmann borrows from Morton again here with this concept of zero-person perspective which removes anthropocentric distance of first and third person perspectives. Timothy Morton, “Zero landscapes in the time of hyper-objects,” *Graz Architectural Magazine* 7 (2011): 80. cited in Kullmann, “The landscape of things,” 64; Kullmann, “The Shape of Things: Re-imagining Landscape Parliaments in the Anthropocene.”

derived from fieldwork.⁴²⁸ The topic of parliaments within these two essays is less relevant, but the underlying discussion of representation in relation to Latour’s actor-network theory proves critical.

Kullmann’s Interest in Representation

Kullmann’s interest in representation questions how landscape designers can engage with *things* or entities beyond abstract objects. He asks how representation can engage with “what a thing in all of its complexity”, to go beyond our common-sense ideas and barriers set up by cliché and conventions.⁴²⁹ Latour describes the limitations of representation used by designers to move beyond an object’s extensive nature in Cartesian space. He notes that designers are more than capable of rotating, scaling, zooming within this system, yet tend to miss the assemblies or ‘gatherings’ that those objects exist in.⁴³⁰ This issue is exacerbated by contemporary representation techniques relying on abstract CAD space which tends to remove the designed landscape or object from its relation to the world via overwhelming abstraction. Latour highlights fundamental impasse for contemporary design methods even if those objects are marked with “a great number of data points” or other forms of metrics and recordings.⁴³¹ Kullmann argues that representation techniques that rely on heavy abstraction needs to be bypassed to enable landscape designers to work with the messiness of the world.

Kullmann describes three representational challenges to engaging with matters-of-concern: *abstraction*, *scaling*, and *deciphering*. Abstraction builds upon Latour’s argument that design representation does not attend to the messy nature of *things*, instead of focusing on objects in Cartesian space. Kullmann argues this is consequential of moves to *accurately* represent landscapes in a non-scenic mode.⁴³² These drawings fail to connect the object to its infinite degree of relations in the world from where it emerged. As a result, when reading these drawings, there is a struggle to connect to what is being portrayed due to the isolation in time and space, creating an object out of the landscape.⁴³³

Scaling describes the inability for a measurement to account for entities who operate beyond our human-oriented sense of perception. Kullmann borrows Morton’s notion of hyper-objects to describe these entities that escape our rational ability to address or perceive them, climate change being an oft-quoted example.⁴³⁴ Cartesian space perpetuates the notion that only certain objects are perceived at any given scale: broader scales operating abstractly at the expense of particularity, and vice versa. Hyper-objects, like actor-networks, exist outside this scaling system and cannot be reduced to any series at any one time, even in novel mapping experimentations such as those by Corner. Engaging with them requires a plasticity in the representational matrix that “stretches in deference to the perceiver and is distorted by the influence that *things* exert over time and space.”⁴³⁵ This removes the viewer as a passive perceiver of information and instead places them within the map itself as an active participant and surveyor.⁴³⁶ In other

437 Kullmann, “The landscape of things,” 63.

438 Latour, *Reassembling the social: an introduction to actor-network-theory*, 128.

439 Kullmann, “The landscape of things,” 65.

440 Kullmann, “The Garden of Entangled Paths.”

441 Latour’s language of actor-networks is easily translatable to the Deleuzian lexicon of concepts, which Latour readily admits it is built upon. Schmidgen, Bruno Latour in pieces: An intellectual biography, 6. Cf. Connolly’s notion of the ‘function of representation. Connolly, “An affirmative open systems conception of how to design landscape.”

words, representation must engage with the actor-network as a whole across any scale or form in which its constituent entities operate.

Deciphering is a method to uncover what exists under any given immediate appearance. Kullmann notes the difference between topography and orography where the former has been cluttered with objects, or ‘things-as-matter’. Orography allows for a more “incisive representational method for deciphering the underlying structures can bypass which”.⁴³⁷ This method can be as analogous to actor network theory’s call to ‘build an account’ of the network itself, tracing all the spatio-temporal relations between actors which provide the structure. Common sense or cliché can obscure the network (or assemblage) and to follow those relations requires some deciphering to uncover what has been coded over by other information. A good account of such a network is one where all the actors present are seen to be doing something, contributing to this event as active participants in this process, and that no actor is passively operating on the side-lines.⁴³⁸ Deciphering then is a method for accounting for what actors were present and what they were doing, events which are often obscured by ‘things-as-matter’ or common sense.

Kullmann’s account of design representation can be conceived is one of conceptual inquiry and active experimentation. He highlights several challenges or motifs as he terms them, landscape architecture should address and respond to via its own medium and not the medium of the physical or social sciences.⁴³⁹ Elsewhere he has shown particular attention to the aesthetic role of the body in the landscape in terms of fieldwork and the ability for this to be generative in the design process.⁴⁴⁰ This particular line of inquiry within the larger research argument suggests that the next mode of inquiry would be a more direct experimentation with how representation techniques and tools are employed as active recording and design tools with actor-networks.

Relevance to this research project

Kullmann’s research offers a useful bridge between Meyer, Prezelj, and this researcher’s own work, conceptualising the function of representation when engaging with matters-of-concern, or assemblages and their affects.⁴⁴¹ The role of representation in engaging with actor-networks in the landscape design process has been highlighted to reveal possibilities and implications for current practice. A sense of practicality almost reminiscent of Corner’s *Mapping* essay two decades earlier suggesting concrete and immediately applicable design techniques. These techniques or the suggestion of such prove the most useful going forward as they reveal a path towards a more concrete engagement with the sublime as the experience of something more, a connection to something super-sensible. Kullmann’s assertion, following Latour, that forms of representation must deal with the messy nature of *things* echoes the nature of this research project and multiplicitous nature of landscape itself. Kullmann’s identification of several representation challenges is pertinent to this wider research project,

442 Kullmann, “The Garden of Entangled Paths.”

443 Prezelj, “Short Towards and aesthetic of affect for landscape architecture/urbanism.”; Prezelj, “Unfamiliar Territory.”; Barbara Prezelj, “Unfamiliar territory: alternative landscape reading of disturbed sites’ particularities,” *SPOOL* 3, no. 2 (2017).

444 Barbara Prezelj, “Unfamiliar Territories: Research on Design” (Master of Landscape Architecture TU Delft, 2016), 3, <http://resolver.tudelft.nl/uuid:9a79ad27-6d9f-4d68-9648-5832d0edd8cd>.

though his inquiry is arguably strengthened by approaching via an aesthetics of affect. Kullmann’s contributions provide a basis from which this research develops and unpacks design practices suited to engaging with the sublime via design and design representation. That he operates within Latour’s actor-network model allows easily drawn parallels and expansion through Deleuze, and Deleuze and Guattari’s writing, enabling a more consistent dialogue to occur between others who operate in a similar realm. Kullmann has also paid attention to the importance of fieldwork in his research although it is not mentioned in the two articles discussed here. In other words, he uses a phenomenological lens to analyse the Albany Bulb wasteland in the San Francisco Bay area to build a designerly attentiveness to the singular nature of its experiential structure.⁴⁴² Here he provides a written account of three phenomena unique to the Albany Bulb to describe them in a way useful and empowering to design. Whilst the written medium is useful to describe how the body moves through space, there is no exploration via graphic representation which subsequently does not allow the relevant spatio-temporal relations to be examined with precision. However, Kullmann’s overall research project offers several lines of inquiry into questioning the relationship between representation and human/nonhuman networks and it should be commended for its clarity and rigour in a relatively murky discursive field.

Barbara Prezelj – a Deleuzian approach

Barbara Prezelj’s research offers the closest point of contact to what this larger research project is attempting. Both her Master of Landscape Architecture thesis and two published papers develop and document design techniques through assemblage-thinking.⁴⁴³ Prezelj’s research focuses on the remediation of Fort de Vaujours in Paris, a former nuclear material storage site. This post-industrial site allows experimentation with techniques that work with and in friction against contemporary SBD derived practices. Prezelj engages with *ecologies* of all kinds in space-time, beyond just the technical.⁴⁴⁴ Her research aims echo my own: moving past ‘mere remediation’ of a disturbed landscape towards engaging with its capacity to shift and change the attitudes of individuals and society. Non-human actors currently and historically operating on a site are given more attention than is typical, opening the scope to material and immaterial productions of whatever systems that are relevant. Scents, light, ‘doings’, processes of decomposition, phytoremediation, a fox, soil mounds, uranium, hay walls – all of these and whatever else is relevant are brought into the mix of what this landscape may ‘become’. Less important is their manifestation in extension in favour of their intensive production.

This sense of *becoming* is central to how Prezelj constructs an argument for true change in a landscape – not just mere simulation as others have done. By giving expression to each of these becomings via *markers* she brings them into being in extension, or at least partially. From there they can participate in new relations, for new becomings, or alter and possibly even destroy others. Prezelj argues that these

445 Prezelj, “Unfamiliar Territory,” 33–34.

446 Territoriology is borrowed from Andrea Mubi Brighenti who critically analyses Deleuze’s concept of territory and expands it in both a political, ethical and spatial sense. Brighenti, “On territoriology: Towards a general science of territory.”

447 Prezelj’s primary work is at master’s level research yet in my opinion far exceeds what would typically be expected. However, even keeping in mind the level at which the research operates it is disappointing to not see the full potential of this work unfold.

448 It is this doing that both Prezelj and myself are most interested in as it is only via this that design can fully engage with how the world works.

intensive differences are critical to the design of post-humanist landscapes as they include every actor or entity in that landscape.

How does Prezelj approach designing?

Prezelj’s research is a rare example of an explicit attempt to both conceptualise and document a design approach that embraces the aesthetic dimension of Deleuze’s philosophy within landscape architecture. She describes a design methodology that engages with what she terms ‘site specificities’ or ‘site particularities’ through assemblage-thinking.⁴⁴⁵ Considering the Deleuzian context, this can easily be read as *site singularities*. Prezelj employs concepts borrowed from Deleuze and Guattari to articulate complex relations in space-time to work with ecologies in a manner distinct from SBD practices. These concepts are borrowed and partially translated into a form more appropriate to landscape architectural design, a unique contribution on its own. Prezelj continuously highlights the aesthetic nature of her work, though does not strongly connect to affects or involuntary doings. However, it is an important step forward in perhaps a post-SBD discourse as it attempts to re-orient landscape architectural design methods back towards an aesthetic grounding, and highlight the obvious aesthetic nature of Deleuze and Guattari’s work, a dimension which has been largely unrecognised within both landscape architecture and architectural discourses. The concepts that Prezelj borrows from Deleuze and Guattari to construct this aesthetic machine are primarily *the refrain*, and *territory* or *territoriology*.⁴⁴⁶ *Affect* is employed to a lesser degree, which in the end, unfortunately, limits her work. Her thesis does not fully engage with a) real landscapes i.e. Fort de Vaujours itself on the ground and b) the affectual productions between an organism and its environment. Affects are produced by those same refrains and territories, so it is a critical misstep to have not engaged with the affectual dimensions of Fort de Vaujours in an intensive manner.⁴⁴⁷ These concepts are employed as a means to understand and make sense of the milieu of relations so that they can be operationalised by design through what Prezelj terms ‘markers’. Design of this form sits outside the dominant forms of discourse and practice. In this way, Prezelj’s research is valuable as the closest contemporary to this research. Prezelj uses the term ‘*marker*’ to describe the spatialising of both a refrain and the consequent territory created. In other words, a *spatialising of the singular* in the landscape. Both the world as an autonomous force and the designer’s hand can create markers suggesting a continuity between design and the pre-existing conditions.

These singularities are not objects, form, or even single entities, but are complex relations in space and time that come together to produce something that *does something*.⁴⁴⁸ This is not the same sense of ‘doing’ that interests SBD practitioners as it is not functional performativity in a narrow technical sense. Instead, it is an aesthetic production of *doing*, a creation of difference. These singularities are what creates certain site specificities which Prezelj describes as “a particular arrangement of intensive differences that for a certain duration drive

449 Prezelj, “Unfamiliar Territory,” 35.

450 Bonta and Protevi, *Deleuze and Geophilosophy: a guide and glossary*, 143.

451 Prezelj, “Unfamiliar Territories: Research on Design,” 14.

452 Ibid., 33.

453 Ibid., 32.

specific processes on-site, as an arrangement that results in specific material configurations and spatial experiences.”⁴⁴⁹ Importantly, these singularities operate pre-individually and impersonally as the self-ordering forces of an assemblage.⁴⁵⁰ In doing so it allows the designer to move past a subject/object divide generated by an idea of subjectivity and connect to the aesthetic nature of an assemblage. The aesthetic production or ‘doing’ of the assemblage in question for each marker is not an intellectual or conscious form of knowledge. Designers are often drawn to engaging with these singularities whether or not they are aware of them. However, to move beyond the obscurity of cliché and common-sense ideas requires stronger forms of design and representation techniques to “focus on what things do, how they are formed, how they could be otherwise”.⁴⁵¹

The markers as an analytical tool force the designer to look beyond the immediately perceptible and trace the practices and processes constituting the milieu from which it emerged. Representation can bring these relations into a graphical space where they can be examined, split out, recombined in different combinations, or erased to both give expression to the singularity embodied by the marker and to alter them in the formation of something new. The design is to intervene with these relations, closing some, opening others, but never leaving them fixed, allowing change and new singularities to emerge. This form of design demands a level of attention to the aesthetic interactions between actors. The banal is equally important as the extraordinary because what these entities/relations do is of interest. Prezelj pays attention to those interactions via Deleuze’s notion of the refrain which she describes as a series of practices or habits which spatialise such processes or interactions between actors.⁴⁵² The fox creates a refrain by urinating on a log, scratching tree trunks and vocalising in order to establish and mark his territory. He does so to temporarily keep the forces of the world, the forces of chaos, at bay. These acts by the fox, however, are not a simple instinctual act that can be written off as something beyond design. This act involves relations in the fox itself, between the animal and its urine, the log, the tree it claws, the area in which it marks as its own and the area beyond this, other foxes which recognise this demarcation, the foxes prey, and other predators. These relations and others are beyond instinct, they are an *experimentation* with the world in what these practices offer the fox. Via these practices, the fox and the world beyond it create what Prezelj describes as a “heterogeneous and experimental assemblage that is as much functional as it is aesthetic.”⁴⁵³

What aesthetic practices are employed?

Prezelj’s research unfolds via two modes, each complementing but not entirely reliant on the other. The theoretical argument based upon re-introducing the aesthetic dimensions of Deleuze and Guattari’s work to design discourse provides an interrogative tool from which the design-based experimentation can be launched and evaluated. The design component of the research, via its role of testing theo-

454 A 4th study was proposed within the thesis document before the design phase in which a video game would be developed to force players to “become performers and to engage in relations between human and nonhuman, analogue and digital, people and technology”. Prezelj suggests that the affective potential is of interest to designers in that it can reproduce and give expression to bodily affects from a landscape.

455 Prezelj, “Unfamiliar Territory,” 25.

456 Ibid.

ry and concepts, allows for a stronger articulation of what has been discovered and worked through via her own theorisation. Three design components eventuated from the research, each entitled “learning-through-making” where design methods and practices were employed to further sharpen Prezelj’s own practices related to designing via relations.⁴⁵⁴ The three phases follow a standard landscape architectural design process (wider site analysis, specific site analysis, and design in response).

The first two phases investigate the spatio-temporal relations between various actors across the landscape history and spatial extents. Objects are of little interest here. Figure 6.64-71 are the forms of representation Prezelj employs to examine these relations, “tracing patterns of activity and agency” in a way she suggests allows speculation of which relations affect transformation and which may be changed to create new events.⁴⁵⁵ The overall diagram presents itself as a complex assemblage of line work, hatching, and textures, with little annotation explaining the significance of the various intersections and events. This mapping of Fort de Vaujours removes itself from a spatial framing, instead choosing to focus on the location of events in the site’s temporal extent. This approach is not uncommon in contemporary practice as it feeds directly from notions of indeterminacy that dominate the contemporary discourse. However, this investigation pays more attention to the agents within these processes and how they affect transformation rather than the processes themselves. The diagram unfolds in an investigatory manner: “what happened, how it happened, which agents were present”.⁴⁵⁶ The linework within the diagrams traces these agents as they interact, empowering or denying relations to allow for transformation across the site. An agent cannot be separated out of the *milieu* even if its agency is lesser at one point in history than another. This forces a certain openness when looking at the development of a site towards its current state and is strengthened via bypassing any abstract division between natural/cultural or human/non-human processes and agents.

The second stage of the design-research, *learning-through-making 2* shifts from mapping historical activities towards engaging with markers discovered within the present-day site. This process is arguably the most important component of the wider project as it is where the theoretical concepts are tested with the actual processes and practices of Fort de Vaujours, to unpack and speculate on these markers. Four separate diagrams show the processes involved in the marker’s creation and which processes it currently and may in the future enter.

These drawings are the primary investigative tools for designing via markers, chiefly through the diagrams which trace the processes and actors instigating their creation. However, instead of focusing on temporal transformation, these drawings tease out the specific arrangement of site conditions that allowed for this emergence. Doing so allows the designer to get closer to how a landscape works beyond

Fig 6.64. *Building Ruins and Debris* Prezeli, "Unfamiliar Territory," 41.

*Fig 6.65. Pioneer woodland on top of old mining site
Prezelj, "Unfamiliar Territory," 38.*

457 Gilles Deleuze, Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi, Bloomsbury Revelations, (London, UK New York, NY: Bloomsbury Academic, 2015), 104.

458 Prezlj, “Unfamiliar Territory,” 49; Raxworthy, “Novelty in the entropic landscape.”

459 This quote is taken from the well-known wasp-orchid example which describes two terms of becoming. However in the case of a landscape there would be many more terms that are becoming via a constant process of deterritorialisation and reterritorialisation. Deleuze, *A Thousand Plateaus: Capitalism and Schizophrenia*, 9.

460 Prezlj, “Unfamiliar Territory,” 50.

461 Ibid.

462 Ibid.

463 Raxworthy, “Novelty in the entropic landscape,” 56-57.

a scientific sense. It offers a way to unravel the entanglement of relations, processes, and practices constituting it, which then, in turn, allows experimentation via adjusting, extending, destroying, or multiplying. These diagrams allow for a parallel analytical and experimental investigation into the particularities of the given marker. Abstraction allows certain freedom at the same time as testing whether enough material has been captured to allow for the analyses to hold true. These diagrams unpack and rebuild the bodies and actions within a marker’s assemblage to ascertain its operations and interactions with others. However, Prezlj assumes that the marker is an expression of the totality of the machine in a causal manner. In this way, she perhaps fails to register Deleuze and Guattari’s warning that “it would be an error to believe that content determines expression by causal action.”⁴⁵⁷

Learning-through-making 4 marks where Prezlj alters Fort de Vaujours. Borrowing Julian Raxworthy’s ideas on the gardener’s role, Prezlj sees the designer as one that guides and cultivates the creation of a ‘becoming-landscape’ characterised by events and encounters transforming each entity present.⁴⁵⁸ Change via becoming for Deleuze, and Prezlj, is driven by the “deterritorialization of one term and reterritorialization of the other; the two becomings interlink and form relays in a circulation of intensities pushing the deterritorialization ever further.”⁴⁵⁹ Prezlj argues that technical remediation practices typical of SBD projects would only delay any issue or shift it. For significant change to occur Prezlj turns to the notion of deterritorialisation to engage with the larger relations and affects at play.⁴⁶⁰ Echoing Meyer’s manifesto and its follow-up, Prezlj suggests that technical design alone cannot solve such complex problems; it needs to be felt and for it to affect you.⁴⁶¹ These markers themselves are not fixed in spatial or temporal bounds are open to transitioning to something else entirely as well. They are only a temporary stabilisation of the forces of chaos, a series of “intensities defined by their functions, their qualities, expressions and their affects.”⁴⁶² Learning-through-making 4 then sets up a series of conditions which, when certain criteria (e.g. the expansion of one territory over the top of another, not scientific quantifiable criteria) are met, the marker flips into something else, or becomes spatialised in a new form, or even destroyed. In this process, there is a built-in flux that moves beyond the far weaker conceptions of flux employed by SBD which rely on natural ecological succession and change, which as Raxworthy points out is often sped up falsely to meet our expectations of human time.⁴⁶³

Prezlj’s work, as a critique of SBD forms of designing, opens up new avenues of designing capable of ecologically connecting to the ‘doings’ of the world in an aesthetic sense. Her research has paid close attention to technique and the role of representation within the design process. However, there are several limitations within her research, namely a minimal engagement with affect, and the deferral from engaging with the human involvement in these designed markers. In this, we can see some relations to emergent ‘more-than-human’ types of de-

464 See Connolly and Rosier, “Species of More-Than-Human Design and Design Thought.”Forthcoming

465 Prezlj, “Unfamiliar Territory,” 44.

466 Ibid., 45.

467 Ibid.

468 See the section of Connolly’s PhD thesis for a robust investigation of Manuel de Landa’s theorisation which operates as the primary repository of affect/assemblage thinking for architects and landscape architects. Connolly, “An affirmative open systems conception of how to design landscape,” 185-93.

469 “[affects] are non-signifying, yet they influence our actions and get quickly picked up by thinking, speaking and conscious reasoning...” Prezlj, “Unfamiliar Territory,” 45.

470 Deleuze, *A Thousand Plateaus: Capitalism and Schizophrenia*.

471 Ibid. Deleuze’s concept of the middle will be explored in Stratum 6

signing which tend to downplay or actively defer from the human on a moral basis.⁴⁶⁴ Prezlj does not seem to embrace that position though the degree of human-oriented designing in her work is limiting to the overall research.

Prezlj’s engagement with affect

Prezlj describes affects as “the excess that falls outside the immediately knowable and communicable and stresses the limits of reason, representation and language.”⁴⁶⁵ They operate pre-personally, autonomously, and pre-consciously before what is normally understood as feelings and emotions.⁴⁶⁶ Further Prezlj draws the link between an affect and the body as its primary mode of operation by “trigger[ing] material-affective responses that are not found in the reflective mind but are rooting in the body (not exclusively human).”⁴⁶⁷ This contrasts with techno-science understandings which either do not engage with affect or tend to avoid its aesthetic nature.⁴⁶⁸ Prezlj draws the same conclusions as Meyer does in “Musings on a Manifesto, that affect can play a role in design by connecting it to a form of ethico-aesthetics. This is a deviation from ethics employed by SBD which tend to defer to absolutes on human impacts upon the world. The immanence of affect provides the means to develop the ethical relationship between society and a disturbed site, as it not only creates specific experiences for any given organism but also changes that organism in its capacities to act and to perceive.”⁴⁶⁹ Affects, like markers, are created by concrete spatio-temporal relations between an organism and its environment. Affects for Deleuze and Guattari are central to understanding and engaging with the world: “We know nothing about a body until we know what it can do [ce qu’il peut], in other words, what its affects are.”⁴⁷⁰ By not engaging with the affectual dimensions of these markers (in particular the affects produced by them in relation to the human organism), arguably Prezlj’s research has not fully engaged with knowing what these entities are and how they operate in the world.

Aesthetic relationship to site

Prezlj’s research hinges on working in a very concrete way with the *real* relations, agents, and processes of Fort de Vaujours. This would suggest that fieldwork plays a central role in the methodology. The realm of intensities and affects can only be understood by ‘being in the middle’ and can “be explored only by legwork.”⁴⁷¹ An obligation is implied for the landscape architect to engage with real landscapes and not defer entirely to remote material. The aesthetic relationship between a landscape architect and site with which they are designing is central to the unfolding design process. Without the aesthetic encounters that can only be discovered via fieldwork, the markers are weakened by becoming closer to the ‘technical-problem-solving-machines’ than instigators of aesthetically driven change.

Fig 6.66. Processes of Site Production
Prezeli, "Unfamiliar Territory," 26.

Fig 6.67. Timeline Part 1
Prezeli, "Unfamiliar Territory," 27.

Fig 6.68. Timeline Part 2
Prezeli, "Unfamiliar Territory," 28.

Fig 6.69. Timeline Part 4
Prezeli, "Unfamiliar Territory," 30.

*Fig 6.70. Soil Piles
Prezelj, "Unfamiliar Territory," 39*

Fig 6.71. Post-ming Gypsum Quarry
Prezeli, "Unfamiliar Territory," 40.

472 Meyer, "Seized by Sublime Sentiments," 28.

A lack of documentation engaging with affects limits the research's ability to unfold the ethico-aesthetic changes it argues for. Each marker exists in extension yet also has an unrepresentable dimension of affect that moves us pre-individually, which as Meyer suggests are moments of the sublime: "when the visible struggles to represent the invisible or the present moment evokes the past duration."⁴⁷² These moments would be experienced via the body before conscious thought. Design-oriented representation works to strengthen these aesthetic connections back to the site, not to communicate an *idea* placed onto it. The aesthetic relationship between the designer and site, therefore, is fundamentally constructed via fieldwork, by the designer being forever changed by events that need to be discovered and unfolded via drawing and writing. This dynamic interplay goes back and forth, feeding off the body's memory of affects, is what needs stronger attention in landscape architectural theory and discourse.

473 This is not to say that this research does not value others who do not operate in that realm, however it does place a particular importance on work that does engage with theory through the medium of design itself.

Conclusion

Given this research's practice-led nature it seemed appropriate to discover and discuss contemporary designers and thinkers operating in a similar vein. Specifically, those who engage with theories of assemblage and actor-network thinking in a designerly-aesthetic sense. The number of researchers who directly engage with the aesthetic dimension of assemblage thinking from a designerly perspective is limited, even more so when focused to those within a landscape architectural modality. This catchment partially expands when looking at actor-network theories yet largely remains detached from the 'coalface' of landscape design practices.⁴⁷³ Of the three designer-researchers discussed within this section, only Prezelj has articulated her theoretical findings via design practice itself. In doing so, the material and associated challenges strengthen both her own and disciplinary practices. Meyer and Kullmann, on the other hand, do not explore their findings via design or case studies beyond written word.

These researchers offer something to the collective challenge of thinking how to craft an aesthetically oriented open-systems oriented design practice. First, Meyer draws connections between an aesthetics of affect encountered by a body as sensation and societal shifts through Guattari's ethico-aesthetics. Secondly, Kullmann's argument for the role of representation again highlights the limitations, and possibilities, of conventional representation techniques. Questioning both how scaling and abstraction are employed by designers in the wake of Corners *Mapping* essay, Kullmann suggests a novel way of approaching design representation and processes to uncover what happens beneath obscuring layers of cliché, objects, and common sense. Lastly, Prezelj's work offers a useful inroad to engaging with the assemblages and relations of a given site, even if the affectual dimension could be stronger. These researchers and their work develop an immediate realm of designer-researchers which this research can feed off and into. No research operates in isolation and is always in a milieu of forces with which it continuously operates. Investigating these contemporaries has built a clearer picture of their practices and what they have to offer the discipline, alongside providing space for critical reflection in the practice-led component of this research.

Fault 2

Pukeahu – Everyday Sublime

Fig 8.78. View towards Mt Victoria from the middle of Pukeahu Memorial Park.

Pukeahu Memorial Park in Wellington, New Zealand, is a useful example to explore the everyday sublime. It is a monumental space in a literal fashion, being the national memorial for armed conflicts, yet it also appropriates the affectual dimensions of Wellington's landscape. In short, Wellington is constructed of steep terrain with little to no flatness bar the waterfront area. Pukeahu stands as a large, raised, flat platform that looks out to the waterfront through the city. The walk up to this park via a moderately graded ramp is long enough that the sense of the city fades away: the noise of the traffic and sense of being surrounded by buildings disappears. The platform sits up from the surrounding ground-plane, a raising up that is highly uncharacteristic of Wellington's public spaces. The surrounding hills wrap around on both sides – the greenery of townbelt providing a close-in topographical horizon. The monumental space that is this park establishes allows a connection beyond the individual, towards something greater, something spiritual.

Fig 8.79. (Opposite) Te Aro, Wellington, context plan showing Pukeahu within the wider landscape.
 Fig 8.80. (Following) Pukeahu Park and context aerial image.

Taranaki Street (major vehicle road)

Tory Street (minor vehicle and pedestrian road)

Pukeahu Park and surrounding urban fabric
1:1500 @A3

Carillon and vegetation creates stage
in centre of Pukeahu

Taranaki Street

The life of Wellington flows down the surrounding hills – where everyone lives – to the flat valley plane of Te Aro which gently slopes down towards the waters edge, another line of intense publicness. Pukeahu straddles the middle of the valley, perpendicular to this movement. Walking past it, you notice its perpendicular topographical form, sloping up towards Mt Victoria whose dark green silhouette brackets the city. Even from the street edge there is a sense of the topographical slope – not too much, just enough to walk up without even considering its effort.

Fig 8.81. Moving from Taranaki Street to Pukeahu Park plateau.

Moving up the slope, a sense of time almost seems to disappear. You were on Taranaki Street just a moment ago, and now find yourself at the top. The slope seems to be just steep enough that you find yourself in between focusing on your movement and thoughts, and focusing on the wider landscape. There is no traffic to worry about. Traffic noise very quickly drops off. As you reach the top, where the slope flattens out – but you can't quite see where to – the view of Mt Victoria rushes forward and seems to inhabit this space with you. No longer just colour, you can feel the texture.

Fig 8.82. (Top) Arrival at the plateau above Te Aro.
 Fig 8.83. (Bottom) Panorama of Pukeahu plateau.

Within the bowl of Te Aro, Pukeahu Park sits almost directly in the middle. The topography slopes down from both sides, forming an almost perceptually flat plane between the sides.

Looking closer, we can see that the park rises up from this from plane, forming a plateau between the hills on either side. A large flat space is rare in Wellington, particularly in the cities centre. This flatness is raised up above the city, perched above some of the buildings below it.

This flatness is a break in the topographical structure of the city, and the rhythms of the city’s public life. The flatness, raised up above the city, seemingly in line with the vegetated hills on each side, adds to a sense of intense publicness not found anywhere else within the CBD.

This encounter with something much greater than yourself is an encounter with intensity. This encounter is ecological, involving whatever is relevant – an encounter with the world at large. An everyday form of the sublime.

Fig 8.84. Te Aro and Pukeahu Park cross-section studies.

612 Deleuze and Guattari, A Thousand Plateaus: Capitalism and Schizophrenia. 23.

613 Ibid., 293.

This small, yet important, study goes some way to showing how an everyday landscape such as Pukeahu Park have some dimension which we can call an ‘everyday sublime’. It also offers a useful example to explain the Deleuze-Guattarian notion of ‘the middle’, introduced briefly in Stratum 5.

“Why is this so difficult? The question is directly one of perceptual semiotics. It’s not easy to see things in the middle, rather than looking down on them from above or up at them from below, or from left to right or right to left: try it, you’ll see that everything changes.”⁶¹²

“A becoming is always in the middle; one can only get it by the middle”⁶¹³

One finds themselves in the middle when you can see, and feel, the workings of an assemblage, even if just partially. A way in is enough. Everything else follows as you find connections. The middle is where you can see openness working – the world as an open system in an aesthetic sense, not metric or scientific. Within the middle we can follow only one rule: whatever is relevant is relevant. The angle of the slope, the darkness of the vegetation on Mt Victoria, the expansiveness of the sky, how long it took me to walk here from home, the height of the park above Taranaki Street, the arrangement of the parade ground in front of the cenotaph, the grey stone material underfoot, the contrast between that and the adjacent grass, etc.

One should always attempt to enter the middle as this is where we can see relations and affects at play. These can be directly related to your own being, but once you have a way in you can are able to see or speculate how others participate in this or other assemblages. You can see, and more importantly *feel*, how the stone, large flat area, streams of pedestrians, and different height surfaces allows for a showing-off-experimental-skateboarding assemblage to be established by a group of teens atop Pukeahu for example. Or even more simply, the experience of ‘out-of-the-city-ness’ documented in this study.

The role of representation is to ensure that throughout the design process the designer is able to stay connected to, or feel a resonance with, the middle. This involves giving expression to these affects and relations, maintaining a connection to the openness of the world.

Fig 8.85. (Top) Skyline and sense of the city defined by the Kelburn hills – Looking West.

Fig 8.86. (Bottom) Skyline and sense of the city defined by Mt Victoria – Looking East.

Stratum 5

On the Sublime as Intensity

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Fig 7.74. Remnant marks from extraction machinery atop Main Bench.

474 Deleuze and Guattari, *A Thousand Plateaus*, 262-63.

Note: The term entity is used throughout there as a convenient term to describe bodies, flows, relations, composites, assemblages, etc. It is not, as others such as Graham Harman suggest, a discrete entity or object, withdrawn from other entities/objects. Instead, it as Deleuze and Guattari write:

*[they] cease to be subject to become events, in assemblages that are inseparable from an hour, a season, an atmosphere, an air, a life. The street enters in composition with the horse, just as the dying rate enters in composition with the air, and the beast and the full moon enter composition with each other. At most, we may distinguish assemblage haecceities (a body considered only as longitude and latitude) and interassemblage haecceities, which also mark the potentialities of becoming within each assemblage (the milieu of intersection of the longitudes and latitudes).*⁴⁷⁴

Introduction

This stratum presents a turning point in this argument, ideally, a moment where all the previous trajectories come together, much like how “all things serve the beam” in Stephen King’s *Dark Tower* novels. All entities in that universe from the leaves blowing in the wind, to the clouds moving above, fault lines, and bush beaten animal tracks all point in one way or another towards the Dark Tower. They follow the track of one of six beams of an unknown force born of the beginning of the universe whose purpose is to hold the Dark Tower standing as the centre of this universe. This stratum then forms a similar central point as the Dark Tower where the previous strands of argument which operate semi-independently draw together and form something greater than their atomistic components. What then is the role of such a chapter that stands as this central point, the final piece of ‘traditional’ theorisation within this project? It is the drawing together and operationalising of what has been gleaned from historical and 20th-century accounts of the concept of the sublime, past disciplinary writing on the role of the body in aesthetic encounters, and critically approaching the sublime as an affectual force of Nature.

The sublime that emerges from the heritage of Kant’s work is hemmed in by its restrictions to the faculties of reason, which proves problematic and somewhat lacking in the context of the metaphysical and scientific work since the mid-20th century. Whilst Kant is generally regarded as the primary academic source for much writing on the sublime, his contemporary Edmund Burke also receives significant attention. However, this attention has been oriented towards the psychological processes of the sublime at the expense of the overtly physiological dimension to Burke’s writing. Revisiting this dimension provides the basis from which we can begin to look at the sublime as affectual. Following Spinoza and Deleuze, affects are bodily responses to an empowerment from another entity or its environment which then empowers on the body to be able to perform a new action or shift in their capacity. With that in mind, this chapter will argue that the sublime is not as mystical

475 Designers seem willing to let the sublime operate as a transcendent or abstract concept that hovers over their work, not fully engaging with it.

476 See Connolly’s discussion on the ‘function of representation’ for further discussion in this area. Peter Connolly, “Embracing Openness: making landscape urbanism landscape architectural: part 2,” in *The MESH book: landscape/infrastructure*, ed. Julian Raxworthy and Jessica Blood (Melbourne: RMIT Publishing, 2004).

477 A discourse on the sublime was unfolding throughout 18th century Europe yet was never so concentrated or rigorous as it could be found in Britain.

or out of reach than what the writing of Kant and others suggests.⁴⁷⁵ Nor is it restricted to affectations of the mind such as the discourse within the discipline that stems from Kant’s *Critique of Judgement*. Most landscape architecture-oriented discussions of the sublime from the past three decades tend to rely on Kant or Lyotard who builds on the former. This reliance is likely due to a lack of close attention being paid to the original writing on the sublime, alongside a willingness to go along with the predominant stream of thought on the subject. This research posits that the sublime can be considered as something quite concrete, something that can be felt, understood, and designed with via sensation. Not something intellectual, but something bodily. Approaching it via an aesthetics of affect, it is possible to identify and unpack via drawn representation some of the key spatio-temporal relations that produce such an event, such an affect.

This stratum posits that an encounter with the sublime or a sublime event can be traced back from its feeling to the spatio-temporal relationships from which it emerged.⁴⁷⁶ In this case, it is largely oriented towards the relationships between a human organism and a given landscape. This position is intended to empower designers within the wider landscape architectural discourse so that aesthetic events such as the sublime can be engaged with a concrete and practical manner. A growing interest in such aesthetic forms of knowledge has been acknowledged as missing within the contemporary atmosphere of instrumentality and (technical) systems-oriented thinking. These trends whilst powerful, do not empower the designer to engage with the sublime, beautiful, or picturesque events. Through working with students in design studio projects it has been obvious that approaching these matters through an aesthetics of affect, whether it has been pointed at any of the three ‘classical’ aesthetic categories or another, has proven invigorating to the student’s ability to engage with their material. This significantly closer attention to the material they are working with bolsters the rigour in design practices and their own sense of power to engage with the complexities of landscapes. This stratum and the following practice-led research component seek to emulate this empowerment at a wider disciplinary level to show that designers can actively operationalise the sublime and other aesthetic encounters.

An Issue of Subject and Object

Historically, there exists an issue surrounding the origin of the sublime: whether the subject of the object is the principal source of this experience. Ashfield and de Bolla note this question fluctuated throughout the history of the British sublime discourse and likely did as well outside of the Isles.⁴⁷⁷ Thinkers and writers likely would have been aware of certain tensions within the Enlightenment climate of the time and sought to ascertain the source of the sublime in either position in response to this. The waning power of the Church suggests a greater agency of the individual, likewise, the atrocities of the French revolution pivoted the sublime from self-preservation to “produce a sub-

478 Ashfield and de Bolla, *The Sublime: A reader in British eighteenth-century aesthetic theory*, 265.

479 The sense of barrier here is notably different from Graham Harman’s notion of withdrawal, which appears to be counter to assemblage/affect thinking.

480 Ian Hacking, *The social construction of what?* (Cambridge: Harvard university press, 1999), 103-08. Quoted in Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham & London: Duke University Press, 2002).

481 Massumi, *Parables for the Virtual*, 2-3. One such normative movement between states that Massumi uses is from infant to child to adult. Such movements are predefined.

482 Ibid., 3.

lime of harmony, civil order and virtue”, moving the sublime’s origin away from the subject.⁴⁷⁸ What it means to be a subject, a perceiving conscious being devoid of God’s divine order and ultimate law was addressed directly through the sublime, culminating in Kant’s *Critique of Judgment* in 1790. Here the origin of a sublime event is placed firmly in the faculties of the subject. This would face no serious philosophical challenge until the 20th century with the introduction of flat ontologies and different forms of ecological thinking.

The revival of Spinoza’s work within continental philosophy saw the dichotomy of subject and object itself challenged in such a way that it became questionable whether the dichotomy would remain a suitable means to discuss the unfolding processes of aesthetics, let alone ontological determinations of the world. The key figures of Bergson, Simondon, Deleuze, and Nietzsche form much of the challenge to this divide, which ultimately leads to Deleuze and Guattari’s conceptualisation of machinic assemblages, constituted by bodies, forces, flows. It is important to note this ontological shift in the context of the sublime. As previously shown, much of the contemporary writing on the sublime relies on a Kantian framework, a non-affectual reading of Lyotard, or the psychological aspects of Burke’s model. This presents a problematic condition for the role of aesthetics in a post-SBD discourse within the landscape architectural discipline. Moving beyond this division which places the subject separate from a world constituted of objects allows for the entity which is normally considered the subject to be seen as deeply embedded and situated in an already existing and forever changing machine of relations between itself and other relevant entities. This dissolution of a barrier between the world and designer suggests a significantly greater connectedness than the subject/object dichotomy allows, one that is continuously varying in its form and capacity.⁴⁷⁹ Moving beyond ontologically constructing the world as divided between subjects and objects highlights processes of relations over categorisations of objects, a mode of thinking entirely suited to the design of landscapes.

Similarly, a challenge of the ‘fixed’ position of the subject within a positional grid of cultural terms or what Ian Hacking describes as “interactive kinds” (gender, race, class, ethnicity, cultural practices) has been unfolding through the past two decades, spurred on by these same flat ontologies.⁴⁸⁰ Brian Massumi describes this problem as the creation of a subject which is pinned to a grid of terms, defined by an overlapping of oppositions in effect locking it to a gridlocked state, unable to shift beyond normative movements.⁴⁸¹ This construction of the ‘locked’ subject perpetuates the idea of subjective knowledge only being knowable to that particular subject which operates from that particular position on the grid. As Massumi puts it: “movement is entirely subordinated to the positions it connects. These are pre-defined. Adding movement like this adds nothing at all.”⁴⁸² The grid, constructed via these terms, is the field upon which the subject finds itself pinned, from where it draws its identity and ability to relate with objects or other subjects. On the

483 Ibid., 4.

484 Ibid., 5.

485 Massumi provides an excellent distinction between two often confused terms in the context of affect: possibility and potential. “Potential is unscripted. It only feeds forward, unfolding toward the registering of an event: bull’s-eye. Possibility is a variation *implicitly* in what a thing can be said to be when it is on target. Potential is the *immanence* of a thing to its still indeterminate variation, underway. Implication is a code word. Immanence is a process.” *ibid.*, 9.

486 Connolly, “An affirmative open systems conception of how to design landscape.”

487 SBD discourse as shown earlier is heavily influenced by Deleuze and Guattari yet focuses on the techno-science aspects of assemblages and do not engage with affects. The extensive parts of these machines are prioritised as these are more readily shown via representation unlike affects which are less readily shown via representation.

other hand, following Bergson’s work on space-time, there is reason to look at neither the subject nor its fixed positions before and after a movement, but the movement itself as means to understand experience. Movement or motion is the process of transition from one state to another in which the body takes part in an “immediate, unfolding relation to its own non-present potential to vary.”⁴⁸³ This ability to vary is real but exists in an abstract form: “never present in position, only ever in passing.”⁴⁸⁴ This inherent variability is only discovered retrospectively, because as Zeno’s arrow paradox shows, positional states cannot grapple with the continuity of movement, instead reducing movement to an infinity of points between a beginning and end. If movement, and not position, is the source of what we may loosely call a ‘subject’, then the body’s ability to vary is, following Spinoza and Deleuze, the ability to affect and be affected by other bodies in motion. The ‘subjective being’ that is created by its relations to gender, race, ethnicity, and age that construct its identity and its ability to know and be known part of that same body’s ability to enter into potential relations with others.⁴⁸⁵

In the case of the sublime, then, there is no object or subject in which its origin may lie – it is suspended – or that the notion of subject commonly understood is woefully under-equipped to deal with it in this age of flat ontologies. Within affect/assemblage theory there are only machines constituted of smaller machines. Actor-Network Theory (ANT) also suggests a similar model where interactions in the world are part of a greater network of actors. If we move beyond subject/object, then the classical notion of the sublime is disrupted as it was argued to emerge from one or the other, either a disruptive object or the disruption of the subject’s faculties. What is it then that takes the place of this dichotomy? Relations. Relations between entities, and between and inside the assemblages those entities enter into. These assemblages are constituted of whatever relevant entities and relations that seek to partake in the production of certain affects. In the case of the context of this research, we can largely restrict these relations to what Peter Connolly terms ‘landscape affects’, where the primary assemblage is orientated around a (human) organism in a landscape—oriented on a certain disposition or desire.⁴⁸⁶ Such affects operate pre-consciously and involuntarily before a ‘subjective’ mind engages with the process. Affect theory then proves critical to moving past this divide, but also empowering for the designer in potentially providing a method in how to actively engage with the sublime as a central aesthetic concept within the discipline. Whilst the ‘affective turn’ has occurred throughout much of the humanities, it has seemingly not been embraced vigorously within landscape architectural discourse.⁴⁸⁷

The sublime once operated as a central tool within the practice and thinking of the landscape architecture discipline and yet has almost completely fallen away. The past two decades have seen brief mentions of the sublime and where it does, it relies on a clichéd notion or is employed in a generalised or abstract manner. The dichotomy of subject and object has perpetuated this problem which has come to an

488 See Pollak, “Sublime Matters.”; Pol-lak, “Matrix Landscape.”

489 Deleuze and Guattari, *A Thousand Plateaus*. 25

490 See Deleuze and Guattari’s three strata from which they derive much of the organisational layers of the world. Ibid., 502.

491 Massumi, *Parables for the Virtual*, 13.

492 Whilst I use the term body in a sense that is largely oriented towards a human body, it can equally be used in the true Deleuzian sense that encompasses the bodies of organisms, political bodies, weather systems, chemical compounds and more. Cf. Spinoza’s concept of there being no simple bodies – only composite bodies.

493 See ‘*The Emergence of the Sublime*’ within Stratum 2.

494 “Milieus are the material environments (consisting of matter and energy flows) in which strata and territories are formed...”. Eugene W Holland, *Deleuze and Guattari’s ‘A thousand plateaus’: A reader’s guide* (A&C Black, 2013), 61.

apex since the introduction of SBD. With SBD, the ‘subjective’ designer has been implicitly removed to invigorate the outcomes of ‘serious’ designing. The sublime would hold no place in this model, and if it did it was evoked in an odd Kantian sense, where the designed systems were too complex and large for the faculties of the subject to possibly conceive in totality.⁴⁸⁸ Totality is problematic in this sense because it draws you away from what Deleuze and Guattari term “the middle” which they describe as “...by no means an average; on the contrary, it is where things pick up speed. Between things does not designate a local-izable relation going from one thing to the other and back again, but a perpendicular direction, a transversal movement that sweeps one and the other away, a stream without beginning or end that undermines its banks and picks up speed in the middle.”⁴⁸⁹

Employing affect/assemblage thinking seems to be the best way to move from this divide that has perpetuated discussions of the sublime since the 18th century, and to operationalise it into a productive design technique and series of practices. It allows this divide to be entirely by-passed through its construction of the world consisting of entities, relations and assemblages - a flat ontology where the (human) organism is given no more precedence than a rock or the flow of capital on Wall Street.⁴⁹⁰ Critically it is the role of affects, which Deleuze borrows from Spinoza, that allows the subject/object divide to be put aside. Affects operate pre-consciously, autonomously, and involuntarily i.e. before a ‘subjective’ mind can act in the process. Conscious or rational thoughts occur after the fact, where what we consciously perceive as sensation is what Massumi calls “a feeling of having a feeling”, the feeling of a change in the bodies systems which unfolded before conscious thought.⁴⁹¹ Resonance between the organism and its environment (whatever entities are relevant) is felt in relation to the problematic that this whole event is orientated towards. It involves sensation, past experiences, anticipated futures, and the struggling of physiological and psychological processes. Approaching the sublime under an aesthetic of affect then suggests that a sublime event is a product of an assemblage, involving intensities and affects – an affect being a change in a body’s power and a feeling of this power.⁴⁹² This echoes the arguments of those 18th century writers which in the previous strata have described it as a rising of one’s own being or capacities.⁴⁹³ Such (landscape) sublime events then are the products of an assemblage involving an organism and the environment in which it finds itself, a milieu of other entities some of which are relevant and others that are not.⁴⁹⁴ The mechanisms of how such sublime events and the relevant assemblages come together and unfold in their production of ‘sublime affects’ will be covered throughout this stratum. What is important to take forward from this point is that the commonly held dichotomy of subject and object is unable to provide the underpinnings from which we can explain the complex relations between entities. Ecological forms of thought prioritise exchanges between bodies or composites in a productive sense, only being interested in what a body is capable of.

495 Gilles Deleuze, *Seminars on Capitalism and Schizophrenia*, 1971-1980, Seminar, University of Paris 8 - Vincennes Saint Denis. In Arjen Kleinherenbrink, “Machine philosophy. Gilles Deleuze and the externality of entities” (PhD in Philosophy Radboud University Nijmegen, 2016), 118.

496 Ashfield and de Bolla, *The Sublime: A reader in British eighteenth-century aesthetic theory*.

497 Ryan, “The Physiological Sublime: Burke’s Critique of Reason.”

498 With the sublime, alongside the beautiful and the picturesque, being such a central concept within the history of landscape architecture it is expected that there will be some negative feedback on the argument that it can be ‘reduced’ to the page or domesticated in its operation. This researcher does not see this to be the case at all as it is highly unlikely the sublime could ever really be domesticated for it would likely flip into something else entirely. Nevertheless, it is the intent of this research to provide the discipline tools and techniques to move even just one step closer to engaging with this aesthetic material, and not to introduce a dogmatic approach to aesthetics in general.

499 Timothy Morton, “Sublime objects,” (2011): 217.

Deleuze on this matter said:

*So, we define things, beings, and animals by their powers. One can immediately see, at the very least, to which other points of view [paysages] this is opposed: one no longer defines them by or as genera or species. I will not say a table is a manufactured thing, or that a horse is an animal, I will not say a person is of the masculine or feminine sex; instead tell me of which affects are you capable? In other words: what are your powers of being affected?*⁴⁹⁵

Revisiting Burke – Physiological Sublime

The tension between whether the sublime originated from the subject, object, or other such location has led to the concept as a whole collapsing into the abstract and arcane.⁴⁹⁶ Without a strong sense of how the sublime unfolds as a process and what forces are at play, landscape designers struggle to engage with it. The 18th-century British discourse and Kant’s model are not sufficiently strong enough to affirm the powers of the designer to manipulate or create such a landscape experience. Vanessa Ryan’s article, *The Physiological Sublime: Burkes Critique of Reason*, suggests a reading of Burke that has both gone almost entirely unrecognised and is entirely relevant to how designers practice.⁴⁹⁷ Shifting its orientation from the ‘private’ mind of the subject towards the open and ecologically connected sensory plane of the body and its constituent relations suggests that the sublime’s operations can be traced and represented. Ryan argues that Burke’s model of the sublime has been critically misconstrued so that its physiological aspects are downplayed as resulting from the psychological, or not included at all. If the sublime does operate primarily through the body and not the mind with its various faculties, as Ryan suggests, then there is significant ground to be made in readdressing it as a central concept to designers. Her argument that the sublime operates through physiological means suggests two things relevant to landscape designers: 1) that a sublime event is far from abstract in its creation, and that the milieu from which it emerged can be retraced; 2) and that in doing so designers will have the material at hand with which to design with the sublime in a more deliberate and precise way. Both points have direct applicability to the state of the sublime (and other aesthetic concepts) in design through the proposition to move beyond the abstractness of mysticism and obscurity that hinders it developing as a design practice.⁴⁹⁸

Art discourse (which has proven significantly more progressive in the realm of aesthetics than landscape architecture recently) also still relies on a mostly Kantian operation of the sublime which as Timothy Morton notes, is “an experience of inner freedom based on some kind of temporary cognitive failure”. Morton argues that this is starkly contrasting to Burke’s model, which he argues is “simply craven cowering in the presence of authority...No real knowledge of the authority is assumed - terrified ignorance will do.”⁴⁹⁹ Whilst Morton’s description here is characteristically provocative, it shows the typical response to

500 Burke, *A philosophical enquiry into the sublime and beautiful* 2. Emphasis mine.

501 James Prior, *A life of Edmund Burke* (G. Bell & Sons, 1908), 47.

502 David Bromwich, “The sublime before aesthetics and politics,” *Article, Raritan* 16, no. 4 (1997): 63.

Burke’s model of the sublime - one that suggests that it is a ‘safe pain’, partially known and understood by the mind.

Sensation over reason

Burke described the sublime as a force “capable of *affecting the body* and thus exciting our passions”, and it is this notion of the body being affected that is important/significant here.⁵⁰⁰ This notion illustrates two things, both critical to approaching the sublime as a physiological force. Firstly: Burke at the very beginning of his treatise describes the sublime as ‘affecting the body’, it does not affect the mind or the faculties as its primary vector. This is different from the predominant reading of Burke which focuses on the mental aspects of the encounter. Burke here is likely not using ‘affect’ in the Spinozan sense , yet the intent behind the word is remarkably similar. What he describes is a sublime affect that acts on the body and shifts it, *affects it*, causing a state change. A change of this kind may be minute or of great magnitude, the degree is less important than the fact that this change in state happens at all, and that it happens via a body being affected by an exterior force. Secondly: the mental or psychological effects are the subsequent results of a sublime affect acting with a body. Burke demonstrates his intent that the mental (or conscious) aspects of feeling some sense of the sublime are only the result of it being first parsed through the physiological mechanisms of the body . Therefore, he places the excitement in the faculties of the mind at the end of the process, as if they were the logical conclusion to a mathematical equation. This does not make the mental dimensions less important or any less interesting, but it does raise the question of why the body has been left out of the discussion to foreground the psychological.

Processes of the physiological sublime

Where, then, does the origin of the sublime lie under Burke’s physiological model? This affectation of the body, which creates what we may recognise as a feeling of the sublime, must originate from a series of relations coming together to produce it. Here the sublime is not an inherent quality that resides within an object that can create a shift within a subject, nor is it originating from the subject’s own mental faculties and processes. The source for this physiological sublime is less clear in Burke’s writing, likely due to the lack of conceptual tools at hand, as well as the fact that the *Enquiry* was his only philosophical text, which he started before the age of 19.⁵⁰¹ What can be discerned is that he did not make a clear distinction in his construction of the world between objects and the body (of the subject). Instead, he describes bodies as being both animate and inanimate, each readily capable of affecting one another.⁵⁰² In doing so, Burke is creating a radically different ontological plane than his contemporaries, one that echoed the works of Spinoza and anticipated the20th century post-structuralists. David Bromwich, a Sterling Professor of English at Yale, describes Burke’s model of the sublime as a forcible impression on the mind capable of leaving a residue that is carried forward through future experience. This force is exterior to the mind and the subject. Bromwich clarifies

503 Ibid.

504 Ibid.

505 Burke, *A philosophical enquiry into the sublime and beautiful* 127-60.

506 Ibid., 64.

507 Michael Hardt, *Gilles Deleuze: An apprenticeship in philosophy* (London: UCL Press, 1993), -73.

508 Capacities, change, and action in the Deleuzian sense tends not to be intensively understood within the discipline.

this further by adding that “bodies carry powers into minds that have feelings or passions...the affective powers of the sublime and the beautiful can be causes of mental activity”⁵⁰³ This is to say that both the sublime and the beautiful have their origins in sensation, not reason as most contemporary readings based upon Kant suggest.⁵⁰⁴

Processes of the Burkian sublime

The *Enquiry* has proven useful to those interested in the sublime (and the beautiful) due to its full account of not only what Burke considers these aesthetic concepts to be, but also the mechanisms and processes which unfold throughout the experience of them. How this physiological form of the sublime operates will be unpacked here as it provides a foundation to expand from, when it is aligned with contemporary frameworks. In Part IV of the *Enquiry*, most of this material is found through what Burke terms the ‘efficient cause’ of sublimity.⁵⁰⁵ Earlier Burke writes, “I know of nothing sublime which is not some modification of power.”⁵⁰⁶ This power is not in the sense of authoritarian power of one body over another, but the power that one body has to affect or be affected. Michael Hardt describes this power as “the power to be affected, which corresponds to the power to exists, is completely filled with active and passive affections.”⁵⁰⁷ Burke’s quote sets the tone for the following exploration in that it makes vividly clear that the sublime involves capacities, change, and action at a pre-personal level.⁵⁰⁸

The operations of the physiological sublime can be described by the following steps: 1) a relation is formed between any number of bodies or relations, one necessarily being the animate (a human organism), in which this relation creates a modification in the physiological systems via the sensory system of the organism, 2) This change in capacity is to such a degree that it disrupts the normative responses of the nervous system in its capacity to act or respond, 3) this disruption is felt again as a sensation by the conscious mind – the feeling of this feeling, 4) mental processes and conscious mind react following this in the effort to respond to this unfolding event.

Fig 7.75. Types of Power. Adopted from Michael Hardt, Gilles Deleuze: *An apprenticeship in philosophy*. 73.

509 Burke, *A philosophical enquiry into the sublime and beautiful* 14.

510 Ibid.

511 Ibid., 24.

512 Ibid., 22.

513 Ryan, “The Physiological Sublime: Burke’s Critique of Reason,” 270.

514 Antonio Damasio, *The Feeling of what Happens: Body and Emotion in the Making of Consciousness* (London: Vintage Publishing, 2000).

The importance of a physiological sublime

The *Enquiry* presents Burke’s attempt to construct an empirical model of aesthetics that, even if it is based on sensation, is capable of being used as a working model for universal affectivity across all humans.⁵⁰⁹ As all humans have a general “conformation of their organs” Burke suggests there is a commonality across the species for feeling the same sensation.⁵¹⁰ Further, as Burke suggests that ideas have their source from sensation itself, then there must be a great degree of commonality with our ideas as well: “for as the senses are the great originals of all our ideas, and consequently of all our pleasures, if they are not uncertain and arbitrary, the whole ground-work of taste is common to all”.⁵¹¹ This proposition then suggests that the physiological sublime cannot be easily pushed aside and labelled as merely subjective due to the very structure of both the event and the organism. It may vary in degree between those who experience it which Burke resolves by that organism having either “a greater degree of natural sensibility, or [experiencing] a closer and longer attention to the object.”⁵¹²

The physiological aspect of Burke’s writing in the *Enquiry* has proven critical in the approach that this research has taken to the sublime, but also appears to be entirely unappreciated if not unknown within the landscape architectural discipline. Despite the constant invocation of Burke’s work, the physiological dimension does not appear in the disciplinary discourse. This reading of Burke and his insistence on the primacy of physical over the mental, breaks what Ryan calls the “well-established assumption that the sublime is allied with an elevation of the mind.”⁵¹³ This assumption has continued throughout contemporary discussions on the sublime within the discipline, likely in part due to a lack of close readings of the source material. This research has discovered no traces of this physiological dimension within the contemporary discourse that engages with the sublime, which instead focuses on the psychological and Kantian dimensions. Put simply, Burke’s physiological systems opens the door for the sublime to be approached directly through a lens of affect and assemblage, an approach that engages *directly* with the interactions between bodies, the environment, time, and space. Affect/assemblage thinking and Actor-Network-Theory immediately become useful to ‘trace the network of actors’ as Latour would say, to rebuild what happened and how. For the sublime to be useful in design, it must be able to be re-presented through the tools of representation suited to landscape design. If the sublime operates primarily at a physiological level as Burke and Ryan suggests, then the notion of *expression* put forth by Spinoza and later Deleuze becomes critical. To give expression to these sublime movements and events through representation is to reproduce – even if partially – the forces at play which the reader/ viewers body can engage with and respond in what Antonio Damasio calls an “as-if body loop”.⁵¹⁴ Deleuze writes of this process of expression involving re-presenting an affectual action so that involuntary actions involved can be felt as a resonance with our own past experiences. This unfolds via whatever means is best suited, whereas Damasio from his neuroscience perspective suggests that the

515 Kleinherenbrink offers a unique perspective on Deleuze as he has offered an OOO perspective critique on Deleuze within his recently finished PhD and subsequent book. Kleinherenbrink, “Machine philosophy. Gilles Deleuze and the externality of entities.”; Arjen Kleinherenbrink, *Against Continuity : Gilles Deleuze’s speculative realism*, Speculative realism, (Edinburgh: Edinburgh University Press, 2019).

516 Kleinherenbrink, “Short All Entities are Sublime: Chaos according to Deleuze.”

517 Ibid., 1.

518 Ibid. Emphasis in original.

519 Ibid., 6.

body and its organs are entirely capable of feeling sensation ‘as-if’ it was doing so directly, with the same somatic marker response as if that sensation were directly encountered.

A Sublime Differend

Burke’s physiologism in his conceptualisation of the sublime brings forth two questions on the state of entities that could not be resolved at that time: 1) what exactly is an entity, as Burke uses the term body to refer those that are animate and inanimate, 2) what are the processes that unfold within and during the relation between any number of entities beyond the physiological changes? Burke suggests that entities are not as simple as they appear, that they are not merely phenomena that exist ‘out there’ passively waiting for interaction with another. The *Enquiry* lacked the conceptual tools to follow this further and delve into the question of what entities are and how they affect us as (human) organisms through whatever means.

The work of Arjen Kleinherenbrink, a contemporary Dutch Philosopher, has proven useful in attempting to answer this question concerning the sublime.⁵¹⁵ His conference paper *All Entities are Sublime: chaos according to Deleuze* provides a useful starting point, though remains problematic in its use of several key concepts borrowed from Deleuze.⁵¹⁶ Kleinherenbrink’s version of the sublime has noble motivations, yet is not fully suited to a landscape design context. These motivations will be explored here before highlighting its limitations. Subsequently, a Deleuzian sublime based on the notion of *intensity* will be developed that is suited to landscape design practices.

An entity’s internal sublimity

Kleinherenbrink suggests that the fundamental idea of the sublime being an exceptional event is misleading. Instead he posits that “the sublime, and even chaos, are not exceptional, but rather constitutive features of every existing thing.”⁵¹⁷ In doing so he is countering the established claim that the sublime is an event where “reality escapes our grasp” which suggests that remaining existence is “mundane, knowable, and predictable *in principle*.”⁵¹⁸ Further, he proposes a rule where the extreme examples we typically call the sublime are exceptions: “not a single entity is every accurately expressed in a relation.”⁵¹⁹ For Kleinherenbrink, the scientific categorisation of entities and events reduces the world to what is knowable and organised, despite Nature being unruly and schizophrenic. The philosophy of Deleuze opposes this reduction and it is here that Kleinherenbrink employs Deleuze to suggest that the sublime is not an exceptional event and that entities are as mundane as the sciences would suggest. Kleinherenbrink’s intent with the construction of this rule is important: he is seeking to expand the sublime beyond being an exceptional event to show that the world is much wilder and more interesting than common sense would suggest.

520 Deleuze, *Difference and Repetition*, 230. cited in Kleinherenbrink, “Short All Entities are Sublime: Chaos according to Deleuze.” 3. First emphasis by Deleuze, second by Kleinherenbrink.

521 See for further definitions: Parr, *The Deleuze Dictionary*, 9.

522 Kleinherenbrink, “Short All Entities are Sublime: Chaos according to Deleuze.”,6. Emphasis in original.

523 Ibid., 4.

524 Ibid.

525 Ibid., 5.

Divide between the Actual and the Virtual

For Kleinherenbrink, the relations formed between entities play the central role in the formation of a sublime event. Breaking with Kant, who relied upon a disinterested subject apprehending an exterior object, he turns to Deleuze to explore a sublime that emerges from within the machinic relations between entities. Here he quotes Deleuze: “‘the sublime principle of the *differend*’ must be regarded as ‘coming from the heart of *things*’.”⁵²⁰ This extract initially proves problematic in two respects: firstly, Kleinherenbrink places emphasis on *things*, in other words, objects at the expense of assemblages; and secondly, the way in which Deleuze has been quoted is not entirely in step with the original intent of the text as the quoted material is out of phase and it would be a stretch to consider it coherent. Kleinherenbrink interprets this differend within each entity as between the actual and the virtual, to which he attributes *sense*, *expression*, and *partial object* to the former and *desire*, *puissance*, and *singularities* to the latter. These two terms are often confused within Deleuzian discourse. So a clearer definition can be presented as the actual being the dimensions of an entity that presents itself to us in extensive space-time, and the virtual as that entity’s capacities to affect, be affected and what makes it singular.⁵²¹ These two dimensions inherent to every entity are always paired, always present together. However, Kleinherenbrink suggests through his reading of Deleuze that this may not be the case due to a differend existing within each entity:

*Regardless of the name, a sublime and irreconcilable rift exists between two irreducible aspects of each entity. First aspect: an entity insofar as it actually relates to something else. Second aspect: an entity insofar as it virtually never relates to anything else...one actual and relational, one virtual and essential.*⁵²²

Following Kleinherenbrink, events that we may recognise as sublime are examples of where an entity is fully (or accurately) expressed in a relation: exceptions to his prior stated rule. This suggests that the virtual dimension of any non-sublime entity is beyond sensibility, though, and practice and as such cannot be known or with in principle. Relations between and within entities then do not engage with the virtual itself, but a translation of that virtual aspect.⁵²³ Kleinherenbrink seems to be suggesting that this virtual dimension is restricted to the entity itself. This is problematic as it implies an *all or nothing* approach to the how an entity relates to the virtual. This then suggests in all but the most extreme cases we never relate to the virtual, only a translated version of it which is never fully accurate. If access to this dimension, which Kleinherenbrink describes as “what a body can do”, is never really available to another entity, it is difficult to understand how it may be utilised or appropriated in the production of the new via experimentation.⁵²⁴ If it is withdrawn from all relations, as he argues, then it would not be in any position to engage with life except in the rare exceptions that we recognise as being sublime. Whilst he is correct in stating the virtual cannot exist in extension, this does not exclude it from relations.⁵²⁵ Lastly, Kleinherenbrink’s move to discuss entities in an object-oriented manner precludes his model of the sublime from

526 This experimentation is arguably Deleuze’s greatest interest in his philosophical project, particularly in his collaborations with Guattari.

527 Massumi, *Parables for the Virtual*, 33.

engaging with the problem-oriented assemblages that organisms continuously experiment with.⁵²⁶

Moving forward

Despite these issues, Kleinherenbrink’s writing illustrates that there is something worthwhile reconsidering the sublime beyond an extraordinary event. His declaration that *all entities are sublime* is provocative and suggests a greater degree of attention might/should be paid to the mundane and everyday moments in life. The ambition with which he approaches the sublime is worth carrying forward, but the issue of his reduction to object-like entities will need to be bypassed, in this case by turning directly to Deleuze. Without doing so, Kleinherenbrink’s model seems to be only capable of treating the world via discrete objects which is counter to how landscapes are composed and experienced. Our engagement with landscapes involves a multiplicity of relations and bodies. We don’t experience the slopes in a gully, with the darkness of the vegetation, and our desire to experiencing something out of the everyday, as a series of discrete objects. It would be hard to qualify how we experience the slope, or vegetation as discrete objects. Instead we must consider the world, and landscapes, as being experienced through composite bodies, any number of relations coming together to form a problem-oriented assemblage through which affects are produced.

All Intensities are Sublime

*“Intensity and experience accompany one another like two mutually presupposing dimensions or like two sides of a coin.”*⁵²⁷

Kleinherenbrink’s differend remains problematic due to its object-oriented nature. Landscapes cannot be readily reduced to a series of individual objects which suggests that his approach to the sublime is not appropriate for this research. However, Kleinherenbrink’s sublime does demand an obligation to attend to the specificity of material and form as parts of a composite assemblage. Due to landscapes being irreducible to objects and instead involving composites of entities and relations, we must bypass Kleinherenbrink’s assertion that the virtual is a dimension that can never be accurately or fully related to in an all-or-nothing sense. Whereas Kleinherenbrink suggests that connecting to an object’s virtuality without translation produces a shock within the organism, we might reconsider this shock arising as the result of intensity in relation to a certain problem. Moving past objects to composites or assemblages allows us to understand the sublime as a coming together of whatever is relevant in relation to a given problematic – this problematic being the maypole around which the actual, virtual, and intensity circle around.

528 Hughes, *Deleuze's Difference and Repetition: A Reader's Guide*, 150-56; Clisby, "Intensity in Context: Thermodynamics and Transcendental Philosophy,"; Bowden, "The Intensive Expression of the Virtual: Revisiting the Relation of Expression in Difference and Repetition," 236; Roffe, *Badiou's Deleuze*, 142-43; DeLanda, "Space: Extensive and Intensive, Actual and Virtual," 86; Protevi, "Adding Deleuze to the mix," 421-22.

529 Hughes, *Deleuze's Difference and Repetition: A Reader's Guide*, 150.

530 Clisby, "Intensity in Context: Thermodynamics and Transcendental Philosophy," 253.

531 Ibid., 2017; DeLanda, "Space: Extensive and Intensive, Actual and Virtual," 86; Hughes, *Deleuze's Difference and Repetition: A Reader's Guide*, 150-56; Protevi, "Adding Deleuze to the mix," 421-22.

532 Voss, "Intensity and the missing virtual: Deleuze's reading of Spinoza," 169.

533 "...Deleuze falls squarely in the camp of object-oriented ontology." Kleinherenbrink, *Against Continuity: Gilles Deleuze's speculative realism*, 269. 534 Further explication on the relationship between OOO and Speculative Realism can be found in Peter Connolly and Shaun Rosier, "Another Approach to the Aesthetics of More-than-humanness," *Kerb Journal of Landscape Architecture* 28 (2020).

535 Daniel W Smith, "Deleuze's theory of sensation: Overcoming the Kantian duality," *Deleuze: A critical reader* 29 (1996): 45.

536 Hughes, *Deleuze's Difference and Repetition: A Reader's Guide*, 150,49.

537 Ibid., 114,69-70; James Williams, *Gilles Deleuze's Difference and Repetition: A Critical Introduction and Guide* (Edinburgh: Edinburgh University Press, 2003), 184; Deleuze, *Difference and Repetition*, 230; Roffe, *Badiou's Deleuze*, 143.

538 Deleuze, *Difference and Repetition*, 144,44-45.

539 Ibid., 222.

Intensity as third register

Within Deleuzian discourse there has existed a trend to place the notion of intensity within the virtual, though this has recently undergone a degree of critique.⁵²⁸ Joe Hughes suggests that this conflation is incorrect: "intensity is not virtuality, and it would be a mistake to confuse the two...intensity is felt, for example, whereas Ideas are thought."⁵²⁹ Dale Clisby highlights that this conflation gives the virtual a "productive potential" where it "holds some 'power' over the actual."⁵³⁰ In opposition to this dichotomy, Jon Protevi, Manuel DeLanda, Sean Bowden, and Hughes, all suggest that intensity is better thought of as a third ontological register sitting between the virtual and actual.⁵³¹ In Deleuze's texts on Spinoza there is little discussion of virtuality, eschewing it for a ubiquitous inclusion of intensity in its place.⁵³² This third ontological domain supports bypassing an object-oriented view of sublime by considering intensity as separate from, though ecologically in, the virtual. Doing so allows us to consider composites or assemblages in sublime encounters and not just objects with restricted and essential internal realities. This approach is more capable of dealing with the complexity of landscape than the object-oriented-ontology manifestation of Deleuze that Kleinherenbrink evokes.⁵³³

Intensity as a shock to an organism

*"Every sensation is intensive; it implicates within itself a difference in quantity between unequal forces..."*⁵³⁵

Just as Kleinherenbrink intended to show that all entities are sublime because of their internal *différend*, it can be argued that the same is true if we consider the role of intensity in the formation of a composite assemblage. To do this we must first unpack intensity as the third register before discussing its role in the sublime. Following DeLanda, Protevi, Clisby, and Hughes, intensity operates between the virtual and the actual, an intermediary register critical to processes of individuation and actualisation.

Hughes describes intensity as "the degree to which a subject is affected by the environment...[a] shock to sensibility."⁵³⁶ This affection occurs only via sensation: "everything begins in sensibility"; "intensities are the matter of sensation, trillions of uncontracted sensations"; "sensations are signals of reconfiguring intensities"; "intensity is simultaneously the imperceptible and that which can only be sensed"; "[intensity is] the only basis on which sensible difference can arise".⁵³⁷ This sensation, or intensity, is "pure difference in itself" which for Deleuze makes it "both the object of the encounter and the object to which the encounter raises sensibility."⁵³⁸ It exists outside sensibility yet is only sensible. Intensity presents difference to the organism. Difference that is not just between A and B, but an infinite, ecological, differential coupling of E-E', E to e-e', and e to $\mathcal{E} - \mathcal{E}$ and so on.⁵³⁹ Intensity, or intensive differences, then are composed of heterogeneities which infinitely relate them to whatever-else, and vice versa – they cannot be separated

540 "Ontological Difference: Difference Making a Difference," (Webpage), updated 02/12/2009, 2009, accessed 07/02/2020, 2020, <https://larvalsubjects.wordpress.com/2009/02/12/ontological-difference-difference-making-a-difference/>. Original emphasis.

541 Deleuze, *Difference and Repetition*, 234.

542 Bryant, "Ontological Difference: Difference Making a Difference."

543 Deleuze, *Difference and Repetition*, 234. Emphasis in original.

544 Ibid., 140.

545 Cf. Deleuze's term '*sentientum*'.

546 Deleuze, *Difference and Repetition*, 144-45.

547 Ibid., 140.

548 Ibid.

549 Ibid., 267.

from the rest of Nature (other intensities). Deleuze determines two other important characteristics to intensity: firstly, "it is a difference that *makes a difference*" – the point at which water boils at particular altitude and temperature is a series of inequalities that creates a difference which cannot be cancelled out by the inequality that generated it.⁵⁴⁰ Secondly, "intensity affirms difference."⁵⁴¹ As it is already inherently involves difference, there is no negation between series, but rather a positivity, or as Levi Bryant suggests a "power, a potency...a positive being in its own right."⁵⁴² There are obvious implications for this in terms of landscape aesthetics. Intensity being ecological allows us to read a change in topographical slope, affects the experience of the vegetation atop it which changes the degree of enclosure we may feel. This seems to be a notion immediately relevant to landscape designing which crucially involves the alteration of spatial relations and variables.

We can now begin to relate intensity to an organism and a landscape environment. Intensity presents a shock or disruption to an organism which it then subsequently reformulates as a problem, later returning to make sense of the solution to this problem. Put simply, something in the world forces us to doing something. This is what Deleuze means when he says "something in the world forces us to think. This something is an object not of recognition but of a fundamental *encounter*."⁵⁴³ This encounter is one with an intensive difference that presents to the organism outside of their habitual categories or responses, which Deleuze terms a 'sign'. This sign is not a "sensible being" but is "of the sensible" making it both imperceptible and can only be known by sensibility.⁵⁴⁴ In other words, it cannot be perceived as it cannot be recognised, only sensed.⁵⁴⁵ Deleuze states this clearly: "...it is always by means of an intensity that thought comes to us...what forces sensation and that which can only be sensed are one and the same thing, whereas in other cases the two instances are distinct. In effect, the intensive or difference in intensity is at once both the object of an encounter and the object to which the encounter raises sensibility."⁵⁴⁶ For Deleuze, this sign presents to the organism a limit in sensibility and forces it move beyond common sense in order to respond through action or thought.⁵⁴⁷ This confrontation forces the organism beyond habit and common sense, as it finds itself "perplexed" in the face of this 'sign-as-problem'.⁵⁴⁸ Problems or problematics in this case are never negative, they are spaces of positive production and experimentation.⁵⁴⁹ Though they are always positive in their production, their outcome, the events produced, are not always positive to us: they may contain war and famine. Deleuze unpacks this notion of a problematic via an example of learning to swim:

The movement of the swimmer does not resemble that of the wave, in particular, the movements of the swimming instructor which we reproduce on the sand bear no relation to the movements of the wave, which we learn to deal with only by gasping the former in practice as a sign...there is an innate or acquired practicality with signs...We learn nothing from those who say: 'Do as I Do'. Our only teachers are those who tells us to 'do with me' and are able to emit signs to be developed in heterogeneity rather than propose gestures for

550 Ibid., 23. Emphasis added.

551 Ibid., 165.

552 “The ‘problem’ is an excitation.” Hughes, *Deleuze’s Difference and Repetition*: A Reader’s Guide, 113.

553 Cf. Merleau-Ponty’s approach. Maurice Merleau-Ponty, *The Structure of Behaviour*, trans. Alden L Fisher (Boston: Beacon Press, 1963), 148-49; Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. Colin Smith (New York, NY: Routledge, 2005), 248-49.

554 Bergson, *Matter and memory*, 65.

555 Hughes, *Deleuze’s Difference and Repetition*: A Reader’s Guide, 169; Deleuze, *Difference and Repetition*, 251.

556 Hughes, *Deleuze’s Difference and Repetition*: A Reader’s Guide, 70.

557 Deleuze, *Difference and Repetition*, 245.

*us to reproduce. In other words, there is no ideo-motivity, only sensory-motivity. When a body combines some of its own distinctive points with those of a wave, it espouses the principle of repetition which is no longer that of the Same, but involves the Other – involves difference, from one wave and one gesture to another, and carries that difference through the repetitive space there by constituted. To learn is indeed to constitute this space of an encounter with signs.*⁵⁵⁰

Nature of a problem – Bergson, sensation, and action

This example, though seemingly mundane, allows us to pragmatically unpack this rhizomatic series of concepts. First, Deleuze affirms that learning occurs through an unconscious experimentation with forces through “establishing the bond of a profound complicity between nature and mind.”⁵⁵¹ This presents an intensive shock to the body: swim or drown, habit cannot save you here. This intensity extends to the creation of a problem with which the body must grapple and experiment in order to swim.⁵⁵² A problem allows for a field of infinite variabilities to be experimented with in response to this shock in the form of sensation. Secondly, the distinctive points and variabilities of the body and wave combine in the formation of a multiplicity. The distinctive (intensive) points of my body merge with the distinctive points of the wave (the strength of my arms and legs, the salinity of water, the turbidity of the wave). In this we find the formation of the problematic idea. Sean Bowden describes this as “at first a set of merely potential relations” relevant to a situation that is progressively specified to discover the ‘solution’ to the given problem. Here we find a “set of actual terms and relations” structured by those of the problematic idea. To come to this solution requires experimentation which by its very nature requires a connection to the past which we find in the virtual as a form of involuntary memories of previous encounters and empowerments, being drawn forward, contracted, to meet the present. This may be from playing in the bath or a paddling pool, or it may be each previous individual movement of the arms and legs.⁵⁵³ Importantly, it is the virtual past that is brought forward to the present that provides a means of evaluation for such acts of experimentation.⁵⁵⁴

To determine a solution to this problematic requires moving beyond experimentation towards the actualisation of solution – in this case, a successful ‘novice-ocean-swimming assemblage’. Here intensity emerges again after delivery of the initial shock – it “pulls Ideas outside of their virtuality” into the present based on their relevance to their initial “intensive environment”.⁵⁵⁵ Ideas (multiplicities) are brought into the present “repetitive space” by intensity *dramatising* them, in other words, to bring them to life by giving them quality and force.⁵⁵⁶ Through this process of learning-to-swim-in-the-sea, intensity determines what aspects of the multiplicity to incarnate in quality and extensity.⁵⁵⁷ Slightly bending your elbow more, cupping your hands, timing strokes with kicking your legs, holding your breath for four instead of two strokes, and so on. Each of these is a continuous determination of the idea by intensity, dramatising it so that it can be experimented with; carried forward or discarded. Importantly, this process is never

558 Cf. Ibid., 246. and Simondon in Bowden, “Gilles Deleuze, a Reader of Gilbert Simondon,” 141.

559 Bowden, “Gilles Deleuze, a Reader of Gilbert Simondon,” 142.

560 Clisby, “Intensity in Context: Thermodynamics and Transcendental Philosophy.”

561 Deleuze, *Difference and Repetition*, 246.

562 Hughes, *Deleuze’s Difference and Repetition*: A Reader’s Guide, 145.

563 Ibid.

564 Deleuze, *Difference and Repetition*, 278.

565 Hughes, *Deleuze’s Difference and Repetition*: A Reader’s Guide, 145.147

566 Ibid., 14.

exhausted: the ‘pre-individual’ field overflows the individual (the assemblage) itself which allows for further experimentation to occur later – say in the development of a ‘novice-breaststroke-swimming assemblage’.⁵⁵⁸ This is a composite of heterogeneous relations of which some are actualised based on the singularity and milieu in which it emerged from; not a common sense idea of a consciously acting subject moving their limbs in water.⁵⁵⁹ In this we have an individualised being: a ‘novice-swimming-assemblage’ that is this being and not any other, no matter how similar.

Individuation gives form to the potential given by ideas, it is a “thing-in-itself” before obtaining its actual, extensive form.⁵⁶⁰ This is the “act of solving a problem”, though it is only solved when this individualised entity is actualised so that it is determined to have a quality and extensity.⁵⁶¹ Importantly, it is not an isolatable or discrete object (individual) that is created – instead an event of successful swimming emerges. Here we find the spatio-temporal dynamism that actualises individualised being by two dissimilar halves. The virtual (differential) relations of the idea determine its actualities, and the virtual singularities determine its extensity.⁵⁶² Relations determine quality through a “contraction of trillions of vibrations” or sensations which are then organised into certain qualities.⁵⁶³ Singularities determine extensity by acting as points of departure which organise all other points till the vicinity of another singularity.⁵⁶⁴ A triangle has three singularities which extend themselves till the encounter with another, in turn determining form.⁵⁶⁵ Hughes suggests that these two aspects are not exclusive: “quality and extensity are coextensive. Form is quality and quality is form.”⁵⁶⁶ What we encounter is not form, but the contraction and organisation of quality as determined by virtual relations. A successful-swimming-assemblage is a contraction of all these relations into a determined event, a solution to the initial problematic shock presented by intensity.

A useful landscape example

Let us compare this swimming example to one in the landscape – the experience of walking towards an excavated quarry face (See also Figure 7.76).

As you walk towards this wall of rock its height seems unmeasurable. At a further distance it stands back as massive object that you cannot quite reference yourself against. The dark rock betrays any ability to define a scalable element. Moving closer, it looms above you, its mass bearing down. You begin to feel a weight or pressure pressing down on your shoulders. You look up and up and up, and across its breadth to try perceive its entirety. Each bench blends into the other, the edges barely differentiated from the rest. At a certain point you feel as though the entire mass of the wall is pressing down onto you – you can’t see anything else – the darkness of the rock, the shear verticality that extends beyond reference. The sensation of pressure presses against your chest and arms as your whole body feels like it is pushed back. This sensation of pressure arrests you – holding you in place without choice, unable to act. Eventually you are able to move again, the shock of it all having moved on. Now your body is oriented to the rock wall directly in front, the raw and violently hewed materiality.

567 Bowden, "The Intensive Expression of the Virtual: Revisiting the Relation of Expression in Difference and Repetition," 235.

This account shows a series of tipping points that that occur in the intensive relationship between organism and its milieu. Each one is representative of an intensive shift – a problem presented to the organism by intensity (sensation). The varying perceptions of the quarry face change as distance increases or increases, which in turn unfolds as a series of fresh problems that the organism must respond to via experimentation. Each shift, created by a change in intensive difference (of sensation), relates to how the body is related to the rock face. In this case the experimentation is less literal, the learning is of a different form. Instead what we find is that the experimentation draws on current and past experiences to respond to a novel and confronting shock. This novel shock demands learning a novel response in the production of new knowledge (actual terms and relations).⁵⁶⁷ In extreme cases such as this what may occur is a disruption or delay in the processes of problem-solving – a temporary disruption in the experimentation and eventual actualisation of the body. Movement is arrested entirely as intensity is so disruptive to the organism that process of determining what aspects of the idea to incarnate is halted or significantly restricted.

All intensities are sublime

We can read similarities in this reading of intensity to Kleinherenbrink's thoughts which shows that everyday encounters with entities are more complex than common sense portrays. The more extreme example of the rock face illustrates that more disruptive shocks are experiences we tend to recognise as sublime. Whereas the swimming example clearly illustrates that everyday experiences also constitute a richly varied encounter with signs, similarly sublime. Much like how Kleinherenbrink argued that each entity had an internal sublime dif-férend, these examples show that each encounter is the result of an

Fig 7.76. Diagram of movement towards rock face.

568 Gilles Deleuze, *Bergsonism* trans. Hugh Tomlinson and Barbara Habberjam (New York: Zone Books, 1991), 92.

569 Craig Lundy, "Tracking the triple form of difference: Deleuze's Bergsonism and the Asymmetrical Synthesis of the Sensible," *Deleuze Studies* 11, no. 2 (2017): 184.

570 Zepke, "The Sublime Conditions of Contemporary Art," 78.

571 Audrey Wasser, "A Relentless Spinozism: Deleuze's Encounter with Beckett," *SubStance* 41, no. 1 (2012): 124.

intensity. We can determine such intensities to be sublime by virtue of the extreme examples showing that all encounters involve a shock and experimentation via sensation, which in turn suggests (and Deleuze shows) that everyday encounters should be considered as sublime or at the very least worthy of more attention. Whereas Kleinherenbrink argues that the sublime is not exceptional because it is constitutive of every entity (seemingly counter to his wider aspirations), this researcher would argue that the reverse is true. Each encounter is exceptional *because* every intensity is sublime. In looking at landscapes and how design approaches them, suggesting that significantly greater attention needs to be paid to both the exceptional and the mundane/everyday as both are examples of contractions of wildly varying relations and bodies. Deleuze provides us with one last point which affirms the role of intensity in experience: "If it is true that intensity is never given in a pure experience, is it not then intensity that *gives* all the qualities with which we make experience?"⁵⁶⁸ Intensity presupposes all experience, both its quality and extensity.⁵⁶⁹ We can now see that the sublime, not being exceptional, is part of every encounter with landscapes. Here we may also find why there are perpetual discussions by landscape architects on the mystery and challenge of engaging with these landscape encounters.

A Difference in Encounter

*"The sublime is the mechanism by which genetic rhythms emerge from chaotic infinity, rhythms as aesthetic syntheses or sensations..."*⁵⁷⁰

With this introduction to spatio-temporal landscape affects we can now bring affect, sensation, intensity, and ideas together to form a cohesive picture of the sublime as an intensive problem. Audrey Wasser likens this encounter with an intensity to a disturbing shock to the body's system, which she describes in a direct and visceral manner: "What is encountered is not an object but a difference in sensation, one that wounds or strains existing categories of sense perception, and transmits a shock to thought because it disrupts thought's ready concepts."⁵⁷¹ This shows us two important things related to the sublime, intensity, and affect. Firstly, it explicitly argues that thought is conditional on sensation, and from there thought, if it can muster a response, can engage with the object as it relates to a specific problem. Secondly, that a powerful enough sensation can disrupt the normative processes of the central nervous system which then subsequently creates changes within the mind. This affirms that encounters with the sublime are an encounter with an intensive shock, disrupting our habitual responses. Through this we can also affirm that such encounters and challenges – both the extraordinary and the seemingly everyday – are wildly experimental, and that such experimentation are central to life.

Marie Shurkus notes that Deleuze and Guattari also align the sublime with a connection to *something greater* or *something more* to a body

572 Deleuze and Guattari, *A Thousand Plateaus*. cited in Marie Shurkus, “The Sublime Event with Kant, Deleuze and Lyotard,” (Armory Center for the Arts: Armory Press, 2013), Essay, 20.

573The quoted passage from Deleuze and Guattari is particularly useful to thinking of the sublime in relation to landscapes with the overly landscape-oriented language used. This is not uncommon within *A Thousand Plateaus* and perhaps deserves greater attention.

574 Deleuze and Guattari, *A Thousand Plateaus*, 479.

575 Gilbert Simondon, *L’individuation psychique et collective* (Paris: Aubier, 1989), 108 in ; “A Short List of Gilbert Simondon’s Vocabulary,” *Fractal Ontology*, 2007, accessed 18/06/2018, 2018, <https://fractalontology.wordpress.com/2007/11/28/a-short-list-of-gilbert-simondons-vocabulary/>.

576Taylor Adkins is a noted translator and writer on Simondon, Laruelle, and Deleuze.

577 Peter Connolly, “What landscape design aesthetics might offer to the question of the designer’s relation to the real?,” (Auckland University: Interstices Under Construction Symposium: Presence, 13/07/2018), Symposium Presentation.

578 Massumi, *Parables for the Virtual*, 26.

or composite: “Deleuze allows the catastrophe of the sublime encounter to unfold, which allows for a passage into what he will later call ‘space of pure connection’, where all ‘orientations, landmarks and linkages are in continual variation.’”⁵⁷² This space of pure connection can easily be read as analogous to the spirituality of Simondon’s sublime where a connection to something radically more than the individualised entity is possible. Likewise, we can draw connections to Deleuze and Guattari’s ‘smooth space’, which they write is “filled by events or haecceities...a space of affects...*haptic* rather than optical perception.”⁵⁷⁴ Through Gilbert Simondon, we find that the sublime is tied to affectivity. In his *n L’Individuation psychique et collective*, affectivity designates a relation between an individualised being and the pre-individualised milieu. Adkins in his notes on Simondon writes that “affectivity, more than perception, indicates a spirituality that is greater than the individualized being (the Sublime)”.⁵⁷⁵ The sublime here is the excess of affectivity over the simple perception of a body – a connection to intensity, and the virtual (ideas, problems, capacities, sense) in the form of a sign or challenge through experience.⁵⁷⁷ A connection to this sublime spirituality then is a connection to life and Nature. The sign that is presented to us in sublime encounters is different than that which we encounter in habit. Deleuze describes signs as “the true elements of theatre. They testify to the spiritual and natural powers, which act beneath the words, gestures, characters and objects represented.” Signs are an affectual challenge to a body, emerging from the spirituality Simondon pointed to. Similarly, Deleuze and Guattari describe signs as “mark[ing] a certain threshold crossed”, a tipping point where the differential relation in an intensity signifies the transformation to something different. In encounters with the sublime, as we have already shown, these signs present a complex experimental field (if the organism-environment assemblage forms in a suitable way that is open to experimentation). What differentiates sublime encounters from something entirely habitual then?

*“Intensity would seem to be associated with nonlinear processes: resonation and feedback that momentarily suspend the linear progress of the narrative from past to future...It is a state of suspense, potentially of disruption.”*⁵⁷⁸

Throughout most accounts of the sublime dating back to the 18th century, there is a commonality sense of disturbance being felt by the subject psychologically, physiologically, or both simultaneously. This disruption would appear to be a central pillar to the sublime, no matter which way it is understood, contrasting with the beautiful which is considered to bring pleasure through harmony and unity. This disruption unfolds in the subject by means of an intensive shock presented to it by sensation. Such sensations are encountered as a sublime intensity due to to their problematic nature – they are beyond what the organism was expecting or had previously encountered. No previous memory of empowerments was able to be brought forth into the present to evaluate it, or it was inadequate. This in turn leads to a disruption in the individuation and actualisation of a body as part of an assemblage, the formation of action. We might ask the question, as did

579 Deleuze, *Cinema 2*; Williams, *Difference and Repetition: A Critical Introduction*.

580 This researcher would have liked to allocate more room to exploring the movement-image and time-image here. Refer to Connolly’s doctoral thesis for prior scholarship in this area. Connolly, “An affirmative open systems conception of how to design landscape.”

581 Deleuze, *Cinema 2*, 100. Emphasis in original.

582 Ibid., 47.

583 Ibid., 98.

584 Ibid., 99.

585 Ibid., 115.

Kleinherenbrink, why does the teacup on my desk not disturb my entire being yet the raging storm does? Why does the storm not disrupt or disturb the experienced fisherman? In looking at landscapes and how design approaches them it suggests that significantly greater attention needs to be paid to both the exceptional and the mundane/ everyday as both are examples of contractions of wildly varying relations and bodies processes⁵⁷⁹ To point towards an answer, we turn to Deleuze’s *Cinema 2* and James Williams’ commentary on *Difference and Repetition*.⁵⁷⁹

Deleuze’s Recollection Image

Habitual encounters with other bodies or events lead to a change in our capacities and subsequent actions or shifts in the *internal milieu*. Encounters beyond this are of a different kind – they are beyond what the brain was anticipating, leaving an interval where no response is issued as the problematic must be worked through. Deleuze’s texts *Cinema 1* and *Cinema 2* build on his theories on both space and time in perception and experience. In *Cinema 1* we find Deleuze’s movement-image composed of the three interweaving (and cardinally related) images of perception, affection, and action which allow us to conceptualise how a living-image encounters the world. In contrast to *Cinema 1*, which focused on movement, *Cinema 2* introduces time and the time-image to the established foundation of movement.⁵⁸⁰ Following Bergson, Deleuze introduces here the *reflection-image*, a temporal image that involves memory. Not memory of things, nor a catalogue of a chronologically ordered past, but a series of ; memory-sheets’ involving past, present, and possible future empowerments and encounters. Deleuze argues through Bergson that “there is no longer a future, present and past in succession”, but instead “*a present of the future, a present of the present, and a present of the past*, all implicated in the event, rolled up in the event and thus simultaneous and inexplicable.”⁵⁸¹ Memory for both Deleuze and Bergson is not a chronological past that is consciously called forward, instead, it forms a critical role in the sensory-motor system .

Deleuze places the reflection-image between the perception-image and affection-image, filling the gap with temporality and a connection to a spiritual dimension.⁵⁸² Memory and time function in a non-linear progression here: “the present itself exists only as an infinitely contracted past which is constituted at the extreme point of the already-there.”⁵⁸³ What we perceive as time passing is a series of distinct contracted points. The past, then, is an infinite number of contracted moments, which Deleuze calls sheets, each with its own characteristic points, singularities or aspects that are relevant to our being in some form. Following a perception, we begin a process of recollection based on some specific information suited to addressing the currently confused perception or sensation.⁵⁸⁴ We move from sheet to sheet in search a point of reference to determine the significance: “they are the strata from where we draw our recollection images.”⁵⁸⁵ Upon delving into a particular sheet three possibilities unfold: 1) my being discovers

586 Ibid., 123.

587 Ibid., 44,47.

588 Credit to Peter Connolly for this example which has proven useful keying students into the role of memory in movement.

589 Williams, *Difference and Repetition: A Critical Introduction*, 171-78. Whilst Williams considers intensity to reside within the virtual in contrary to more contemporary readings, this researcher considers his argument in this section to still hold immense value.

590 Deleuze, *Difference and Repetition*,
222,29. Original emphasis.

591 Ibid., 229.

the relevant information, forming a recollection-image; 2) the information is not found on this sheet and remains temporarily inaccessible; or 3) we creatively assemble fragments from different sheets in order to create lines of communication between various points across different sheets. This third case, as Deleuze points out, is a dangerous one as it risks failure leading to the production of “incoherent dust made out of juxtaposed borrowings.”⁵⁸⁶ In this we may draw some lines of relation to the sublime whereby if this creative act fails the organism is unable to recollect enough information in relation to the perception. In other words, it is unable to determine the significance of this perception and cannot determine subsequent affections or actions: it is *arrested*.

This conceptualisation of the recollection-image is important as it highlights that the past, and memory, are not a consciously driven operation by the subject. They, instead, involve an involuntary recollection of past encounters and empowerments in relation to a given perception or sensation. Through this conceptualisation, we can define a difference between habitual encounters and those that extend beyond that. Habitual encounters with objects do not rely on the development of this recollection-image, though they do play a role. The herbivore sees grass and eats it; I see a cup and pick it up to drink from. Here, the recollection-image inserts itself between perception and response to refine responses by the SMS. In this way it is “*interven[ing] accidentally and in a secondary way*”.⁵⁸⁷ Crossing the street is an entirely habitual movement for most adults. It is a build-up of previous encounters that allows us to know how to cross without thinking, seemingly on an automatic drive. Though for a child, or any person who has not encountered street-crossing, this would be an affronting experience which demands the recollection-image to pull any relevant bodily memory to the present so that it can be experimented with: to learn to cross the street.⁵⁸⁸ In this example, the perception of unfamiliar velocity and mass, the distance to cross, the noise of traffic, is what we previously identified as an intensity. What defines it as an intensive shock to the organism is the contraction of an intensive shock and the organisms memory, and as we showed through Williams, the context of the encounter.

Intensity, depth, and space

Williams' commentary on Deleuze's *Difference and Repetition* is an eloquent description of how an organism encounters intensity, depth, space in the construction of experience.⁵⁸⁹ For Deleuze, intensity emerges out of depth: the infinitely deep realm of distance, difference, and intensity, where E relates to E', E to $e-e'$, and e to $\varepsilon - \varepsilon'$ and so on – "a pure *implex*".⁵⁹⁰ It is from depth that extensity emerges, being the "(ultimate and original) heterogeneous dimension [as] the matrix of all extensity".⁵⁹¹ Intensive difference allows us to determine distance. Extensive coordinates hold no significance in this sense as they are devoid from any relation to intensity. For Williams, the perception of distance only emerges because we sense and create depth – all bodies and ad spaces bathe in a depth of intensity. Though

592 Ibid., 230. Williams, *Difference and Repetition: A Critical Introduction*, 176.

593 Williams, *Difference and Repetition: A Critical Introduction*, 174.

he later makes clear that extensity is not presupposed by intensity – both are reliant on each other, which is Deleuze’s intent when he says that “intensity is simultaneously the imperceptible and that which can only be sensed”.⁵⁹²

Through depth we can follow Williams to explain why certain encounters with intensity are disruptive or disturbing for some and habitual for others. Depth relies on recollection-images (or habit as Williams writes) for its explication: “we are able to move from depth to distance through habit (for example, after successive long jumps we come to know how far we can jump as opposed to seeing far marks as perhaps frightening depths).”⁵⁹³ This is to say that encounters with intensity are something we learn from – in the same way that we learn to swim. An initial encounter with the rock face may leave us completely arrested as our being struggles to find a reference point across any sheet of memory. Though over time, with enough exposure we build up enough experience to this perception of overwhelming mass and scale that it fades away, seemingly less relevant. We can imagine that this is the case for those working inside a quarry for example. This is not to say that it is now entirely mute or that the subject is indifferent to it. It fades back into habit because of the particular context (work) that they’re in – if you change the context (a park goer who is more consciously aware of the landscape) then they are struck differently. The significance of the encounter changes dependent on the intensity, and as an intensity is infinitely deep,

Fig 7.77. Encounter with a sublime intensity diagram.

594 Ibid., 176.
595 Ibid.
596 Ibid., 176,78.
597 Deleuze, *Difference and Repetition*, 228.
598 Bonta and Protevi, *Deleuze and Geophilosophy: a guide and glossary*, 63. Emphasis mine.

all other intensities are present even if obscurely in the encounter. Context of the situation then is important to the encounter with intensity. For Williams, “intensity can be perceived as qualities in extension (this shade of red)”, but “the sensations associated with that quality vary according to the other qualities that are present” according to their context and the subject perceiving them.⁵⁹⁴ This red may appear more or less red when paired with another hue, or it may have an emotional impact if it is given a certain shape. Someone walking towards me in a park with a stick, if they have a dog at their side, is perceived as something entirely harmless. But if that person is walking towards me, holding it not as a throwing toy, but as a club, hides their face or postures menacingly, then this is an entirely different encounter. These different contexts, as Williams puts it “‘have an effect’ on the intensities expressed through them” as they reorganise the different orders of relations relevant to any given encounter.⁵⁹⁵ This is the meaning of what Deleuze terms *the asymmetrical synthesis of the sensible* – variations in actual relations lead to different encounters with intensities. This is rather different than being ‘merely subjective’, it is as every bit as real and concrete for those who suffer vertigo than those who do not. Their worlds are constructed differently.⁵⁹⁶ It is for this reason that in order to fully understand what exists in extension we must account for the intensities that emerges from and that make it significant now and in the future. This is how Deleuze accounts for why signs are significant for one individual and not the other: why I experience a certain shift in relation to the horizon and someone else may not. The cause is intensity which cannot manifest in extension or be restricted to an internal property to a being:

*Whence the double aspect of the quality as a sign: it refers to an implicated order of constitutive differences, and tends to cancel out those differences in the extended order in which they are explicated. This is also why causality finds in signalling at once both an origin and an orientation or destination, where the destination in a sense denies the origin.*⁵⁹⁷

Intensity and creativity

Throughout the 18th century sublime discourse there is a somewhat consistent thread that suggests the sublime can elevate oneself via its disruption. In approaching the sublime through a Deleuzian lens, it is apparent that this disruptive force is capable of such a becoming through the breaking of habitual steady/stable states of being. Deleuze and Guattari describe such a process as the construction of body that is not held hostage by a form of organisation that leaves it fixed, a body that is opposed to organising structures that define its molecular capacities. The sublime may well be a force that can instigate such breaks in organisation structure as it takes bodies away from their equilibrium. Bodies that are no longer oppressed by organisational structures are described by Bonta and Protevi as “moved from ‘equilibrium’, that is, out of a stable state or ‘comfort zone’ (a certain functioning set of *homeostatic* mechanisms and regulated habits), to an *intensive* crisis realm (producing changeable, ‘metastable’ habits).⁵⁹⁸ Further, they write that the sublime’s construction involves “disturbing the organ-

599 Ibid.
600 Deleuze and Guattari, *A Thousand Plateaus*, 153. Original emphasis.
601 Ibid.
602 Meyer, “Seized by Sublime Sentiments.”; Meyer, “Uncertain Parks: Disturbed Sites, Citizens, and Risk Society.”; Meyer, “Sustaining beauty: The performance of appearance.”; Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto.”
603 Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson-Smith (Oxford, UK: Blackwell, 1991).
604 Ibid., 160.
605 Ibid., 224.
606 Ibid., 51.
607 Ibid., 225.

ism, that is, by disrupting the homeostatic feedback loops that maintain organismic patterns by a shift in intensity that triggers a change of habitual practices”.⁵⁹⁹ By being subjected to this disruptive force of intensity and the problem it presents, a body has the opportunity to break free from the organisational structures that keep it from experimenting with its own capacities. Breaking from these structures allows for that body to occupy for a time a field that is occupied and populated by only intensities “in a *spatium* that is itself intensive, lacking extension.”⁶⁰⁰ This is pure experimentation for Deleuze and Guattari. Such a break is the ultimate intent for Deleuze and Guattari’s operationalisation of Spinoza throughout their work.⁶⁰¹

The sublime, then, may be a practice through which a body can readily enter this field of intensive experimentation to push its processes of becoming into unforeseen avenues. Elizabeth Meyer mentions that the sublime may have a capacity somewhat similar to this in *Seized by Sublime Sentiments* and in her later work suggests that aesthetic encounters in general have the capacity to instigate shifts in both individuals and collectives.⁶⁰² In *Beyond Sustaining Beauty* she suggests (aesthetic) landscape affects have the capacity to shift social and cultural attitudes towards the environment (towards a more sustainable approach), yet unfortunately does not draw any concrete methods through which this may unfold. Where she places greater emphasis on the beautiful in this piece (and the preceding manifesto), it would seem that the sublime has greater capacity to create radical breaks at any level of entity (individual, social group, collective, political, nation). This echoes Simondon’s suggestion that the sublime is an entry point to a greater ‘spirituality’ of affect and affectation beyond what a body typically engages with.

We might also turn to Henri Lefebvre’s *The Production of Space* (1974, 1991 translation to English), in particular his notion of ‘monumental space’.⁶⁰³ On this, he writes that the apparatus’ of some states tend to appropriate space for its own means. Likewise, the processes of capitalism are incapable of producing spaces that are not capitalist themselves: spaces of profit maximisation and production.⁶⁰⁴ Monumental spaces tend to resist this however, as it is the space of affectivity made simultaneously public and individual: “the affective level...is transformed into a ‘property’ of monumental space”.⁶⁰⁵ Affectivity resists appropriation by the forces of states and capitalism, as it “cannot accede to abstract space, and so informs no symbolism”.⁶⁰⁶ Lefebvre argues that these monumental spaces may become the “metaphorical and quasi-metaphysical underpinning[s] of a society” where we must consider the role landscapes of the sublime have in the project that Meyer has outlined.⁶⁰⁷

Central Park, NYC, is a vivid example of the city appropriating – or feeding off – the sublime dimensions of the landscape. Robert Smithson, in his discussion of the park, describes it as not “‘a thing-in-itself’, but rather a process of ongoing relationships existing in a phys-

608 Smithson, "Frederick Law Olmsted and the Dialectic Landscape," 119.

609 Charles E Beveridge, "Olmsted: His essential theory".

610 Ibid.

ical region".⁶⁰⁸ Manhattan simultaneously feeds off and intensifies the sublime nature of Central Park, which this researcher was able to experience and document first hand. Experiencing the park leads to experiencing a connection to something greater – a greater spirituality per Simondon – through the sublime affectivity of its designed relations. There are few examples where we could point to extreme examples of the sublime, yet there are countless examples of lower or different intensities. Charles Beveridge argues that Olmsted's fundamental approach to design involved an active attention to how landscapes *move* us. Beveridge writes: "[Olmsted] intended his designs to affect those who viewed them...he concluded that the most powerful effect of scenery was one that worked by an unconscious process."⁶⁰⁹ Further, he argues that Olmsted sought to design in such a way that the landscape produced a "psychological response that went beyond the appreciation of the beauty of the scene."⁶¹⁰ That Manhattan appropriates the designed, sublime dimensions of Central Park is noteworthy as it suggests that the sublime, as Meyer suggests with other aesthetic encounters, can be experienced as something public. A collective experience of the sublime, not unlike David. E. Nye's account of the technological sublime. Large parks, or other significantly large landscapes, appear to have this distinct ability to connect the sublime to collectives in a way that only intensifies the experience and sense of affectual connection to the world.

Conclusion

This stratum brings forth a conceptualisation of the sublime built upon Deleuze's notion of intensity. The sublime is felt as a disruptive encounter with intensity, an intensive shock, in the form of a sign, a problem: a difference (or variation) in space-time which is connected to all over intensities in an ecological manner (a-a', b-b', c-C, C-C', ad infinitum). The undeniable ecological nature of these relations also means that the productions of such relations are ecological, folding into the depth of intensity, all the way down. Burke's ideas on the sublime being a physiological encounter is directly relevant to this. The body is faced with a sensation or force it does not yet know how to handle and is left wanting for a moment whilst a response is determined. For Burke, the sublime involves a variation of power which all (human) organisms are capable of encountering, not bound by subjectivity or thought. His thoughts echo those of Spinoza, and later Deleuze and Guattari, in their notion of affect. The sublime then is an encounter with a problem (something to come to grapple with in a given situation/context) presented via intensity, which the organism via its past, present, and possible future relations to the world must experiment with, later actualising a solution to this problem in the formation of new being or assemblage of experimentation.

Understanding the sublime as an encounter with a problematic sensation in the landscape allows designers to think through how it can be designed *with* and *for* more concretely. Sensations are produced via relations between an organism and its environment (milieu), which if 'strong enough', representation can document and give expression to. Further, the sublime as understood here is pre-individual, and autonomous, escaping claims of mere subjectivity by positivist lines of argument. Non-conscious memory can be explored and given expression through drawings and other forms of representation – bringing it to life. This line of inquiry into the sublime suggests that it is rich in potential for landscape designers, given that most experiences in landscape could be considered to be sublime in that such encounters varying in their extremity. Further, it shows that encounters with landscape wholly involves intensive depth to the degree that where it stops is unclear. You are wholly within depth. Interestingly, this exploration of depth runs counter to predominant disciplinary interests in temporality over space, suggesting an interesting line of inquiry. Fault 3 explores how the sublime as it is understood here can be operationalised via design through developing and documenting a series of techniques and practices that bring those encounters to life via representation.

Stratum 6

ProblematISING the Sublime through Design Practice

221	Introduction
222	Assemblage and Affect Thinking for Design Research
223	Design Investigation as Research
224	The Body as an Affective Register
226	The Importance of Expression

Fig 9.87. Crown Peak benches being formed.

614 Connolly, “What is Design Research: Problem, Technique, Ambition,” 24.

615 Marcelo Stamm, “Reflecting Reflection(s): Epistemologies of creative practice research” (paper presented at the Knowing (by) designing, Ghent; Brussels, 2013), 39. Original Emphasis

616 Candy, *Practice based research: A guide*.

617 M Elen Deming and Simon Swaffield, *Landscape architectural research: Inquiry, strategy, design* (Hoboken, New Jersey: John Wiley & Sons, 2011); Sanda Lenzholzer, Ingrid Duchhart, and Jusuck Koh, “‘Research through designing’ in landscape architecture,” *Landscape and Urban Planning* 113 (2013); Anna Maarit Mäkelä and Nithikul Nimkulrat, “Reflection and documentation in practice-led design research” (paper presented at the Nordic Design Research Conference, Helsinki, 2011); Steffen Nijhuis and Inge Bobbink, “Design-related research in landscape architecture,” *J. of Design Research* 10, no. 4 (2012); Stephen Scrivener, “Towards the Operationalisation of Design Research as Reflection in and on Action and Practice” (paper presented at the Foundations for the future. Doctoral education in design: Proceedings of the Conference, La Clusaz, France, La Clusaz, France, 2000); Simon Swaffield and M. Elen Deming, “Research strategies in landscape architecture: mapping the terrain,” *Journal of Landscape Architecture* 6, no. 1 (2011); Adri van den Brink and Diedrich Bruns, “Strategies for Enhancing Landscape Architecture Research,” *Landscape Research* 39, no. 1 (2012); Joyce Yee, “Capturing tacit knowledge: Documenting and understanding recent methodological innovation used in design doctorates in order to inform postgraduate training provision” (paper presented at the Experiential Knowledge, Method and Methodology, London Metropolitan University, 2009).

618 Till, *What is architectural research? Architectural research: three myths and one model*, 5.

619 Ibid., 4.

Introduction

*“The problem of landscape architectural design can only be explored through specific concrete problems. It is only through examples that experimentation occurs.”*⁶¹⁴

*“The most radical way to research into the formation and constitution of such singularities consists in creating such singularities: researching creation through creation.”*⁶¹⁵

This research grapples with the *disciplinary problem* of how landscape architectural practices can engage with, or operationalise, the sublime. Operating via a practice-based methodology allows new knowledge to be gained partly employing practice and the outcomes of such practices.⁶¹⁶ Typically practice-led or based research argues the tacit knowledge embedded in practice is the key contribution to the methodology and outcomes of the research, allowing this to play a role in the creation of new knowledge via robust documentation and reflection.⁶¹⁷ However, this research will employ practice as both the *means* and the *object* of research which invites the disciplinary preoccupations to be included in the process alongside other forms of knowledge. Jeremy Till identifies this type of research in his framework where he notes three modes of architectural research: architectural processes, product, and performance research.⁶¹⁸ For Till, “practice has the raw data on which architectural knowledge is founded; academy can release this potential through research.”⁶¹⁹ The focus in this research is directly on the first of these, processes, but also on the products, to the degree that the products make sense of or demonstrate the ability of these processes.

620 James J. Gibson, *The Ecological Approach to Visual Perception*, Classic Edition ed. (New York: Psychology Press, 2015); Latour, *Reassembling the social: an introduction to actor-network-theory*.

621 Stan Allen, “Field conditions,” *Architectural Design* 66 (1996); Stan Allen, “Mapping the unmappable,” *Practice: Architecture, technique and representation*, G+ B Arts International, The Netherlands (2000); Robin Evans, *Translations from drawing to building and other essays* (London: Architectural Association, 1997).

622 Peter Connolly, “What is at hand: A re-evaluation of technique in landscape architectural design,” *Kerb: Journal of Landscape Architecture* 6 (1999); Connolly, “What is Design Research: Problem, Technique, Ambition.”; Connolly, “An affirmative open systems conception of how to design landscape.”

623 Marie-Luise Angerer, *Ecology of affect: intensive milieus and contingent encounters* (meson press, 2017); Suzie Attiwill, *Practising with Deleuze: Design, Dance, Art, Writing, Philosophy* (Edinburgh: Edinburgh University Press, 2018); Michael Biggs and Henrik Karlsson, eds., *The Routledge companion to research in the arts* (Abingdon, Oxon: Routledge, 2010); Ken Gale, Becky Turner, and Liz McKenzie, “Action research, becoming and the assemblage: a Deleuzian reconceptualisation of professional practice,” *Educational Action Research* 21, no. 4 (2013); David Leatherbarrow, “The project of design research,” in *Design innovation for the built environment: research by design and the renovation of practice*, ed. Michael Ulrich Hensel (London: Routledge, 2012); Betti Marenko and Jamie Brassett, *Deleuze and Design* (Edinburgh: Edinburgh University Press, 2015); Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto.”; Prezeli, “Unfamiliar Territory.”; René van der Velde and Peter Connolly, *Technique: landscape architecture graduate design research at RMIT University, 1995-2002* (RMIT University Press, 2002).

624 Horst WJ Rittel and Melvin M Weber, “Dilemmas in a general theory of planning,” *Policy sciences* 4, no. 2 (1973).

625 Simon Twose explores this throughout his practice-based doctoral thesis. “Drawing/Building/Cloud/: Sfumato Practice as an Open Work” (Doctor of Philosophy in Architecture RMIT, 2017).

626 Schumacher, “The Dialectic of the Pragmatic and the Aesthetic - remarks on the aesthetics of data-scapes.”

Assemblage and Affect Thinking for Design Research

For an emerging set of researchers and thinkers, improving design processes/practices and products are best understood directly through the abilities of such practices and the abilities of the products. These processes now tend to be understood as affects (Deleuze), affordances (Gibson), and actions (Latour).⁶²⁰ Importantly, these notions are recognised as operating pre-consciously in a pre-personal manner. They are a part of the involuntary workings of the world that we participate in. Robin Evans and Stan Allen have given attention to affects within the architectural design process, notably the ‘doings’ of representation.⁶²¹ Peter Connolly has similarly discussed affects within landscape architectural practices.⁶²² In general, there has been a growing trend to see art and design practices through an aesthetic of assemblages and affect due to its ability to connect to ‘how things to work’ at pre-subjective level, whilst simultaneously affirming the practice’s singular nature.⁶²³

Significant to this research is recognising that affects carry within them an involuntary significance, which Deleuze terms *sense*. Sense is produced in relation to a given problem or orientation which allows practices and practice-affects to be evaluated in relation to the specific problem at hand – not an external criterion. As such, the disciplinary problems which this research grapples with produce the means of evaluation internally. The unfolding nature of the investigation further narrows what is significant to the problematic as it defines what is relevant. The affects of the design-practice assemblage produce a robust form of experimentation which is focused not on iterations for their own sake, but on what starts to make a difference to the problem being developed. This has obvious affinities with Horst Rittel and Melvyn Webber’s notion of a ‘wicked problem’ where the solution specifies the problem.⁶²⁴

The evaluation of practice-affects is focused on affects and their sense – on the ability or power of the assemblage, and the significance of that power to something of concern. Evaluation unfolds using ‘expressive’ accounts which aim to draw attention to the involuntary workings of an assemblage: if successful a *resonance* is felt. This is an affirmation that the text or visual description is connecting with the realm of affects and intensities being investigated. This is often referred to as *friction* or *traction* by architectural designers.⁶²⁵ Programme, as described by Patrik Schumacher, involves this aesthetic resonance as an “economic substitute for experience.”⁶²⁶ Critically, these accounts allow a ‘way in’ to the assemblage by showing how relevant entities and relations interact in space-time, contracting together to form affects or doings.

In this context, the larger problem that this design-practice-assemblage orients towards is engaging with the sublime. More closely, this problem flips into how to engage with specific sublime encounters in the landscape through design. This problem starts as a loose idea that

627 This is best evidenced in the contributions by graduates of the RMIT Practice Research programme. <https://practice-research.com/>

628 See ‘the function of representation’ in Connolly, “What is Design Research: Problem, Technique, Ambition,” 22-24; Connolly, “An affirmative open systems conception of how to design landscape,” 100.

629 Nithikul Nimkulrat, “Situating creative artifacts in art and design research,” FORMakademisk—research journal for design and design education 6, no. 2 (2013): 14.

the design process sharpens and forms a reflective complex capable of evaluating practices in relation to the singular nature of each encounter. A practice is not a thing or a causal relationship. It is a realm of interacting arts, practices, disciplines that assemblage thinking allows us to think about concretely, given enough rigour. In this way engaging with past practices not only identifies research gaps but also identifies the structures of practice assemblages employed by others who have grappled with similar disciplinary challenges.

Design Investigation as Research

Practice-based doctorates in built environment disciplines tend to focus on a practitioner-researcher assessing their past work to discover tendencies, forces, and emergent techniques. Those are then sharpened via reflection and occasionally a small design study which intensifies their praxis.⁶²⁷ However, employing a design project that interrogates a disciplinary or practice problem is not uncommon, particularly by those who are not established practitioners. The project-driven approach allows for a more active and agile reflection in developing novel techniques as the act of creation is both the means and object of research, unlike a review of past work.

The design investigation within this research operates as a testbed for developing landscape design techniques suited to operationalising/engaging with the sublime. It does so through a series of methods, each of which seeks to strengthen and affirm the aesthetic relationship to the pre-existing site:

- Fieldwork
- Giving expression to the involuntary ‘doings’ of the pre-existing landscape via written and visual means
- Affirming the affectivity of representation in relation to the sublime⁶²⁸
- Engagement with variabilities to efficiently connect to aesthetic relations
- Employing technical forms of knowledge to drive and affirm the designed outcomes as a viable proposition
- The public sublime as a driving concept for any propositions
- Representational assemblages that bring the design to life by giving expression to the proposed encounter

Importantly, this mode of research does not necessarily see the outcomes of the design project or the ‘artefact’ as the contribution to knowledge. The designed work is a vehicle through which the techniques and practices that constitute the research can be developed and evaluated, and then later reflected upon allowing this knowledge to become explicit and shareable.⁶²⁹

630 Nigel Cross, “Designerly ways of knowing,” *Design studies* 3, no. 4 (1982); Donald A. Schon, *The reflective practitioner: how professionals think in action* (New York: Basic Books, 1983).

631 Lisa Grocott, “Design Research & Reflective Practice: The facility of design-oriented research to translate practitioner insights into new understandings of design” (Doctor of Philosophy in RMIT, 2010), 24.

632 Ibid., 27.

633 Schon, *The reflective practitioner: how professionals think in action*.

634 Designing can absolutely operate in an experimental form in this sense where individual adjustments are made in a closed-off sense like would be seen in the sciences so that a change in one variable can be directly observed affecting other variables or agents. However, designing tends to naturally resist such reductive situations, seeking to engage with a wider milieu. A notable exception to this is certain SBD practices often related to digital design methods.

635 Scrivener, “Towards the Operationalisation of Design Research as Reflection in and on Action and Practice,” 389.

636 Ibid.

The role of design

Designing, especially when engaged as design-research, has its own distinct forms of knowing and doing distinct from other disciplines and academic methods.⁶³⁰ This has only recently become accepted by the academy as valid and appropriate as a form of research, though it remains a thoroughly contested field, especially at the doctoral level.⁶³¹ The creative forms of experimentation and the artefacts often produced in design-research does not fit neatly in the categories or evaluative metrics of other disciplines. Lisa Grocott writes that: “the goal is not for the practitioner-researcher to become a philosopher or a psychologist, but for the designer to be sufficiently ‘self-conscious, rational and reflective’ (Scrivener) to the extent that his or her insights into praxis can play a formative role in building theories of design.”⁶³² In this sense, and in the context of this research, designing is not employed to *prove* anything, but to open up realms of enquiry that can be explored through experimentation.

To turn this messy nature of design into design-research requires reflection, typically understood via Donald Schon’s *The Reflective Practitioner*.⁶³³ Given that experimentation in the natural or social sciences is understood as requiring an objectivity in its rigour, how can designing offer this if it operates in a self-directed or on-the-spot manner?⁶³⁴ The previously described affectual capacities of design practice help to determine this. Design practice opens up lines of experimentation where what is discovered is evaluated on its ability to “keep things moving” in relation to a given problem, and by feeling out its capacities to do so via past experience (self and disciplinary) related to that practice.⁶³⁵ The significance of those practices emerges from reflection-in-action where what is being experimented with is “at once exploratory, move-testing, and hypothesis testing.”⁶³⁶ In this sense, designing, and the documented design practices, does not prove any one way that the sublime can be engaged with, but instead, opens up this realm of practice and theory to others as well as sharpens this researcher’s own practices.

The Body as an Affective Register

This research places significance on affective encounters as a starting point to understanding and eventually designing (operationalising) with the sublime. Encounters of this sort involve a mixing of bodies, in this case a landscape environment (milieu) and a human organism. Practically, this involves discovering these encounters via fieldwork, where this researcher uses their body as an affective register to begin to describe and unpack the relevant relations that create this encounter with the sublime. There are some similarities in this approach to autoethnographic approaches to design research; however it is distinct enough from it to not be categorised entirely within that paradigm.

Using the body as an affective register was critical in the fieldwork sessions within each of the Fault studies (Central Park, Pukeahu, and Horokiwi). This typically involved moving through each landscape till a

637 Carolyn Ellis, *The ethnographic I: A methodological novel about autoethnography*, vol. 13 (Rowman Altamira, 2004), xix.

638 Keith Berry, “Spinning autoethnographic reflexivity, cultural critique and negotiating selves,” (2015): 212. Kris Rutten, “Art, ethnography and practice-led research,” *Critical arts* 30, no. 3 (2016): 296-97.

639 Tony E Adams et al., *Autoethnography*, Understanding Qualitative Research, (New York: Oxford University Press, 2015), 1-2.

640 The cultural cannot be washed out of the affectual or physiological, neither can the difference in physiology between individuals. However, for instance, the Foucauldian position of cultural determination is less useful for this approach.

641 Adams et al., *Autoethnography*, 23-24.

642 Genetic in this sense is not the same as biological notions of genes or genetics. Instead, it is borrowed from Deleuze’s drive to ascertain the causes of experience of each individual encounter, contra to Kant’s aim to understand the universal or generic causes.

643 Ryan, “The Physiological Sublime: Burke’s Critique of Reason,” 271.

644 Bassett, Keith. “Walking as an Aesthetic Practice and a Critical Tool: Some Psychogeographic Experiments.” *Journal of geography in higher education* 28, no. 3 (2004), 398.

645 Debord, Guy. “Theory of the Derive. French Situationist International Journal# 2.” *Situationist International Anthology* (1958): 50-54. Available at <http://www.bopsecrets.org/SI/2.derive.htm>.

646 Bassett, Keith. “Walking as an Aesthetic Practice and a Critical Tool, 402.

significant shift was felt *bodily*, which was then taken as a starting point for investigation. It is important to note that this technique is interested in examining pre-conscious, pre-subjective, and autonomous *doings*, not subjective or culturally determined thoughts or understandings. This contrasts with autoethnographic approaches which seek to connect the “autobiographical and personal to the cultural, social, and political.”⁶³⁷ Contemporary autoethnographic approaches tend to be critical of the ‘self’ or ‘I’ in such accounts, making clear to outline who this self is so that it does not speak for others.⁶³⁸ Where the self is used as an interpretive register, it is almost exclusively done so as a means to understand cultural experiences and practices.⁶³⁹ However, in this research the sublime (or any other kind of landscape encounter) is not considered to be strictly a cultural or subjective phenomenon, instead a predominantly physiological, prepersonal and autonomous one.⁶⁴⁰

The use of the body in this research does not rely on the individual self in the way that autoethnographic approaches do in both the fieldwork and narrative components of the methodology. Autoethnographers use the self as a means to understand or critique cultural experience, *specifically* by highlighting their experiences in relation to wider cultural practices.⁶⁴¹ Instead, this research places emphasises the physiological which in turn obliges a movement beyond conscious thought, cliché and common sense in order to determine what happens between the body and its milieu – the genetic conditions of experience.⁶⁴² Doing so allows a movement away from concerns such as ‘individuality vs universality’, or the exclusiveness of the account given by the narrator. The physiological basis of the following accounts, based on the body as an affective register, achieves some degree of universality due to the common makeup of human organisms. Burke in his work on the sublime suggested that because of its physical causes, that the sublime was “comparable from individual to individual.”⁶⁴³

The body is primarily employed as an affective register by walking around/over/through the landscapes documented within this research. Walking as a research method is not new, having been rigorously employed in social science disciplines such as human geography, and an innate – but perhaps less academically documented – tool within spatial design disciplines, particularly landscape architecture.⁶⁴⁴ The method was popularised in the 1950’s and 60’s by the Situationist’s studies of European cities as an aesthetic and critical practice. Notions such as the *derive* and *plaques tournantes* are relevant to this research, but will not be explicitly explored. To briefly summarise, Guy Debord describes the *derive* as a “playful-constructive behaviour and awareness of psychogeographical effects”, being attentive to the “attractions of the terrain and the encounters [one] finds there.”⁶⁴⁵ *Plaques tournantes* are a landscapes nodes, points, lines of differentiation where something happens: “fissures and lines of resistance, its sudden breaks”.⁶⁴⁶ Both of these notions point towards an attentiveness to the involuntary doings when moving through a landscape – an attentiveness to affects and intensities even if the Situationists did not use this lanugage.

647 Gilles Deleuze, *Expressionism in philosophy: Spinoza*, trans. Martin Joughlin (New York, NY: Zone, 1990).

648 Connolly, “An affirmative open systems conception of how to design landscape,” 100; Deleuze, *Expressionism in Philosophy*, 100.

649 Bergson, *Matter and memory*, 19.

650 Damasio, *The Feeling of what Happens: Body and Emotion in the Making of Consciousness*.

The importance of Expression

Deleuze’s notion of expression is important for this research. Expression and affect are twinned, bound together within each assemblage.⁶⁴⁷ This aspect has been overlooked in techno-science readings of Deleuze. For this research, expression is an expression of affect, a parallel affect to what has been bodily discovered in a landscape encounter. This is in effect, connecting to what landscapes ‘do’ in an aesthetic sense – a realm weakly or entirely unattended to in SBD practices. Drawings, text, spoken word, photography, whatever is relevant, are employed to create an assemblage of representation that *gives expression to affect*.

This assemblage connects to the encounter in question by showing a series of spatio-temporal relations that when viewed/read/heard resonate with your bodily memory. What is created is a parallel affect, not an exact re-presentation of the original, but something similar that is made anew. This is how representation connects to, and allows experimentation with, affects – what Connolly calls the “function of representation”.⁶⁴⁸ Giving expression to affects in this way allows the reader/viewer to feel, at last partially, what I encountered through my own body used as an affective register. Henri Bergson writes that “the brain is part of the material world; the material world is not part of the brain.”⁶⁴⁹ The brain is ecologically connected to the world, and is able to find relations with the world through direct and indirect means. Antonio Damasio’s notion of ‘as-if body loops’ is also relevant to understanding expression and representation in this way. Damasio writes that our brain is capable of feeling something in an indirect, or ‘as-if-it-were’ way. He shows that this entirely part of everyday life, such as when someone tells us a story, or describes an encounter, and we hit a point where their narrative resonates with, resulting in the “a-hah’ moment – everything falls into place and we *feel* something.”⁶⁵⁰

Here we find the immanent means of evaluation for the design-research components of this thesis: expression. Expression, paired with sense (significance), provides a mechanism of evaluation that does not rely on exterior ways of knowing or criteria – it connects to the problematic at hand. If the forms of representation used are able to create a resonance with the reader/viewer, where the encounter is felt in a new, parallel way, we can consider this to be a successful experiment. Likewise, can the adjusted relations in the design drawings resonate with the pre-existing conditions where the significance of the alterations is *felt bodily*. Can you feel what the designed topographical adjustment might do to your body – how it moves, perceives, senses itself moving, connects to the wider landscape, or depth of geological time?

Fault 3

Horokiwi Quarry

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Fig 10.88. Extraction machinery bucket teeth.

Introduction

This stratum acts as a pivot within the research project: it does not operate under the same frameworks and with the same expectations as the previous work, which operates much closer to traditional doctoral research scholarship. The practice-led aspect of this research will be discussed in this stratum to both illuminate and describe the various techniques developed throughout. It does so through a design-led research project which allows for techniques oriented towards making the sublime a more concrete design tool. I do not intend the designed work to be considered entirely on its value as a ‘product,’ as it does not include rigorous technical documentation or other aspects such as user/community engagement. However, it hopes to offer something to the discipline: an example of how to design with the sublime.

For several reasons a quarry landscape immediately stood out as an obvious choice for developing design practices to engage with the sublime. First, such landscapes are often described as sublime because of their scale, materiality, and radical topographical shifts. This offers an opportunity to address such cliché and commonly conceived ideas, alongside rigorously engaging with those dimensions. Landscapes of such magnitude are commonly cited throughout both the original 18th century writings and in contemporary discussions on the sublime. It presents an opportunity to measure these sources against a real-world example. Secondly, quarries are inherently technical landscapes, being optimised for the extraction of whatever material is desired from its geological structures. What is leftover is a landscape bounded by economic and geotechnical considerations which maximise the amount of profit and minimise the waste material - little else matters.

Alongside this technical aspect, particularly in quarry operations which extract and processes minerals residing in larger ore structures, such as gold and other rare metals, there is often an intense level of soil and water system contamination. Though such situations are not restricted to quarries, disruptions of this kind are the ideal ‘playground’ for those operating within landscape urbanism or SBD paradigms. The desire to address the innate complexities and issues that systems design is well suited to deal with makes such landscape problems attractive. These aspects of contemporary landscape architectural practice are something I wholly embrace and engage with, yet the opportunity to go beyond just dealing with those systems, to employ them in the service of something greater was compelling. Third, if every encounter is sublime as this research argues, then looking at extreme examples such as the Horokiwi Quarry can likely tell us a lot about the more mundane and *everyday* aspects of landscape. The everyday is an aspect given little attention within SBD discourse or their design projects. Whilst this project operates at a larger, more extreme scale with the design of a large park and associated infrastructures, it has the potential to uncover information and techniques relevant to designing with the everyday which often goes unseen or under-appreciated. In other words, if it is

651 The countless examples employed by Deleuze and in his collaborations with Guattari have inspired this approach to explaining and working with Nature and life.

652 Bridget Keane, in her doctorate thesis employed a similar method which proved useful in order to situate this methodology. The term LAB is borrowed from her work as it best describes this practice. “Instability and landscape” (Doctor of Philosophy in Landscape Architecture RMIT University, 2016).

653 Such research projects, at least within landscape architecture, tend to produce intentionally abstract or undecipherable drawings, though clearly have value.

654 “Representation is not about re-presenting anything, as virtually all the theorising of representation in landscape falls into assuming...” Connolly, “An affirmative open systems conception of how to design landscape,” 219.

655 Ibid., 100.

possible to document how an extreme event unfolds, then perhaps doing so with everyday ‘doings’ is also possible. Any type of landscape or landscapes could have been chosen as a site of investigation, but the most extreme, like quarries, have the potential to make the operations of the sublime explicitly clear. In the case of Horokiwi, the quarry itself is extreme, yet it is surrounded by everyday suburbia and reserves, offering an opportunity to engage with both poles on the sublime spectrum.

I have made an effort to make each example within this study read as an emergent event where it can make sense of itself in relation to itself.⁶⁵¹ The reflective description of the design project unfolds via ‘labs’, a means to divide the study into stages that operate individually and as a whole when brought together.⁶⁵² The process involved a series of encounters. Each lab focuses on documenting how each problematic event was grappled with in relation to the wider question of operationalising the sublime. Doing so offers greater clarity on each aspect via separation, though the constituent labs are parts of a whole – an offering to the world in the form of this large park. Separating the labs should not be compared to the reductive measures seen in the sciences where variables are removed to see causal relationships which may then, but not always, be plugged back into a wider system. Instead doing so allows a testing of one or a series of related techniques suited to a sublime event.

Each lab or stage of the design investigation orients toward a problem and uses a different form or use of representation in relation to that problem. Importantly, whilst representation is central to this research, it does not experiment in the same way that other, more art-practice or artefact-oriented research projects may.⁶⁵³ Instead, seeking an aesthetic efficiency and pragmatism, this research employs more normative drawing forms (plan, section, edited photographs) in ways that connect to aesthetic encounters in a way that both gives expression to that encounter, and allows direct adjustment through designing. These drawings are not artefacts or examples of experimentation in the *act* of drawing, where the focus might be on the artefact.⁶⁵⁴ Instead, they are a progression in the “function of representation” where they are intended to give expression to the series of spatio-temporal relations involved in encounters with the sublime.⁶⁵⁵ The Horokiwi Quarry design project employs a wide range of representation in different formats contained both within this main document and a secondary document which contains larger format drawings. Where appropriate, drawings best viewed at a larger scale are included in the secondary document, though all drawings are present with this document as well, though may be arranged differently in some cases. Not only does every landscape project need its own ‘custom set’ of representational tools but also each event or encounter within itself.

This may be exaggerated by the level of extremity inherent to the sublime events or encounters documented here, but it would not be sur-

prising if it were to be the case for many projects that operate with the everyday doings of landscape. In a way, the challenge for this thesis is:

What methods of representation are necessary for a landscape designer to employ to operationalise the sublime?

A note on how to read the design investigation

This study seeks to give expression – recreating the involuntary experienced response – to the sublime, affectual dimensions of this landscape, to feel this again (or afresh) by abstracting certain key spatio-temporal relations. Many of the drawings presented here were originally constructed to be presented and viewed in large format together as an assemblage of its own. The importance, and actions (doings) produced by these relations are made clear via cross-referencing various drawings and text, which does require some work from the reader. This is done so that the drawings can relate back to the bodies experience of these relations or allow someone unfamiliar to connect to their own past, similar, experiences. Doing so brings for the involuntary experienced responses encountered within this study.

To aid the drawing sets to ‘function’, a separate supplementary document is provided alongside the main thesis. This second document contains A3 and A2 fold-out sheets containing several drawings within this main document at their full, intended size. When reading the main document, you can find the page number of a drawing in the supplementary document by the figure captions. For example: *Fig XX: Upper Quarry schematic plan (SD: XX)*. The bold, coloured note indicates the page number where the larger drawing can be found. The drawings are intended to be read alongside the text in a symbiotic manner.

Description of the Horokiwi Design Investigation

This design project explores the role of representation in operationalising the sublime to elucidate its operations in a way where it is made concrete to design practices. Designers grappling with some sublime dimension in their work would have their abilities bolstered through having access to stronger aesthetically oriented techniques, tools, and methods. Improving practice by developing and sharpening techniques, through design itself, seems the most appropriate way to engage with the landscape sublime.

Designing is actively employed here to push the findings further than just documenting existing encounters with the sublime. Documenting the spatio-temporal relations that contract to create a sublime event has proven to not be a straightforward task. As the designer discovers and documents those relations, they can begin modifying them to create something new. Designing, like Nature, always orients towards creating novelty via problems or problematics. The design work within this project is largely speculative but founded upon concrete realities wherever possible. The project remains tethered to the realities of

Fig 10.89. New Zealand context map.

Fig 10.90. Wellington urban structure.

656 Others have noted that contemporary ‘technical problem solving’ approaches to quarry and mine remediation are incapable of dealing with the inherent aesthetic qualities of those landscapes suggesting that an approach is needed. Hine and Kirsch, “Dreams of Futures Past - Curating post-mining landscapes.”; Hine and Kirsch, “Earthworks-Mineworks - creating shared visions for postmined landscapes.”; Hine, Kirsch, and Amizlev, “Red Mud: Art and the post-mining landscape.”

657 Many visitors to Wellington remark on the proximity native bush, vegetative ecologies, and water to the city’s structure and everyday rhythms.

658 Many other cities with intense topographical structures also seem to have a sense of life that takes advantage of that. See Lisbon, Sydney, Valparaiso, and Istanbul.

659 NZTA, Horokiwi Mitigation Workshop Minutes, NZTA (06 March 2016 2016), <https://www.nzta.govt.nz/assets/projects/petone-grenada-link-road/docs/2016-03-18-Horokiwi-Workshop-Meeting-Minutes.pdf>.

660 “Takapu-Horokiwi,” New Zealand Government, 2019, accessed 17/06/2020, 2020, <https://www.stats.govt.nz/tools/2018-census-place-summaries/takapu-horokiwi>.

how it may unfold if it were an actual proposition. Doing so provides an inbuilt tension and empowerment in how one might design with the sublime alongside discovering useful insight on quarry remediation approaches.⁶⁵⁶

Background – Horokiwi suburb

The Horokiwi Quarry is situated at the southern end of New Zealand’s North Island, within Wellington City. Seismically driven topography of sharp hillsides characterises the region, surrounding the Wellington harbour with a rugged bowl-like form. Many Wellingtonians consider the harbour as the centre of the city’s life, surrounded by the shifting topographical folds which many inhabit. With the city encompassed by hills in every direction, most forms of recreation involve a sense of adventure or stepping beyond the normal everydayness of the city. This is further heightened by the sharp transition from city to bush that can be found in most parts of the area.⁶⁵⁷

The topographical structure of the region’s landscape has driven the city’s structural form and also how life unfolds within it. You may live in one gully or valley and work in the adjacent one, perhaps travelling to the city’s flat area which exists on reclaimed or earthquake lifted land to go shopping or to meet friends. Topography drives the life of Wellington, and its residents are seemingly proud of that. The most cherished part of Wellington for many people, the city’s waterfront that began to be redeveloped into public space in the early 2000s, is driven by its existence as a thin stretch of continuous flat, public land at the foot of the bowl-like hills. The city’s life flows down these hills either commuting to work or just walking down on a nice day - but inevitably these flows tend to make their way down to this strip from which the harbour’s whole expanse is seen against the backdrop of the Orongorongo Ranges. There is an easiness here, you can just walk without any other care in the world to distract or worry you - before long you’ve entirely lost track of time or how far you’ve walked along here. The landscape sets this up, not just the topography and greenery but the entire structure of the city. This is all to say that Wellingtonians are already well versed in the landscape’s power to engage with life, and how the Horokiwi Quarry project is another intervention in an already existing system.⁶⁵⁸

Horokiwi itself is a semi-rural outer suburb on the Northern stretches of Wellington City, directly adjacent to both Wellington and Lower Hutt urban areas. Current residents value this rural character, and likely will be unwilling to compromise on despite the level of planned development that will occur in their immediate vicinity.⁶⁵⁹ As of 2018, 273 residents in 96 dwellings live in the area, with a significantly higher median age of 44.0 compared to the rest of the city at 34.1, suggesting a more settled lifestyle reflective of the rural setting.⁶⁶⁰ The suburb itself sits atop the hills edging the harbour, providing views across the water body and to the cities which bracket it on either side. Farmland on rippling gullies and spurs span to the north till it reaches the next

Fig 10.91. New Zealand quarry scale comparison.

Fig 10.92. Large park scale comparison.

Fig 10.93. 1941 Aerial Imagery.
Retrolens.co.nz.

Fig 10.94. 1943 Aerial Imagery.
Retrolens.co.nz.

661 “Grenada Hunters Hill Subdivision,” accessed 17/06/2020, 2020, <https://www.russellproperties.co.nz/subdivision-grenada>.

662 The Woodridge and Grenada Hunters Hill developments, despite their extreme proximity (no more than 20m at one point) will not be linked by their road network. A colleague working on the final Woodridge proposal noted that there existed significant tensions between the developers of each side..

suburb of Grenada North. This farmland is slated to be Wellington’s last large greenfield development, originally called Lincolnshire Farms but now under the name Grenada Hunters Hill, which has slowly begun to unfold over the course of this project, led by Russel Properties Ltd. The planned development of 800–900 dwellings and 45 hectares of business and industry at its core will significantly change the landscape itself and how life operates in this part of the city.⁶⁶¹ Coupled with the proposed *Grenada to Petone Link Road* providing highway connections between the Hutt Valley and northern Wellington/Porirua, there will be easy access to a significant piece of Wellington that had previously been out of reach. To the west lies the almost completed (as of mid-2020) Woodridge development which when completed will have housing right on the edge of the Horokiwi Quarry’s boundary, as well as the previously existing Newlands and Paparangi suburbs.⁶⁶²

Background- Horokiwi Quarry

Horokiwi Quarry has operated since the early–20th century, with aerial imagery recording activity from 1943 with initial excavations on the harbour edge where State Highway 2 now runs. As of late–2019, the quarry (in terms of its excavated bounds) is 1468m long, 512m wide (planned to extend approximately to 560m, or 920m wide including the south-western tailing pit), lowest elevation at 36m, and the highest edges at 270–300m along the northern boundary. The quarry has operated in aggregate extraction and production since its inception, providing materials for major roading and building projects throughout the lower North Island. Horokiwi Quarry’s extent and production is significantly larger than the four other major quarries south of Palmerston North, establishing it as the dominant body in the region.

On both its western and eastern flanks the quarry is bounded by remnant native forest and bush ecosystems, portions of which have been identified as ecologically significant. The predominant ecotype surrounding the quarry is broadleaf indigenous hardwood forest such as kohekohe, karaka, manuka, and ngaio. Generally, the soil conditions reflect this type of forest being relatively loamy and moderately free draining. Salt-laden winds buffet the immediate area but have significantly less impact on the northern reaches of the quarry area adjacent to Lincolnshire. The Wellington fault line runs in a NE/SW direction directly adjacent to the quarry’s southern end underneath State Highway 2. This significant geological actor is paired with countless smaller fault lines which permeate the geology the quarry exists upon and is surrounded by.

The Horokiwi Quarry and the surrounding landscape has become a fulcrum of sorts around which most of the region’s development is occurring. This poses an interesting design question: what will occur once the quarry ceases operation when it becomes either uneconomical to extract material or suitable material is no longer available within its boundaries. In Horokiwi’s case, the quarry extracts predominantly greywacke and argillite material which is then processed on site into

Fig 10.99. Wellington region quarries.

Fig 10.100. Horokiwi Quarry visual access.

Fig 10.101. Views from Horokiwi Road.

Developer-owned land is highlighted here as it is property that can reasonably be assumed to be open to designing with if the project unfolds via a form of urbanism. This suggest cross-leveraging the desires and economics of the quarry operators, developers, local and regional councils, and national government bodies can open this site up significantly more than just approaching it as a site-design exercise.

Fig 10.102. Horokiwi land ownership.

Fig 10.103. Processing plant in permanent (top) and mobile (bottom) fixtures.

Fig 10.104. Horokiwi vegetation ecology mapping.

Fig 10.106. (Top) Existing quarry revegetation.

Fig 10.105. (Bottom) Predominant surrounding tree/shrub species.

663 Spire Consulting LTD, Regional Demand Forecasts for Aggregates in Wellington, Wellington City Council (2017).

664 The current quarry manager, Ross Baker, has suggested that it may be likely that the quarry floor is converted into an industrial park with the slopes being covered in vegetation. Ross Baker, 04/03/2018.

665 Hamish Cleland, "Arcadia, the Museum of Nature" (Master of Landscape Architecture Victoria University of Wellington, 2018); Michael Cook, "Im-mensity: An exploration of emphasis in Kapiti Quarry" (ibid.2017); Nathan Lark, "Questioning the Quarry: Negotiating landscapes through reciprocity" (ibid.2019).

aggregate for roading, infrastructure, construction, and landscape. The operators have predicted closure between 2032-2037 dependent on whether other quarries in the region are consented for expansion or not.⁶⁶³ This places its closure in the approximate time frame where the surrounding development and roading projects will be completed, provoking a series of implications relevant to this project. Existing between Wellington, Hutt City and Porirua, adjacent to two major highways linking all three areas, and being surrounded by developable land suggest this post-mining landscape should be envisioned as something much greater than a 'nature reserve' – the likely outcome if processes play out as normal. To do something more requires approaching it as an urbanistic question where economics, policy, and technology can all be leveraged to get more out of the situation than any one part could alone.

Questioning rehabilitation

In the context of Wellington, once deceased, the quarry will be required to return to a 'natural character' or rehabilitated/remediated in similar means as part of the Wellington City Council District Plan rules.⁶⁶⁴ Law requires quarries within New Zealand to have, and continuously update, a quarry management plan which covers the eventual rehabilitation plan. In Horokiwi's case, the lifespan remains too long to seriously consider the specifics. However, from looking at other examples, we can assume the smoothing of the benches and slopes to allow for hydroseeded vegetation to cover the topography, provide a more 'natural aesthetic' will be the primary approach. As a designer, it seems obvious that a landscape like this deserves much more than a 'greenwashing' approach which covers a perceived ugly past. Other options exist such as converting the landscape into large parks (usually based on a botanic garden model - see the *PT Newmont Minahasa Raya* in Indonesia), housing or development in the interior driven by architectural ambitions, filling with water to create reservoirs, or remediating them via landscape ecological systems, typically as part of a wider development. The question of how landscape architects might address such a problem seemed timely within my cohort at the point this research initially started. Within a cohort of 23 beginning work on their MLA thesis projects, 3 investigated the possible futures of different quarries (and one more the following year). Though there was no coordination between any of us on the topic, it seems to be a question worth asking considering that we had roughly all stumbled upon in our own various ways.⁶⁶⁵ Even at an early stage, it was apparent that my approach to this problem would be urbanistic – to do so allows design to leverage capacities from various bodies into something more. Something beyond restoring natural ecologies or cultural values (although these are obviously important) which is typically expected from SBD-oriented projects.

The ability for the aesthetic experience of this quarry landscape to affect both individuals and society drove the project, everything else was in the service of this. Just by orienting the emphasis of the project in this way created a series of questions and problems:

- What role can landscape architectural design play in the processes of quarrying so that both design and economic outcomes can be satisfied and ideally lifted higher?
- How do landscape architects engage with the technical information and processes of quarrying in a way that doesn't reduce their abilities to offer speculative futures beyond the norm?
- How does a landscape architect approach the remediation of a quarry as an urbanistic problem driven by how life unfolds on the ground?
- In such a technical and operational design setting, how is the sublime able to lift these agents towards a higher purpose and outcome?

Fig 10.107. Smoothed quarry benches at Red Rocks quarry, Wellington post remediation.

This is Horokiwi Quarry, the largest quarry in the Wellington region. It supplies aggregate, bitumen, and landscaping material for the ever increasing urban population. The extraction-based economics of capitalism drives its sustained growth – a growth via reduction.

A wide-angle photograph of a massive open-pit quarry. The quarry's face is composed of numerous horizontal terraced levels of greyish-brown rock. The top of the quarry is covered with dense green vegetation. In the foreground, a large, flat, light-colored area serves as a processing or storage yard, filled with several large, conical piles of grey material, likely crushed stone or sand. A few small structures and vehicles are visible in this area. To the right, a steep, rocky slope descends towards the quarry floor, partially covered with green plants. The sky is a clear, pale blue.

A whole landscape reduced to regimented geometries,

resulting in a disturbed landscape only possible through industry.

How can this disturbed landscape exist in such close proximity to the impactful topography of Wellington's harbour. Its form and ecologies radically altered beyond what even the faultline can do.

Policy dictates it must be returned to a natural character.

**But what is natural in this context?
An uneasy question in New Zealand.**

These machines scurry across the landscape carving out rock,

different forms and different sizes,
all with the same purpose in mind:

Extraction.

Fault lines separate the various geological domains,

Mainly greywacke, largely unweathered, used for aggregate and landscaping. Weathered rock is set aside for landscaping or cheap fill. No waste in this system. High quality argillite – the darkest rock – is specified for roading and concrete aggregate.

Each arc of the diggers blade removes what was there before – a continuous process of erasure, tabula rasa. Continual reformation though deformation.

Fig 10.108. (Previous) Horokiwi photograph study.

Fig 10.109. Horokiwi surroundings.

Fig 10.110. (Opposite) Quarry context.

This is Grenada,

This is Horokiwi,

This is Woodridge,

This is Horokiwi Quarry, which sits outside of the cities life yet fuels its construction.

This is Newlands,

This is Wellington Harbour,

Water flow vectors derived from ArcGIS hydrology analysis from DEM data (2017).

Existing Surface Flow Paths
1:5000 @A3 25m 50m

- Platforms
- Extent of Extraction (2017)
- 5m Contours (2017)
- Harbour Waterbody
- Predominant Flow Vectors

All the water flows down from the surrounding landscape into the pit, from the various platforms to the Lower Quarry area. Erosion and detention must be managed throughout the whole site.

Fig 10.111. Surface water flow.

All detention pits constructed of concrete retaining walls below grade. Dual purpose to trap sedimentation run off - easily accessible for mechanical removal

Existing Water Management Systems
1:5000 @A3 25m 50m

- Platforms
- Extent of Extraction (2017)
- 5m Contours (2017)
- Water Detention Pit
- Conveyance System
- Pipe Outlet

Current water management sytems revolve around several unconnected detention pits and one major outlet leading to the harbour. The options are restricted by operational requirements and will need to be bolstered post-extraction

Fig 10.112. Water management.

Topography Structures
 1:10,000 @A3 50m 100m

Original Topographical Profile
 2017 Topographical Profile
 5m Contours (2017)

The original landscape was unsurprisingly drastically different before extraction began prior to 1943. In contrast to many quarries, the area disturbed is confined to the extraction extents, leaving much of the existing vegetation and topography untouched.

Fig 10.113. Topography structures.

Current Internal Quarry Material Movement
 1:5000 @A3 25m 50m

Extent of Extraction (2017)
 5m Contours (2017)
 Extraction Movement
 Processing Movement
 Storage Movement

Critical to the operation of the quarry is the processing plant. All extracted material goes through here, and then either enters secondary processing at the bitumen plant or is distributed to the various storage areas based on grade and type.

Fig 10.114. Material movement.

Current Quarry Function Locations
1:5000 @A3 25m 50m

Quarries are highly functional landscapes. Their layout is partitioned based on basic activities: extraction, processing, and storage. Any adjustment to the form and layout must take these operational processes into account.

Fig 10.115. Quarry functions.

Operations within an aggregate quarry can be defined by three functions:

- Extraction
- Processing
- Storage (of product and by-product)

Outside of this there are designated movement areas, typically defined by precisely designed haul roads, turning areas, and vehicle storage/maintenance yards.

Horokiwi Quarry is no exception to this. In response to the extraction areas shifting, a mobile processing plant will move as well, allowing more efficient processing of aggregate and tailing material

Fig 10.116. Quarry function exploded diagram.

Fig 10.117. Extraction and deposition locations based on 2016 topography.

Fig 10.118. Extraction scenarios.

Extraction Operation
Deposition Operation
Processing Operation

Speculations on where, and to what degree, the future extraction may occur within the Horokiwi Quarry. These drawings assumed maximum cut, with no more than 50m lower on the quarry floor - given that the existing watertable location is not currently known by any party. The image above seemed to be the most viable option.

Fig 10.119. Extraction scenario – closest to Tonkin & Taylor proposal.

Fig 10.120. Extraction scenarios.

It is a tricky problem to try plan out how a quarry's extraction may unfold. So many competing interests.

**The excavators need access to rock.
Dumpers need access from rock to storage.
Other dumpers need access from storage to the crushers.
Crushers need large flat areas.
Processed rock needs to be stored.**

**Machines need safe access to all these areas.
Customers need safe access to the storage.**

**Haul roads link all these demands together.
Quite important really.**

In the face of all this you have to ask:

**What agency does the landscape architect have
to intervene here?**

Fig 10.121. Adjusted Tonkin & Taylor proposed scheme contours - 10m.

T&T Extraction Contours
Scale 1:2000 @ A1

**Tonkin & Taylor offer their own proposal:
Simple. Economic. Efficient. Pragmatic.**

It is what we can expect after all.

**All parts of the quarry are adjusted.
Even the quarry floor is dropped 30m.**

**This proposal is both confining and liberating.
It shows an envelope of potential form by suggesting the
predicted maximum degree of extraction.**

**This measurement of extracted material should be respected. It
cannot be brushed aside, but instead embraced.**

**What can we do now, knowing where the edge of the project's
reality lies?**

**Starting at this scale would defeat the purpose.
To begin, we should get to know our material.
Let's start small. Something manageable.**

The Main Bench.

Each of these areas form an individual study within this project.
Each one based off an event.

An encounter with the sublime.

Each one sheds light on what the sublime is, and how design can grapple with it.

Each one shows that the sublime is ecological – something more than us, more than anyone entity.

The studies are compartmentalised yet function as a whole.
They are the individual organs of the park.

But the park should be seen as organless – only a whole entity, a being of its own right in the world.

Calling this a ‘park’ folds in certain expectations.
What if we denied those?

Fig 10.122. (Opposite) Design study locations.
Fig 10.123. (Following) Horokiwi Quarry entrance.

Seems impossible to imagine this as a park...

though it readily proposes the challenge.

LAB: Techniques of Extraction

Here the technical envelope of quarrying operations will be explored in a relevant way to landscape design. This is intended to allow design to intervene within the quarry's lifespan instead of the end. Doing so allows the extraction processes to create the final form - the remediated post-mining landscape - whilst the quarry continues to operate. These technical processes are to be operationalised for their aesthetic potential in designing the sublime.

Fig 10.124. Komatsu excavator schematic.

Greywacke

*coarse-grained sandstone (visible)
highly deformed or fractured
hard, durable material
dominant basement rock in Wellington*

Weathered-Greywacke

*considered overburden
up to 50% of rock converted to soil
water follows joints/faults in rock
severely reduced structural strength*

Argillite

*fine-grained mudstone (not visible)
highly deformed or fractured
hard, durable material
Folded between greywacke horizons*

Greywacke, a highly jointed and mineral rich form of sandstone makes up the vast majority of the material at the Horokiwi Quarry. Because of Wellington's highly faulted geology, much of the greywacke is weathered, leaving it fit only for overburden or sold off as cheap fill. Lines of argillite, a superior material due to its finer grain and higher strength, is interlaced between layers of greywacke throughout the quarries various geological domains,

Fig 10.125. (Top) Main Bench geological structure.
Fig 10.126. (Bottom) Greywacke close-up.

Mitre Peak Domain

Composed of strong to very strong greywacke, thickly interbedded with weak to moderately weak argillite. Low degree of weathering.

Crown Hill Domain

Highly deformed greywacke with low degree of argillite. Material highly fractured with low strength.

Middle Hill Domain

Analogous material to Mitre Peak Domain, though with higher degree of quality argillite and less fractured. Highest quality aggregate material.

Pavement Hill Domain

Slightly to highly weathered greywacke and siltstone. Highly varied degrees of strength. Material severely affected by historic streams running through area pre-extraction.

Source: Tonkin & Taylor LTD, (2018). 2018). Horokiwi Quarry - Preliminary Resource Evaluation.

Despite the deformation and faulting caused by the proximity to major fault lines, Wellington greywacke is surprisingly sturdy. It can be designed to produce steep, relatively high slopes, even if weathered. This allows for a high degree of economy in designing benches that maximise the amount of cut.

Source: Grant-Taylor, T. (1964). "Stable angles in Wellington greywacke." New Zealand Engineering 19(4): 129-130.

Fig 10.127. (Top) Horokiwi Quarry geological domains.
Fig 10.128. (Bottom) Wellington greywacke slope stability.

Operational quarries are high-tech, heavily scanned and cataloged landscapes. With the advent of readily available drone and LIDAR scanning tools, operators now have the capacity to receive high-resolution models of the quarry at request - sometimes even in real time.

The latest generation of excavation and earthwork machinery can interface with these models, referencing themselves against via GPS links. The tooling can be set to respond to given instructions via these links. Alterations can be directed to the machinery in 0.1m contour intervals, driving a significantly higher degree of control than previous workflows.

This degree of control is less relevant to quarry extraction processes, though its relevance to crafting the eventual post-mining landscape during this process is obvious.

Bulldozer - moderate degrees of control
Capable of moving large volumes of earth efficiently
Moderate degree of control in blades depth setting
Versatility provided by rear tool mounting options

Front-Loader - close degree of control
Versatility provided by a range of buckets and blade options
Bucket/blade can be manouvered side-side
Versatility in material movement - can carry or dump elsewhere

Fig 10.129. Quarrying machinery 01.
Fig 10.130. (Opposite) Quarrying machinery 02.

Excavator - variable degree of control
Inefficient movement of material
Highest degree of vertical movement above and below ground plane
Tends to need pairing with other machinery for best results
Variety of bucket and tool options offers highest flexibility
Can cut and sculpt landform with same platform

KOMATSU PC450LC-8 Operating Envelope

1. Maximum Digging Depth	11 810 mm
2. Maximum Reach at Ground Line	17 250 mm
3. Maximum Loading Height	10 950 mm
4. Minimum Loading Height	3310 mm
5. Maximum Vertical Wall Digging Depth	8390 mm
6. Maximum Vertical Reach	16 075 mm

-Using 10m Reach Boom

Fig 10.131. (Top) Excavator extraction envelope
Fig 10.132. (Bottom) Slope components

Components of an Open Pit Mine slope

~10m single height benches ~7-8m wide catch benches 50-60° overall slope angle

Fig 10.133. (Top) Mitre Peak bench structure.
Fig 10.134. (Bottom) Maximum envelope for bench components.

Quarry Face Design Parameter Options

60° Bench slopes (maximum angle for weathered greywacke near fault) with 6m catch bench

-Can be used to achieve a steeper overall slope angle
Double height catch bench (every second mining level) at 60° slope angle. Safer angle for non-weathered greywacke. Width of catch bench must be increased to account for the greater height

80° Bench slopes with pin back reinforcing for weathered greywacke, with 6m catch bench

2m wide, 1m high berms on catch benches can help prevent falling rock progressing further

80° Bench slopes (maximum angle for greywacke near fault) with 6m catch bench

-Can be used to achieve a steeper overall slope angle
Double height catch bench (every second mining level) maintaining 80° slope angle. Only suitable for non-weathered greywacke.

9.8m minimum Haul Road Width may be dispersed between the catch benches. These roads can act as catch benches to a degree.

Fig 10.135. Quarry face design options.

LAB: Design Rules

This design study is structured around a series of design rules, some of which were established at the outset of the design study, and others which were determined after some initial experimentation where potential was discovered. A small number were also developed throughout the study, and later folded back into prior work where appropriate to strengthen the designed outcomes in its ability to establish encounters with the sublime.

The preparation and procedures of a Japanese tea ceremony involves a series of rules, just like this study. These rules establish an envelope of behaviour and relations between host, guests, utensils, and the tea itself. Using these rules allows the establishment of an assemblage that keeps the forces of chaos at bay by establishing a territory whereby the act of tea-drinking can be practiced towards perfection.

The rules established here are employed to establish a territory that defines the envelope of the design study, but also make vivid the relations between designer, designing, and the pre-existing site.

Fig 10.136. M's Photography. "Nodate" Japanese tea ceremony. 2014. CC BY 2.0.
<https://www.flickr.com/photos/93277085@N08/15327101009/>. Opacity reduced to 80%.

Design Rule 1/A

The upper half of the quarry will contain several expected programmes and activities of a park, including: sports fields, seating/sitting arrangements, informal meeting/gathering, and play.

Design Rule 1/B

The lower half of the quarry will contain no programmed areas or activities. Instead it will be involve design moves that structure different forms of movement and bodily experience of the quarry.

Design Rule 2

At no point within the quarry will there be a totalising view of the whole landscape. The entire scale, horizontal and vertical, cannot be fully expressed from any one location.

Design Rule 3

No trees or large shrubs will be placed within the lower quarry. Instead, only grasses, tussocks, and flaxes can be used. The upper quarry can employ a very limited degree of larger shrubs or trees where appropriate to blend into existing vegetation.

Fig 10.137. Design Rules - 01.

Design Rule 4

The design should maximise extraction wherever possible. If it is not possible, or desirable, in a given area, further extraction should occur in another area to balance the economical degree of cut material.

Design Rule 5

The designed topography must adhere to the technical geometry envelope for the benches and other designed forms. These forms are not to be arranged and structured in a purely technical sense, but should be employed for a desired aesthetic outcome.

Design Rule 6

There can be no elements within the lower quarry which the body can readily reference itself against - especially in spatial scale. Structural elements must lose their ability to be aesthetically referenced against at a moderate distance.

Design Rule 7

The designed topography must be arranged in a way that denies the body any easy form of reference point - a sense of any bottom of the quarry, the height of the benches, the weight of the rockface, the spatial extent of the quarry etc.

Design Rule 8

No housing from the surrounding neighbourhoods should be able to be seen from the quarry's interior. Though where and if possible, views of the quarry from these dwellings should be established if the rule is maintained.

Fig 10.138. Design Rules - 02.

Design Rule 9

The design scheme must respect the property rights of the surrounding owners. Extraction must only occur within the land parcels owned by the quarry operator – unless an appropriate landswap is arranged. Similarly, the urban development around the quarry must be restricted to the boundaries of the two major developer-owned blocks.

Design Rule 10

Each design move, or study, should increase the sense of shared publicness or connection to the quarried landscape. Some experiences within the quarry may be individual, yet they should always be designed in mind of a shared, collective experience of the landscape and its role within the city's history as a monument to extraction.

Fig 10.139. Design Rules - 03.

Design Rule 11

The quarry, wherever suitable, should be opened up to the wider world. Views of the quarry, as a park, should be available from all sides, including via foot, bike, car, and other forms of access around the site.

Design Rule 12

No media or design technique will be given precedence over another. Instead each will be employed and evaluated in relation to a given design problem. There is no presumed superiority of digital vs analogue for example.

Design Rule 13

Each design study must amplify, extend, multiply, or adjust a part of the sublime dimension within this landscape. This is a challenge: how to adjust an encounter which struggles to be brought into representational space?

Design Rule 14

The designed quarry park should have as many reasons to come here as possible for the surrounding suburbs and those who may drive here. As many different fixed pathways, and un-fixed ways of walking should be included here as possible. This park should be the centre of life for this part of Wellington, and a significant part of the city at large.

Fig 10.140. Design Rules - 04.

LAB: Main Bench

Transitions and Tipping Points

Initial experimentation with fieldwork, representation, and design techniques suited to dealing with landscape sublimity

Aims/Objectives

To develop an initial set of strategies with discovered sublime landscape affects, operationalising their spatio-temporal relations through design into an adjustment of the pre-existing quarry landscape. Test and develop initial aesthetic-technical parameters and evaluate their applicability for design through the use of transition and tipping points as a foot into the door of the sublime. Proposal is relatively small and restrained in the grander scheme of the quarry and project as its role is a first foray into this uncertain territory.

Hypothesis

That this sublime event within the quarry can be understood and broken down via the use of transitions as a starting point which is then sharpened with the idea of 'tipping points' as this relates directly to changes in spatio-temporal relationships.

Tool(s)

Plan, section, photography, watercolour paint, text.

Method(s)

Propose a formal shift in the terrain of the 'main bench' in the quarry through mutating discovered affectual tipping points, alongside testing possibilities for an aesthetic approach to the quarrying technical knowledge. This is in the service of creating an area or a 'moment' within this eventual parkscape.

Background

This was the first major fieldwork driven study that occurred once frequent access was granted. Early on in this project I felt that there was a dimension to this part of the quarry that was attractive to me as a designer. On reflection throughout this study it was apparent that this relatively simple piece of geometry was something that could be grappled with in a more direct way. The rest of the quarry was just too wild. This allowed a way in.

Previous similar studies were partially developed when access was not as readily available so this builds upon that earlier work which is not shown here. In reflecting upon this study it is remarkable how much this study influenced almost everything that came after it. The findings were so readily understood through representation that it became a primary driver of other design moves.

Fig 10.141. Main Bench lab location.

Rules and Context

The following rules were set up to structure the design work of this lab:

- The majority of Main Bench's height and width must be retained in order to remain as this plateau. (The bench exists as the most recognisable, or knowable, element within the quarry – relatively easy to aesthetically understand as a designer. There is some value in this for design.)
- Any geometric alterations to the bench faces must adhere to the technical guidelines developed for extraction parameters.
- Design propositions must be primarily about movement through space and not rely on 'programmed' activities. (see design rules)

The following assumptions were made at the time of this study:

- The quantity of extraction that would not be extracted by retaining all or a significant portion of the Main Bench will be made up elsewhere in the quarry.
- The Main Bench proposal will be part of a larger movement system and will not serve as a destination point within the park – instead operating a major shift or transition within the experience of the whole.

Fieldwork Log

In early-mid 2018 six fieldwork sessions were conducted specifically on the event discovered atop the Main Bench component of the quarry. This event was discovered during that fieldwork session where no expectations or stringent plan were in place. The approach was to go to the site and just move throughout and experience it until an event confronted me. I was interested in recording how this landscape may move me, what I feel and sense – an initial impression was important. This first session was to have this unencumbered by the need to document anything unless necessary – memory is strong enough to rely on at this point.

Clearing the site office, I moved towards the Main Bench as it was the least busy within the quarry that day, making it suitable for fieldwork. Walking towards it, it looms ahead, jutting out of the wall of the extracted rock. Your sense of space and referentiality is very broad at this point: the quarry is wide and open, and you have just left the car so your mind may still be somewhat open to other workaday thoughts. Walking up the ramp to the Main Bench collapses all of this immediately, dragging you down to this rock surface, your steps on uneven rock, your increasingly heavy breathing, the alien materiality that now begins to surround you. As you're moving up the ramp, there isn't much else to reference or think about other than your own movement. It's just you, taking one uncertain step at a time, legs working harder than they're used to on different terrain.

This is the Main Bench as of 2016, prior to conducting any fieldwork

Going up this ramp, past laden dump trucks

This is the site office where I left on foot

Extraction began prior to 2002,
accelerating heavily in 2013

some of the best greywacke and
argillite in the whole site is here

This is Main Bench on 12 June 2017
when I first started fieldwork there

Fig 10.142. (Previous) Main Bench context.
Fig 10.143. Main Bench geology horizons.

Fig 10.144. Main Bench photography study 1.

Fig 10.145. Main Bench photography study 2.

Fig 10.146. Main Bench photography study 3.

Fig 10.147. Main Bench photography study 4.

Fig 10.148. Main Bench materiality study 01.

Fig 10.149. Main Bench materiality study 02.

Eventually, this ramp smooths out, at which point you become aware that you've made it atop the bench and of just how high you've come. Significantly higher than the surrounding machinery and processing plants that you passed on your way from the site office. You don't stop to take this in though, you're compelled to move. It's so otherworldly and alien atop this bench that there is a sense of curiosity or adventurousness. *This feeling never left me no matter how often I came here, or how analytical the drawings I was producing up there were.* The construction of the ground plane with the almost perfectly flat (at least as far as you can perceive) surface made of crushed rock pieces atop the un-excavated rock base makes each step even more uncertain than when you came up the ramp. The rock chunks are bigger here, enough for your foot to roll off if you're not careful. On this curious orientation, the flatness of the surface gets you to move, to discover what might lie up here. But your eyes are looking down, carefully placing each step on this uneven terrain.

I kept moving like this for some time, at what seemed like a meandering pace, just wandering across this flat surface, thinking about things other than what was right in front of me, which are somehow not quite relevant to my thoughts. At a point where you've strayed too far from the area next to the bench's edge, your head begins to crane up slowly, shifting attention away from those meticulously placed steps. That sheer rock face that you knew was there all along but had not paid conscious attention is now looming above you. It stands there, perfectly immobile, constructed of bands of grey and black rock. Your movement has shifted from the aimless wandering to being pulled towards the rock. As you're doing so, your starts to vision track up the verticality of this rock face. *It's huge, what am I meant to do with this?* You keep heading towards it until you don't, that uneasy knot in your stomach that has been growing till now is pressing on you to go no further. In trying to take in the immense weight and scale of this rock your whole upper body has been oriented up towards it, head and shoulders back in this vulnerable position. You're arrested in this spot, can't take another step forward – it holds you here. You can't physically look any higher to try and take in the full height. *It felt like it was leaning over me, cutting off everything else from my world. I couldn't have taken in anything else even if I wanted to.* This thing just dominates your entire perception, it won't let anything else in.

What seems like a relative eternity comes to an end after 10–15 seconds. You're able to pull yourself back from this affronting presence. Take a step, you've got this. Take another. This sense of an immense looming weight begins to quickly drop off, more like you're under its shadow than being pressed upon by it. Your movement becomes freer now, picking up a normal pace. A sensation like your body is mobilising for something – you're not sure what, but you feel it. Then suddenly it's like that presence drops off; you're not even aware of it. *A relief. I only*

noticed at this point because of the sheer contrast, my body had been entirely tensed up in anticipation of something.

This sense of relief, a looseness in your muscles and nerves, washes through your body. That same face is in front of you, that hasn't changed. But what you hadn't noticed before, is now invading your perception. The visceral gouges on the rock, the sharpness of the rock itself, the deep darkness of the argillite. Even from this distance of 5–6m you haptically feel it, which draws you in. This sense of calmness enlarges as you move towards the face itself, never leaving. Coming to the rock wall feels like you're under an awning, a sense of something over you but seemingly not relevant to you beyond the fact that it's something above you. Down here it's a sense of relief, but also of satisfaction that you did discover something – both reflecting on that transition you took to get here and the utterly alien material surface that now quietly looms above you.

Design Practices

Documenting the shifts

I began this design process on the Main Bench by documenting the transitions that I had felt during those fieldwork sessions. After the initial session, I went back a few days later, having thought and reflected on that encounter. I thought of points that I wanted to clarify and to verify. Questions such as:

*Just how many shifts are involved in this event?
Precisely where did these shifts occur in extensive space?
Are they sharp shifts or do some blur into others?
How long does this whole process take?
Which actors/agents/entities are involved in this event?*

Interestingly, drawing on site proved difficult – something which has never been an issue in using this methodology before, including on other quarry landscapes. A fieldwork session would go by, and seemingly without me being aware, I would walk out there having drawn little if anything despite the best-directed intentions going into it. I suspect that the intensity of not just this event but the whole quarry somehow interferes with what, for me, are normative processes. Your mental processes cannot focus down on that task or simply put it aside.

On-site sketchy diagrams were established in the later sessions where I had to consciously force myself to do so, and unsurprisingly they were productive in their capacity to engage with the problem of this event. This placed a certain reliance on memory, which for this project does not seem to be an issue. A machinic process was set up so that there was a self-evaluating process between the use of drawing and fieldwork. Both fieldwork and drawing used in an iterative process allows relationships to be discovered, sharpened, revisited, and sharpened again. The capacity of the drawings was evaluated in their creation based upon their ability to give expression to what the fieldwork was

Transitions as you move towards the excavated quarry face

Fig 10.152. Main Bench differentiation diagram 02 (SD:1).

Fig 10.153. Main Bench differentiation diagram 03 (SD:1).

666 The app used was GPS Logger, an app from the Google Play Store.

667 Precision, particularly spatial precision, has been a reoccurring theme within this research. Arguably not enough attention is paid to the precise spatial shifts such as these operate in large and complex landscapes. Penny Allan's PhD focuses on the question of designing with large landscapes yet foregoes the spatial precision of doing this, instead operating a removed scale. This is not to privilege one over the other, but simply to suggest a lack of attention given to one. Allan, "Feeling indeterminate: the experience and design of big landscapes."

discovering in terms of the affectuality created by changes in spatial relations. If the drawings could allow these affects to be felt again, this is a success. Likewise, the fieldwork was evaluated on its ability to sharpen up and gather more data on what the drawings uncovered.

Initially, a base plan was set up with 1m contours adjusted to reflect the correct level of the bench as it had changed to a relatively minor degree from when the contours were generated by aerial LIDAR. The locations of the series of shifts were marked on this plan, their locations determined by using a GPS logging app on my smartphone that would track my location in 1-second polling cycles.⁶⁶⁶ During the fieldwork, where I felt a significant bodily shift I would stop and take a photo of my what I could see (specifically where in horizontal and vertical space the landscape was orienting my body), often taking 20–40 seconds to do so. Using this log, it is possible to see spatially where I was stopping due to the increased density of recorded locations in one location than the area leading up to and following it. The initial three major shifts portrayed in the fieldwork log for this lab were determined by this method to consist of a total of seven tipping points in total. These intensive shifts between one differential state to another are mapped in extensive space.

An initial differential diagram/plan of these three major and minor shifts was produced in Adobe Illustrator to provide an accurate record in a format that would also allow manipulation without destruction – a quality that often makes digital drawing more attractive to designers.⁶⁶⁷ This drawing, however, operated ineffectively and, even though it showed the precise locations of these shifts, it was not accurate in expressing the encounter. Within the first two major differentiations, each of the minor shifts blurred one into another. These major differentiations themselves blurred and overlapped at their meeting point, likely being impossible to draw a precise line where one ended and the other began. Even using the gradient tool within Illustrator or Photoshop did not resolve this issue.

Watercolour was used as an alternative in the effort to use its deliberate imprecision in a precise way. *Precise imprecision*. Using drafting film on top of a printed contour plan, I used a red and two blue washes to mark out the three major differentiations – the first two bleeding into each other. The edge of the second transition, where the affronting presence of the rock face begins to take over, is more defined compared to the more consistently fading away mark of the wandering movement area. The watercolour more accurately represents these state changes than the flat and homogeneous gradient generated by Illustrator. Alone this plan does not tell enough, but it is a useful beginning point (Figure 10.150-153).

Following the second fieldwork session, which sought to gather more data on the nature of each of these shifts, a four-part representational assemblage was set up for each of the seven tipping points. Each

668 Bergson, Matter and memory.

669 The accuracy of the GPS was affirmed by the lack of significant variance in the location of the points recorded when standing still. Using the smartphone was initially only a trial run with the intention to use a more sophisticated unit if need be.

assemblage consisted of the following: 1) a plan graphic showing the location of each shift (relative to the others) and the extent of my spatial perception at that point; 2) a 1:750 @A3 section drawing cutting through Main Bench and its quarried face also showing the location of that shift, the spatial perception, and the ability to reference the scale of the body against the horizontality of the ground surface and verticality of the rock face; 3) a photograph taken from that transition edited to downplay what is not relevant with text summarising the felt shift at that point; 4) a plan diagram showing what in the wider landscape the body is referencing itself from if applicable (Figure 10.154-162).

The section was immediately the most useful of these as it showed these spatial shifts in a successive manner more strongly. Doing so also allowed the temporal dimension of how these shifts were encountered to be introduced by showing previous, and future shifts within the same drawing. The edited photograph with its narrative text was used to make this stronger. Reading these section drawings in relation to the others allows what occurs in one part to be carried forward or backward. They are not discrete, static slices of time, but a momentary stabilisation, with the future and the past embedded within each. In doing this, all past, relevant shifts the body has experienced are also brought forward to this point, giving expression to the sense (significance) of the encountered affectual shift. Bergson's work on the nature of time – in that the experience of the present is the experience of every moment leading to this point and beyond – is a notion that was consciously used here and in other drawing sets of this investigation.⁶⁶⁸

These drawings document spatially what happens and provide a dataset that can be analysed to find material which design can work with. I particularly wanted to find the precise relations, inflexions, and factors that went into creating these three large differentiations and the resultant involuntary felt shift. Because of the accuracy provided by the GPS mapping, which is then translated to plan and section, it was possible to derive the distances from the rock face where this experiences shifted from one to another or were at the highest intensity (Figure 10.166).⁶⁶⁹ Also from this series of section studies, it was possible to derive the approximate angle from the eyes to the top of the rock face – the point where I found myself involuntarily trying to scale myself against. These two pieces of geometric data form a shifting differential equation where a change in one relates to a change in the other – though it goes further than a binary pairing as Deleuze shows in his ecological ideas on intensity (c-c', c'-C etc.). The equation dx/dy denotes the relationship between infinitesimal quantities, in this case the derivative x value in relation to the y value. Deleuze uses this equation in relation to the determinability of ideas where the undetermined is understood as dx, dy , what is determinable as dx/dy , and what is already determined and known as the values of these dx/dy equations. As previously shown, ideas for Deleuze are the brain's attempts to grapple with the intensities of the world in response to a problem. These values may then be thought to represent the determinable as-

You've made your way to the top of the bench, put in significant effort to get somewhere out of the way. You expect something more than the everyday up here. It seems quiet up here – raised up above the noise and dust of the quarry floor. In fact you can't even see the floor unless you go right to the edge. The other side of quarry is removed just enough from you to seem like a green wall – *the texture and form of the vegetation is imperceptible*.

The lack of mid-ground, and the hidden quarry floor, pulls you across the eastern edge of the bench. *You find yourself mindlessly wandering*, just looking around at the surrounding hills, and where you can, the floor below. *You sink into yourself* as you're very aware of the loose, large, rocks underfoot that demand your attention.

Main Bench Transition 1a – Mindless Wandering

Fig 10.154. Main Bench transition 1 (SD:2).

Main Bench Transition 1b – Lack of mid-ground

Fig 10.155. Main Bench transition 1 (SD:3).

The opposite side of the quarry fades back into an abstract background. Too far away to be haptic, it retreats as a backdrop to the quarry bench. The mid-ground between the bench and the abstract wall is entirely missing due to the open void of the quarry.

The sharp and immediate contrast between haptic foreground and abstract background highlights the features of both. The materiality and textural nature of the foreground is amplified - drawing you in and holding your attention as you move amongst it. The background works to enclose the world into a smaller interiority by being just close enough to be abstract and at the same time cutting off any relations to the outside world that isn't the hill itself.

Main Bench Transition 1a – Mindless Wandering

Fig 10.156. Main Bench transition 1 (SD:4).

You've found yourself moving across the eastern part of the bench, looping back on yourself a few times...just moving mindlessly. No thinking about where you're going, or even necessarily what you're doing – even though you're very aware of your careful footsteps. At a certain point you stray a bit closer to the rock face – away from the edge – and begin to notice its presence. It seems so obvious that is was there, but this is the first time you've really noticed it from atop the bench.

You're still moving quite freely across the plane, though your *body is now being pulled and oriented towards the rock face*. Its scale isn't quite clear yet as you almost feel compelled to not try look at it. Yet you start to look a bit further ahead, not so focused on where you step or the surrounding hills. Now the plane of the bench starts to become known as your movement spirals in towards the rock face.

Main Bench Transition 2 – Noticing the Rock Face

Fig 10.157. Main Bench transition 2 (SD:5).

Your movement is now being pulled directly towards the rock face. No longer wandering, or even *spiraling* in towards the face. It is a direct walking towards it. Slowly. Very slowly. You feel a *sense of apprehension*, not quite sure of what to make of this situation. It isn't too late to change direction if you wanted to. But do you want to? Its entirely quiet up here now. Just the crunch of the rock underfoot. It seems like you can't avoid going forward, to confront this massive piece of rock. *Feels inevitable*.

As you move closer, the rock face begins to envelop your entire attention. The surrounding landscape fades away sharply. Your eyes track up the vertical face, and acorss to the slopes on either side that it protrudes from. As your eyes track to the top you begin to feel a *nervous, gut-turning sensation*. Nervousness. Something doesn't quite feel right. Though you *feel compelled* to go closer.

Main Bench Transition 3 – Being Drawn Forward

Fig 10.158. Main Bench transition 3 (SD:6).

Even though your movement was slow beforehand, *it feels significantly slower now. Deliberate. Measured.* Almost uncomfortably slow. The rock face now almost occupies your entire vision ahead, only a tiny slither of the slope behind visible – if you can shift your eyes away from the benches in front. It's hard to do so, like its *drawing your entire body up towards the top* of the face. You can't even feel the height, you just know somehow its significant. *You feel its height but can't reference it.*

At this point you can't see the entire slope ahead of and above you without adjusting your body, and head's orientation. You feel forced to shift your head back in order to see the entire face. *A sensation of pressure builds* up when you do so, pressing down onto your chest and shoulders. Your whole being is *oriented to this vertical face* in an attempt to perceive, and aesthetically understand it. But it can't. *You struggle.*

Main Bench Transition 4 – Pressure Building Up

Fig 10.159. Main Bench transition 4 (SD:7).

You come to an abrupt stop. *The feeling of pressure bearing down on your upper body is too much.* It holds you – *arrests you in place*, unable to move. It is impossible to see the top of the rock face now. No matter how you try, you cannot orient your body in a way to see the highest point. As you try – and *you feel compelled* to – your shoulders push back, your upper body tilts backwards. You feel like the *weight of the entire slope is pressing down* onto you. As long as you keep your eyes up, you cannot move.

Main Bench Transition 5 – The Rock Face Arrests You

Fig 10.160. Main Bench transition 5(SD:8).

As soon as you *bring your eyes down from the top* of the slope, and simultaneously take a step or two forward – almost a stumble forward – *the pressure that was bearing down on you is immediately released*. Your whole body relaxes, and the *tension* throughout your body, the tightened muscles, *rapidly ceases*. Your body, your perception, your movement is immediately *oriented towards the bottom of the slope* right in front of you now.

It is much closer than you expected, as you were *unaware of the distance* when you were grappling with the height and scale of the whole slope up to this point.

With this release, you're now very *aware of the materiality of the rock* ahead. You can haptically feel the roughness, the jagged edges, the warmth of the rock as the sun shines on it. Now it feels like *you're free and able to move, but only forward* in fear of being trapped under that pressure again.

Main Bench Transition 6 – Pressure Suddenly Drops

Fig 10.161. Main Bench transition 6 (SD:9).

After you've taken a few steps forwards, 1–2 metres, the *experience of what happened before seems irrelevant*. Too far gone, too long ago. Your *perception is entirely enveloped by the rock* ahead, it swallows your entire vision. The sound of crunching rock underfoot bounces off the wall, creating a sense of an enclosed space distant from the openness of the quarry. This experience is amplified with the intense experience of the crushing pressure of the walk prior. The sensation of release is fuelled by the sensation of intense pressure.

Main Bench Transition 7 – Connected to the Rock

Fig 10.162. Main Bench transition 7 (SD:10).

pects of this relationship between the body-rock-distance-eye-peak-angle machine. Initially, the differential relationship between two actors, the distance between the body and the rock face, for example, is undetermined (dx, dy). This relationship later becomes determined, showing that a change in one variable (the distance) produces a result from a previous position of that variable (dx/dy). These values can then be fully determined, at least within the bounds of this equation ($x=76.543m$, or $y=a$ 1.78m high male human organism – myself).

Designing shifts

The aesthetically derived data in the form of the body-rock face-distance-angle variabilities can be directly appropriated by design processes because of their inherent ‘concreteness’. They connect directly to spatio-temporal relations that can be given expression through representation. Because they are given expression (and through the bodily memory that is carried forward from the fieldwork), the differential relationships within these variabilities when changed provides visceral feedback in what they produce. This resonance between what the body knows, and the shifted relations on the page is what both drives and evaluates the design process.

The initial design moves were interested in how the different transitional zones can be extended, diminished, destroyed, or flipped into something else through their own intensities (Figure 10.163-164). How the body was oriented to the verticality of the slope, its base, or the ground plane seemed to largely dictate the discovered movement. So, the first design alterations played with this by tilting the plane of the bench up and down to achieve a more or less intense sense of looming as you approach it. Knowing the distances that these occurred from the base, I could use a simple rise/run calculation to suggest geometries for this new movement. Quick, hand-drawn sections of tilting the ground plane up produced two small but interesting discoveries: first, that doing so orients the body upwards and presses the torso back, opening the shoulders and raising the head; second, that by raising the plane with a peak of 2–3m the base of the rock face becomes hidden – there is an unknown beyond this angled surface (Figure 10.163). The reverse geometry produces almost the complete opposite experience. A decline to the base orients the body down towards this join of horizontal and vertical surfaces, closing off the verticality that looms above and extending the distance where a connection to the materiality is felt. The gradient of 1:10 is used here as it is steep enough to create the desired geometric shifts but not so steep that when walking up to it you become overly focused on your movement and close off from everything else.

The adjusted geometry stretches and intensifies the pre-existing differentiations and their associated affects. In profile, the adjustments appear to be relatively minimal, yet the on-the-ground affectual production of these adjustments in variabilities result in emergent qualities that are greater than the constituent parts.

The material aspect of this experiential assemblage is critical to its function (Figure 10.179-180). The photographic studies accounting for the movement captured this well, yet the 2D section studies through which the bench’s geometry was adjusted immediately muted it. Based on the location of the geological ‘eastern domain’ containing the dark, striated argillite band that was so impactful during the initial encounter, the geometry of the ramp leading from the apex to the base of the rock face is oriented towards this area. The rock face itself has three distinct treatments of its material across its verticality: roughly hewn at the base; smoothly, more carefully cut for most of its height; and the existing gouged surface at the very top. The bottom band stresses the sense of violence in its extraction, whereas the smoother cut majority helps to hinder any means to reference yourself against when viewed further back.

The ground plane receives similar treatment, with a series of bands of different treatment. These bands are primarily used to differentiate the degree of effort in walking and how conscious one is of their movement. The rougher hewn areas are intended to exaggerate the timeless wandering at the edge and access point, whereas this fades away as you move up the ramp. At the base of the rock face, the smooth surface is replaced with the firm based but crunching sound of small-medium aggregate that echoes off the walls all around you.

Reflection

This stage of the project proved fundamentally important in building momentum in designing throughout the site and for illuminating several key discoveries that challenge preconceptions within the landscape architectural discipline.

Small Shifts...Large Impact

Perhaps the most important and successful discovery in this lab is that small shifts in geometry can have a large impact on the encounter and experience of that landscape. By shifting the angle of the ground-plane in relation to the distance from the rock face, we can see that the affectual encounters discovered via fieldwork can be extended, intensified, or diminished with concrete certainty. We can also find similar results in the geometrical design of the quarried benches and the simple layout of different ground-plane aggregates. These experiential shifts are created by concrete relations between various components of an assemblage, which can appear as outwardly insignificant, or not. Their significance is often only fully realised when the designer finds themselves *in-the-middle*: seeing the world working autonomously with whatever is relevant.

This is counter to what we typically expect from a design response for a landscape like this quarry. Projects engaging with the remediation

It felt like it was leaning over me, cutting off everything else from my world. I couldn't have taken in anything else even if I wanted to.

Fig 10.163. Main Bench geometry experimentation.

670 Michael Barrett, Ralph Johns, and Sarah Bishop, eds., *Coast. Country. Neighbourhood. City. Isthmus.* (Auckland, New Zealand: Six Point Press in association with Isthmus, 2015), 182-89; Pollak, "Sublime Matters.," Pollak, "Matrix Landscape.," Roncken, "Shades of the Sublime.," Roncken, Stremke, and Paulissen, "Landscape machines: productive nature and the future sublime."

671 Hellström, "Rappel au désordre: Architectural Aesthetics Between the Performative and the Sublime," 21.

672 Weller, "An art of instrumentality: Thinking through landscape urbanism," 80-83.

673 Roncken, "Shades of the Sublime," 255-56.

of a post-industrial landscape tend to rely on large structural or systems-derived design moves to order the site towards its new intended purpose. Likewise they also involve large formal moves as though the quarry is to be experienced as an object from afar. This is most readily seen in projects shown in design periodicals or other forms of media intended to publicise a particular firm/design team's work. Most design/representation effort and space are dedicated to showing how the site has been changed via the designer's hand. Large structural installations that allow for movement or new activities to occur are common, often employed alongside large designed ecologies that blanket the site. The size and scale of these moves are portrayed as important to these remediation schemes as they struggle to make sense of the site. Without fieldwork or a direct and sustained encounter, the site remains unfamiliar, and the designer struggles to find a way into the design problem beyond broad and often vague moves. This is even more so when the design problem is viewed from afar – either aerially or obliquely from the exterior of the site.

This design example challenges preconceptions of how to approach landscapes such as this – first, through what we can discover via fieldwork. The variabilities discovered here are likely to have only been found via fieldwork; their significance only able to be understood via a direct encounter. Without this, the designer is left to making large-scale moves that make (a limited degree) of sense in-and-of-itself. They are unable to readily connect to the bodily experience of such landscapes. Secondly, it shows that the sublime in design is not bound to the creation of the large or inconceivable as prior designer-thinkers have suggested.⁶⁷⁰ Instead, it affirms what Hellström Reimer suggests: that the sublime involves singularities and events that can only be encountered through direct exposure.⁶⁷¹ It does not rely on scale or magnitude, though these are not excluded. Small close changes between the bodies relation to the topography can be as significant as large, distant changes – and these two scales of shifts can interconnect and bolster each other. This forces the designer to be more attentive to the smaller, bodily relations that we encounter through movement in the landscape.

Aesthetics and Instrumentality

If we turn back to the foundational SBD discourse, what can be found is an emphatic turn towards implementing data and technical/objective knowledge into the design process. A notable example is Weller's essay "An Art of Instrumentality" in which he argues that landscape architects must move away from visual composition and towards statistics and information.⁶⁷² In landscapes such as this quarry, there would be a general disciplinary expectation that technical requirements of both extraction and remediation would drive its design. This would be considered the major task for the designer.⁶⁷³

This lab determined that the technical information alone cannot propel designing – something that is obvious yet seemingly overlooked

or downplayed by 'serious' design programmes internationally. What I found is that the technical information of quarrying (largely geometrical limits) is limited in terms of designing by itself/ However, if it is combined with the aesthetic differential information derived from fieldwork, immense potential emerges. The aesthetic knowledge from the site drives the investigation and is refined through other forms of knowledge. This is what I term an *aesthetic operationalising of the technical*.

Technical information in design struggles to make sense in-and-of-itself as it struggles to connect to how life works, or is applied as a transcendent form of evaluation to judge one's actions or creations. Relying on the technical envelope for the slope design (Figure 10.125-135) alone would not have been able to connect or work with the experience of walking up to this rock face, though past experience would be able to offer something useful. Pairing the two forms of knowledge seems to be both productive and powerful in design. But by beginning with aesthetically derived knowledge first and then working back in the technical, the designer can bring that material to life to make a difference.

The Function of Materiality

Any designer would not question the importance of materiality in a de-

Fig 10.164. Main Bench designed differentiations.

Fig 10.165. (Left) Bench geometry 'envelope' drawings. Charcoal on watercolor paper.

Fig 10.166. (Right) Skyscraper geometry 'envelope' based on zoning laws. Ferriss, Hugh. *The Metropolis of Tomorrow*. Princeton, NJ: Princeton Architectural Press, 1986. 73,75.

This drawing shows the GPS recorded movement from the initial fieldwork session atop the Main Bench. It clearly shows the 'wandering' movement in light blue, followed by being 'drawn in' (red), then the movement in the 'release-zone' (dark blue), which sticks to the base of the slope so to not stray into the looming weight felt prior.

Fig 10.167. GPS recorded movement from initial fieldwork session atop the Main Bench. Unadjusted contours.

sign scheme, even those who operate within the systems scale typical of contemporary SBD practice. Most approaches to materiality in this contemporary practice are almost thematic: finding the right palette of materials to fit the ‘landscape type’. Instead what this lab shows is that materiality itself, like any other actor in the landscape, has a function in each assemblage. Different grades and forms of aggregate, for example, allow for different forms of working. Chunky and loose aggregate on a loosely hewn base gets you to pay attention to your movement and closes off everything else, in contrast to a smooth, compacted rock base with little aggregate on top. Further, the different strata that makes up the rock face play a powerful role in these assemblages: the dark argillite dominates the view and draws your eyes and body towards it. At a closer scale, it tends to form sharper and more jagged pieces that make up the rock face itself, which, if a larger movement is lead to, allows for a vividly haptic experience from further back.

This further affirms that the sublime does not necessarily require scale or magnitude, interactions with material are as important in a sublime encounter. Or, perhaps, that encountering materiality has a sublime dimension. These smaller relations and what they offer the organism can be more easily understood as ‘affordances’ – though this tends to reduce it to habitual responses, which the sublime disrupts.⁶⁷⁴ Materiality instead offers an organism an empowerment. It is not a reaction to this aggregate or another, it is a reaction *with it*. Representation, and design thinking in general, does not seem equipped to deal with this rigorously. However, design practitioners tend to grapple with this material tacitly and unconsciously, though this can be strengthened through more direct attention.

Presenting the Unpresentable – Intensities in Extension

This lab is perhaps most important as it showed that intensities, the

Fig 10.168. Main Bench geology - adjusted Tonkin and Taylor drawing.

Fig 10.169. Main Bench assemblage diagram.

Fig 10.170. Main Bench geometry experimentation.

675 Lyotard, "The Sublime and the Avant Garde."; Lyotard, "The Interest of the Sublime."; Lyotard, Lessons on the Analytic of the Sublime: Kant's Critique of judgment.

676 Meyer, "Seized by Sublime Sentiments," 15,20,26.

677 See stratum 2

678 Gaillard, Nouvet, and Stoholski, Traversals of Affect: On Jean-François Lyotard.

679 See Connolly for "the function of representation". Connolly, "An affirmative open systems conception of how to design landscape," 219.

unpresentable *difference* that an organism encounters in the landscape, can be given expression through landscape architectural representation. This requires documentation of the relevant spatial relations, a key dimension in giving expression to an encounter. Whereas a certain reading of Lyotard suggests that the experience of the sublime involves experiencing this presentation of the unpresentable forces of an artwork, a different reading is necessary for landscapes.⁶⁷⁵ Meyer offers a landscape-oriented reading that shows the 'unseen' process of the landscape, and the "*longue durée*" are experienced as the sublime through markers of spatialised time.⁶⁷⁶ As noted earlier, this is still not a strong enough account of the sublime.⁶⁷⁷

When Lyotard discusses the 'unpresentable forces' of an artefact, he is talking of affects and intensities.⁶⁷⁸ As this relates to landscapes, it would then suggest that the role of representation is given expression to those forces.⁶⁷⁹ This is strikingly different from the approaches to representation found within SBD discourse. What this lab shows is that for design to grapple with the sublime concretely, those affects and in-

Initial design plan based on the discovered shifts, altered to amplify and extend the experience of them

Fig 10.171. Initial Main Bench design study.

The topographical alterations designed atop the Main Bench were shifted and altered to merge into the surrounding structure. The landform and material changes are arranged in a way to move the body across this area in a certain determined, but loose, way, as part of a larger movement structure in the park.

Fig 10.172. (Opposite) Main Bench design plan (SD:11).

Fig 10.173. Main Bench collage.

The topographical alterations designed atop the Main Bench were shifted and altered to merge into the surrounding structure. The landform and material changes are arranged in a way to move the body across this area in a certain determined, but loose, way, as part of a larger movement structure in the park.

Fig 10.172. (Opposite) Main Bench design plan (SD:11).

Fig 10.173. Main Bench collage.

Designed Alteration for Main Bench Transitions

Fig 10.174. Main Bench designed transition configuration.

Existing **wandering movement** is retained but shrunk slightly
Tend to walk up or across sloping topography - more of a
guaranteed or **extended pull** towards the quarry face

Can now **just see over the crest** but not what lies below
Slope still **orients towards the face** but a lower section now

Body oriented up towards the face when walking up the slope
Topography graded enough to not force attention to be on your own
movement - no sense of **what lies behind** the crest

2m strip at the peak allows a **moment's pause** before being pulled
down the slope towards the base of the face - The **scale and form**
of the quarry face immediately becomes **less relevant**

Fig 10.175. Main Bench design sections.

Fig 10.176. Main Bench design sections.

Everything else **fades away** apart from the the strip of rock at the bottom - The movement down exaggerates this as it **looms** larger and more visceral

Almost at the base - slope still pulls you down towards the very end - the rock face entirely disappears, its **looming presence gone** - a sense of **relief or stillness**

Fig 10.177. Main Bench design sections.

The **flatness** at the end is highlighted and made 'more flat' by the **contrast** - The **visceral material** nature is all that remains - small bench in front of you stands as all you perceive

680 Schumacher, "The Dialectic of the Pragmatic and the Aesthetic - remarks on the aesthetics of data-scapes."

tensities must be brought into the realm of representation. Only there can they be experimented with.

In this example, the areas atop the Main Bench where major intensive differentiations occurred were mapped out, followed by more fine-grained tipping points within those areas. Combining this with sectional profiles allowed me to ascertain what extensive measurements and spatial relations were involved in the formation of these intensive experiences. Diagramming and sketching are useful in this, as they allow extraneous information to be stripped away and added back selectively if needed. Actively designing and experimenting also opens this process to how such intensities work. Affects are always creative – they always involve experimentation. By designing and altering what was discovered on-site, I could readily both discover and give expression to a series of actors and variabilities.

Cross-referencing – custom representational assemblages

An under-discussed aspect of landscape architectural representation is that it tends to involve a high degree of custom creation in the sets of drawings employed. Unlike architectural representation – which can readily rely on the use of 'programme-oriented' drawings such as plans, parti-diagrams, and section profiles to act as an "economic substitute for experience" – landscape architectural representation struggles to do so.⁶⁸⁰ A landscape-design-assemblage has to come to terms with its material – the pre-existing landscape.

This lab shows that to give expression to what landscapes do does not require the flashy images typical of contemporary practice, but in-

Fig 10.178. Main Bench design sections.

1 *Moderate roughness* – transitions from colour to haptic sensation at a medium distance.

2 *Smooth cut rock* – little to reference and scale against. No contrast provided by shadow. Flat, abstract surface.

3 *Extremely roughly hewn* – high contrast between light and shadow. Jagged edges hide form and angles.

The material across the groundplane is arranged to adjust how your body moves through the designed transitions atop the Main Bench. Towards the edge, it is a looser and smaller aggregate so that you're more careful in your foot-steps – less aware of your surroundings. As you're inevitably drawn towards the rock face, the aggregate changes to smooth compacted rock so that the care in your step fades away immediately. This change in sensation allows your body to orient towards the looming rock now beginning to press into you from above. As you move closer, just at the apex of the designed slope, it changes into smaller, unweathered (firm) aggregate on a hard base. Gravelly, but certain in your foot steps. As you get closer to the rock face, at the precise moment where the pressure disappears, the now weathered, crumbly rock on the hard base crunches underfoot, echoing off the rock face in front of you.

Similarly the material of the rock face changes across the face based on where and what you can see. The smoother section of the middle denies any sense of visual reference. As you move over the crest, the roughly hewn rock draws you in as you haptically feel its roughness.

Fig 10.179. Main Bench rockface materiality.

Fig 10.180. Main Bench aggregate conditions.

stead custom sets of drawings suited the particular problem at hand. This particular set is constructed to deal with this design problem. Cross-referencing is important in this as each drawing can only do so much work. These drawings *work together* to bring this encounter to life – to reproduce a certain aspect of the experience. This is why in Figure 10.181 we can see the large scale of the drawings and how they’re arranged together on the wall so that each part of the encounter has the necessary information at hand.

This dimension of landscape design seems to be critically under-discussed and, most importantly, underappreciated. It is an example of the wild and varying nature of landscapes and their design. It is a challenge that landscape architects must positively embrace as part of their craft – and not defer to ‘styles’ or ‘trends’ that tend to actively play down what is singular about a site.

681 There are two groups who experience this expression: myself, who has a direct bodily memory of the affects, and the readers of this work who do experience the expression in a different – but not weaker – form.

Implications for Operationalising the Sublime

The practice-led component of this research starts with the findings discovered in lab 1. This study here shows that representation can document and give expression to the spatio-temporal relations involved in an encounter with the sublime. It does so with precision, almost to a point of disinterestedness similar to a scientific study – though it does not cross that threshold.

The extensive use of cross-section drawings allowed these relations to be efficiently displayed on the page, bolstered by cross-referencing to plan, photographs, and text descriptions. It becomes clear that an assemblage of drawings was necessary for this study, though it may not be for other examples within or outside this research. The experience of walking up to this rock face can be felt through this assemblage – it resonates with you.⁶⁸¹ Using representation in this way starkly contrasts with the typical techniques employed by landscape architects grappling with something similar. The precision found here is antithetical to the emotive, and I suspect almost deliberately vague, watercolour, charcoal, or graphite depictions.

This lab shows an encounter with the sublime **unfolding across both space and time**. Both of these dimensions are larger than what be typically assumed, showing how the **sublime involves an ecology of relations**. The singular nature of the different rock material, the sky-lines all around, the movement to get there, past experiences of similar landscapes, the physiology of the eye, the deep time of geological processes, the implied degree of mass extracted. Whilst this encounter involves some elements which would tend to be readily understood as sublime (scale, mass, darkness, quarries), a multitude of other less immediately recognised relations play a role here. To engage with the sublime, the landscape designer is obliged to go past this immediate layer towards what is really at play.

Fig 10.181. Scale of Main Bench analysis study on pinup wall, arranged to operate as a representational assemblage.

Fig 10.182. Main Bench as of 26 October 2019.

LAB: Harbour Interface

Atmosphere and Presence

Further experimentation based on what was learnt from the Main Bench study. What can be gained from the harbour?

Aims/Objectives

What can we learn about the sublime via approaching it in terms of its atmosphere or presence? The aim is to determine if such terms are appropriate when discussing the sublime in the context of this research, and if they are, how can they be operationalised in the same way? Spatially this will be achieved via introducing the harbour water body into the quarry itself.

Hypothesis

Atmosphere and presence are useful starting points to discuss or think about a sublime event but are not capable of engaging with relevant relations in a way that is strong enough for designing to concretely employ them.

Tool(s)

Diagram, plan, arrayed section.

Method(s)

Introduce the harbour into the quarry itself by carving out a lagoon-like structure in the southernmost end of the quarry. The form created by this will be driven and evaluated by variabilities both discovered on site and created based on past experience.

Background

This lab emerged out a previous larger study that entailed a proposal for the entirety of the lower quarry. After splitting into two this study became oriented towards an initial question of how can we bring a sense of the coastal water into the quarry which was then leveraged into fulfilling the economic cut requirements of the wider project.

Fig 10.183. Harbour Interface lab location.

682 Tonkin & Taylor Ltd, Horokiwi Quarry - Preliminary Resource Evaluation: Phase 1 - Results of Geological Mapping (2018), 13.

683 These intensive differentiations would not operate the same as they do on the Main Bench, yet they serve as an appropriate starting point and approximate for designing with.

Rules and Context

The following rules were applied during this lab:

- No sense of the motorway and its traffic can be experienced inside of the lagoon area.
- All geometries must adhere to the relevant technical consideration.
- The walkable ground plane must move through the three bands discovered via the Main Bench lab.

The following assumptions were applied during this lab:

- The quarrying operations will be able to handle issues with the water table via pump extraction until the point where the coastal water can be introduced.
- That a reinforced channel can be constructed under the motorway on the coast's edge.
- That a raised walkway above the railway and motorway is feasible.

Design Practices

This lab directly followed the initial study on Main Bench by employing what was discovered there. The Lower Quarry area is the lowest contiguous plane within the quarry's boundaries, hosting material processing and storage areas. Within the Tonkin & Taylor proposal, the plane will be lowered 30m from its current state, finishing 20m above mean-sea-level.⁶⁸² Given the lack of extracted material by keeping Main Bench, this quantity is to be balanced out in this lab. By dropping the quarry floor further, the coast, including the harbour can be opened up to the quarry's interior, bringing atmosphere and presence of the coast and harbour into the quarry itself.

Designing began with an A2 base plan consisting of a washed-out aerial image with overlaid, partially transparent, white 5m contours. The basic geometry of the lagoon was derived from knowing the bare minimum distances needed for catch bench geometry. This geometry was arrayed in plan, arranging the height and distance from the quarry base to the desired depth (Figure 10.192). In keeping with the desire to maximise cut, this 'optimised-technical' form was the approximate geometry chosen to go forward with. The area leftover within the centre now forms the interior water body.

The three variability distances discovered in lab 1 were then drawn as coloured buffers radiating from the base of the proposed rock. Three offset boundaries were generated, each one acting as an expression of a transition between one bodily state to another.⁶⁸³ With these offset lines in place, a thin line was drawn, moving between all three differentiations – a proposed edge for a walkable ground plane that wavers between all three intensive transitions at once. An area open to be moving around the edge, with the waterbody in the centre set below.

Fig 10.184. Harbour Interface context aerial

Fig 10.185. (Previous) Quarry inlet context aerial image.
 Fig 10.186. (Top) View from highway 1 - <https://goo.gl/maps/wRqEbxCiQGxxh8mr9>.
 Fig 10.187. (Middle) View from highway 2 - <https://goo.gl/maps/WJouR5CDwNoVVUMRA>.
 Fig 10.188. (Bottom) View from highway 3 - <https://goo.gl/maps/bKD4AHaWZhZEytdD7>.
 Fig 10.189. (Opposite) Extent of quarry visible from highway.

Fig 10.190. Quarry Base panorama.

KOMATSU

PC450LC-8

HORSEPOWER = 362
POWER OUTPUT = 270kW
WEIGHT = 44770KG
MAX DIGGING FORCE = 278kN
MAX REACH = 12M
MAX HEIGHT = 7.6M
BUCKET CAPACITY = 1.90 – 2.10M³

Fig 10.191. Komatsu excavator specifications.

Fig 10.192. Initial geometry layout.

Fig 10.193. Early geometric sketches and drafted section.

Alongside the continuous ground plane, two protrusions are taken out into the middle of the clear paper void, the ends of both facing towards the highest continuous faces of this bowl-like structure.

The experiencing of these transitions is defined by how one walks across the ground plane. The experiential differentiations are arrayed parallel to the rock face, the same direction as pedestrian movement. It would be all too easy to stay within the less intense zones and never stray – this must be disrupted. A continuous varying movement of the body between the rock face and the water body was desired to create a tension between the relative openness of the lagoon and the looming weight of the rock faces. This also moves the body in a semi-structured way between the three experiential bands. The ground plane itself varies in width based on the previously drawn line, but the walkable surface was left undefined. Four 'path structure + ground plane width' typologies were developed where each orients the body and its directional movement in different forms. These are then arrayed around the ground plane in sectors based on the width and what preceded and followed it. The affects produced by seemingly simple assemblages involving entities such as a concrete or non-defined path; a thin, moderate, or wide ground plane; and the combinations of these can move the body in entirely different ways.

The last set of interacting variables used in this study is the arrangement of the riprap used to armour the edge of the walkable ground plane from the effects of any excessive sea surge energy. This technical element has been flipped into an aesthetic device and is arranged primarily on its contribution to the affectual dimension of the design proposal. The extent to which the riprap extends out beyond the immediate edge and the geometry of the base on which it sits varies within three approximate typologies. These typologies are designed to work in tandem with the various movement assemblages in the orientation

1:75 @ A3

The varied topographical edge, and riprap arrangement allows for the body to be orientated in different ways to both the edge and the wider harbour interface landscape.

A more gradated arrangement draws the body, and your attention, out towards the wider landscape by providing a 'friendlier', less abrupt edge which you may feel to be a bit dangerous or uncomfortable.

A sharper edge is less likely to get you to stop, though it does get you to walk alongside it. The sound and sight of the water slapping against the rocks draws you towards the edge but the gradient pushes you along it, orienting you forward or closing you into your own thought as you listen to the water as background noise.

A flat extended arrangement of riprap can get kids, or anyone else adventurous to go across the area to where it reaches the water. Using large rocks allows you something large enough to sit on or walk across relatively comfortably.

and movement of the body. The height of the ground plane is 2500mm above the base of the excavated lagoon, 375mm above the “0m contour” which represents the *mean high water* (MHW) level. The base level is lower than the *lowest astronomical tide* (LAT) which will allow for a permanent water body to exist in the lagoon. The three edge typologies are arranged based on these levels so that it creates a different sense and connection to the water body. *Typology 3*, for example, extends out from the edge of the ground plane a significant distance at the same level. The rocks themselves are large, approximately 800mm, large enough to clamber over, perhaps even to walk across. The intent is to remove the immediate connection to the water’s edge and orient both body and movement out across the field of rock. In contrast to this, *Typology 2* has the riprap sitting on a base with a sharper angle which brings the water’s edge right below the ground plane. Doing so partially closes off the body’s orientation towards the wider horizons of the bowl.

Each set of spatial variations are themselves what has been termed a *variability* – a machinic set of relationships that when one component is shifted the whole thing flips into something, and most importantly that shift is something that the body can feel through the representation used. Such a feeling is to give that affectual shift *expression*, to bring it to life.

Coastal landscapes are often described as having an atmosphere which wavers between the violence of the sea surging on the coastline to calm serenity. The freshness of the air with that distinctive salty aroma and feel on the skin. An in-between zone where the world transitions from *terra firma* to *ignotum aqua*, from known to unknown. The sound

684 See: Anna Ryan, *Where land meets sea: Coastal explorations of landscape, representation and spatial experience* (Routledge, 2016).

and sight of a water body slapping against rock are what I immediately think of when the atmosphere of the coast is brought up. The rhythm of the sound and the brief cloud of moisture in the air that follows each beat. This condition can be found on even the gentlest of days with the rhythms of the tides, but in areas of particularly strong coastal movements such as Wellington, it is typically much more impactful.⁶⁸⁴ The harbour feeds directly off the Cook Strait, one of the most powerful and turbulent bodies of water in the world. It is not uncommon for the coastal edges of the harbour to suffer the brunt of this energy in regular Wellington weather. I was intrigued to see how the generated lagoon form would respond to these conditions in terms of atmosphere or where its presence is felt most intensely. Drawing shapes or areas of different types of atmosphere did not seem to be the most appropriate way to connect to that dimension of the landscape. Instead, a stipple technique using a 0.3mm mechanical pencil was used to generate a drawing that seemed capable of conveying this information appropriately. The density and intensity of the dots are derived from where the primary water flow vectors will interact with the rock edge. The primary flow vectors carry the most amount of water with the highest velocity and so will have more energy when it impacts that rock, in turn, creating a louder sound and a greater cloud of water vapour. The resulting drawing has an atmospheric quality of its own, the density and darkness of the dots rising and falling around the edge and beyond. Such a mapping could have been the starting point as easily as it was a post-design analysis.

Following the initial design investigation, the proposal was drawn more precisely to determine its form and technical implications. Initially, this was done using Illustrator though I quickly found a disconnect

Fig 10.195. Rough harbour conditions seen from trainline running along SH2.

Fig 10.196. Initial sketched plan showing topographical layout.

Taking what had been discovered in Lab 1, the extensive measurements were arrayed out from the base of the cut benches to establish three concentric zones – each relating to a document form of experiencing. The edge of the walkable plane was then drawn to move between all three zones to provide a constantly changing experience.

The walkable groundplane can also be arranged in different ways to create a rich variety of forms of experiencing – even more so when combined with the other variabilities document here.

The 4 variabilities here use two elements: the width of the groundplane and whether or not there is a fixed path to follow.

A wide plane with a fixed path gets you to follow the demarcated path, though there is always the option to leave it.

A wide plane with no fixed path opens up the entire width to be walked across in anyway you choose. This option is employed in areas where the groundplane is widest – where all three of the rockface differentiations can be experienced in one stretch.

A narrow groundplane with fixed path gets you to orient out towards the rest of the landscape and to step off at points where you the view or edge conditions pull you towards them

An extremely narrow groundplane and fixed path get you to move through quickly, orienting to what lies ahead – setting up a sense of expectation for what lies ahead, yet can't be seen.

- 1 Coastal edge platform built on top of existing coastal rock structures
- 2 Raised walkway above SH2 providing access from coastal routes to Lower Quarry
- 3 Pedestrian and Cycleway between Ngauranga and Petone – NZTA Funded
- 4 In situ cast concrete structure providing access to internal coastal edge
- 5 Coastal swimming baths protected by two concrete arms – two level pool
- 5a Pavillion and changing room structure built off quarried rock face
- 6 In situ cast concrete walkway across extended riprap rock protection
- 7 Access from Quarry Coast to Lower Quarry via Horokiwi Road pathway
- 8 Horokiwi South Entrance
- 9 Corten raised walkway structure providing access from Southern Entrance to Lower Quarry

Fig 10.203. (Top) The two swimming pools on the beach at Leça da Palmeira. Christian Gänshirt. CC BY-SA 4.0.

Fig 10.204. (Bottom) Digital vs analogue atmosphere intensity.

between what I was drawing and what I was trying to connect to via bodily-memory. The linework did not seem to connect back to these memories and operated abstractly – though this likely could have been corrected later with the addition of more information. Alternatively, I began to work on large A0 format sheets of 200gsm paper using a drafting board. Though more time consuming, I found this approach to be more considerate in the marks made on the page, even though the general outline of the form had been iterated previously. What was being proposed via linework at this point was relatively simple (widths, heights, angles, relative water levels), I felt more connected to how a change in those variables affected the on-the-ground experience.

Figure 10.211-211 shows how these large-format section drawings were created. After these, the decision was made to keep these initial drawings as limited in scope as possible: their content only dealing with geometry and fixed features. The intent was to layer up various other forms of information later so that each actor, or type of actors, could be seen independently and with its role in the assemblage. The first attempt at layering this information can be seen in Figure 10.212. Using drafting-film, a 1-point perspective was created atop each section, adding depth to an otherwise limited view of the proposed landscape. Photos taken during prior fieldwork sessions showing the rock face materiality were printed and cut up based on the perspective, then attached to the overlay. Whilst this was successful in adding depth the drawings it was not productive in the sense that it helped to propel designing. Adding material, or information of what lay behind the section-line was considered yet was not deemed to add information that either helped design or gave expression to the proposed affects.

This approach was dropped in favour of a more pragmatic and simplified approach. Instead of adding layers of information, each section profile was filled in more with information: the roughness of the rock, boulders, walkways, concreted areas etc. The overlaid sheets were then drawn on with a marker to identify both ‘realms of experiencing’ and what elements within that drawing played a role. Active iteration played a role again by editing profile of the sections on the sheet below – layering up information and alterations. This approach was useful in discussions with those unfamiliar to the scheme. Notably, it drew attention to what and how each actor in each drawing, and how each profile when read sequentially can give a sense of unfolding experience.

This part of the scheme allowed experimentation with what activities the quarry can play host to. As it contains a major entrance to the quarry via the harbour cycle/walkway, the design proposal should offer something to the public beyond just circulation. Here a tidal pool is designed based on the water flow allowed by the basin’s geometry. Inspiration is taken from the Leça Swimming Pools – designed by Álvaro Siza Vieira – for its simple form and integration with an exposed rock foundation (Figure 10.203). Alongside this, several cantilevered plat-

685 See lab 1: Reflections. Schumacher, "The Dialectic of the Pragmatic and the Aesthetic - remarks on the aesthetics of data-scapes."

686 Shane Murray, "Architectural Design and Discourse" (Doctor of Philosophy by Project RMIT, 2004), 18-28.

687 This concept coined by Connolly emerged through studio teaching though has been used consistently throughout this research through discussions between supervisor and researcher, as well as an active design tool.

forms float above the tidal basin, with one sitting at the centre of this topographical bowl. Here the sound of the water slapping against rock echoed in every direction.

Reflection

This lab, as a follow-up to lab 1, began by exploring what was learnt there. Whereas the prior stage was restrained in its changes to the quarry, this stage was more projective. The aesthetic-techno findings were carried forward and applied here with a series of findings relevant to the design process.

Aesthetic Efficiency

An aesthetic efficiency was discovered through lab 1 that was readily able to be applied in this study. Lab 1 showed that through knowing certain distances, heights, and angles of a rock face in relation to the body, we can readily design known experiences. Because these measures can be laid out across Cartesian representational space, and we know how they interact in intensive space, the drawings employed in this lab developed an aesthetic efficiency through geometry. The experience on the ground plane following the rock face could be determined some a degree of concreteness – not certain or perfect, but well informed by fieldwork. We may draw parallels here to Schumacher's prior discussed notes on programme as being an economic substitute for aesthetic data.⁶⁸⁵ This information, however, cannot be carried forward and applied in the same way. Each landscape requires its own custom discovery and application.

Because of this, less immediately relevant information can be stripped away allowing for geometric experimentation to occur. This practice is seemingly distinct from the design-efficiencies discussed in contemporary discourse. Where this occurs, it is in relation to the use of data or parametricism to determine design outcomes effectively without the designer's hand involved in the process at all. Though as Shane Murry points out, designers who claim autonomous processes are often still highly involved.⁶⁸⁶

Variabilities

The designing within this lab largely relied on the use of *variabilities*. This concept coined by Peter Connolly consists of spatio-temporal assemblages involving an organism and its environment, represented in a form that is efficiently appropriated by design.⁶⁸⁷ Put simply, a variability is an assemblage whereby having drawn it and altering its components, we can readily feel the difference in affectual production with variation in the spatial relations. This works most efficiently in reduced or less complex assemblages – though we may also abstract out certain relations from a more complex example and experiment with them in this manner before reinserting back into the whole.

Fig 10.205. Harbour Interface section array.

Fig 10.206. (Opposite) Aerial collage of edge condition.
 Fig 10.207. Harbour Interface interior collage.

Fig 10.208. Harbour Interface pool collage.

Fig 10.209. Harbour Interface pool sections..

Fig 10.210. Mechanical sections with layered information.

688 Several examples within this book extract something concrete from the landscape into abstract space, but completely fail to fold it back. Instead they construct a new landscape entirely within abstract representational space – denying any connection to the world. Mohsen Mostafavi; Ciro Najle, ed., *Landscape Urbanism: A Manual for the Machinic Landscape* (London: Architectural Association, 2003).

689 Corner talks of the body as a tool of measurement in James Corner, “Taking Measure: Irony and Contradiction in an Age of Precision,” in *Taking Measures across the American Landscape*, ed. James Corner and Alex Maclean (New Haven: Yale University Press, 1996), 27.

690 Allan, “Feeling indeterminate: the experience and design of big landscapes,” 5-6; Czerniak, “Challenging the Pictorial: Recent Landscape Practice.”; Czerniak, “Appearance, Performance: Landscape at Downsview.”; Meyer, “Sustaining beauty: The performance of appearance,” 8-10.

A particularly powerful variability was discovered in lab 1 – the bodily distance from the rock face and angles of vision. This variability allowed for an entire design study to unfold from it by first experimenting with its capacities and then folding in other elements. Following this, lab 2 became focused on discovering what variabilities or abstracted spatio-temporal relations can produce themselves, and then what happens when folded back into the larger system. The diagrammatic studies on pages 369-370 and 373-376 are examples of how different movements have been split out from the wider system and then put back in after designed alterations. What this study showed is that doing so can produce a degree of richness and variation in experiencing within a confined space. Without employing studies such as these, the designer would tend to struggle to have a concrete feel for the movements and encounters that can be created.

Importantly, this is not a reduction of the complexity of the world, nor does this abstraction remove this material to the abstract space of representation where it does not return as seen in the work within the *Manual*.⁶⁸⁸ The forms of abstraction and experimentation presented in this research are concerned with affects and intensities which the work by SBD tends to struggle with beyond a limited manner. The efficiency that variabilities offer the design process allows for designing to easily find ways into the design problem. We might start with the distance to the rock face, but then quickly we start to experiment with different path types or the width of the walkable plane. Importantly, variabilities expose the efficiency of using aesthetic bodily measure and knowledge in the design process.⁶⁸⁹ Previously such matters would be discarded as inefficient, or too subjective to form a robust methodology.⁶⁹⁰

Large Format Analogue Drawings

The use of large-scale analogue drawings were surprising in their utility during this lab. Whilst less time-efficient, they were able to provide a more direct connection to the material being designed. It is not uncommon to see large scale analogue drawings from programmes such as the AA, though the way that these drawings are discussed and employed appears to treat them more as artefacts or objects, understood in relation to themselves only, than as active design tools. These drawings are beautiful in their craft, though that seems to be where they find their limitation in the design process: as final objects for visual satisfaction. In this they are exceptional, though this is not where this research is seeking to find traction in its design practices.

It seems to be readily accepted that CAD or programs such as Illustrator are the best tools for designing in a 2D space. Working with students in various design studios has affirmed this, particularly when they are grappling with complex landscape situations. The ability to rapidly change, save, erase, copy, and move elements offers the designer a significant degree of power to experiment with their material. However, what was found in this lab was that using those tools, even in the *relatively* simple case of designing geometry via section profile, there

Set up on a drawing board, using only rectilinear lines across the sheet. The landscape is reduced to its profile, even the line representing it is smoothed over. Despite this graphic homogeneity, the act of drawing it via analogue tools did not divorce it from bodily memory. Memory persisted and was transferred to the page.

Fig 10.211. Technical section drawings.

Fig 10.212. Section-material experimentation.

Fig 10.213. Layering information above mechanical sections.

Fig 10.214. (Left) Edge and flow experimentation
 Fig 10.215. (Below) Thinking about how to
 structure sectional-perspective.
 Fig 10.216. (Right) Detail from analogue quarry
 plan.

691 Paul Cureton, "Drawing in landscape architecture: fieldwork, poetics, methods, translation and representation" (Manchester Metropolitan University, 2014), 296.

was a disconnect between aesthetic bodily memory and how that can be employed through drawing. Paul Cureton, like many have said informally, also suggests that the heavy use of digital tools tends to divorce "direct contact" between site and designer.⁶⁹¹

In this lab I felt that this divorce was a danger, particularly given the more projective design moves being proposed that could not be entirely based on fieldwork. Drawing via analogue tools on a large format slowed the process and forced a more considered approach. In contrast to digital tools which can get iterations to unfold for their own sake, or visual (graphic) pleasure, this method left me feeling readily able to recall through the hand and pencil past-experiences from this site.

These section profiles were drawn initially with 0.5mm 2H mechanical-pencil on 200gsm cold-press paper, followed by 0.5mm 2B mechanical-pencil to further define the profile. The profile was then dimension and annotated in a 'working drawing' style.

This made me reflect that working drawings or construction-style

692 Laurie Olin, “Drawings at Work,” in *Representing Landscape Architecture*, ed. Marc Treib (London & New York: Routledge, 2008), 148.

693 Damasio, *The Feeling of what Happens: Body and Emotion in the Making of Consciousness*, 80.

drawings were where I first really learnt to design. Laurie Olin offers this perspective which in reflection proved useful:

*In this they differ radically from design studies that impart the feeling of particular plants or convey the final planting effect. [Construction drawings] may actually succeed in achieving the effect depicted in the former, but they normally look (and feel) hard-boiled and vapid, or at times even feeble by contrast—as do many of the plants and trees when first installed. As everyone familiar with landscape knows, they’ll grow up and out and fill in, hopefully to match the richness of earlier design studies and presentation renderings.*⁶⁹²

Whereas the drawings produced here are not true construction drawings, their abstracted nature operated similarly. Working drawings operate to convey as much information as clearly and accurately as possible to a reader unfamiliar with the scheme. These drawings were actively constructed for no-one else than myself, they were working drawings for my own processes.

The line that represents the profile of the landform sits on the page as the *other*. Black, slightly fuzzy as the lead catches on the paper’s tooth – against the warm white background. It portrayed nothing more than I needed. Notes around it filled in other relevant information. The most critical information, the extensive distances, heights, widths, angles, were all that was necessary, and this was what was drawn with precision. Because the linework was so precise in its construction, with each move carefully considered and worked out, the designed experience can be given a degree of certainty – only because of this relation between hand and bodily memory.

Damasio talks of the body’s ability to recall experiences as physiological changes through an “as-if-loop”, a recalling of the affects and movements produced as if one were there. He writes:

*“the representation of body related changes is created directly in sensory body maps, under the control of other neural sites, for instance, the prefrontal cortices. It is “as if” the body had really been changed but it was not.”*⁶⁹³

We might consider how this loop is more readily appropriated by the designer’s hand through analogue tools versus digital. Though I do not have a full answer to this question here, it seems to me that the slowing down and careful consideration offered by the former allows for greater engagement with one’s own past experiences.

Implications for Operationalising the Sublime

Directly following from what was learnt in lab 1, this study has shown that the sublime can be engaged with via a degree of abstraction using *variabilities*. This use of abstraction is different from other forms where designing occurs entirely within abstract representational space, or the emotive accounts typical of studies in the sublime. The abstraction employed here directly connects to bodily relations with the environment. Variabilities, as previously described allow an efficient means to design with those relations, in effect, to design with the sublime. When combined with certain forms of technical information relevant to design, the designer is empowered to make design moves with certainty in the experiential outcome. The sublime is given expression here via these variabilities – each one connecting to the organism’s ecological connection to the world via its brain. This connection is more important in this example as the study is not based on a pre-existing encounter, instead applying the spatio-temporal relations employed previously on the assumption that they will stand up by themselves with little translation. This suggests that if representational tools are strong enough, what can be learnt about the sublime in one landscape or study can be translated and understood to some degree in another.

LAB: Lower Quarry

A question of (bodily) reference

It became readily apparent that the body's ability to reference itself was critical to a landscape sublime.

Aims/Objectives

Building upon the previous studies the intent is to produce a design proposition for what has been termed the 'Lower Quarry' – the base plane between the Lagoon and the foot of Mitre Peak. This proposition on this flat plane will continue the design work focused on movement and types of experiencing the sublime dimensions of the quarry. The aim here is to work with how the body references itself to the scale geometries of the quarry, distorting or removing this ability as this has been discovered to be a way into designing with sublime affects.

Hypothesis

Sublime affects are produced in events where the body struggles to reference itself against something knowable. By removing or distorting the body's ability to scale or reference itself against measurable distances or objects in the landscape, design is then capable of designing with these and other sublime affects.

Tool(s)

Plan, transparency layering, section, vignette.

Method(s)

Produce a landform in the lower quarry that distorts the ability to reference to any element on the ground plane and the surrounding slopes. Draw an initial proposal and evaluate its ability on this, adjust, evaluate, repeat. Overlays on the base/design plan will be used to map different intensities relevant this event.

Background

This study evolved from what was learnt from the Main Bench and Lagoon proposals. Fieldwork was conducted but due to the overall schemes proposal to drop the base of the quarry by 25m (to produce enough economical cut to compensate for retaining Main Bench) it is impossible to have that as a starting point for analysis. This problem was taken on board and information was substituted or inferred from other known points so that it can be as close as reasonably possible.

Fig 10.217. Lower Quarry lab location.

Rules and Context

The following rules were applied during this lab:

- The quarry base will be lowered by 25m to maintain the economics of the quarry
- The resulting geometry of this may be designed if it adheres to the identified technical geometry
- No object can be present in the lower quarry that allows the body to scale itself against
- The flow from the existing waterfall must be managed on this part of the site leading it towards the lagoon

The following assumptions were applied during this lab:

- Based on the Tonkin & Taylor Preliminary Resource Evaluation there will not be an issue with lowering the base to the desired height in relation to the sites water table.⁶⁹⁴ The report raised no issues regarding this.
- A larger movement network will be designed around and through this proposal, integrating it as a part of a cohesive scheme.
- The water quality of the water flow stemming from Waihinahina park will be improved by a design proposal to recap its surface.
- That the ground surface will be capable of being re-vegetated via hydroseeding over an extended period where enough organic material will build up and consolidate a suitable surface for grasses and tussocks.

Fieldwork Log

The encounter described here was not one specific event, but a gradual build-up of accumulated experience from moving through the Lower Quarry whenever fieldwork was conducted elsewhere in the quarry.

Much of the existing movement within the quarry already occurs within this area as it contains access routes to the other areas, material storage, and processing plants. I would often find myself moving through here at either the beginning or end of a fieldwork session, this space serving as an opening or concluding act. Spending any significant amount of time proved difficult due to the scale of vehicular movement. However, over the course of the extended fieldwork, this area of the quarry was explored in parts, building up a cumulative body of knowledge.

What was discovered through these intermittent encounters was a condition not dissimilar from that atop the Main Bench, though at a much larger and distributed scale. Most importantly, because of the form of the topography and its extended scale, the most impactful element proved to be a denial of relational references between body and landscape. Without this reference our sense of space becomes distort-

Fig 10.218. (Opposite) Lower Quarry context.

Fig 10.219. (Previous) Lower Quarry seen from Horokiwi Road.

Fig 10.220. Lower Quarry photography study 1.

Fig 10.221. (Opposite) Mitre Peak rock face from quarry floor.

Fig 10.235 Lower Quarry cross-sections (SD:15)

- Coarse, medium sized aggregate spread across groundplane
- Crushed, small sized aggregate spread across groundplane

exaggerated sensation of the topographical mounds

1:400 @ A2
Lower Quarry X-Sections

Fig 10.235 Lower Quarry cross-sections (SD:15)

Fig 10.235 Lower Quarry cross-sections (SD:15)

Fig 10.222. Initial rock face fieldwork findings.

Fig 10.223. Early Lower Quarry geometry reconfiguration.

SUPERIOR TELESCOPER STACKER

Fig 10.224. (Above) Horokiwi stacking machinery.
 Fig 10.225. (Below) Stacker diagram and dimensions.
 Fig 10.226. (Opposite) Stacker geometrics operational diagram.

ed and we rapidly seek for any measure to assist. Elements such as the rock faces hold us still as we look from top to bottom – even from afar – trying to find a suitable measure from the scaleless benches carved out of it.

The base of the Lower Quarry is just large enough to provide a perceptually flat area that cannot be fully seen from any one point. The distances are great enough to deny a sense of entirely knowing what occupies the same plane as your body. The materiality of the ground plane quickly shifts into abstract colour 10m beyond your eyes. Deformations of the ground plane in the form of dips, mounds, channels, drops, and inclines are betrayed by a perceived flatness. This area is defined by the experience of this seemingly flat plane being broken up into a series of differentiations that are defined by how the surrounding topography pulls your movement and attention around, searching for a point of reference. This lack of referentiality produces a feeling of unease, a disturbance that is not necessarily unpleasant but is very unfamiliar to our common sense.

Design Practices

Initially, this study began as part of an entire restructuring of the southern end of the quarry as it was immediately apparent that large scale topographical moves were needed to maintain economic cut and create a new landscape. A series of large-format hand-drawn sections were produced to study just what geometric changes at a larger scale can produce in terms of on-the-ground bodily experience. The decision was made to produce these as analogue hand-drawn sections due to what I felt was a lack in digital drawing techniques to connect as readily to the bodies past experiences. Drawing with the hand, pen or pencil on paper, seems to allow a freer connection to the brains 'catalogue' of past empowerments (via landscape affects) bringing them forward into the design process more freely than digital tools. At the time I did not overly question this decision, it just seemed like the right move to make and I followed it with the intent to go wherever it may take me. There is a shortage of discussion on the role of hand drawing within landscape architectural and architectural discourse based on its supposed ability to act more creatively or intuitively. In the context of this lab what I had discovered very early on is that I perceived an incredible aesthetic efficiency with this technique even if it was simple linework drawings on butter paper atop a printed base section of the already existing topography. I was able to connect quite freely the past affects my body had encountered in this landscape to design propositions that my hand was creating in the virtual space of the paper. Raising or lowering levels, changing slopes to create a sense of compression or expansion, noting material shifts on the ground plane to change how you walk – all of this felt concrete to me. I felt like something beyond speculation because it was grounded from fieldwork in an already existing landscape.

This set of section drawings were always humble. Ranging between 840mm to 1680mm long and 297mm tall by tile-printing a base section in individual A3 sheets and taping them together gave a fixed sense of scale that the zooming in and out of digital drawing programs immediately destroys. Atop this base section was a series of butter paper sheets, each containing a sectional profile proposition or adjustment of the one beneath it. At this point the lagoon had not been envisioned so there was a major question of how might such an expansive ground plane be structured without allowing for referenceable objects or the inclusion of vegetation beyond grasses, tussocks, and the occasional flax? Levels and slopes between them became very important. These initial drawings operated on the assumption of two major level changes in the ground level instead of the uniform 25m that was later derived from the Tonkin & Taylor report – a drop of 10m at the south, 5m in the middle, and the existing level at the foot of Mitre Peak. Figure 10.227-228 show the interplay with levels across a long profile, partitioning the space into a series of bands of horizontal bands that would be seen from the plan view. These section arrays were drawn in order from the south towards the north with a loose intent to link between them via some spatial consistency, though this would not be fully realised without the plan.

In the northern ends of this array where this study would later focus, an interesting condition arose with the use of long sweeping slope gradients from the base level up towards the level of the first catch bench. This creates a continuous surface from one level to another instead of disruptive verticality of the rock face. In the section profile, a beautiful tension arises from the sensuous curve of this sweeping gradient against the rigid and violently hewn terraced landform above it. There was an immediate resonance with what I had drawn here, it felt like nothing I had experienced in the quarry yet because it was so disruptive to those experiences by this contrast, I could feel its potential. The problem till this point was that much of the quarry's extent was uninhabitable due to the geometry of the bench typologies which left only a series of flat planes as designable for use as components of a park. In each of these flat planes there *always* existed a defined edge where flatness met verticality. This edge produced one of the few referenceable conditions that the body could use here – horizontal distance. Such a strong resonance was felt with the drawing of this seemingly simple line because it erased this condition, perhaps the last consistent point of reference. This curving surface would not appear to have the flowing and sensuous quality that the section profile describes – on the ground it would be a spatially distorting ramp that seems to have no discernible start point, emerging out of somewhere and nowhere in particular.

At this point a grave mistake was realised in the construction of this drawing set: I had mistakenly labelled the sections as being scaled at 1:500 instead of their correct 1:1500 scale. This created issue for the content of the drawings yet made something very clear to me once I

Fig 10.227. Large scale analogue section developing a section profile intuitively with the intention to 'loft' together afterwards -01.

Fig 10.228. Large scale analogue section developing a section profile intuitively with the intention to 'loft' together afterwards -02.

CAT 320 MEDIUM EXCAVATOR

HORSEPOWER = 162
POWER OUTPUT = 121kW
WEIGHT = 22800KG
MAX DIGGING FORCE = 150kN
MAX REACH = 9.9M
MAX HEIGHT = 9.4M
BUCKET CAPACITY = 1.19M³

Above: Staggering movement up basin
Below: Kapiti Coast Dune System - 1m Contour

The revegetation at the deceased Owhiro Bay Quarry on the south coast of Wellington is taken as a reference point for the species, form, colour, texture, and a lost sense of where the ground is. Though the below mound-forming technique was not used, the pictured vegetation quickly established itself after planting, now allowing secondary species to emerge.

Fig 10.229. (Opposite) CAT Excavator specifications.
Fig 10.230. (Top) Example of revegetation at Owhiro Quarry.
Fig 10.231. (Bottom) Sectional diagram of revegetated mound structure.
Fig 10.232. (Left) Movement structure and Kapiti dune system.

Fig 10.233. (Opposite) Lower Quarry designed assemblage (SD:14).
 Fig 10.234. Experimentation with mounds and movement.

Fig 10.233 (Opposite) Lower Quarry designed assemblage (SD:14)
Fig 10.234 Experimentation with moulds and movement

Minor Differentiations and transitions

degree of spatial perception

Fig 10.233 (Opposite) Lower Quarry designed assemblage (SD:14)
Fig 10.234 Experimentation with mounds and movement

Fig 10.235. Lower Quarry cross-sections (SD:15).

Fig 10.236. Lower Quarry topographical folds section.

Fig 10.237. Lower Quarry groundplane material.

As you move through the Lower Quarry, the aggregate across the ground shifts...just as the horizons shift...just as the quarried geometry around you shifts and changes.

Different aggregate grades get you to walk in different ways...more or less attentive the wider landscape...different sounds...different sensations...

tiled large, chunky, grade material

small grade material on baserock

hard baserock material

tiled medium grade material

standard geometry - easy construction, minimal wastage, easily replicable...

...a slight alteration, a little twist. A little more here, a little less there...

...when it comes together it creates something much more than the small geometric variations.

distinct series of benches, countable and differentiated...

each face blends into the other...

Chionochloa flavicans, Austroderia splendens, Coprosma propinqua, Poa cita, Melicytus obovatus, Olearia solandri, Muehlenbeckia astonii

Combine it with vegetation and you have a seamless, green facade with no breaks...

Fig 10.238. Bench edge geometry conditions.

Fig 10.239. Lower Quarry walkway plan and section.

Fig 10.240. (Opposite) Walkway sections and sketch work.

Walkway ends where the groundplane material transitions from medium, chunky coarse to a smaller, fine coarse able to be walked on

Topography and walkway move together, amplifying the sensations of shifting horizons and uncertain bodily references

Reused onsite concrete blocks placed on quarry base

Corten steel plate bolted through to steel structure

Steel SHS beam and post substructure bolted to rock ground plane

began to read the designed alterations as operating at this new correct scale. *This mode of the sublime requires bigness. Bigness begets Bigness.*

Given the correct scale, it was clear that only large topographical moves are appropriate in this context, small and piecemeal would not work. This is not to say that the details are not important, but, in this case, they are subservient to the large moves which still involve bodily relations to the landscape. Following the realisation that the work would have to be redrawn and re-evaluated this study was divided into two separate studies: this one for the Lower Quarry and the southern end that evolved into lab 2.

This lab was revisited much later in the project than anticipated (mid-2019) which had allowed for much of the wider quarry structure to be established including a designed southern entrance (the final drawings in Fault 3) alongside some initial pedestrian movement logics throughout all levels of the quarry, as well as final proposed levels of extraction derived from a modified version of the Tonkin & Taylor report. With the edge of the lagoon sitting at its southern edge, the area for this design study was a flat plane hemmed-in in almost every direction (bar the southern neck towards the lagoon) by the towering series of benches reaching towards the sky. The swooping ground profile device was established immediately to establish a base for later marks.

Following this, I intuitively thought to check what the dimensions discovered from the Main Bench lab would show if overlaid on this area. The results suggest that for almost the entirety of the ground surface the sense of that affronting looming created by the rock faces would be felt. Not the same species of sensation as felt on Main Bench, but a different, related version perhaps more intense due to it surrounding you and the significantly higher vertical distance of Mitre Peak (156m difference compared to 106m difference on Main Bench). Taking these two elements into account a concept plan was developed by taking this base plan and combining it with a contour plan of the sand dunes that characterise the Kapiti landscape north of Wellington. The scale and configuration of these dunes are bodily-familiar to me, allowing them to be used in a non-abstract way. The intention was to use these contours in a similar way to using a figure-ground to disrupt what is already existing there, but instead of disrupting an already existing complex field, the dune contours will introduce an entirely new complexity to what currently existed as a flat undifferentiated plane in abstract representational space.

These contours would be laid underneath the base plan and on a sheet of drafting film, they would be traced over via the use of a light-table to allow for the superimposed contours and proposed plan to be read as a cohesive unit. This allowed this top layer of drafting film atop these other two sheets to document the implied spatial relationships between the two based on the body's ability to read them aesthetical-

Fig 10.241. Lower Quarry re-vegetation species.

ly. The experience of the proposed mounded topography is interpreted by the body's encounter with similar events. The dune contour sheet was continually shifted to set up a series of topographical relationships that read as a continuously varying surface that rose and fell without breaking. This propositional set of contours combined with the swooping edge had created a surface that continuously warped and hid what laid behind each series of high point.

A series of smaller adjustments were made to the standardised design of the quarry benches to remove the edges that define each against the greater face. The standard bench edge is formed by a berm to contain any loose rubble (Figure 10.238). This gives distinct edges that run the entire length of the bench which gives a point of reference by being able to either count benches or if you can roughly measure the lowest then you can judge the full extent of that. The altered design works by angling the berm back towards the rock face, and to add a smaller 'micro-bench' beneath. The effect of this is to remove the ability to perceive a defined edge on any bench. This is also combined in places with vegetation on the faces either side of the Mitre Peak benches where this already exists. This will be initially propelled by hydro-seeding species already performing this on site, followed by natural colonisation (Figure 10.254).

Fig 10.242. Deciphering diagram.

695 See Stratum 4 for prior discussion. Kullmann, "The landscape of things."
696 Ibid., 63.
697 Clisby, "Intensity in Context: Thermodynamics and Transcendental Philosophy," 253-56.

Reflection

Deciphering

Whilst working on this lab I had come across Karl Kullmann's previously discussed essay *The Shape of Things* which offered insight into the practices that were becoming increasingly clear and sharper.⁶⁹⁵ In this he writes:

*"Orography, which refers specifically to the shape of the land (and excludes all the other features of the topos), suggests a more incisive representational method for deciphering the underlying structures of the terrain."*⁶⁹⁶

As previously discussed, Kullmann is arguing that designers shift from 'matters-of-fact' towards 'matters-of-concern' in an ANT-like fashion. Kullmann uses the term *deciphering* here and does not return to it – yet it struck a resonance with how I was reflecting on my design practices. Throughout this and prior projects, I had generally considered myself as an analytical designer looking for the mechanisms behind encounters or emergences. From this, I found significant traction thinking design through an affect/assemblage lens. Kullmann's notion of *deciphering* found resonance with me in that it seemed to bring several more loosely connected practices and thoughts together.

In this passage, he is discussing the role of representation, and that common-sense and matters-of-fact through drawing obscures what landscapes do. In response to this, I began to be more systematic in how I was parsing the affectual and intensive forces discovered and proposed in this lab. This can be seen most readily in Figure 10.233. The extensive dimensions of this area were laid out as a base plan – framed and given scale by the measured grid. Intensive information is layered atop, each layer identifying and locating differentiations, singularities, tipping points, or intensities.

The splitting out of this information into two interconnected series allowed me to think through what the role each plays in the found or proposed assemblage. Intensity (as a problem) is presented to the human organism through what exists in extensity and the virtual. The use of deciphering here as a method is to determine what extensive actors and measurements play a role in the studied assemblage, alongside what material from the virtual is impactful. As Clisby suggests, the extensive deserves closer attention.⁶⁹⁷

There are similarities here between this method and similar forms found in SBD. Earlier projects such as Fresh Kills, and Downsview Park, as well as more recent studies (notably those from the AA), display the complexity of landscapes via splitting it into a series of layers. Pre-existing relationships are discovered, and others proposed via alteration. This is a techno-science version of deciphering as it does not attend to the affectual, intensive, or the social beyond abstract representation of programme and movement.

698 Waldheim, “Aerial Representation and the recovery of landscape,” 133.

699 Ibid., 132. See also ‘Notes on the Index I’ in Rosalind E Krauss, The originality of the avant-garde and other modernist myths (Cambridge: MIT press, 1986).

700 Deleuze, Francis Bacon: The Logic of Sensation, 41.

701 Ibid.

702 Claramunt and Mosbach, “Editorial.”

703 Allan, “Feeling indeterminate: the experience and design of big landscapes,” 212.

Indexing of sensation

Using deciphering as a method uncovers material that non-aesthetically oriented practices would not have paid attention to and recorded. In recording it, it is opened towards design. As Waldheim suggests: “To picture landscape is to infer its renovation.”⁶⁹⁸ Waldheim argues that the proliferation of aerial photography offers landscape designers to develop an “indexical trace” characteristic of modernity.⁶⁹⁹ As discussed prior, Waldheim and others within SBD discourse index objects, biological ecologies, machinic flows, and a limited sense of life and sociality. This form of indexing is only capable of collecting material that can be integrated into the models of simulation typical of SBD as discussed in Stratum 3.

This lab sought to index what exists beyond that. Like art, landscape design is not concerned with inventing form, but of capturing and experimenting with forces.⁷⁰⁰ These are aesthetic forces of affect and sensation. “For a sensation to exist, a force must be exerted on a body, on a point of the wave.”⁷⁰¹ This lab and others are examples of a method that allows the designer to operate from the *middle*, to see the relevant relations and movements at work – to see how an encounter with the sublime unfolds. Forces as sensation and the *sense* (significance) of those sensations is what is indexed here, which can only be discovered, deciphered, and indexed through the middle. Marc Claramunt and Catherine Mosbach also write on the importance of the body in landscape encounters:

*The never-ending construction of the body in space goes hand in hand with the construction of a self. A self which, subject to human time, finds its place within the space of its own transformation. The body is this space then, buffeted by the emotions, which impart to it their fluidity. It physically unwinds us from a particular tempo which is not confined to objects but creates a ductile relationship to time and to situations.*⁷⁰²

Bigness

Bigness is an important component of the quarries sublime dimensions. This is likely not surprising for many – as if the quarry is expected to sublime because of its scale. As noted in the reflection of lab 1, large sites like this, particularly with extreme differences in verticality, seem to demand equally large moves by the designer. The dramatic topography of the Lower Quarry seemed to expect the same through design. Bigness in itself is hard to comprehend. That is why it fascinated those 18th-century thinkers.

Bigness seems to be such a landscape-oriented problem. Penny Allan approached this question as the topic for her practice-based doctorate. Her conclusions pointed towards feeling, not instrumentality as the fundamental approach in engaging with bigness: “the direct experience of landscape acts as a catalyst, generating new connections between various ways of knowing and what is happening on the ground in the present moment.”⁷⁰³ Bigness in terms of landscape design is often smoothed over by focusing on *how landscape works* at the ex-

704 Ibid.; Connolly, “An affirmative open systems conception of how to design landscape.”

705 Except for Meyer’s contribution, this is typical of most within Large Parks. Julia Czerniak and George Hargreaves, Large Parks (New York: Princeton Architectural Press, 2007).

706 Peter Connolly, “101 Ideas About Big Parks,” *Kerb: Journal of Landscape Architecture* 1 (1995): 22. Emphasis in original.

707 Ibid. Emphasis in original.

708 Ibid., 24. Emphasis in original. This does not require the invention of novel representations as artifacts but instead is a challenge to the function of representation itself. Connolly, “An affirmative open systems conception of how to design landscape.”

709 Connolly, “101 Ideas About Big Parks,” 31. Emphasis in original.

710 Rem Koolhaas, “Bigness or the Problem of Large,” in S, M, L, XL, ed. Jennifer Sigler (New York, NY: The Monacelli Press, 1995), 495.

711 Ibid., 497. Emphasis in original.

712 Ibid., 511.

713 Ibid., 512-13.

714 Yve-Alain Bois, “A Picturesque Stroll around” *Clara-Clara*, (1984).

715 Allan, “Feeling indeterminate: the experience and design of big landscapes,” 214.

pense of the aesthetic, social, and political dimensions.⁷⁰⁴ The *problem* of bigness does not seem to be embraced as a designerly problem (at least not with any subtlety) – instead, it is deferred to other forms of knowledge to domesticate.⁷⁰⁵

Connolly offers several interesting insights:

*“Big Parks contain the possibility of losing yourself in, or escaping to, another world. The close copresence of different worlds is a key modern and urban experience.”*⁷⁰⁶

*“Smallness comes in many guises – as bodily experience, as details...experientially, ergonomically...Smallness usually suffers first in an increase in size. Bigness versus smallness in a complicit opposition. **Bigness is unavoidably thoroughly about smallness.**”*⁷⁰⁷

*“Being a medium that is difficult to represent and working at a scale that is difficult to control Big Parks test the **limits of representations.**”*⁷⁰⁸

*“Big Parks **exploit and are driven by sites.** The quarry, possibly the most dramatic found landscape, almost invariably controlled by technicians, only needs a twist to go beyond being a technical object...”*⁷⁰⁹

Koolhaas also offers something valuable:

*“Bigness is ultimate architecture.”*⁷¹⁰

*“Bigness instigates the regime of complexity that mobilizes the full intelligence of architecture and its related fields.”*⁷¹¹

*“Bigness destroys, but it is also a new beginning. It can reassemble what it breaks.”*⁷¹²

*“Bigness is a blueprint for perpetual intensity...Its vastness exhausts architecture’s compulsive need to decide and determine. Zones will be left out, free from architecture.”*⁷¹³

In Koolhaas we can readily read these quotes as discussing *landscape* architecture, especially given the context of Connolly’s contributions. This lab attempted to grapple with the bigness of the quarry as a whole and the area under investigation. In reflection, I find a strong resonance with the struggles encountered through designing and the comments from Connolly and Koolhaas. Bigness tends to destroy smallness, yet it invariably has the capacity to uncover its potential. Bigness pushes designers towards the gestalt image.⁷¹⁴ Yet if careful and rigorous attention is paid, employing the full breadth of tools necessary, smallness is recovered as an equally impactful force. Here we find that bigness feeds of smallness and vice versa. Further, bigness opens design to indeterminacy. This is not in the fashion that has been fetishised by SBD discourse, but as Allan describes: “an in-between state of instability or ambiguity that precipitates (is resolved by) a shifting of perception or a physical response.”⁷¹⁵

Fig 10.243. Lower Quarry perspective 1.

Fig.10.244, Lower Quarry perspective 2.

Fig 10.245. Lower Quarry perspective 3.

Fig 10.246. Lower Quarry perspective 4.

Fig 10.247. Lower Quarry perspective 5.

Fig 10.248. (Opposite top) Exterior perspective of walkway structure from lower quarry.
 Fig 10.249. (Opposite bottom) Rockface materiality from walkway seating area.
 Fig 10.250. Walkway technical details.

The views unfold, unpack, as you move down the walkway. Never revealing too much. Less and less as you move down...

Fig 10.251. Viewsheds from gaps in structure.

Fig 10.252. Walkway perspective.

Fig 10.253. Perspective from rockface platform.

716 Corner, "Taking Measure: Irony and Contradiction in an Age of Precision," 33.

717 Ibid.

Denying reference

Experiences of the sublime discovered and experimented with here have a strong link to how and to what degree the body references itself against the landscape. The sublime as an intensity shocks the organism with a problem that must be experimented with. Referentiality is fundamentally important to this. Returning to our previous swimming example: the body references the movement of the limbs against the central position of torso and head, the depth of the shallow pool can be seen and referenced, the nearby father references a position of safety. We can also include the experience of never having swum as a lack of reference, part of why learning to swim is such a disruptive and vividly experimental experience.

Denying bodily reference became a strong and practical design technique for engaging with the sublime. Lab 1 and 2 had already experimented with this in the relationship between body and rockface. Now we turn to the ground plane and immediate bubble of reference – our most comfortable and readily known. Now we begin to destroy it in seeking the sublime. I asked myself: what modifications to the ground plane could I make that possibly could have an impact when surrounded by looming masses of sinister rock?

Onsite drawing studies began to work through this. It seemed this could only be done on-site – off-site I was left without the 'right material' to make on-the-ground aesthetic judgments. In 'Taking Measure: Irony and Contradiction in an Age of Precision' Corner writes how designers make these decisions "without a ruler in hand" by intuitively following "informed experience and the 'feeling out' of those phenomena".⁷¹⁶⁶ This form of intuitive knowledge exists outside of "techno-mathematical" disciplines – it is a "practical form of knowledge".⁷¹⁷⁷ Making adjustments onsite via pencil and paper or by doing 'what-if' studies by imagining changing geometries or adding/removing elements allows for immediate feedback on what it might do.

Creating an undulating landform that seamlessly ramps up into the surrounding rockface denies the body a point of reference beyond its most immediate surroundings. It requires a 'feeling out' through the drawing process – there is no objective measure – only the feeling of intensities. The denial of bodily reference through using topography and planting to destroy any sense of flatness, a 'bottom' of the of hole quarried hole, or a sense of distance through obscured and overlapping horizons plays a strong role in the sublimity designed here. These moves, and therefore the creation of experiences of the sublime, can only be made through rigorous attention to and experimentation with landscape aesthetics and encounters.

Fig 10.254. Pioneer planting taking hold atop bare rock.

Implications for Operationalising the Sublime

This lab discovered that encounters with the sublime (at least within this landscape) strongly tend to involve removal, or destruction, of bodily reference to the landscape. The body is constantly referencing itself against its milieu, at various distances, depths, and times all at once. This referencing tends to be readily handled via habit based on past experience, going unnoticed in conscious thought. Though when this referencing involves something alien, is impaired, or completely impeded, this is where the sublime presents itself as a problem – a problem via sensation. Our perception of landscape is constructed via the body – disrupting these references is disruptive to our being.

Design drawings allow us to start to engage with this dimension of the sublime. Representation can readily give expression to the ability to reference and how it can be denied/destroyed. Given its ability to be represented, designing can readily alter this referencing on the page in a concrete manner. The success of this is evaluated via feeling a resonance when the lines on the page connect to our bodily memory of previous relations and affectual empowerments. The page, this landscape, past experiences, your abilities as a designer, you sitting there with a pen in hand testing things out – all of these things connect ecologically through a problematic centred on designing with the sublime. The body's process of referencing itself to the landscapes offers a readily accessible way into designing with the sublime, though it does require some legwork to make it work.

LAB: Upper Quarry

Expectations of a park

This components asks what the sublime can offer for the traditional aspects and programs of a park.

Aims/Objectives

To test what sublime affectual dimensions of a quarry landscape can be employed in the development of a parkscape that meets the normal expectations of how it works the activities offered. Much of the information that has been gathered in the forms of variabilities can be considered as 'parameters' – this will be experimented with via the use of a Rhino + Grasshopper plugin called Bison.

Hypothesis

That sublime experiences are more likely to generated in a stronger form in areas of movement between areas of activity. Areas of activity can have sublime dimensions to them but is likely to operate more as a background noise. Parametricism and 3D modeling will not prove to be as efficient a process as conventional techniques yet will expose a useful dimension.

Tool(s)

3D modeling, parametricism, plan, section.

Method(s)

Generate a design proposal for the Upper Quarry area based on fieldwork encounters that leverages 3D modeling and parametric techniques based upon on-the-ground aesthetic knowledge instead of relying on generating form entirely in abstract space.

Background

This study was the final study to be started and carries with it much of the learnings from the previous stages. It was a timely opportunity to test the new parametric techniques that the Bison plugin offers given that it was the final stage and anything impactful from there would not necessarily infiltrate into later work that falls under the scope of this PhD. If anything significant was discovered in this regard it would be approached as a continuing research project in the future via teaching and my own research projects.

Fig 10.255. Upper Quarry lab location.

718 The assumptions for the tailings bench height increase is based on evaluating the change in topography from historic imagery and contour data. However, this may change given the quality of the rock in the extracted areas may be more, or less, suitable for aggregate processing which determines how much is leftover as tailings.

Rules and Context

The following rules were applied during this lab:

- The Upper Quarry proposal must contain typical park activities and elements such as benches and seats, sports and recreational fields, lookouts, vegetation, areas of seclusion and openness.
- No excavation may occur on the strip between the existing hills – only deposition.
- Excavation can only occur on the hill to east of the tailings bench as it is deemed to have economic value.
- Links must be provided to Woodridge, Grenada Hunters Hill, and the town centre at the northern edge of the quarry.

The following assumptions were applied during this lab:

- That the eastern hill will not be required to be fully excavated per the Tonkin & Taylor report due to the increased cut provided by lowering the quarry base and lagoon.
- That the southern tailings bench will increase in height by 4–5m
- That the northern tailings bench will increase in height by 8–10m⁷¹⁸
- That the current land being used for grazing in the gully can be purchased by either local or regional council and incorporated into the park's single land package

Fieldwork Log

This lab was the last of 5 conducted. Fieldwork here was possible yet very intermittent due to the high level of vehicle movement, police explosive testing, and processing of materials. Multiple visits were conducted towards the end of 2019 to ascertain what this area of the site offered for design.

The Upper Quarry is accessed by walking up the main haul road, a relatively steep but well-graded and wide route that runs along the eastern quarry boundary (Figure 10.256). Taking approximately 10 minutes at a steady pace, it is far enough removed that it feels distinctly different than the area below. The time and effort needed to move to the top creates a differentiation in their experience – they do not feel like two contiguous areas. In walking up the road, the effort is great enough that you focus on yourself and your thoughts more than the landscape itself. This is compounded by a series of banks on either side of the road that conceals and reveal views intermittently.

Reaching the top of the road, a valley-like landform unfolds to your right (north), and the quarry pit with the open view of the harbour on the left (south). Turning north, the ground surface has a slightly noticeable upwards gradient, a condition that's uncommon in any other area of the quarry not for movement. Immediately the topography here, at least at first, is significantly more 'knowable' – in

Here we find a methodoligcal condition opposite to almost anywhere else within the quarry...

Deposition, not extraction.

What conditions can addition provide to the public park that subtraction cannot?

What to do with this territory?

Fig 10.257. Moving north through the valley 01.

Fig 10.258. Moving north through the valley 02.

Fig 10.259. Moving north through the valley 03.

Fig 10.260. Moving north through the valley 04.

that it is less extreme in its geometry and closer to what I've experienced in other, 'normal', landscape conditions (Figure 10.257-260). Moving up an access road, two things very quickly happen in seemingly rapid succession and then repeated twice more.

1. The topography rushes back on the left (west) side – it opens up and you get a sense of the open sky and wider horizon lines
2. The topography rushes back in on left side as the gully that had opened transforms into a spur pushing into the valley landform (Figure 10.261).

Within 5 minutes you can walk most of this valley before it tracks upwards at the end. The rapid shifting of topography on one side is contrasted by the steady and distant horizon line on the other which does little to affect the body in comparison.

What is created here is an experience of rapid spatial compression and decompression that cycles within a short temporal and spatial measure. The topography here is also of a scale more relatable to the body, covered in vegetation which we can estimate size, weight, and texture. The shifting topography changes your movement. As it opens you slow down, sometimes stopping to survey the extent of the gully. As it closes and the spur pushes into the road ahead, your walking speeds up as it is uneasy being compressed on both sides.

This pushing and pulling of the body by the topography seems like a challenge worthy of designing with. The sequencing seems important, as well as the temporal dimension not just being an infinite series of points, but a shift that involves what happened prior and the anticipation of what comes next. The more 'knowable' nature of this area of the quarry also leaves it suited to experimenting with more typical park-like activities and structures. The topography and experience here are far from mundane. How can this be leveraged into designing with the everyday components of park design?

Design Practices

This lab introduced several different techniques previously not used to a great extent in this project. It also expanded on the deciphering methods that were initially developed in lab 3 – these will not be covered here in the description but are visible through the included drawings. The designed alteration was to feed off the closer – more intimate – connection to the topography, and the sequencing of rapid exposure/enclosure found as you move through this landform. This experience would be appropriated by the inclusion of more regular 'park-like' activities and programmes throughout the Upper Quarry.

In mapping out the intensities and forced movements discovered with the moving landform, I found myself immediately beginning to experiment with altering these affects. Documenting it, even relative-

719 Connolly, "An affirmative open systems conception of how to design landscape," 98,185.

720 Daniel Smith and John Protevi, "Gilles Deleuze," The Stanford Encyclopedia of Philosophy Spring 2020 Edition (2020), <https://plato.stanford.edu/archives/spr2020/entries/deleuze>.

721 See an upcoming practice-based PhD by Rosie Scott who talks on this aspect of watercolour in design practice, education, and research. Rosie Scott, "Interior Painting: painting interiors" (Doctor of Philosophy in Interior Design RMIT).

722 Deleuze, Difference and Repetition, 229-31. Also see the following, keeping in mind the prior discussion on intensity: Williams, Difference and Repetition: A Critical Introduction, 171-78.

ly simply, seemed to flow directly into a creative resonance between designer and material. Affects after all are inherently creative if given expression.⁷¹⁹ Creativity comes from difference, and difference is both intensity and affect.⁷²⁰ I returned to the use of watercolour paints on transparent paper to try give expression to the experiential gradients found on site. Varying the level of pigment applied allowed for a degree of precision, and the seemingly chaotic paths the pigment took across the moistened paper reinforced the non-static nature of the differentiations. This, however, did not get to the level of detail and craft that I desired following lab 3. The ability to spread pigment in a controlled but semi-chaotic fashion still proved valuable for its visual (ability to give expression) qualities, but also that it necessarily forces the designer to slow down in their thinking and actions. This slowing allows for more reflection and consideration, in contrast to the immediate feedback offered via digital tools.⁷²¹ As an alternative option, I briefly employed Indian ink. The deep blacks controlled the page, denying everything else which was detrimental to engaging with the 'depth' of the landscape.⁷²² The tonal value was too difficult to control and lost the 'imprecise-precision' initially offered by watercolours.

A larger set of 'extensive' layers was constructed to work through the deciphering process. This was done via drawing over aerial photography and contour maps, in the end creating a set of data that is seemingly obvious in its physical manifestation, yet only made present by drawing it out. This involved more abstraction than what was done in lab 3. The abstraction, though losing some of its spatial specificity, shows more directly the effects of the extensive relations being shown. In parallel with this extensive mapping, an intensive mapping was also completed, also involving more abstraction than lab 3 (Figure 10.262-269,273).

Fig 10.261. Push and pull of the topographical edge.

**As you move through here,
a rhythm unfolds...a rapid
sense of topographical
opening and closing...the
body oscillating between
relating to whatever is
close and far...so different
from the rest of the quarry
because of the restricted
spatial extents**

Fig 10.262. Experiential differentiations based on movement through Upper Quarry.

- 1** You're unsure of what lies ahead...a sense of arrival as the landscape begins to shrink...much smaller than the rest of the quarry
- 2** As you move up the ramp your body orients to its more immediate surroundings as the landscape shrinks around you...
- 3** The view starts to unfold down the valley, but its extent is unclear. The sides of the valley continue to close in, far from expansive
- 4** Suddenly your sense of the valley opens up...not so close now...a minor connection to the wider skyline, especially to the east
- 5** The eastern slope pulls your body toward it...it had largely gone unnoticed till then...the darkness of the slope appears as Pines
- 6** Sides of the valley fold back in closer to the body as the tailings bench gets higher...sense of the wider valley fades away...
- 7** Sense of valley rapidly expands...body is drawn across this openness to the slope...something to be discovered...
- 8** Feeling like you're in the middle of the valley seems uncomfortable, stuck down below too large slopes...
- 9** Topography rapidly folds in again...attention draws into the self...how I'm moving...my thoughts...the direct material around me...
- 10** The world is now almost entirely closed in...the valley ahead slopes up steeply...a desire to keep moving forward...

It's been a long walk up the haul road. Your legs ache from the effort, but it feels like you've accomplished something significant. It seems a worthy challenge to make it up here. The views along road showed perspectives of the quarry landscape radically different from within the pit.

As the haul road flattens out and the view extends up the valley bound on either side by hills, you get a sense of the openness.

Your eyes are drawn across the skyline.

The bowl-edge of the quarry is much closer here.

Moving up the valley the topography shifts in and out...expanding and contracting on both sides at times simultaneously and others in opposite fashions.

Here the nearest valley wall had previously pushed right in - leaning over you as it shifted your orientation to what was ahead and to the east.

Then all of a sudden it rushes back, dragging your view and body up towards the top of the gully.

The sharpness of the shift catches you by surprise. Your movement slows as you look up the gully towards the edge of the slope above. The immediate surroundings fade away as you look all the way around the skyline in again, taking in the whole scene.

Just as quickly the valley had opened it...it closes off again. It feels like a rhythm is being established.

Open. Closed. Expansion. Contraction.

Even though past the gully it stays in your mind. You remember it as you move beyond it. The sense of rhythm stays with you.

On your right, to the east, the tailings pad has risen up, now just above your eyes. Its surface, and what's above it is beyond what you can see.

What you can see beyond it is the eastern slope of the valley. Only now do you notice the darkness of the slope which now becomes determinable as a pine plantation.

An impenetrable dark surface forming the boundary of the quarry.

The slope on the left folds in at the same moment that the valley seems to erupt outwards to the right.

The tailing pad's berm closes in on the immediate space, denying any sense of the bottom of the slope.

Your movement is slowed to a halt, uncertain what to do...your sense of this space is so twisted, it doesn't seem to make sense.

Your body struggles to anticipate what will happen next...

Fig 10.266. Upper Quarry differentiation 6 (SD:19).

...and then the valley rushes open again.

The slope on your left retreats as the berm reduces in height as you move forward.

Your body flips in orientation from left to right, not sure where to go. Your eyes track up and across the tops of the slope before changing to the other side.

Its almost a sense of anxiety in this flipping, like you aren't quite in control of its shifts...

Fig 10.267. Upper Quarry differentiation plan 7 (SD:20).

...and now the gully to the left holds your attention, though just for a moment longer...

For a while the eastern slopes fade away, much less important now...

You find yourself having a sense of connection to the slopes themselves, feeling how they fold down to the base of the valley where you stand...

You're held still as you try to come to grips with this degree of topographical relation...

Fig 10.268. Upper Quarry differentiation plan 9 (SD:21).

...and as fast as the valley had opened up, it closes in.

The sense of the eastern slope fades away.

The western slope is reduced to where its folds meet with the road in front of you, creating a series of smaller folds.

Your body is now drawn up the valley, focused on the ridgeline ahead, following the snaking road as it dips in and out the slope.

Fig 10.269. Upper Quarry differentiation plan 10 (SD:22).

723 See: www.bison.la This plugin has seen recent academic attention from the landscape architecture programme at ETH Zurich. Ilmar Hurkkens and M Bernard, "Computational terrain modeling with distance functions for large scale landscape design," *Journal of Digital Landscape Architecture* (2019). See: Kadin Hegglin, "Algorithmic Toolmaking: parameter thinking in landscape architecture" (Master of Landscape Architecture Victoria University of Wellington, 2020); Jacob Jenkins, "A Shift in Modality" (ibid.).

During this lab, I began investigating a landscape architecture oriented plugin for the Grasshopper extension included in Rhinoceros 6 called Bison.⁷²³ I had previously specialised in using digital tools in teaching and research through design, yet I had not explored parametric-based software in great detail.

In contrast to previous concerns I had with parametric software and landscape design, this plugin allowed immediate and productive feedback between analysis and alteration. The most useful tool in this lab was the viewshed analysis. A nearly identical tool is available in ArcGIS but there it cannot work alongside actively designing the landform. This tool was employed with a 3D model created from 1m contours (2017) of the existing site. Despite the changing nature of the quarry's topography, there has been little change in this area and the model required no modifications. Based on the onsite and studio-based analysis, and memory, several viewshed analysis studies were produced to ascertain the extent of one's 'world' as your body moves through here. Each of viewshed diagrams shown in Figure 10.271 are derived from a point where an intensive transition as felt onsite. These diagrams show that the changes in possible extent of perceivable space echoes the experience described earlier.

Shifting towards design, Bison was used heavily for formal generation and analysis of moves. The Upper Quarry is marked by two large existing pads formed by the placement of 'tailings' – excess product from the crushing machines. This material is laid down and built up throughout the quarry's lifespan. This operational mechanism will be used to define the major design moves here. In this respect, Bison is well suited to designing with as it adjusts 3D models via adding or extracting volumes – like how material is modified by quarrying. Drawing 2D form using curves and then extruding to a given height from the pre-existing surface allows for rapid generation of new proposals which can then be rapidly analysed using viewshed or any of the other tools in Bison.

In this lab, the proposals engage with the expansion/contraction dynamism at both a medium and larger scale. The pine-covered slope to the east marks the eastern extent of the quarry in this area. It also offers a visual constant as you move through this area (Figure 10.272). These intensive landscape elements are the material that the modelling is working with. This is a different form of virtual designing than tends to appear in disciplinary discourse which will be reflected upon later. How form is evaluated is not through an exterior measure but an immanent one – what ability does it have to heighten and exaggerate the on-the-ground experience? It must also allow public park functions to occur, though this is secondary and feeds off the primary function.

The lower 'tailings bench' is raised 12m at the southern end, tapering to a 3m raise at the northern edge. It roughly follows the extent of the current bench except for large cut-outs along its western edge. Raising the bench to this degree blocks off any perception of the forest-

Fig 10.270. Different conditions at each end of the Upper Quarry valley.

Fig 10.271. Different conditions at each end of the Upper Quarry valley.

Each viewshed mapping is created from a point noted on-site where I felt a significant shift related to the sense of space drastically expanding or contracting.

Whilst not 100% representative of the extent, they provide a valuable insight into the degree of spatial perception.

Importantly, these are generated within a 3D model that can be altered instead of a non-designable map such as in ArcGIS or other systems.

Upper Quarry topographical analysis

Fig 10.272. Upper Quarry topographical analysis (SD:23).

Fig 10.273. Upper Quarry decipher mapping (SD:24).

724 P Belesky, “Testing Terrain: exploring the computational design of natural systems in landscape architecture” (Doctor of Philosophy in Landscape Architecture RMIT, 2018); Bradley Cantrell and Adam Mekies, *Codify: Parametric and computational design in landscape architecture* (Routledge, 2018); Jillian Walliss and Heike Rahmann, *Landscape Architecture and Digital Technologies: Re-conceptualising design and making* (Routledge, 2016).

725 Walliss and Rahmann, *Landscape Architecture and Digital Technologies*, xxiii.

ed eastern slope. These two cut-out areas open to brief views of this slope again. The intent is to increase the rapid sense of enclosure and exposure through alternating the landform on both sides of the body whereas previously it was static on one (Figure 10.276-280). Planting of various species atop this lower bench shifts in density and form depending on the distance between western and eastern slopes – denser when closer. This disrupts the ability to accurately feel the extent of the wider landform.

This area of the quarry contains many of the more expected functions of a large park – namely demarcated areas for active recreation. This has largely been allocated to the larger ‘upper’ tailings bench at the northern tip of the quarry. A series of appropriately sized soccer and basketball/netball courts are distributed atop the bench – each one sunk no more than 500mm into the surface to provide edge seating and contain loose equipment. The topographical form, materiality, and experience of the quarry are reflected in these recreational activities. They feed off the landscape, raising the intensity and spectacle. By placing them slightly out of the way it creates a sense of procession and anticipation for the event which is only heightened by the atmosphere. Apart from these fields, the surface of this bench is left relatively untreated and only adjusted in places to allow for designed planted mounds to be arrayed across the otherwise flat plane. Benches and other seats can be found on the southern edge where a view over the quarry and the harbour can be found.

At the northern edge of the Upper Quarry is an easy access route to the proposed Lincolnshire suburban centre development, and as well to the existing Woodridge suburb. These links needed to be strong and readily accessible for this end of the quarry to fit into the everyday life of these residential areas.

Reflection

Digital tools and Aesthetic Parametricism

This limited study showed the immense potential that a new form of aesthetic-oriented form of parametricism has to offer landscape architecture. Parametricism within landscape architectural discourse has seen an increasing level of attention though it still lags what is found within architecture. The simulation and automatic forms of design of natural systems appear to be the preoccupying topic at the continued expense of everything that SBD did not address. Notable examples such as Philip Belesky’s doctorate *Testing Terrain* (2018), Bradley Cantrell’s edited volume *Codify* (2018), and Jillian Wallis and Heike Rahmann’s *Landscape Architecture and Digital Technologies* (2016) all fail to address questions on the aesthetic, ethical, and political dimensions of landscape and landscape design.⁷²⁴⁴ Wallis and Rahmann claim that landscape architecture operates in a “weak theoretical discourse of making” which they suggest can be remedied via digital theory and praxis.⁷²⁵

Fig 10.273 Upper Quarry decipher mapping (SD:24)

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Fig 10.273 Upper Quarry decipher mapping (SD:24)

724 P Belesky, “Testing Terrain: exploring the computational design of natural systems in landscape architecture” (Doctor of Philosophy in Landscape Architecture RMIT, 2018); Bradley Cantrell and Adam Mekies, *Codify: Parametric and computational design in landscape architecture* (Routledge, 2018); Jillian Walliss and Heike Rahmann, *Landscape Architecture and Digital Technologies: Re-conceptualising design and making* (Routledge, 2016).

725 Walliss and Rahmann, *Landscape Architecture and Digital Technologies*, xxiii.

ed eastern slope. These two cut-out areas open to brief views of this slope again. The intent is to increase the rapid sense of enclosure and exposure through alternating the landform on both sides of the body whereas previously it was static on one (Figure 10.276-280). Planting of various species atop this lower bench shifts in density and form depending on the distance between western and eastern slopes – denser when closer. This disrupts the ability to accurately feel the extent of the wider landform.

This area of the quarry contains many of the more expected functions of a large park – namely demarcated areas for active recreation. This has largely been allocated to the larger ‘upper’ tailings bench at the northern tip of the quarry. A series of appropriately sized soccer and basketball/netball courts are distributed atop the bench – each one sunk no more than 500mm into the surface to provide edge seating and contain loose equipment. The topographical form, materiality, and experience of the quarry are reflected in these recreational activities. They feed off the landscape, raising the intensity and spectacle. By placing them slightly out of the way it creates a sense of procession and anticipation for the event which is only heightened by the atmosphere. Apart from these fields, the surface of this bench is left relatively untreated and only adjusted in places to allow for designed planted mounds to be arrayed across the otherwise flat plane. Benches and other seats can be found on the southern edge where a view over the quarry and the harbour can be found.

At the northern edge of the Upper Quarry is an easy access route to the proposed Lincolnshire suburban centre development, and as well to the existing Woodridge suburb. These links needed to be strong and readily accessible for this end of the quarry to fit into the everyday life of these residential areas.

Reflection

Digital tools and Aesthetic Parametricism

This limited study showed the immense potential that a new form of aesthetic-oriented form of parametricism has to offer landscape architecture. Parametricism within landscape architectural discourse has seen an increasing level of attention though it still lags what is found within architecture. The simulation and automatic forms of design of natural systems appear to be the preoccupying topic at the continued expense of everything that SBD did not address. Notable examples such as Philip Belesky’s doctorate *Testing Terrain* (2018), Bradley Cantrell’s edited volume *Codify* (2018), and Jillian Wallis and Heike Rahmann’s *Landscape Architecture and Digital Technologies* (2016) all fail to address questions on the aesthetic, ethical, and political dimensions of landscape and landscape design.⁷²⁴ Wallis and Rahmann claim that landscape architecture operates in a “weak theoretical discourse of making” which they suggest can be remedied via digital theory and praxis.⁷²⁵

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Upper Quarry Park Schematic Plan
1:1500 @ A2

Fig 10.276. Upper Quarry schematic plan (SD:25).

The Upper Quarry. Some of the programs expected of a park in a situation far from normal. The topography plays stage to movement of a different kind, raising the intensity so that the sporting event hovers above the landscape

- 1** Mixed-use sports field sunk 0.5m into bench, bracketed by seating
- 2** Seating and table area surrounded by scattered low-level vegetation (grasses and tussocks)
- 3** Perched bench covered in tussocks, grasses and small shrubs – runoff catchment for surrounding topography
- 4** Secluded seating space between offset grid of kowhai and kanuka
- 5** Excavated hill with 3 benches containing pathways and contained open areas between vegetation bands
- 6** Lookout bracketed by low-lying shrubs and grass/tussock clumps
- 7** Multi-use fields for organised and casual recreation. Sunk 0.5m into bench
- 8** Constructed footbridge structure linking two benches together
- 9** Smooth topographical lawn area hidden away from rest of park
- 10** Re-vegetated area – tauhinu, mahoe, kanuka, fivefinger, akriaoho
- 11** Proposed Lincolnshire Town Centre – edge of development hidden by planting, keeping out of sight from quarry interior

Fig 10.277. Upper Quarry rendered plan (SD:26).

Fig 10.278. Upper Quarry vignettes.

- 1 Multi-use sports/activities pitch sunk 0.5m into raised bench to separate
- 2 Pitch separated from concrete path by raised terrace seating around edge
- 3 Areas of bench surface scattered with crushed rock to differentiate surface
- 4 Clumped plantings of tussocks, flax, and hardy small shrubs like muehlenbeckia
- 5 Intersecting grids of kowhai and kanuka structure the 'interior' end of the bench
- 6 Tussock and grassland, hardy enough to revegetate created bench
- 7 Deep tread-shallow rise stairs constructed of corten compacted rock

Upper Quarry designed section profiles 1

Fig 10.279. Upper Quarry designed section profiles 1 (SD:27).

Upper Quarry designed section profiles 2

Fig 10.280. Upper Quarry designed section profiles 2 (SD:28).

These drawings explored the extent of your view – and subsequent sense of space – as you move up through the valley.

The views/sense of space experienced in the original topography (left) is contrasted with the proposed topography (right). At the points marked by a cross in each drawing, a viewshed analysis was generated by Bison with a vertical offset of 1700mm to simulate human eye height.

Existing Landform

Designed Landform

Existing Landform

Designed Landform

Fig 10.281. Existing Upper Quarry viewsheds 01.

Existing Landform

Designed Landform

Existing Landform

Designed Landform

Fig 10.282. Existing Upper Quarry viewsheds 02.

Fig 10.283. Combined original-topography viewshed analysis

Fig 10.284. Combined designed-topography viewshed analysis

726 Ibid., xxviii-xxix.
727 See: Belesky, "Testing terrain," 201-32.
728 Ibid., 227; Raxworthy, "Novelty in the entropic landscape."
729 Connolly, "An affirmative open systems conception of how to design landscape," 185-93.
730 Devan Castellano, "Humanizing parametricism" (ACADIA Regional 2011: Parametricism: (SPC), University of Nebraska-Lincoln College of Architecture, 2011); Neil Spiller, "Surrealistic exuberance—dark matters," Architectural Design 80, no. 2 (2010).

Central to this are claims of metric efficiency and performance offered by digitalia.⁷²⁶⁶ There may be something to this claim, yet this researcher is entirely sceptical whether digital tools such as parametricism, at least in its form proposed by these works, can address such shortcomings for several reasons. Such works tend to:

- fetishize the internal logic of parametric modelling at the expense of engaging with the landscape itself, only engage with material that can be quantified or held to a metric measure,
- fail to account for the social, experiential, and affectual interactions between organisms, and organisms and their environment, restrict open systems thinking to natural ecologies, and continue to push design towards an autonomous and objective design process.

Notions of emergence appear to be important to this form of practice, though only in a limited sense.⁷²⁷⁷ Belesky claims that by simulating landscape systems they are given "greater autonomy and agency". In doing so he argues – counter to Julian Raxworthy – that novelty and emergent qualities can be fully engaged with.⁷²⁸ This discourse tends to be built on a misrepresentation of Deleuze's work, largely by focusing on readings by Manuel DeLanda, which fails to address the aesthetic dimensions of the source work.⁷²⁹⁹

I do not claim to presume that what I uncovered here in this lab can compete with the complexity and richness of digital experimentation shown by those previous examples – though it suggests that a rich vein of previously untapped potential for landscape architecture. The design-feedback-design loops allowed through Bison was startling in its efficiency. Not an economic or metric efficiency – but *aesthetic efficiency*. Form could be adjusted, analysed via computation, and then based on past bodily experience it is evaluated based upon what it contributes to the world. Some effort has been made to address the lack of cultural and historical information in architectural parametricism, yet this remains even less clear in terms of landscapes.⁷³⁰

Fig 10.286. (Opposite) CAT Dumper specifications.
Fig 10.285. Existing Upper Quarry topographical profile.

Fig 10.287. Upper Quarry structure diagram.

731 Paola Sanguinetti and Chad Kraus, "Thinking in parametric phenomenology" (ACADIA Regional 2011: Parametricism: (SPC), University of Nebraska-Lincoln College of Architecture, 2011).

732 Luis E Fraguada and James Melsom, "Code matters: Consequent digital tool making in landscape architecture," in Codify (Routledge, 2018); Hurkxkens and Bernard, "Computational terrain modeling with distance functions for large scale landscape design." 2018

733 Connolly, "101 Ideas About Big Parks," 27. Emphasis in original.

734 Ibid.

Others have attempted to use 'phenomenological inputs' to a parametric system – though this still focuses on the internal logic of the algorithm and not the world itself.⁷³¹ This study – even just slightly – opens the door to thinking how aesthetic information as affectual spatio-temporal relations can be integrated into a parametric system.

Due to time and scope limitations, this avenue was not explored further in practice though several trajectories have been considered:

- Currently, this lab used the viewshed tool in Bison to create a design-analysis-design loop. This is done without any categorisation within what is shown i.e. close, mid, and distant visual relation. Much of the experience of landscape is determined by how we visually reference ourselves to the environment. The viewshed could be modified to show distance parameter set by certain tipping points (close enough that I can haptically feel the roughness of the rock, far enough away that the vegetation turns into an abstract colour).
- The geometric parameters discovered and experimented with in labs 1-3 lend themselves well to parametric modelling as they can all readily be represented in that system. Once a series has been discovered through fieldwork and analysis, they can be translated into material that a system like Grasshopper can manipulate in relation to each other. The landform manipulation done in analogue form in lab 1 could very easily be imagined to be more rapidly explored in this way. The important factor here is that this aesthetic 'spatial relation data' is discovered through encounters.
- Topographical design can be rapidly experimented with. Consider the desire to have no 'lowest point' in lab 3. This could be defined as a rule in a parametric system, perhaps combined a series of high points and buffers around each of them. This has been a technique explored in greater detail by academics at ETH Zurich though it appears that it has largely limited to technical computation – not including aesthetic or other forms of knowledge.⁷³²

Bigness and the Public Park

Connolly points out that in big parks "form and function are somewhat useless terms" as there is at once no separation and simultaneously drive and feeding off one another.⁷³³ "There is **no separation between function and aesthetics**".⁷³⁴ It is tempting to distribute as many activities as possible throughout a big park as a means to control its spatio-temporal extents. Driven by stakeholder interactions determining a seemingly infinite list of activities the park should play host to, the landscape itself fades away as it becomes cluttered with an equally infinite degree of objects. Big parks, as expressions of publicness trap the designer into delivering a programmatic object for everyone. However, big parks are antithetical to objects. They do not care for the playground, the obstacle course, the rotunda, or the painted path. Whilst they may contain a number of these, big parks are an *expression of the landscape itself*, not the programmes it hosts.

Fig 10.288. Upper Quarry re-vegetation species.

Fig 10.289. Upper Quarry design move plan.

Cutting a series of benches in the existing hill allows for some measure of cut to be maintained without removing the landform entirely.

Revegetating the slopes, particularly with taller species at the foot of each bench allows for a consistent 'wall of vegetation' to be established. This hides the bench forms and maintains the perception of the valley being relatively closed in compared to the wider quarry.

Fig 10.290. Initial bench and vegetation structure section drawings

Section Cuts at 5m intervals

Section Cuts at 5m intervals

Fig 10.291. Original v Designed topographical profile.

735 Meyer, "Uncertain Parks: Disturbed Sites, Citizens, and Risk Society," 62.

The three spaces at the northernmost end of the quarry (the re-vegetated bench (area 9), grassy mounds (area 10), and the upper bench (area 6 & 7) shown in Figure 10.276 contains the few programmed areas and objects within the park, barring the small amount on the adjacent lower bench (area 1,2 & 4). Their presence is downplayed and obscured by dropping them into the topography or placing them at points where the landscape itself takes centre stage. This is possible due to the extreme nature of the topography here. Meyer argues that large parks that focus on programmed and scenic opportunities function as “a form of amnesia, a practice of forgetting site histories...hidden under a thin green veneer of grass asphalt...a form of forgetting and deception”.⁷³⁵

Early on in this larger design project, it did not feel right to clutter this landscape with the usual trappings of a public park – yet the intent was still to give a sense of immense publicness. This became challenging when coupled with other decisions like the exclusion of referential objects within the lower quarry. Even though the Upper Quarry contained a series of these objects and programmed areas, its main purpose was for the experience of this landscape, through movement, activity, or from still contemplation. The landscape escape itself elevates the sporting and recreation activities found on the various benches. They heighten the experience of both recreation and landscape. The rock face at Estádio Municipal de Braga elevates the intensity of the football, the game and the landscape come together in a process of becoming to form something greater than either component alone. The Minack Theatre in Cornwall, England is perched on the precipice of the cliff – the tension of the edge heightens the dramatic performance. Vincent Scully shows that ancient Greek temples were situated

Fig 10.292. Estádio Municipal de Braga. Leon L. 2011.<https://flic.kr/p/af9hhs>. CC BY 2.0.

Fig 10.293. Minack Theatre, Cornwall. Duncan C. 2019. <https://flic.kr/p/257H42F>. CC BY-NC 2.0.

Fig 10.294. Temple of Apollo, Delphi. Dan Lundberg. 2018. <https://flic.kr/p/29HJPEc>. CC BY-SA 2.0.

736 Vincent Scully, *The earth, the temple, and the gods; Greek sacred architecture* (New Haven: Yale University Press, 1962); Vincent Scully, "The Earth, the Temple, and the Gods: Greek Sacred Architecture. Addenda," *Journal of the Society of Architectural Historians* 23, no. 2 (1964).

737 Meyer, "Uncertain Parks: Disturbed Sites, Citizens, and Risk Society," 82.

738 I am somewhat reminded of Ciro Najle's recent text on this matter, though he does not appear to treat aesthetics seriously. Instead he does show the power of iteration and shock in the design process. Ciro Najle, *The Generic Sublime* (Actar, 2016).

and designed in a way that feeds off and amplified the experience of the surrounding topography.⁷³⁶ Meyer offers us a closing remark on the publicness of big parks:

*Large parks affect us differently in that we experience the particular configuration of their physical forms through our bodies and through spatial practices dispersed across vast ecological fields or landscape matrices. Therein lies the unique role and promise of large parks.*⁷³⁷

Implications for Operationalising the Sublime

This lab is different from the others in that it involves an initial inquiry into the relationship between parametricism and landscape aesthetics. This alone has significant implications in how the sublime can be designed. Lab 2 showed how an aesthetic efficiency can be developed in the design process by using variabilities. This lab, though only briefly, shows that this can be expanded by using tools such as Bison. In the reflection, this process was further speculated on, making clear the necessity that the relations translated to parametric software must be discovered and derived from *real* encounters. It seems somewhat perverse to suggest that the sublime could be manipulated by detached, and autonomous, processes of digitalia. This is *not* some romantic longing for analogue tools. Rather it is a critical wariness of the tendencies of parametricism to remove the designer from the middle.

The act of designing within this lab, and others, has been significantly time consuming. Not the drawing of final representation, but working through design decisions, questioning what move engages with the encounter best or most strongly. Doing so, I found myself limiting my options, following a line of investigation to its end before changing. Parametricism, if aesthetically connected like this research proposes is possible, has the capacity to radically shake up this process. It has the ability to *shock* the designer with what is possible by rapidly developing speculative landscape forms. The potential here is immense; lurking just beneath the surface.⁷³⁸

Fig 10.295. Looking south through the Upper Quarry.

LAB: Urban Development

Urban Game Playing

What does adding an urban dimension to the scheme offer to the sublime? How can this be leveraged into a *public sublime*?

Aims/Objectives

To propose an urban development that is able to engage with the sublime dimensions of the quarry without compromising the viability of either development, quarry or proposed infrastructure. This experiment was set up to provide a 'sense of life' directly adjacent to the quarry in a way that provides a critical density of population around it that may make it a part of their everyday lives. However it is not purely complementary to the quarry project, it initially set out to question an urban sublime of the everyday

Hypothesis

That a public sublime can be generated at an urban level via employing development and landscape driven links between it and the quarry so that one bleeds into the other and vice versa. A public sublime may exist at two levels: an everyday and the more extreme.

Tool(s)

Urbanism, large format analogue plan, layering.

Method(s)

Generate an urban development adjacent to the quarry based off sublime landscape affects via large format analogue drawing.

Background

This stage of the research initially occurred during the middle stage of the MLA work and was later put aside for a significant period of time. The form that was generated from that early stage was not re-used but the initial generative landscape relations and diagrams were carried forward. Fieldwork on the Lincolnshire site was also conducted at this earlier stage and once more in late 2018. In late-2018–early-2019 this lab was revisited and interrogated again based on the discoveries of the previous and concurrently operating labs in the quarry itself.

Fig 10.296. Urban Development lab location.

739 During 2018 there was significant doubt that this project would go ahead after a business case review by NZTA. The decision was made to still include it in this scheme despite whether this was the case or not as it could show the benefit beyond what the business case may look at. As of late 2019 the review is still undecided though it is suggested the project will go ahead but in a reduced or rerouted form.

Rules and Context

The following rules and assumptions were set up to structure the design work of this lab:

- The basic structure plan of the Lincolnshire Farms development by Wellington City Council will be used as a starting point and not be taken as fixed
- Drawings sourced for the final stage of the Woodridge development will be used as a base and tweaked to improve outcomes related to the lab’s hypothesis
- A higher density than the structure plan suggests will be proposed
- A more ‘landscape sensitive’ approach will be used – letting the landscape drive the structure instead of being a field upon which the plan is laid across
- No housing inside or directly adjacent to quarry extraction areas
- No housing areas to be visible from the quarry or major landscape areas such as the gullies
- Moving the suburban centre towards the northern tip of the quarry. This allows greater public life and activity to occur in and around the quarry park.
- Assuming more future-oriented forms and structures of transport i.e. far less reliance on personal cars, more public transport, bikes, electric bikes/ scooters
- Protect the existing rural character and lifestyle of the existing Horokiwi residents
- Assume that the Petone-to-Grenada North (P2GN) road is implemented based on the concept plans available as of 2016–2018⁷³⁹

The initial structure plan for Lincolnshire Farms shows a typical low-density transport-oriented-design structure where density of development and services is increased at the central point with suburban and rural densities radiating away from this central point. Whilst there is little wrong with this as a concept, the way it has been employed within this early plan shows little sensitivity to what the landscape has to offer at an urban level. The inclusion of civic services, higher density residential, commercial, and industrial/employment activities as part a sustainable and resilient development is beneficial to the overall scheme and as such have been carried forward, albeit in a slightly different form.

Fieldwork Log

Initial fieldwork was conducted in mid-2016 where I was able to walk across the farmland that will eventually become host to 800–900 dwellings. The intent behind this fieldwork was to discover what this landscape ‘does’ in the same manner as the fieldwork in the quarry. Fieldwork can provide knowledge that only it can discover which then can be spun off into something new or interesting even if working at a diagrammatic level.

The flatness of the image betrays the topographical reality. Other schemes have furthered betrayed it. How can we let this be?

Contrasting gullies and fields.

Slowly being bracketed by housing and infrastructure.

If this is to be a part of the city, how can it be a part of the quarry too?

Fig 10.297. (Opposite) Lincolnshire Farm context aerial.

Fig 10.298. Lincolnshire photography study 1.

Fig 10.299. Lincolnshire photography study 2.

Fig 10.300. Lincolnshire photography study 3.

Fig 10.301. Upper Quarry distance relationship to Lincolnshire, with Ridgeline barriers impeding movement.

Fig 10.302. Original Lincolnshire structure plan. adjusted from:
Wellington City Council, Lincolnshire Farm Structure Plan.

Fig 10.303. Designed Lincolnshire structure plan.

After jumping some farm fences, what was before me was something radically different than the material I had been working with previously in the quarry. Instead of the rigid geometries and materiality of the rock benches, what unfolded across this landscape was something much closer to what might initially be categorised under *the beautiful*. The topography smoothly rippled and folded on itself creating smooth gradients of gullies and spurs between each other. The sky was entirely open above, the horizon lines stretched as far as the eye could see, leaving the gaze open to searching for familiar landmarks in the far-off backdrop. Here the topography was equally impactful on its initial encounter as the quarry's was, just on a different mode. I could feel a sense of movement in the topography itself, the way it slipped and folded from the series of high points that separated this area from the quarry and views of the harbour. This feels like a seriously large landscape because of extensive horizon lines far off in the distance but also that the close and medium grounds were never fully open and knowable. The folds and gullies obscured much of what you might reference against in the middle distances suggesting there is much more here than is immediately apparent. Such a distributed field of known and unknown distorts the sense of scale and ability to know just what was here. A sense of mystery – though not a dark and obscured one.

The topography – its folds, crests, gullies, the gradient underfoot, the view over it – feels incredibly large. Even on-site I struggled to think of a measure or design move that could organise it. The gullies plunged out of sight, their scope and feel largely mysterious. The high areas too felt unknowable as the rising and falling topography betrayed any sense of knowing what lay beyond the crest.

Fig 10.304. Housing layout study.

Fig 10.305. (Left) Oataru, New Zealand and (Right) Hillsborough, New Zealand topography and housing relationship diagram.

Fig 10.306. Initial Lincolnshire development earthworks at the Grenada end. <https://www.waterfordpress.co.nz/business/russell-properties>.

740 Wellington City Council, Lincolnshire Farm Structure Plan (2006), 4, <http://wellington.govt.nz/~media/your-council/projects/files/linc-structureplan.pdf>.
741 Ibid., 40-47.

The ground condition radically changes between the upper and lower part of the folds. In the upper, it remains firm and consistent with each step. This consistency allows you to take in the wider surroundings as you are trekking across the topography. The lower areas are soft and laden with water. The erosion processes that formed these gullies can be felt underfoot. The soft surface creates a sense of uncertainty underfoot, each line is chosen carefully as the wider scene fades away.

Walking through and along the gullies was more interesting than walking along the higher areas. The softer ground conditions, the sense of the time taken to form these gullies, and the way in which you would follow the contour of the topography gives a sense of moving with the landscape. Walking this way, following a consistent *perceived contour* along the gully, at a given depth from the rim gives a sense of seclusion and removal in an incredibly large and open landscape. There is a very fine tipping point for this where this ceases to occur – approximately 1.5m from the rim of the gully.

This is even more evident in the smaller, more shallow depressions. Here the vegetation is smaller and in a more emerging state. As you move into the gully the wider landscape drops away at the same time the grasses, flaxes, and small shrubs begin to appear. The further you go down the larger and thicker the vegetation becomes. Your bodily sense of scale changes drastically in an unexpected manner as you move from the rim to depths. The excessive scale of the landscape gives way to the material texture of grasses, the distinct forms of flax, and the intimacy of the gully as it wraps around you.

Design Practices

The area known as Lincolnshire Farm has been designated as an area to be developed under the Wellington City Council Northern Corridor development plan. According to the Structure Plan, the area is intended to host 800–900 households, 45 hectares of business activity, both supported by the major roading link provided by the Petone-to-Grenada-North Highway (P2GN).⁷⁴⁰ As of mid-2020, the only publicly available drawings for this scheme are those found in this 2006 Structure Plan.⁷⁴¹ The proposed structure in these drawings is fairly typical of 2000s Transport Oriented Design (TOD) developments – a dense centre for both housing and employment, with the intensity dropping from the centre to periphery (Figure 10.300). This structure serves as a launching point in gauging the scale and types of activity this development includes. However, its layout is largely ignorant of the landscape, in particular the topography. This lab attempts to address this issue through developing a (limited in resolution) alternative that engages with the singular nature of this landscape in the service of establishing public life links between this area and the adjacent quarry.

Finding a productive and concrete way into designing a piece of city on this site initially proved difficult. The topography itself seemed to

Fig 10.307. Hobsonville Point, Miramar, Johnsonville, and Mount Victoria housing-topography typologies used throughout study.

Fig 10.308. Private/mixed/public space analysis of options.

Fig 10.309. Precise use of vegetation to block view of structures

Fig 10.310. House-Path typological iterations.

Fig 10.311. House-topography-vegetation assemblage experimentation.

Fig 10.312. (Opposite) Gully edge sight-lines and extent of your 'world' changes as you move up and down the slope, aided by little terraces.

Fig 10.313. Gully structure in relation to quarry and infrastructure.

Fig 10.314. Proposed scheme 1 housing layout.

resist any reasonable ordering device drawn over it. Initial plans earlier iterations focused on designing suburban relationships between landscape, housing, and shared/common spaces (Figure 10.301-302, 306-307, 311-314).

These initial schemes, even at a restrained scale and resolution, showed the difficulty of arranging housing, infrastructure, and public/shared space on this wildly varying landscape. Fitting in building footprints in a way that is both economically and landscape sensitive proved difficult.

These two initial schemes uncovered several lines of friction through their design, which are then later turned into 'design rules' for following iterations:

1. Density must be higher on the topographical edges. It should provide an exceptional view to as many people as possible.
2. Where possible, a shared access route shall also occupy the topographical edge on the 'gully-side'.
3. Significant pieces of topography (such as high points, saddles, gullies) should be reserved from housing and infrastructure.
4. The gullies, both major and minor, shall be used as pedestrian movement routes.
5. When moving through the gullies on these access routes, the exterior housing should not be visible.
6. Where the topographical edge along gully deviates significantly, a shared public space in the form of a parklet, communal barbeque area, a small lookout will be allocated. Each of these areas will provide access to the pedestrian movement routes through the gullies, towards the suburban centre, to other suburbs, and to the quarry itself.

Using these rules as the foundation for an urban scheme, a *landscape-driven urbanism*, a site-wide scheme was drawn up. Initially, this took a diagrammatic form, locating roads, tracks, and development areas to determine a 'logic of life'. By constructing an urban diagram, the flows and rhythms of life can be drawn out and speculated on with a degree of certainty based on lived experience and designerly intuition. Given that this urban scheme is working together with the remediation of the quarry, given its approximately 20–40-year life span left, we can assume that daily life will have changed drastically. For example, individuals are likely to be working less, if at all, given the rise of robotics; an increase in small electric transportation; less personal large vehicles; more telecommuting leading to an increase of time spent in one's community.

These shifts suggest that there will be more time spent engaging with one's more immediate landscape, which this scheme looks to take advantage of. TOD schemes weight the density of development towards the centre under the (rightful) assumption that it allows more people to access services they need. As shown in Figure 10.319, the suburban

742 Landscape here is used in the disciplinary sense, involving the urban realm, infrastructure, roading, transport, and of course the natural landscape.

743 At this point these areas where the topographical system changed began to be thought of as points of catastrophe, per Sanford Kwinter's essay. Kwinter, "Landscapes of Change."

centre and a degree of development density are weighted towards the east where it intersects with the edge of the quarry. Doing this allows for the daily suburban rhythms to be drawn to the edge of the quarry and possibly into it. Not doing so would leave the quarry as an untended landscape – falling outside the flows and practices of the city. This is already evident by the number of people that are surprised to learn there is a quarry, let alone one of this scale, pinched between two cities. From any point in the suburb, it is possible to walk exclusively via these gully tracks to this centre or the quarry – and quicker routes are available if short sections are taken along the road between larger gully routes.

Based on this diagram, detail began to be added to the scheme via a series of plans at a scale of 1/1500 on A0 sheets. This scale proved fundamentally important. 1/1500 allowed a fine balance between being able to think at the instrumental planning scale and feeling as though I have the power to consider or design on-the-ground relations between body and landscape. Drawing at this scale using analogue tools gave me a feeling of greater certainty in what the marks on the sheet meant – both through being able to more readily recall past affectual empowerments and in the slower pace that such tools demand.

As a landscape architect, my focus was less on the particularities of the housing layout, instead weighted on the interactions between housing (private life) and the landscape (public life).⁷⁴² Design focus was further limited to the areas closest to the quarry with the understanding that the western areas could have the same techniques applied later. The points of topographical differentiation identified earlier were the starting points. The viewshed from each point was generated using ArcGIS and then traced on the large sheets – the information being traced was restricted to the extent of the gully from each differentiated point.⁷⁴³ This defines a visual catchment for each shared space – defining a piece of the landscape with others. A 200m and 400m radius is drawn from each point to highlight an immediate and close catchment for each area and to identify the density of these collective areas. Each should feel collectively owned by the immediate residents and shared ownership of the wider grouping.

Roads are laid out roughly following the contours so that each spur/high area was populated with housing. Using printed out aerial imagery of existing developments (Hobsonville Point, Johnsonville, Miramar, and Mt Victoria from New Zealand, and several examples from the developments surrounding Sydney Harbour), a collaging approach was used to arrange building footprints. These examples were chosen for how housing is arranged across highly variable and steep topography, as well as a higher degree of density. Hobsonville Point is useful for its mixture of medium density typologies and street-house scale arrangements.

SHARED ZONE:
THE SUBDIVISION OF ALLOTMENTS
COMPRISES AN ALLOWANCE FOR SHARED
SPACE AT A PROPORTION 1:4

SHARED ZONE: CENTRALISED CARPARK IN SHORT TERM

**SHARED ZONE: COMMON OPEN SPACE AND RECREATION
FACILITIES IN LONG TERM**

Fig 10.317. (Top) 'L-Type house' site plan showing shared road and spaces, and access points. Shane Murray et al., *Infill Opportunities Design Research Report*, 12.

Fig 10.318. (Bottom) Subdivision strategy showing access and shared space allocation. Shane Murray et al., *Infill Opportunities Design Research Report*, 10.

744 Shane Murray et al., *Infill Opportunities Design Research Report*, Monash University (2011).

745 I first encountered this form of gully-back fence-sociality assemblage when doing fieldwork with an MLA colleague, May Jan Macintyre in Hamilton New Zealand. The extent to which some residents would appropriate the Kirikiriroa gullies was astounding and provided valuable insight to these social landscape formations. May Jan Macintyre, "Hamilton's Kirikiriroa Gully: Engaging with waterway social life from the ground up" (Master of Landscape Architecture Victoria University of Wellington, 2017). Also see Connolly's studio work at RMIT for similar conditions in Melbourne, Australia.

Where the shared spaces are not adjacent to a road, secondary access and housing arrangement are employed. The typologies and spatial arrangement are taken from a Monash University study on infill opportunities and employed to create further density on difficult terrain, as well as creating a more socially and movement permeable suburb (Figure 10.316-317).⁷⁴⁴ This model allows for a significant increase in density through semi-detached housing that caters for private parking and significant amounts of shared space.

The curvilinear layout of the roads never seemed to sit 'right' with me. Despite their careful layout and ability to develop on either side – what seemed to be the correct way – the adherence to the topography felt wrong. After surveying the drawings so far in this lab it was clear that the higher ground, the 'not-gullies' was really of little interest to me beyond acting as space to fill. The landscape could be drawn into a figure-ground-like diagram. Gully and not-gully (Figure 10.318-319)

A more radical and diagrammatic approach was taken where the upper topography was appropriated by a rigid grid structure that is broken by the gully forms and significant high points (Figure 10.320). The gullies as figure are laid down first as sacrosanct areas. Using the P2GN highway as the edge, a 200x100m grid was laid down to establish the major structure with the lines stopping where they encounter the gully-figure. In cases where a complete (or practically so) 200x100m grid is formed, it establishes an internal 100x50m grid. Outside of these areas, the 100x50m grid is continued in a non-uniform manner allowing for low densities away from the established complete grids. The complete 200x100m grid areas are established as areas of medium density, whereas the remainder is low, but not rural, density. The suburban centre is still established at the northern tip of the quarry where it uses the tighter grid system. The grid structure is a counterpoint to the continuously warping topography. Through contrast, both forms are amplified. Black on white is blacker than on grey. Whilst the footprints in this scheme are undefined – it is imagined that they're readily fitted into the topography – typical of Wellington's suburbs. The rectilinear infrastructure orders and measures the landscape – yet does not breach the boundary of the gullies suggesting a limit of control.

This approach does not privilege the topographical points that determined the original placement of the shared/communal spaces – though they tend to coincide with the terminal point of a road. This layout instead privileges a more 'back-fence' appropriation of the gully. This is less formal and relies on individuals and collectives taking some ownership and agency of certain stretches. Conditions like this tend to emerge by themselves and are often areas of rich social-spatial interaction.⁷⁴⁵ Designers can only provide the conditions and hope for it emerge with time.

Both schemes sought to work with the sense of disparity in scale and relation to the landscape that was first encountered in the gullies. The

Fig 10.319. Gully-Development links diagram 1.

Fig 10.320. Gully-Development links diagram 2.

Fig 10.321. Lincolnshire Urban Schematic Plan (SD:29).

746 Smithson, "Frederick Law Olmsted and the Dialectic Landscape."
747 Ibid., 119.
748 Ashfield and de Bolla, The Sublime: A reader in British eighteenth-century aesthetic theory; Meyer, "Seized by Sublime Sentiments."
749 See Nye, American technological sublime.
750 Landscape architecture tends to be wholly more public than architecture – its designed products are very rarely held behind the veils of capitalism. Douglas Spencer, The architecture of neoliberalism: How contemporary architecture became an instrument of control and compliance (Bloomsbury Publishing, 2016).

connection to the land, its soil, moisture, and slope, was vividly present here. The design work focused around providing a connection to and through these gullies as the primary form of pedestrian movement and collective (neighbourhood) space. The experience of this *minor* or *everyday sublime* is a key driver in this urban structuring. A collective experience of the sublime is provided by allowing easy and open access for suburban *minor* and the *major sublime* of the quarry. Rhythms of suburban life are oriented towards and through the quarry. Grocery shopping, everyday and more significant recreation, fish and chips with a view, coffee with friends – all of these occur at the precipice of the quarry. It becomes part of the public life and psyche. Life in Woodridge and Lincolnshire is fundamentally entwined with the sublimity of the quarry and the surrounding landscape in much the same way that the life of Manhattan is conditional to the experience of Central Park.

Reflection

A Public Sublime?

The investigation into a public sublime was established at the beginning of this research through a reading of Robert Smithson's essay "Frederick Law Olmsted and the Dialectic Landscape".⁷⁴⁶ This work highlighted how Manhattan appropriates and intensifies the expression of the sublime found in Central Park. He writes that it is not "a 'thing-in-itself', but rather a process of ongoing relationships existing in a physical region".⁷⁴⁷ This is in contrast to the overwhelming private portrayal of encounters with the sublime found within 18th and early 19th century discourse, and even within Meyer's writing.⁷⁴⁸ As previously discussed, David E. Nye introduces the notion of a public American technological sublime, though this has its limitations in the context of landscape design. Notably, it relies on an event (normative sense) and spectacle which quickly erodes its novelty into banality.⁷⁴⁹⁹

Right at the beginning of this research, when it was an MLA thesis and not yet a doctorate, I had the gut intuition that the sublime as I understood it could be transformed into a radically public experience through design actions. At that point there were only sketchy thoughts about a form of urbanism around or in the quarry – I had not yet discovered concrete techniques or other designer-thinkers who had grappled with this. Later after reading Meyer's "Beyond Sustaining Beauty", coupled with Smithson's essay, I had begun to develop an understanding of this *public sublime*.

This scheme sets up experiences of the sublime to be an event that can be encountered every day – wholly public and not partitioned by programmed activities or commercial boundaries.⁷⁵⁰ It works with the daily rhythms of the suburb, the city, and the region by situating points of access, movement, activity, and rest in relation to what the landscape does. Meyer describes a similar approach as "calibrating the density, proximity, accessibility, and distribution of landscape spaces and surfaces relative to the desired effect of that strike on the individ-

Fig 10.319 *Lincolnshire Urban Schematic Plan*

750 Landscape architecture tends to be wholly more public than architecture – its designed products are very rarely held behind the veils of capitalism. Douglas Spencer, *The architecture of neoliberalism: How contemporary architecture became an instrument of control and compliance* (Bloomsbury Publishing, 2016).

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Fig 10.319 Lincolnshire Urban Schematic Plan

746 Smithson, “Frederick Law Olmsted and the Dialectic Landscape.”

747 Ibid., 119.

748 Ashfield and de Bolla, *The Sublime: A reader in British eighteenth-century aesthetic theory*; Meyer, “Seized by Sublime Sentiments.”

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751 Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto,” 36.

752 Lone Bertelsen and Andrew Murphie, “An Ethics of Everyday Infinities and Powers: Felix Guattari on Affect and the Refrain,” in *The Affect Theory Reader*, ed. Melissa Gregg and Gregory J. Seigworth (Durham & London: Duke University Press, 2010).

753 Ibid., 141.

754 Connolly, “101 Ideas About Big Parks,” 24.

755 Nigel Thrift, *Non-representational theory: Space, politics, affect* (Abingdon, Oxon: Routledge, 2008), 171.

756 Ibid., 172. See stratum XX.XX for discussion on Corner’s limited ability to engage with affects.

757 Waldheim, “Landscape urbanism: a genealogy.”; Waldheim, “Landscape as Urbanism.”; Waldheim, *Landscape as Urbanism*.

758 Chris Reed and Nina-Marie E Lister, *Projective ecologies* (Harvard University Graduate School of Design Cambridge, MA/New York, 2014); Waldheim, *Landscape as Urbanism*.

759 Allan, “Feeling indeterminate: the experience and design of big landscapes.”; Connolly, “An affirmative open systems conception of how to design landscape.”; Meyer, “Sustaining beauty: The performance of appearance.”; Meyer, “Beyond Sustaining Beauty: Musings on a Manifesto.”; Thompson, “Ten tenets and six questions for landscape urbanism.”

ual and collective body. Those affective strikes would occur during the socio-ecological practices of everyday life”.⁷⁵¹ Whilst Meyer’s approach is oriented towards establishing a greater socio-cultural sensitivity towards the environment, her thoughts on the affective relationship between landscape and both individuals and collectives are relevant. Most importantly for this research, it is her working through a “social aesthetics”, developed from work by Lone Bertelsen and Andrew Murphie that offers some insight into the public sublime developed here.⁷⁵²² Bertelsen and Murphie argue through Felix Guattari that the everydayness of affect needs greater attention, especially in its ability to establish ‘subjective pluralisms’.⁷⁵³

Big parks are inherently oriented towards the collective.⁷⁵⁴ These schemes show that designing can establish the conditions to allow for a subjective pluralism built on the experience of the sublime. As Nigel Thrift points out: “Cities can be seen as roiling maelstroms of affect” – and we can certainly include the sublime in cities, or parts of them, where it emerges.⁷⁵⁵ This inclusion of the sublime (and of affect) would not fit into the discourse and practice of SBD due to a “residual cultural Cartesianism”, despite what Corner and others argue.⁷⁵⁶

After conducting extensive fieldwork at Central Park, NYC, I have a strong handle on the role that the park plays in the city and vice versa. What I learnt there – how the city feeds of the sublimity and its affectuality – directly informed how I structured these schemes. The quarry park and its wider landscape needed to feel as though it could be found around any corner. It needed to feel at once both wholly *collective* and an intense *personal* encounter with something greater than yourself. The rhythms of the suburb and the city must intersect and run adjacent to it – any reason to include it in your everyday movements.

The time I had spent in NYC was fundamental to how I viewed what a public park was. Both Central Park and Prospect Park radically shook up my perception of publicness and the scale of life that designed landscapes can play host to. It is my hope that these two schemes can create a degree of that through the sublime in a similar way to Olmsted.

Landscape-driven Suburbanism

Landscape Urbanism established itself as a dominant discursive field through its argument that it would approach urbanisms through a landscape lens – in other words, the field instead of the object or figure.⁷⁵⁷⁷ However, this approach has been shown to only address landscape in a very limited sense. Neither *Landscape as Urbanism: a general theory* or *Projective ecologies* – both manifesto-esque – address the aesthetic, social, and political events of landscape beyond a narrow ecological lens.⁷⁵⁸ This has been an established failing by SBD and has not as yet been addressed by its proponents.⁷⁵⁹

This piece of designed city has been designed and operates in a very different way to landscape urbanist schemes. Such works, as shown in

760 Marot touches on many of the same notes, though does not include the sublime explicitly. Marot, *Sub-urbanism and the art of memory*.

761 Manuel De Solà-Morales, “The Culture of Description,” *Perspecta* 25 (1989). See also Manuel De Solà-Morales, “Una cartografia per il territorio catalano/A cartography for the Catalan Territory,” *Lotus International* 23 (1979).

762 De Solà-Morales, “The Culture of Description,” 16.

763 Ibid., 16-17.

Stratum 3, tend to focus on infrastructure and constructed natural systems – the fields which are claimed to be the material of landscapes. In contrast, lab presents a scheme that offers suggestions on designing with aesthetic-intentions at an urban scale. It does so by considering how public and private life – and gradients in-between – might engage with topography designated for development as well as the relationship to the quarry. It would be easy for a scheme, including the official proposal, to never connect to the quarry given that it is hidden behind a ridgeline, with no major paths, roads or activities engaging with its edge. This design structures the life of this settlement around the pre-existing landscape.

The grid avoids engaging with the topography entirely except where in deference to the gully boundaries. By its very nature, the grid orders this landscape through horizontal control and rhythm. Drawn on paper, it does not care about the verticality of the high ground, its dips, and folds. This disinterestedness highlights the *depth* of the gullies – literal and in terms of encounter. Whereas the first scheme based on *fitting into the topography* was sensitive to both depth and height, it seemed to weaken both. This second grid-based scheme intensifies the depth of the gullies and the height of the ridgelines, at the same time not homogeneously colonising the landscape’s surface thanks to its regular discontinuities.

This structure intensifies the landscape is coupled with smaller moves that orient the rhythms of life. The previously described micro-parks or community shared spaces at points of inflection, coupled with shared walkways, and distributed access points to the gully network all work towards making this landscape experience as public as possible in a suburban setting. The grid’s major axis is aligned to the quarry’s northern tip where the roads lead to the suburban centre – shops, fish and chips, post office, and employment, all at the edge of the quarry. It makes for a landscape-driven suburbanism that focuses on the everyday rhythms of life and how the singular nature of a landscape can engage with that.⁷⁶⁰

Mapping territory – a missed relation to Morales

The large-scale analogue plans focus on extracting potential from the gullies by considering their topographical and vegetative composition, alongside the latent bodily-memory of this place. These plans, though only an initial foray and certainly not as explorative as they could be, are perhaps best reflected upon in relation to the drawings in Manuel De Solà-Morales’ *The Culture of Description*.⁷⁶¹ This work by the Laboratori d’Urbanisme de Barcelona (LUB) in the 1970’s, one of the earliest systematic designerly engagements with mapping, operates as both map and propositional plan by tracing cartographic material at a large scale to “provide an understanding of the territorial composition of each settlement”.⁷⁶² Morales describes these as an opposition to “mechanical maps” which have an inherent “thematic reduction” ill-suited to design propositions.⁷⁶³

764 Ibid., 17.

765 Ibid., 18.

766 Connolly, “An affirmative open systems conception of how to design landscape.”; Corner, “The Agency of Mapping.”; Evans, Translations from drawing to building and other essays; Meyer, “Landscape Architecture as Modern Other and Postmodern Ground.”

Morales makes an incredibly profound statement that highlights a fundamental struggle within landscape design practice: “The problems of the drawing of each map were connected to the problems of each territory’s own identity and structure.”⁷⁶⁴ Morales here is describing the fact that the design of landscape *requires* innovation and customisation in each project – from site to site, scale to scale, and type to type in relation to each territory’s identity and structure. One line-type over another, to draw roads or not, hatching terrain here but not there. “To draw is to select, to select is to interpret and to interpret is to propose.”⁷⁶⁵ Remarkably similar to Corner’s ideas on mapping.

I wish I were more aware of this work by LUB when I was exploring the work in this lab. Reflecting on both my plans, and these mappings of Catalonia, that whilst I had limited the scope in a pragmatic sense, had I known I would have explored this area more rigorously. Even though they are not similar in scope, scale, or level of craft to the work by LUB, the mapping of the gullies provided my practice with a way to orient this suburbanism towards engaging with the landscape instead of muting it. In this way, Morale’s comments rang true – avoiding mechanical maps allowed the landscape to speak during the design process. This highlights that drawings *do* things, just as Connolly, Corner, Meyer, and Robin Evans have argued.⁷⁶⁶ Had I given myself the time and space to explore this more in relation to LUB’s work I can speculate that stronger relationships could have been established between suburban life and the landscape upon which it sits.

Implications for Operationalising the Sublime

This lab worked towards mustering a degree of publicness in sublime nature of the Horokiwi Quarry. In this there are obvious cross-overs with the overall design project as a whole, and in particular lab 4. The development scheme here leans into neo-liberal forms of development, twisting and altering such tendencies where possible to extract something more from them as a landscape architect. The notion of a public sublime here is treated somewhat differently than others have tended to think of publicness. David Nye’s idea of a public sublime involves an event, gatherings, and spectacle. Other design projects which orient towards similar aspirations also rely on a use of representation that shows the landscape as a public spectacle. In contrast, this lab approaches the public sublime as an everyday encounter, where the quarry park feels part of the everyday life of the surrounding residents. This attention to ‘everdayness’ is lacking in contemporary discourse and is left almost entirely unattended to by SBD practices. This lab hopes to show that whilst the sublime may operate in extreme forms within the quarry, its presence can be involved in the life of the city, not as something *other*, but as something shared.

LAB: Quarry-wide Moves

Movement, Views, Horizons, Shifts

Creating a park through and around the established design studies, through internal and external movement.

Fig 10.322. Whole quarry before and after.

2016 - Horokiwi Quarry

—

20XX - Horokiwi Park

Fig 10.323. Original vs proposed Horokiwi quarry topography.

Horokiwi Quarry Topography - 2016

Proposed Horokiwi Park Topography

Fig 10.324. Original vs proposed Horokiwi quarry topography.

Fig 10.325. Controlled slippage on crown hill.

Fig 10.326. Large scale design move diagramming.

**A park of countless
different worlds.
Differentiated by
topographical surfaces
which divulge the
geological and intensive
depth from which the
landscape emerges.**

Fig 10.327. Horokiwi Park Schematic Plan (SD:30).

- 1 Coastal edge platform and raised access from Petone-Ngaauranga cycle-walkway
- 2 South entrance to Quarry through corten structure – removing all references to exterior landscape
- 3 Quarry ‘lake’ provides the atmosphere of the coast into the quarry itself. Bottom is walkable
- 4 Tailings pit converted to grass/tussock bowl with cleared center
- 5 Access to Upper Quarry via repurposed Haul Road
- 6 Lower Quarry base constructed of a series of tailings mounds replanted with grasses/tussocks
- 7 Partially excavated Crown Hill – revegated with vegetation
- 8 Lower Recreation Bench – static activities and 1 medium sports field
- 9 Upper Recreation Bench – series of multipurpose sports fields and spectator seating
- 10 Tussock grassland with seating and tables dispersed throughout – connects to Lincolnshire
- 11 Steel mesh structure sits above large, loose, rock field – removing contact with the quarry’s surface

Fig 10.328. Rendered Lower Quarry plan.

The Lower Quarry. Moving and moving and moving and moving. Your body and the landscape all around. Composed by extraction, time is both revealed and destroyed as you move through.

- 1 Coastal edge platform and raised access from Petone-Ngauranga cycle-walkway
- 2 Grade separated pedestrian access from carparking at bottom of Horokiwi Road
- 3 South entrance to Quarry through corten structure – removing all references to exterior landscape
- 4 Tailings pit converted to grass/tussock bowl with cleared center
- 5 Quarry 'lake' provides the atmosphere of the coast into the quarry itself. Bottom is walkable
- 6 Raised walkway structure access from main entrance to Lower Quarry base
- 7 Lower Quarry base constructed of a series of tailings mounds replanted with grasses/tussocks
- 8 Main Bench mound and trench as an interstitial and open space perched above quarry floor
- 9 Dog park surface is recapped with new topographical structure to deal with runoff
- 10 North Quarry is designed with more traditional park aspects and functions
- 11 Steel mesh structure sits above large, loose, rock field – removing contact with the quarry's surface
- 12 Raised corten/steel mesh walkway above rock field, bracketed by re-used concrete block barriers shifting perspectives of quarry as you move through

5m Contours
1m Contours - dashed

Groundplane aggregate
Paths and structures

Vegetation
Riprap rocks

Fig 10.329. (Opposite) Analog design plan.
Graphite and ink on drafting film. (SD:31).
Fig 10.330. Individual analog design plan layers.

Fig 10.331. Path Structure Schematic.

Fig 10.332. Horokiwi Park Movement Structure.

Pausing/Stopping/Viewing Moment ■
Stopping/Sitting/Resting Moment ■

Fig 10.332 Horokiwi Park Movement Structure

Fig 10.333. Path Structure overlaid on Slope Mapping.

the slope retreats and the vegetation closes in...views restricted to a corridor forward and back

the slope begins to close in, a discernable edge downwards...the vegetation now thins, partial, obscured view beyond opening up

the slope now pushes in and equally drops off radically...views piercing the thinned canopies devoid of body and branches

Various pathway typologies to be used on the rock base within the quarry:

- Concrete filled into folds of the existing surface, or raised so that it sits perched above provides a determined movement vector
- Semi-fixed vectors can be structured through using low-lying markers such as recycled concrete blocks or steel rails inserted into the rock
- Fixed movement typologies are used extensively in the Upper Quarry between programmed zones of activity
- Semi-fixed paths are used for tertiary movement vectors between fixed and non-fixed towards lookout points and other features

Fig 10.334. Pathway Typologies.

Its amazing how fast things change.

4 years. Countless drawings.

And yet the extraction never slows.

Not for a while yet.

Upper Tailings Pad - Ongoing deposition

Lower Tailings Pad - ongoing deposition

Crown Hill - ongoing extraction

Mitre Peak - completed extraction

Main Hill - completed extraction

Pavement Hill - completed extraction

Wet Tailings Pit - ongoing deposition

**All up, this design investigation
proposes to cut 7,614,437m³
of material from this site.**

Fig 10.337. Current Horokiwi Quarry situation. Mid-2019 Aerial Imagery.

Stratum 7

Discussion and Conclusion

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Fig 11.338. Main Bench viewed from haul road. Late 2018.

Introduction

From April 2016 to January 2020, I watched the Horokiwi Quarry change. In some ways this was drastic, like the complete extraction of what was once Main Bench; and in others much more subtle, such as the slow build-up of material within the Upper Quarry area. Watching these changes drastically affected me – the sheer scale of earthworks and material movement isn’t fully conceivable until you know this place intimately. The Main Bench had immediately struck me when I first encountered this landscape and was the foundational design study for this research. This was a rare opportunity to experience and document significant landscape shifts in a restrained temporal scale, amplifying those sensations of change. By mid-2019 it had been entirely extracted and work had begun on excavating the quarry floor where it once stood.

This thesis has developed entangled bodies of thought and praxis to engage with the sublime in a concrete, designerly, manner. I have argued that landscape aesthetics, including the sublime, have been pushed aside by dominant forms of contemporary discourse established on the basis of skewed readings of Deleuze, and Deleuze and Guattari’s philosophy. Where the sublime has been revived, it is often employed in an anti-aesthetic sense. This research is situated in a growing discourse that seeks to address the lack of attention given to landscape aesthetics. The work of Connolly, Roncken, Meyer, and Hellström Reimer provides valuable insight into how the sublime may be addressed in a contemporary manner. Based on this foundation, I have approached the sublime through a Deleuzian-aesthetic lens, arguing that an encounter with the sublime is an encounter with *intensity*: a disruptive shock to an organism which leads to rapid experimentation with an organism-environment multiplicity. Importantly, this approach shows that the sublime involves real and concrete relations with which design assemblages can engage. In doing so, notions of ‘how landscapes work’ have been demonstrated to go far beyond techno-scientific ways of knowing inherited from McHarg and advanced by DeLanda and others. Given the clamouring at the door, landscape architecture must go further with *encounters* at its foundation.

This stratum draws together the body of my research and presents a series of conclusions which affirm the nature of landscape design as an embedded series of practices and ways of thinking. Ambitiously, this research has aimed to operationalise the sublime through design itself alongside engaging with the nature of landscape design through a critique of past practice. I argue that the work presented here can tell us something about the particular ‘trickiness’ of landscape design projects, the power of landscape itself, and how designers might rise to the occasion. However, this research is not anti-science or anti-objectivity, as these forms of knowledge are fundamental to a design project and should be employed in ways that are inclusive, not exclusive of other ways of knowing and doing.

767 Claramunt and Mosbach, “Nature of a Landscape Project,” 56.

768 Gilbert Simondon, L’individuation psychique et collective, 108 in ; “A Short List of Gilbert Simondon’s Vocabulary,” Fractal Ontology, 2007.

Lastly, I have shown that aesthetic encounters are worth treating seriously in response to the rise of the Technic in order to find the balance Marc Claramunt and Catherine Mosbach describe:

*The development of a [landscaping] project wavers between the intelligible and the emotional. Such a position may resemble a halfway point in which the requirements of none of the categories would be satisfied. But it can also have something to do with the scientific exactitude and human experience, and thus proceed from an order inherent to the landscaping project.*⁷⁶⁷

The Sublime as Fundamental to Landscape Encounters

Through comprehensive literature and design-research studies, I have argued that the sublime is a fundamental part of most, if not all, landscape encounters. Such encounters are a connection to something greater than just our own being, where the subject is radically decentred as the nucleus of perception and relation. This is made possible by the disruptive capacity of a sublime intensity – an affective force which momentarily breaks our reliance on habit. The sublime is intrinsically linked to our experience of landscape: if we take our engagement seriously it forces us to shift away from habit as both everyday participants and designers in the world. Landscape encounters tend to open our beings to *something more* – an expansion beyond the mundane and everyday, from within the everyday, or a ‘greater spirituality’ as Simondon suggests.⁷⁶⁸ Our actions and relations in the world allow us to build up habits via prior encounters. We can walk down the steps from our house in the dark or navigate from train station to the office seemingly without thinking. How landscapes move us, change us, and their ability to transport us from these everyday rhythms – even if only slightly – is what interests me most. Herein lies the power of the sublime.

My employment of Deleuze’s philosophy shows that encounters with extreme examples of what we traditionally term the sublime prove how *all* encounters are sublime. Each encounter is presupposed by an intensive shock, only its degree varies in relation to the multiplicity formed. In other words, our attachment to everyday landscapes tends to be built on how we are moved, what experiences we encounter, or a dimension which escapes our ability to pin down – a grappling with the intensive problem of a given landscape. Just as the event of learning to swim is sublime, so is the connection to the geology of Manhattan in Central Park or the feeling of Bloedel Reserve’s unrepresentable hydrological system.

Landscape design fundamentally involves designing relations, *not* objects. How we experience those relations tends to be downplayed as mundane at one end, or unknowable/undesignable on the other end of the spectrum. The sublime, as understood here, champions the *doings* of landscape by highlighting it’s wildly varying capacities to move and change us. The sublime foregrounds the importance of aesthetic, ethical, and political dimensions of landscape in a way that makes them felt viscerally. It shifts landscape architectural thinking from *matters-of-fact*

to *matters-of-concern*. Such shifts are necessary if landscape designers are to grapple with the propensities of landscape assemblages beyond just their technical or science-based ecological processes.

The Sublime as an Ecological Encounter with Intensity (or Difference)

Since its emergence in the 18th century, the sublime has resisted being pinned down and examined so its mechanisms can be comprehensively examined and understood. Earlier aestheticians, notably Kant, attempted to account for the conditions of all *possible experience*. Kant sought to establish the conditions where the sublime may emerge – an ontological framework of universal categorisation based on the given. This body of research has pushed beyond the given to seek the genetic conditions from which the given is determined. This is Deleuze’s famous maxim: “Difference is not diversity. Diversity is given, but difference is that by which the given is given, that by which the given is given as diverse.”⁷⁶⁹ As I previously have shown, difference *is* intensity; and each encounter is presupposed by intensity – a sublime shock. Here we can uncover, following in Deleuze’s footsteps, the genetic conditions for *real experience* through the sublime. As each encounter is presupposed on an intensity, or difference, then we must conclude that the sublime is with us in both extreme *and* everyday events.

The sublime, in this sense, is significantly more concrete than previously conceptualised. Its relation to problems, sense, and affect describes a complex of experimentation with the world – something we are a part of. The sublime is *not* something that happens to us – an exterior force we are subjugated to. Contra to Kant, it is not an affirmation of the powers of reason. Rather, the sublime affirms the power of what escapes reason’s grasp. The sublime understood as intensity celebrates Nature’s ability to experiment with life. Here the sublime is an encounter with intensity which involves mixing both matter and memory in relation to a given problem. This mixing involves the production of a problem-oriented assemblage or multiplicity, determined and evaluated by the contraction of past, present, and all anticipated future encounters to an arena of experimentation. Such a mixing is unequivocally ecological. Here we find our being revelling in the joy of creation – the pleasurable aspect inherent to Burke’s understanding of the sublime.

The ‘ecological’ has recently been given much attention in landscape architectural theory and practice, yet the sense of what the ecological is has been severely limited. External bodies of knowledge, largely the sciences, have been pulled in to legitimise disciplinary discourse without allowing a moment of critique to occur. We can readily see this in the dominance of SBD and other techno-science forms of landscape thinking and designing. Here the ecological is reduced to what can be measured and made to exist under the reign of the Technic. Anything else is exiled. This is very problematic for the discipline.

As Deleuze shows in *Difference and Repetition*, intensity is ecological: E-E’, E’-e, e-e’, ad infinitum. The relations which form an intensity are connected to all other intensities, as well as what is formed via those relations, per Deleuze’s notion of depth. We perceive this depth via sensation, continuously buffeted by it, filtering out whatever is relevant. We do not perceive extensity; we perceive depth which is implicated in the perception of extensity. As Deleuze says: “Depth is the intensity of being, or vice versa.”⁷⁷⁰ We, as human organisms, are continuously connected to this depth, to intensity all the way down, and as such cannot be separated out from it. The sublime opens us up to the ecological variations of the world such that we can autonomously experiment with them.

Such experimentation can occur autonomously because of these ecological relations. Why an encounter is sublime for one person and not another is accounted for via Deleuze’s notions of problem and sense – both entwined in each other. The sublime can be through of as something which affects a body *before* subjectivity – this is something we can communicate and share if we are capable – and where differences of conscious subjectivity are less relevant. A problem develops from an intensive shock, a sensation or force that habitual responses cannot handle. Sense provides the means of evaluation for this problem or relation: the significance of this sensation/force is provided to the organism based on all past, present, and anticipated future encounters. *Memory, an involuntary sense of memory, is fundamental to the sublime*. An encounter with the sublime is where habitual memory fails the organism, the extremity (or lack thereof) of the encounter is only a difference in degree, *not kind*, of shock or disruption by this sensation/force.⁷⁷¹

Problematising the Sublime Through Design

Designing is about making a difference. It is not about form, iteration-for-itself, restoration of ecologies, or culturally referenced iconography. It is about navigating a given problem, feeling your way along, and evaluating your experimentation via what the proposals *do* in relation to that problem. Intensities are differences that make a difference. A tipping point, the creation of something new, transition from one state to another. *Are the processes of designing sublime then?* This practice-led project set out to make designing both the means and object of research, but in the end, it seems that perhaps the sublime is the focus of this dual operation and not design. *Researching the sublime through itself*.

Doing so in a landscape architectural context requires optics which allows the designer to see the world working autonomously: *the middle* per Deleuze. Approaches, sensibilities, techniques, and tools suited to working with the aesthetic material of landscapes are required. Fundamentally this begins by rigorously engaging with real landscapes via

772 The following examples, all well regarded ‘guide-books’, discuss representation extensively yet do not yet grasp the ‘doings’ of representation. Diana Balmori, *Drawing and reinventing landscape*, Architectural Design Primer, (Chichester, West Sussex, [England: John Wiley & Sons, 2014]; Bradley Cantrell and Wes Michaels, *Digital drawing for landscape architecture: contemporary techniques and tools for digital representation in site design* (John Wiley & Sons, 2010); Jil Desimini, *Cartographic grounds : projecting the landscape imaginary*, ed. Jil Desimini and Charles Waldheim (New York: Princeton Architectural Press, 2016); Elke Mertens, *Visualizing landscape architecture functions, concepts, strategies* (Basel :: Birkhäuser, 2010).

773 Gilles Deleuze and Felix Guattari, *What is philosophy?*, trans. Hugh Tomlinson and Graham Burchell (New York: Columbia University Press, 1994), 167.

fieldwork and encounter. Extreme sublime events are visceral proof that landscapes do things beyond technical/scientific systems. Problematising the sublime requires a shift in how representation is used within the design process. Fundamentally *expression* must be given to the affectual relationships discovered: affects being re-created, even just partially, an entry point can be enough. This shifts evaluation within the design process away from external ideas or criteria, and towards an immanent mode where alterations are considered against the aesthetic problem of the sublime. This involves a resonance between existing and proposed where we can *feel the significance* of what we are designing, in turn providing the means of evaluation. Representation’s role is critical – yet its power and potential tend to not be discussed within dominant discourse.⁷⁷² Lyotard argued that to present the unrepresentable was to foster an encounter with the sublime. Affects are unrepresentable. Presenting affects – sublime affects – through an encounter (as designed work) and representation is perhaps the most important remit of the landscape architect.

Representation is not re-representation. Operationalising the sublime requires drawings and other forms of representation to move beyond graphic affects towards giving expression to landscape affects. This research has shown, through a practice-led project, how representation give expression to such affects and their relevant spatio-temporal relations, and hence to the affectuality of those relations. This involves both documenting relations but also the sense (significance) of the encounter. Representation’s function is not to re-present objects, or change over time (though it may do so); its function is brought to life through these relations, forming “bloc[s] of sensation, a pure being of sensations.”⁷⁷³ Sensation is the presentation of difference. Forming blocs of sensation via design representation connects to the ecological affectual dimensions of landscape and the sublime. Design representation must move beyond the object, the subjective perception, and the figured. Some may argue to do so risks the gains made in instrumentality over the past two decades, to plunge the discipline back into the depths of ‘landscape-design-as-art’, threatened with a loss in legitimacy and agency. My research argues that to not do so means struggling to make a *real* difference at all. Landscape aesthetics and ethico-aesthetics are increasingly given attention by those pushing beyond the SBD frame of reference. Establishing concrete design techniques which honour and empower the affiliations between (human) organisms and other non-human entities is required next. Other assemblage-oriented designers, such as Barbara Prezelj, have approached the aesthetics of non-humans, though further development in relation to how human-oriented aesthetic encounters can work towards such goals is necessary.

Deciphering the Genetic Conditions of Landscape Experience

Karl Kullmann’s brief introduction of orography-vs-topography and deciphering as a design/representation technique has proved fundamental to how I have conceptualised and developed my own practices. Only in the depths of this research did I begin to find the language to describe my interests and practices. In reflection, I have always been interested in the *genetic conditions* of real experience, less interested in universality and de-localisable criteria or forms of knowledge. This goes much of the way to explaining why Deleuze’s ontology and aesthetics meshed so closely with my own design practices.

Contemporary landscape design representation tends to not move beyond what exists in extension, and when it does so it is often limited. This is symptomatic of techno-science thinking embedded within SBD discourse and practices, alongside a lack of design practices suitable for engaging with aesthetic material. *Deciphering* as a technique empowers the designer to begin anywhere – any-point-whatsoever is as good as the next. Corner’s notion of mapping empowered designers to see beyond scientific measurement of landscape, towards the underlying structures. Though his notion of mapping struggles where deciphering steps forward: working within, and mapping from, *the middle*. Deciphering as a (series of) design technique(s) obliges the designer to engage with a given landscape assemblage in a conjunctive ‘and... and...and...’ mode. This is an open and rhizomatic form of thinking entirely suited to the complexity of landscape – escaping the ordered and arborescent structured thought of modernity. Deciphering may begin with a question – ‘why does this encounter occur here’ – or it may start with documentation – a mark on the page – making the inquiry clearer as the assemblage is explicated. One can start mapping what exists in extension: topographical boundaries, vegetation structure, lines delineating material changes. Or intensive, aesthetic material driven by sensation and experience: an increasing sense of looming, a greater connection to the skyline, or the feeling of getting lost in the landscape. Deciphering empowers a designer to start at any given point and intuitively explore whatever relations seem relevant – who/what was involved, what did they offer, how did they relate, what did this come together to produce? No external criteria for these questions can be found, only the ability for the deciphered material to give expression to a sublime encounter.

Affirming the Role of Aesthetics in Landscape Design

Fundamentally, this research has sought to affirm the role of landscape aesthetics within design process situated in a discursive context that remains sceptical, if not dismissive, of such material. As others have argued, aesthetics are performative – relationally as connected to the openness of the world as the weather or a wetland system. This research has understood landscape aesthetics through a Deleuzian lens that informs and is informed by design studies. Doing so allows

774 Note Andrea Kahn's surprise at the complexity and power in this relationship. Kirsten Bauer et al., "From a Discussion with Andrea Kahn," *Kerb: Journal of Landscape Architecture* 4 (1996): 5.

claims of subjectivity to be bypassed – if the expressive account is strong enough – and affirms the *ecological* and *aesthetic* connection (human) organisms have with the world. Most landscape architects understand the value of knowing the site they are working with. It is the very material which they design.⁷⁷⁴ An encounter during fieldwork often instigates the initial design trajectory – though the importance and singularity of this encounter can easily disappear due to the power of certain representational and design methods which obscure its significance or relevance to the project. The aesthetic material of landscape design is often shifty, hard to pin down, and decidedly weirder than perhaps anticipated in both content and what entities are involved. It is too easy to let this slide out of focus when designing in favour of more knowable and familiar forms of information. New encounters can only be designed with any certainty when representation and design techniques are obliged to keep this aesthetic material in focus.

Aesthetic material is not lesser, subjective, or scenographic. It involves the material that moves us, a myriad of collectives and affiliations between human-human, human-landscape, human-non-human, or any combination of such. The discipline has developed a demonstrable degree of rigour in integrating scientific/biological ecologies to landscape design processes and products over the past two decades. Now we must address the previously unattended role aesthetic ecologies play in relation to this – a vector which this research has developed a series of techniques along and seeks to illuminate possible future lines of flight.

The Importance of Engaging with Real Landscapes

Within SBD we have witnessed a shift away from rigorously engaging with real landscapes as part of the design process over the past two decades. Transitioning from site design towards urbanistic or regional scale propositions – landscape extents that cannot realistically be engaged with in a regular 'site-visit' manner – has resulted in studies which defer away from life on the ground, though that is not to preclude that investigations of this scale cannot have this connection. Corner's innovations in mapping, and subsequent trends, have only exacerbated this by removing the designer's optics from within topographic folds to kilometres above.

In contrast, prolonged and extensive fieldwork has proven fundamental in discovering how the documented sublime encounters within this document unfold. Discovering these events would have been impossible without doing so – no amount of aerial reconnaissance or 3D modelling can substitute for a direct encounter. Fieldwork can highlight what is singular about a site, often the material which designers follow when designing if it doesn't fall to the wayside. It also provides the immanent means through which design actions can be evaluated. If we consider, as this research suggests, that all encounters being sublime are also problematic, then this constitutes what is engaged

775 Allan, "Feeling indeterminate: the experience and design of big landscapes."; Rod Barnett, *Emergence in landscape architecture* (Routledge, 2013); Connolly, "An affirmative open systems conception of how to design landscape," 198; Kullmann, "The Garden of Entangled Paths."; Raxworthy, "Novelty in the entropic landscape."

with via design and the evaluative 'criteria' – where criteria are not comfortable checkboxes but challenging affectual reference points. It seems impossible to suggest this could be done without confronting the site directly. An aerial image combined with contour data, along with undirected photography or emotive drawings that may capture some dimensions yet is no substitute for a *direct affectual* encounter. Fieldwork and representation must work in coordination to give expression to an encounter, so that design can make a difference.

The sublime, contrary to most understandings, is a fundamentally *everyday* encounter involving a problematic shock, even if this shock is not conscious or extreme. SBD and other contemporary bodies of practice tend to focus attention to the 'large problem', typically a looming ecological disaster. This leaves the everydayness of landscape, or seemingly mundane examples receiving little critical design consideration. Viewing these as sublime, as something beyond mundanity, should be a provocation to the discipline that shifts efforts to celebrating, and designing with, the everyday rhythms of life on the ground, the everyday empowerments produced between humans (and other organisms) and their milieu, and the unattended richness of landscape.

A Challenge to SBD Techniques and Practices

The research presented here challenges the assumptions made by SBD and other contemporary design movements that human subjectivity is inferior to other forms of knowledge, or problematic because of a lack in objectivity. Techno-science understandings of 'openness', assemblage, and ecologies are not sufficiently strong enough to engage with how life unfolds on the ground. SBD struggles to grapple with aesthetic relations between any number of entities, specifically the problematic aspects which this research recognises as sublime, intensive shocks. Engagement with *difference* has been cast aside for vague understandings of indeterminacy within ecological systems fostered by a fascination with change over time. Such changes are quantifiable by metrics and external measures, removing or downplaying the role of non-extensive relations. This is a significant issue as doing so defers from life itself.

Change over time, as employed by contemporary landscape designers and thinkers, has been heavily restricted in how it understands change. These limitations, and associated assumptions, must be challenged and moved past. Open systems notions of change must be considered beyond techno-science optics. Those interested in gardening practices and notions of emergence, such as Penny Allan, Rod Barnett, Julian Raxworthy, and Connolly, have recently given this attention.⁷⁷⁵ Their work shows that change involves difference in power or capacity – novelty emerges not between static forms but in the creation of difference. Let us remember that change, or difference, that makes a difference is sublime. These projects, whilst a substantially positive step forward, can be bolstered by closer attention to concrete design techniques

776 Isabelle Stengers, “Speculative philosophy and the art of dramatization,” in *The Allure of things: Process and object in contemporary philosophy*, ed. Andrew Goffey and Roland Faber (2014), 190-91.

777 See: Kleinherenbrink, *Against Continuity* : Gilles Deleuze’s speculative realism.

778 Connolly and Rosier, “Species of More-Than-Human Design and Design Thought.”Forthcoming.

which actively work with difference as this research has done. Championing change, or difference, which makes a difference is to champion life itself – the role of the landscape architect.

Future Trajectories

Relation to more-than-human ontologies

Obvious affinities and conflicts exist between this research and various more-than-human ontologies operating within landscape architectural discourse. First, despite its apparent human-centredness, this research does highlight how assemblage-based design practices can engage with non-human entities concretely and rigorously. It does so through engaging with their affectual capacities – a dimension which goes beyond subjective or habitual relation to the world. Doing so allows us to see a (human) organisms relation with other entities beyond pragmatic or functional uses, telling us something about their non-habitual, sublime capacities. This stresses the involuntary nature of such assemblages, the workings of which, including our inseparable participation, extends far beyond any sense of human-centredness. Secondly, it offers a challenge to object-oriented or anti-human forms of more-than-humanness which relies on a critique of correlationism – a correlation between human-centred thinking/perception and being in the world. Isabelle Stengers writes that such thinking has “an enticing philosophical flavour” that opposes ontologies where “ ‘a’ thing or ‘an’ object has meaning only in reference to the meditative subject”.⁷⁷⁶ As Stengers suggests and is critical of, such thinking argues that there are dimensions to non-human entities excluded from any relation in principle.⁷⁷⁷ As explored elsewhere, this position is problematic to landscape design practices.⁷⁷⁸

Given the inherent relation between Deleuze-Guattarian thought and dominant more-than-human ontologies, there is significant scope to establish discursive links through design practice itself. This research has engaged with the human as part of a human-non-human assemblage which has so far been unattended to by many more-than-human design projects. It may seem problematic to consider this research as not wholly anthropocentric, though to do so misses the importance of what *happens* when affiliations between human and non-human beings form. This dimension has received little attention in contemporary discourse. There is potential in continuing this research methodology and framework along a less human-oriented line of work – focusing on the affiliations formed, and the affects produced, between a wholly mixed and open ecology of entities.

Introducing aesthetic material to parametric landscape design

I have always been interested in using digital tools, both within and outside my practice as a landscape designer. Despite this, I have previously been sceptical towards the use of parametricism as a key driver in the design process. Such methods and techniques tended to only exacerbate the deferral from real landscapes by digitising them under the

779 Hegglin, “Algorithmic Toolmaking: parameter thinking in landscape architecture,” 140.

780 Hegglin’s investigation is considerably more design-led than most parametric projects where a solution is considered to ‘emerge’ at the end of the process. The difference in approaches between our research is largely a modality, not a fundamental reliance on the software to produce outcomes.

781 Manuel DeLanda, “Parametrising the social,” *Architectural Design* 86, no. 2 (2016).

assumption that computational data portrays ‘reality’. We can see this unfolding vividly in the work of the Architectural Association’s landscape urbanism program.

Given more time this research would have expanded its minor exploration where ‘aesthetic data’ was folded into parametric tools. The research’s ability to discover spatial-temporal relations through fieldwork suggests that such relationships can be translated to parameters. Kadin Hegglin considered translation as the chief challenge in the creation of parametric, or algorithmic, tool making specifically suited to landscape design.⁷⁷⁹ Despite this, the form of ‘parameter thinking’ he identified and developed is not dissimilar to the form I have employed here – though it is explored via digital algorithms compared to analogue design acts.⁷⁸⁰ Manuel DeLanda highlights the potential of translating assemblages into a parametric form, though as is characteristic of his work, he does not engage with the spatial and aesthetic dimensions of the world.⁷⁸¹

There is obvious scope to expand the aesthetic design, analysis, and representation techniques developed here towards digital, notably parametric, forms of designing. My interests are largely oriented towards technique, what a tool can do in relation to a given problem. As such there are few issues with employing digital tools if they can connect to and experiment with what landscapes do beyond just scientific systems. In this parametricism stands out due to its inherent productivity. The ability to iterate and make ‘on-the-fly’ adjustments which are immediately visualised in 3D form provides immense potential for this research going forward. This is not form-for-itself, but the means through which bodily-relatable drawings, a section for instance, can be quickly created. Rapidly iterating and producing unexpected outcomes – based on concrete aesthetic discoveries – promises an exciting and liberating design practice that challenges our contemporary ideas on digital landscape design.

Sustained attention to the aesthetics of disturbed landscapes

Contemporary approaches to designing with disturbed landscapes are highly mixed, though a general tendency exists where they are treated as either an object to be viewed from the outside (often involving a privileging of an architectural-ish intervention) or a technical problem to be solved. Both approaches actively defer away from engaging with the real issues of site. The issue of how to deal with urban and peri-urban quarries post-extraction is one a global one. The technical remediation of these landscapes has been illustrated to be insufficient alone. Sites such as the Horokiwi Quarry illustrate how a peri-urban site of extraction can rapidly be enveloped by development, leaving a myriad of opportunities and issues. This is not a new development; it has unfolded and been engaged with by designers since the 1990s.

This research has identified a line of inquiry that goes beyond the ‘techno-science’ approach to remediation of these post-industrial sites. It

782 Meyer, "Uncertain Parks: Disturbed Sites, Citizens, and Risk Society."; Meyer, "Sustaining beauty: The performance of appearance."; Meyer, "Beyond Sustaining Beauty: Musings on a Manifesto."

can be readily expanded beyond quarries to any manner of disturbed landscapes that have something to offer the public life of the city. Crucially, it would do so by championing the aesthetic ‘doings’ of those landscapes – a dimension which, as this research has identified, has received little attention. Such sites are readily labelled as sublime – an abstract categorisation with no engagement. If such landscapes are sublime, then their ability to shock and decentre our beings likely has some value to society, and perhaps should be appropriated via design. Continued design-based research in this area holds promise through both the designed products and the processes developed. Concerning this, I echo Elizabeth Meyer’s call that to create truly sustainable futures and relationships with our environment, we must develop an ethico-aesthetic approach.⁷⁸²

Fig 11.339. Excavation of the quarry floor beginning in Nov 2020.

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