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**Abstract**

Measured, marked, modeled: becoming with the urban landscape

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Landscape has become a central organizing concept for the design of urban space through design practices seeking to ‘recover’ the flow and flexibility of ecological processes. Yet, urban landscapes almost everywhere, and in every way, are divided and categorized as bounded sites through cartographic practices, property delineations, and environmental management, making site central to imaging and experiencing landscape. I pose that site is always part of engaging landscape and that by examining the unruliness of site we may reimagine the power relations within landscape itself. I use archival and discourse analysis to examine three moments of transition in how site is conceptualized in twentieth century North America. By situating the production of site and landscape within particular socioecological historical contexts, I show how normative site readings are predicated on and lead to the regulation of life through practices and discourses that foster or disallow lively relations. The three case studies illustrate how the regulation of life takes place through racial formation (chapter three), the fragmentation of ecological systems (chapter four), and the imagining of neoliberal futures (chapter five). I argue that the regulation of life as reflective of uneven power relations is revealed through site formation, and is the result a failure within landscape practice to recognize how site knowledge

is always situated and power-laden. In response, I propose site knowledge as becoming-with, which I develop through practices of care. Care practices bring attention to intertwined historical formations, socioecological responsibility, and critical self-reflectivity to draw out the plurality that lives within categories of site. By thinking and acting through care, landscape practice has the potential to become a practice of life, with the creative and intellectual capacity to engage land and its relations.

for Shiloh, my brother always, and the land that we are.

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## Measured, marked, modeled: becoming with the urban landscape

Sara Jacobs

### *Abstract*

Landscape has become a central organizing concept for the design of urban space through design practices seeking to ‘recover’ the flow and flexibility of ecological processes. Yet, urban landscapes almost everywhere, and in every way, are divided and categorized as bounded sites through cartographic practices, property delineations, and environmental management, making site central to imaging and experiencing landscape. I pose that site is always part of engaging landscape and that by examining the unruliness of site we may reimagine the power relations within landscape itself. I use archival and discourse analysis to examine three moments of transition in how site is conceptualized in twentieth century North America. By situating the production of site and landscape within particular socioecological historical contexts, I show how normative site readings are predicated on and lead to the regulation of life through practices and discourses that foster or disallow lively relations. The three case studies illustrate how the regulation of life takes place through racial formation (chapter three), the fragmentation of ecological systems (chapter four), and the imagining of neoliberal futures (chapter five). I argue that the regulation of life as reflective of uneven power relations is revealed through site formation, and is the result a failure within landscape practice to recognize how site knowledge is always situated and power-laden. In response, I propose site knowledge as becoming-with, which I develop through practices of care. Care practices bring attention to intertwined historical formations, socioecological responsibility, and critical self-reflectivity to draw out the plurality that lives within categories of site. By thinking and acting through care, landscape practice has the potential to become a practice of life, with the creative and intellectual capacity to engage land and its relations.

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## Chapter One

### Between Site and Landscape

#### *Introduction: why site and landscape matter*

Since the early 1990s, designers of urban landscapes have increasingly sought to recover ecological processes lost to the linearity of modernist planning and resource-extractive growth, bringing renewed interest to the politics, aesthetics, and ecology of urban landscapes.<sup>1</sup> Driven by perspectives on sustainability and resiliency, landscape has become a central organizing concept for the design of urban space through landscape design practices seeking to “recover” the flow and flexibility of environmental processes.<sup>2</sup> Yet, urban landscapes almost everywhere, and in every way, are divided and categorized as discrete sites through cartographic practices, property delineations, and environmental management, making site central to imaging, designing, and experiencing landscape. Despite this categorization, landscape theory continues to develop within narrow frameworks focusing on what landscape *is*, rather than asking *how* landscapes come into formation relative to site. Landscape theory and design practice have long acknowledged site and landscape as distinct yet entangled categories. Still, questions of site have been overlooked, ignored, or framed as an impediment to the design of dynamic and flexible social and ecologically vibrant urban landscapes.<sup>3</sup>

Site is traditionally understood in landscape design as a physical location, constrained by temporal or spatial boundaries, for design intervention. Landscape in the Western imagination refers to the various ways land is imagined and related to by humans. In this dissertation, I contextualize

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<sup>1</sup> (Scott and Swenson 2015, Meyer 1997, Waldheim 2006, Gandy 2015, 2016)

<sup>2</sup> The design of urban landscapes has long worked with both social and ecological systems but since the early 1990s, in part because of the rise of post-industrial lands and shifting urban conditions, ecologically-driven work has increasingly become the focus of landscape practice. For more on this transition see: (Corner 1999c, Waldheim 2016, Reed and Lister 2014)

<sup>3</sup> (Meyer 2005, McHarg 1967, McHarg 1969, Olin 1988)

within history how attempts to blur the categorization of site and landscape have often drawn more discrete distinctions between the two, remaking normative categories of nature and society. I pose that site is always part of engaging landscape and that in examining the unruliness of site, or the ways it is constituted relationally and always exceeds that which delineates it, we may reimagine the power relations within landscape itself.<sup>4</sup> I argue that understanding site is key to developing tools, practices, and methods capable of imagining and actualizing the dynamic urban spaces that landscape design practices advocate.

As landscape and the design of landscapes gain greater attention as a medium for designing public space and for addressing the decline of ecological functions in contemporary contexts, the role of site in shaping urban landscapes has remained underexplored.<sup>5</sup> Through three case studies, I situate the production of site and landscape within particular social, environmental, and political historical contexts. I argue that normative site readings are predicated on and lead to the regulation of life, limiting how landscape is imagined and experienced. By regulation of life, I am referring to the ways life is managed through uneven expressions of power in the form of knowledge, discourses, and political practices. Here, I explore site representations through the lens of biopower to analyze how normative site practices foster or disallow life. While life is always regulated by some

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<sup>4</sup> (Tsing 2012) 144-151.

<sup>5</sup> Ideas about nature are not pre-determined and much of environmental history and human geography has looked at the ways nature is produced through capital and political systems (such as political ecology as a subdiscipline of human geography). See (Cronon 1995, Robbins 2012) for instance. I consider nature to be both a concept and an entity, a duality I find important for understanding site and landscape outside frames of human exceptionalism. However, power dimensions and human agency that distinguish between nature as a concept and as an entity are rarely even, with concepts of nature often overpowering the material reality of nature. This uneven attention to power is certainly true in contemporary landscape practice, where ideas positioning landscape as central to urbanism are often grounded in the implicit assumption that nature can—and will—self-regulate without human oversight. This assumption overlooks the ways perceptions of nature are produced through and reflective of social, cultural, and political power structures. Central to how perceptions of nature are understood in urban environments is an idea of site, a space marked or delineated for study, design, or construction. Cities are increasingly seeing more landscape in the form of parks and ‘green’ space (roof gardens, bioswales, etc) as akin to “better” cities. (Bierig 2010) When discussing ideas, concepts, or perceptions of nature, I have tried to distinguish each as such.

means, it through expressions of power that the regulation of life is revealed. Throughout the dissertation and case study analysis, I consider life to broadly include humans, plants, and animals as well as the biophysical components that produce life such as soil, food, and climate.<sup>6</sup>

In professional landscape architecture, site is often assigned by a client to delineate the scope of design work, a practice that is mirrored in landscape and design education.<sup>7</sup> This traditional understanding of site suggests that designers have little or no role in determining site, and that site is set and pre-determined as the result of property delineations, spatial zoning, or territorial claims that are “fixed” by societal, environmental, and political norms. This traditional framing of site narrowly overlooks how a physical location is never one thing. It always is assembled through temporal and spatial relations that extend beyond the representational boundaries of a traditional site or through boundaries that are relational and never expressed physically or representationally.<sup>8</sup> Importantly, traditional site delineations are defined by those with the power to do so.<sup>9</sup> In this context of this dissertation, I consider traditional understandings of site to be the ways physical land is measured, marked, and modeled to maintain boundaries and distinctions that make mixing individual and collective socioecological responsibility impossible.

Landscape in a European and North American context is traditionally understood as the various way humans imagine, relate to, and shape land.<sup>10</sup> Landscapes emerge from specific historical, geographic, and social circumstances, yet traditional understandings of landscape in North America

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<sup>6</sup> While Foucault developed concepts of biopower in relation to human populations, I am applying these ideas to life, in the broadest sense. For more on biopower see: (Danaher, Webb, and Schirato 2012, Foucault 2007). Importantly, my analysis includes an attention to life *and* power: by focusing on other-than-humans, I am not suggesting that all forms of life are equal in their formation via concepts of nature but rather to draw relational connections, as (Krupar and Ehlers 2019) discuss. The regulation and control of plant, animal, and biophysical life directly effects human life and vice versa (Danaher, Webb, and Schirato 2012).

<sup>7</sup> See Chapter one of (Burns and Kahn 2005, Meyer 2005) for more on the history of site with landscape practice.

<sup>8</sup> (Tsing 2012) 144-152.

<sup>9</sup> (Burns and Kahn 2005) x.

<sup>10</sup> (Cosgrove 1998, Jackson 1984)

have been shaped by European cultural frameworks where landscape is a practical and visual shaping of land. Landscape, then, is traditionally an on-going process of shaping and relating to land through visual and practical land uses. Traditional framings of landscape place humans as central and dominant, as landscape is distinguished from land by human influences via visual control. In contemporary contexts of global capitalism and environmental change, the dominance of humans in shaping land is not inaccurate. However, framing landscape solely in relation to human agency limits how landscape can operate spatially and temporally, as well as how land and landscape are conceived as 'legitimate' practices outside Western epistemologies.<sup>11</sup> As Donna Haraway suggests, "struggles over what will count as rational accounts of the world are struggles over *how* to see."<sup>12</sup> How landscape is seen, and in turn how it is designed and remade, and vice versa, is closely bound up with questions of visual perception, power, and control.

In response to these framings of site and landscape, I position landscape as both a relational and material reality to unsettle the ways it has been conceived in the Western imagination as a visual idea that reinforces divisions between humans and perceptions of nature. This unsettling is important, not because it suggests decentering human responsibility for caring for land, but because it refocuses how power, control, and visual perceptions of landscape create relations *with* land. Human-land relationships are deeply entangled—and always have been—making distinctions between landscape and land no longer useful. Distinguishing between land and landscape then reinforces antiquated boundaries between spaces that are and are not part of social, environmental, and political systems. This view continues to place humans as exceptional to nature as well as failing to recognize the many Indigenous and non-Western worldviews that have never distinguished

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<sup>11</sup> See (Simpson 2017, Hirt 2012) for the ways Indigenous place, stories and land histories are expressed cartographically.

<sup>12</sup> (Haraway 1988) 587.

between human and land relationships.<sup>13</sup> By examining how landscape has often been determined by site, I show how normative nature-society categories are maintained. This maintenance results in the regulation of life, which continues to create the conditions for ‘seeing’ landscape as outside human socioecological responsibility and care. I argue this regulation of life limits how temporal and spatial relationships are constituted outside normative power dynamics.

I examine how site and landscape have been remade and recategorized to maintain normative power dynamics through three case studies that examine moments of transition in how site has been understood within landscape practice. I began this research with the question: how would acknowledging urban landscapes as sites becoming, constantly transformed and reemerging through shared relations, bring about new practices that more fully engage the responsibility of living in a more-than-human world? To engage this question, I needed to work backwards, to understand how site and landscape have been conceptualized within historical contexts. Through this research, the question then became: how has the categorization of site allowed for or erased multiple realities and saturated differences to exist and be expressed within site?<sup>14</sup> And finally, how is the normative categorization of site used to regulate social concepts of life, particularly along lines of race, gender, and more-than-human life? Existing studies of site, while often acknowledging the diversity of site experiences, have focused primarily on questions of definition. Still, there lacks

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<sup>13</sup> (Simpson 2017, Tallbear 2019, Gómez-Barris 2017)

<sup>14</sup> (Burns and Kahn 2005) 286.

precedent for how site has been conceptualized in relation to landscape practice. To answer what site can be, I had to answer what site has been.<sup>15</sup>

Site is central to landscape practice, often delineating the physical space of design or area of study. Site has been a question of study for previous scholars and designers of the built environment but historical studies of site remain limited. In the edited volume *Site Matters* (2005), Carol Burns and Andrea Kahn write site is at once “a real construct (of nature), a narrated construct (of discourse), and a collective construct (socially constituted).”<sup>16</sup> Building on Burns and Kahn, I organize this dissertation around three case studies that point to the historically-situated production of site and landscape. I look historically in order to unsettle and reimagine the normative boundaries and power dynamics of past examples of site categorization. In examining how landscape practice has approached site and landscape as essentialist yet entangled categories of socioecological knowledge in twentieth century North America, I show how past attempts to overcome the boundaries of site and landscape have depended largely on scaling of site to landscape (chapter three), stabilizing the boundaries of site and landscape to each other (chapter four), or substituting landscape for site (chapter five).<sup>17</sup>

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<sup>15</sup> (Burns and Kahn 2005) write that “context is what the site is not.” While acknowledging that sites have “multiple realities” “saturated with difference” that shape “dynamic relational constructions,” Burns and Kahn continue to ask, “how, then, to define the confines of urban sites?” (286-294) What if the question was not how site is defined but what are the conditions that would allow ‘multiply realities’ and ‘saturated differences’ to exist and be expressed within site? To answer this latter question required looking at how site has been understood contextually and historically. When I began this research, I knew I was less interested in how site is define than what it already is, but I needed to be able to contextualize before I could be speculative. I expand more on this in the final chapter.

<sup>16</sup> (Burns and Kahn 2005) xxi.

<sup>17</sup> I use landscape practice intentionally throughout the dissertation to not only describe landscape architecture, a professional discipline, but also the various land practices falling outside traditional landscape architecture. I do this to challenge my own discomfort with landscape ‘architecture’ as a descriptor and to work toward an alternative that is more inclusive of the many ways land is designed, maintained conceptualized both through material acts of making and working land outside Western professional structures.

In the case studies, site reveals multiplicity and it is through the suppression of site multiplicity that the case studies come together. The case studies show how over the past 100 years, landscape theory has as moved toward an acknowledgement of unbounded, collective, and unpredictable landscapes. Yet, efforts to enact land-based practices that are not predicated on divided or categorized site have remained limited. Why is this the case, particularly as it is clear that human and other-than-human worlds are unavoidably entangled? In all three case studies, the inability to interpret site as something more than a pre-determined or given condition leads to the remaking of normative site categories and power dynamics. I suggest that framing site as indeterminate, in that it is not exactly known, established, or defined, is not much different from establishing a pre-determined site, as both focus on building essentialist understandings of site. This search for essential knowledge suggests a failure within landscape practice and theory to recognize that site knowledge is never essential, it is also situated and power-laden. I argue this oversight ignores site plurality and is a primary reason landscape theory continues to be circular and self-referential, focused on landscape definitions (what) rather than relations (how).

I combine textual and visual analysis with archival scholarship and direct observation to interpret the ways that site and landscape are constituted and made visible through relations of society, environment, and power. The three case studies were selected to represent key moments of transition in how site and landscape have been conceptualized, with a particular focus on moments of transition in which site within landscape practice shifted in relation to social, environmental, or political influences. Geographer Doreen Massey describes this process of relationality as the coalescing of space in relation to other subjects and structures co-constituted through complex power relations.<sup>18</sup> In each case study chapter, I parse out how power operates through site,

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<sup>18</sup> (Massey 2005) 167.

landscape, or both. In response to the ways normative site practices create distinctions between site and landscape to maintain homogenous power dynamics, I propose a fourth strategy of becoming-with that seeks to work with the relationality of site and landscape to create spaces of possibility for socioecological care.<sup>19</sup>

The case studies show how urban landscapes continue to blur the lines between modern science and cultural memory, unsettling boundaries between various forms of life and temporalities that reveal new contradictions between political, cultural, and ecological systems. Central to these blurry lines are how positivist science and “bounded individualism” create assumptions of growth and temporal progress as the desired outcomes of modern life.<sup>20</sup> I am critical of these assumptions and instead insist on the inseparable entanglement of social and ecological life, or what has been referred to as ‘socioecological entanglements.’<sup>21</sup> In critiquing growth and progress as the assumed goals of design, I look closely at the role of scale and scalability within design practices, particularly as it relates to positivist science and increased interest in seemingly ‘objective’ generalizable and universal knowledge within design.

As site has traditionally been understood as the bounded delineation of a physical space, scaling site potentially disrupts how site and landscape are regulated by revealing how physical site boundaries are rarely, if ever, a site’s extents. In the three examples, I explore how the relationship between scale and erasure enacts practices of forgetting, creating ruins. The case studies show how

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<sup>19</sup> (Braidotti 2006, Barad 2011, Haraway 2008) all use the term “becoming” or becoming-with” to describe entangled human and more-than-human worlds that are not only relational and co-constituted but also changing, or always becoming something else. How we (designers, people) then position ourselves in relation to the more-than-human world then becomes a question of how we become-with.

<sup>20</sup> (Haraway 2016b) 30. Donna Haraway uses the term “bounded individualism” in *Staying with the Trouble* (2016). Others such as (Bourdieu 1991) have considered ‘bounded rationality’ as one way of describing the results of neo-liberal policies, for instance.

<sup>21</sup> (Gandy 2018, Barad 2007) both discuss socioecological entanglements and the apparatuses that go into studying such entanglements. Gandy does so through examples of developing and studying water infrastructure and Barad does so through an exploration of matter as entangled material and theoretical things and objects.

erasure that leads to ruins depends on growth-based production, such as the production of citizenship (chapter three), the production of nature (chapter four), and the production of growth (chapter five). Framed relationally, the production of each of these requires segmenting knowledge that results in the loss of socioecological life, creating ruins that are pushed aside, erased, buried to allow for the production and maintenance of general and universal site knowledge.

Erasure and ruination have been explored in a range of contemporary theory.

Anthropologist Anna Tsing has illustrated how modern growth leads to erasure. Tsing uses the language of scale to describe the shortcomings of the ways ecological design, specifically, and urban life, generally, are assumed to grow and progress within normative scientific and design frameworks. Tsing argues that modern design has focused on scalability, often without acknowledging how relationships change through scale. Particularly, scale erases the diversity of life. Tsing writes, scale “disguises such divisions [of diversity] by blocking our ability to notice the heterogeneity of the world; by its design, scalability allows us to see only uniform blocks, ready for further expansion.” Resisting this erasure requires a “theory of non-scalability.”<sup>22</sup> Tsing suggests non-scalability in design allows for precision, not so much precision of measurement but precision of intent. A theory of non-scalability offers an alternative to the ways knowledge about site and landscape bury, contain, and otherwise erase difference in favor of scalable and generalizable positivist environmental knowledge.

Similar ideas of erasure have been revealed by decolonial and critical race scholars.

Decolonial novelist Sylvia Wynter, for instance, suggests European colonialism has erased different forms of life and humanness by standardizing white, European, male bodies as not only ideal but as

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<sup>22</sup> (Tsing 2019) 143.

‘normal.’<sup>23</sup> Scaling, as Tsing explores, often leads to normalization via standardization by covering over systems, experiences, and worldviews that hold less power, creating a single and universal ‘normal.’ Revealing power dynamics has the potential to uncover plurality and multiplicity lost in the process of scaling and normalizing. If universal understandings of site and landscape erase, then the non-scalability of site becomes a key space where the urban landscape can resist, push back, and uncover to ‘become-with.’ This uncovering suggests a landscape of care, where care becomes a political response to the ways normalized and universal power erases and ignores.

Becoming-with suggests that neither landscape nor site are ever complete nor singular, they are always in process of becoming. This process includes and is made possible through the shared relations of humans, more-than-humans, the bio-physical world, and time. That site can simultaneously be more than one way of understanding and acting in the world has the potential to unsettle the ways landscape design is practiced and theorized by unsettling temporal contexts prioritizing positivist solutions and linear growth. Burns and Kahn, for instance, suggest site is a transient condition. While Burns and Khan acknowledge site is “saturated with difference” through “multiple realities,” they approach site as largely inscribed with meaning through representational practices of site analysis or as a construction site or as a built site, an idea landscape architect Martin Hogue has also explored.<sup>24</sup> To become-with changes how site is understood temporally and spatially; it is no longer a ‘transient’ condition shaped by project demands but an ongoing accumulation of time, memory, and action. Becoming-with has immense and mostly unexplored implications for how the design of landscape is conceived and practiced: it fundamentally changes the starting point of

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<sup>23</sup> (Wynter 2003) 260-264. See also, (Gómez-Barris 2017) for the ways decolonial methods can resist normalization and standardized knowledge through “submerged” or bottom-up methods of research that take historical formation and local knowledge as serious starting points.

<sup>24</sup> (Hogue 2017)

design and decenters growth and progress as the assumed outcomes for design and landscape practice.

***Content: sites of scale, materiality, and process***

The dissertation is organized around three areas of inquiry examining how site is conceptualized, negotiated, and produced through specific site practices. Each focuses on scale, materiality, and process, respectively, forming chapters three, four, and five. Each chapter focuses on a singular case study selected to trace key moments of transition in how site was conceived in twentieth century North American landscape practice. Chapters one, two, and six provide scaffolding for the three case study chapters. Chapters one and two introduce ‘site,’ ‘the urban landscape,’ and ‘becoming-with’ as key historical and theoretical framings for the dissertation’s approach, literature, and methods. Chapter six brings the case studies together to theorize landscapes practices of becoming-with, where I outline a future project engaging care as a methodology for design practices.

The case studies are intended to be representative but not comprehensive of key moments in the development of landscape theory and practice in twentieth century North America. First, in the early twentieth century, as the newly professionalized field of landscape architecture attempted to distinguish itself from garden design, landscape architecture sought professional legitimacy by framing site through progressive reforms that addressed environmental conservation and urban growth. Next, in the mid-century, site became more spatially formalized as it was considered in relation to modernist art and architecture. As environmentalism began to gain public prominence, landscape architects again sought professional legitimacy by rethinking site. This time, the field shifted from the design of formal modernist spaces to designing spaces of post-industrial decline through ecological systems and environmental efficiency. More recently, with advances in geo-spatial

technologies landscape design has again reframed site to position landscape design as central to addressing concerns of increased urbanism and climate change. The three case studies were selected based on these three historical periods, as representative of ideas and approaches that were integral to each of these periods.

The case studies point to the historically situated production of site and landscape in order to unsettle and reimagine their normative boundaries and power dynamics. The first area of inquiry, *site as scale* (chapter three), examines how practices of standardization developed through horticultural design were scaled to the national landscape in the early twentieth century, imagining the United States as single unit of standardized landscape and contributing to an American settler project of racial formation. The second, *site as material* (chapter four), considers how attempts at ‘curing’ landscapes damaged by industrial production in mid-twentieth century relied on stabilizing site through the regulation of biophysical forces, flattening site as a temporal space.<sup>25</sup> The third area, *site as process* (chapter five), explores the effects of indeterminately scaling dynamic landscape processes onto site to ‘recover’ urban ecological systems in the late twentieth and early twenty-first century. The three chapters work together using historical scholarship to investigate the intersections of design and theory, contributing to shaping contemporary landscape practice. Together, they show how site is maintained through racial formation, the suppression of ecological systems, and limited historical perspective, reducing and abstracting socioecological responsibility.

**Chapter three, *site as scale*,** considers the effects of landscape architect Warren Manning’s ‘National Plan’ (1919-1923) through a lens scale and racial formation. First published in 1919 and subsequently as a 23-page study brief in *Landscape Architecture* in 1923, the plan was deeply entangled with ideas of nature, race, and nation. I examine how the National Plan conceptualized the nation as

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<sup>25</sup> See (Clare 2014) for more on an ‘ideology of cure,’ an idea I discuss and build on in chapter four.

a singular and generalizable site to maintain a white supremacist future for the United States. The National Plan operates as a site of epistemological slippage through practices of standardization and racial formation that result in the erasure of socioecological difference. Standardization and racial formation are enacted by a process of scaling seen in the regulation of site, first at the scale of plant life through horticultural standardization and later through the regulation of ecological diversity at the national scale.<sup>26</sup> These processes create a ‘rational’ view of the nation predicated on the preservation of white life and the regulation of non-white life. The maps of the “National Plan” illustrate the ways acts of drawing have been put to work to exonerate the designed landscape from—while often working to maintain—spatial structures racial violence and white supremacy. The ongoing racial formation that the National Plan contributes to is seen in urban landscapes today, requiring strategies that can resist the historical momentum of racial formation. Recovering these stories becomes an act of care that is attentive to repair as a strategy of resistance.

**Chapter four, *site as material***, explores how attempts to maintain site-specificity during the design, construction, and maintenance of post-industrial sites in the mid-twentieth century relied on the subversion and stabilization of dynamic landscape systems. In this chapter, I examine how King County, Washington’s 1979 art symposium and exhibition, *Earthworks: Land Reclamation as Sculpture* attempted—and failed—to control temporal and networked landscape processes through the regulation of property boundaries. The exhibition sought to transform eight former gravel quarry and waste sites, developed for the construction of Seattle’s highway system after World War II, into site-specific landscape installations that would reflect the regrowth of environmental conditions in post-industrial landscapes. The desire to make ‘whole’ the *Earthworks* sites also

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<sup>26</sup> (Tsing 2019) 144-145.

suggests a fractured relationship with care, where responsibility for caring for environmental systems is individualized.

**Chapter five, *site as process***, traces ecological discourses focused on novelty and indeterminacy within landscape practice over the past twenty years. Through the analysis of design competitions and publications since 1999, I critique the ways ecological process has become a surrogate for landscape when applied to specific sites. I begin in 1999 as a transition into a contemporary period of landscape theory that connects past debates in landscape practice between the merits of ecology and art with contemporary concerns around environmental change. The edited volume *Recovering Landscape* published in 1999 asserted landscape theory as worthy of serious scholarship.<sup>27</sup> Second, two major park competitions for the reuse of large urban sites, Downsview Park (Toronto, Ontario, 1999) and Fresh Kills Park (Staten Island, New York, 2001) called for ecological succession as central to the design brief. In the first half of this chapter, I consider how the Parc Downsview Park Competition promoted the language of ecology to advocate for both dynamic and indeterminate process-based design. I argue that the Downsview competition created the conditions for urban sites to be seen as stable voids, allowing for capital growth and redevelopment to become naturalized processes. The second half of the chapter examines how the language of ecology has since affected design practice through the example of novel ecosystems. Through this chapter, I examine how a focus on ecological process in landscape practice has instead created the conditions for technoscientific futures that often essentialize landscape, scale, and time in favor of generalizable and universal site practices.<sup>28</sup>

The three case studies establish a genealogy of the ways landscape practice has long responded to and been reflective of political, social, and cultural systems. The organization of

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<sup>27</sup> (Corner 1999c)

<sup>28</sup> See (Puig de La Bellacasa 2015) for use of the term ‘techno-scientific futures’ to frame how technology without critical perspectives will not save people or the environment.

research through linked themes, rather than clear topical connections has precedent in design research. In particular, I am thinking of *Organization Space* (Easterling 1999) which uses three distinct and rather divergent case studies to develop an idea of “organizational space” about American urbanism.<sup>29</sup> In that example, the case studies becomes tools for illustrating the broader ideas rather than themselves being the central focus. In this dissertation, I am framing the case studies in a similar way; they can stand alone but when linked together tell a larger story. The first case study of Warren Manning’s ‘National Plan’ considers how the scaling of the garden site to the region in the early twentieth century reflects a historical moment marked by transitions in urbanization, immigration, and environmental conservation often defined by an uncertainty of scale. The second case study, the reuse of extractive sites in western Washington in the late 1970s explores the role of materiality in determining landscape practices during a time when resource economies were beginning to shrink. The final example considers how contemporary ecological discourses are reacting to a period of environmental uncertainty, suggesting how an urgency of capitalism requires replicating landscape systems, in almost any and all ways. The three case studies all engage questions of scale, materiality, and process, weaving a story of how landscape practice has long been concerned with questions of site, and to pose care as a methodological for landscape practice.

### ***Intentions: toward historically situated and self-reflective landscape practices***

Landscapes are messy and contentious, and often where political, social, and environmental power is spatialized. Landscapes form as a direct reflection of this power, on sites conceived in a variety of representational, physical, and material ways.<sup>30</sup> The edited volume *Site Matters* offers an initial

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<sup>29</sup> (Easterling 1999)

<sup>30</sup> Both (Mitchell 1994) and (Crampton 2001) discuss how landscapes reflect political and colonial power through art and cartography, respectively.

introduction to the ways architectural and landscape history has sanctioned specific ways of engaging site, often through clear delineations of identifiable ownership, belonging, or memory.<sup>31</sup> However, though *Site Matters* addresses the ways site has often been overlooked within scholarship of the built environment, the volume largely focuses on how sites can have multiple but still neatly resolved definitions. In response to past scholarship, a first aim of this dissertation is to contribute to the gap in scholarship on site in landscape history. I am particularly interested in how site becomes site, and how examining the formation of site begins to disassemble how landscape history and theory has been largely approached from an essentialist perspective.

By adding to histories of site within landscape practice, I build on landscape critic Elizabeth Meyer's call for more scholarly work within landscape practice on the history of site.<sup>32</sup> Bringing science and technologies studies and feminist methodologies into conversation with landscape history, I am critical of the ways landscape practice has historically sought to pardon itself from engaging in social and political questions of space. I address questions of history in all three case studies but I engage it mostly deeply in chapter three, particularly the ways design practices have sought to pardon themselves from the historical construction of race and place. Through historical analysis, I contribute to a growing project of dismantling and rebuilding taking place in landscape design and history, often focusing on the ways landscape practice has been complicit, and continues to be, in materializing practices of Indigenous dispossession and racial segregation.<sup>33</sup>

Second, I address the need for socioecological responsibility toward the design of urban landscapes perceived as wasted or damaged, particularly as they relate to contemporary ecological functions and socioecological futures. Over the past twenty years, as environmental change has

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<sup>31</sup> (Burns and Kahn 2005)

<sup>32</sup> (Meyer 2005) 119.

<sup>33</sup> See (Bélanger 2020, Barton 2001, Harris 2007, Safransky 2014) for ongoing contributions from landscape practice, geography, and architectural history to address how design practices have engendered racialized spatial practices.

become a central global issue, landscape design has increasingly sought to solve environmental problems through design while employing ‘quasi-scientific’ methods.<sup>34</sup> The scope of traditional landscape practice—parks, gardens, and public urban spaces—is shifting with the acknowledgement that landscapes reflect complex and often unseen ecological and industrial histories.<sup>35</sup> In response, landscape designers have often looked to theories and practices of art and environmental sciences to make sense of the various ways site is constructed, resulting in definitions of site rooted in cultural theories of place or scientific language and methods.<sup>36</sup> Landscape critic Anita Berrizbeitia describes this shift in a 1999 essay, explaining a move from studying what landscapes *are* to a focus on what they *do*.<sup>37</sup>

More recently, citing the use of shellfish and other aquatic life in landscape restoration projects, geographers Bruce Braun and Stephanie Wakefield note that in the context of climate change, the ecological functions of a site are no longer designed to work *with* human agents to enact spaces of cohabitation but to work *for* them to ward off unwanted futures.<sup>38</sup> Throughout the dissertation, I remain interested in how knowledge is cared for in design practices. Caring for knowledge is directly linked to socioecological responsibility in my analysis. Both my analysis and how I frame socioecological responsibility are concerned with who normative environmental knowledge reflects and serves, issues I address most explicitly in chapter five. Site in this context

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<sup>34</sup> (Raxworthy 2017) 88.

<sup>35</sup> (Way 2013)

<sup>36</sup> (Howett 1998) and (Meyer 1997) have both addressed varying positions toward art and science in landscape practices of the mid and late twentieth centuries. In favor of art, writing in the introduction to *Between Landscape Architecture and Art*, John Dixon Hunt notes: “the failure to attend to any conceptual concerns. The dread of what is called theory ... another cause of professional unease is the fear of art, an anxiety that human ingenuity may jeopardize the earth’s unique equilibria (or those that survive) for the stewardship over which modern landscape architect takes particular pride; another way this to be formulated is via the old opposition of science versus art.” Quoted in (Weilacher 1996) 6. For those again advocating landscape as science, see: (Davis and Oles October 2014) and (McHarg 1967).

<sup>37</sup> (Berrizbeitia 1999) 188.

<sup>38</sup> (Braun and Wakefield 2019) 207.

remains focused on ‘solving’ environmental damage through the ecologically functional qualities of landscape, such as the collection and filtration of urban stormwater or the measurement of habitat restoration within contaminated soil.

My final intention is one of critical reflectivity within landscape design and practice. Focusing on the ways landscape practices have engaged environmental knowledge, specifically normative epistemologies of nature distinguishing between humans and the biophysical world, reveals site can never be isolated to only what it does or how it functions. Site always intersects with the social and political dimensions of landscape.<sup>39</sup> Implicit throughout is a critique of singular time and linear growth, particularly the ways modern capitalist contexts seek to recover, restore, and repair sites damaged or wasted by modern capitalist-driven environmental change, including landfills, infrastructures, and industrial lands. I engage in a relational analysis that insists recovery, restoration, and repair are always shaped in relation to other spaces, subjects, and structures that are always shifting and temporally changing.<sup>40</sup> These ideas I engage most directly in chapter four through ideas of ruination and ideologies of cure. Through historical examples, I respond to the ways contemporary landscape practice has been hesitant to fully engage the consequences of spatial histories. I aim to build critique within landscape theory and build connections with historians to inform how landscape practice can normalize honesty and humility with respect to the ways landscape and site have been used to neutralize and naturalize uneven power dynamics.<sup>41</sup>

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<sup>39</sup> In examining how environmental knowledge has been used to construct site historically, I consider how landscape practice has benefited from the strictness of positivist scientific methods, but suggest that perhaps this focus has run its course as what constitutes urban nature continues to blur the lines between modern science and cultural memory. Both (Spirn 1988, Howett 1998) discuss this extensively, as early as the 1980s and 1990s.

<sup>40</sup> (Massey 2005) 167.

<sup>41</sup> Landscape theory informs landscape practice and vice versa. Much of my interest in landscape theory stems from experience and training in landscape architecture and work as a professional landscape architect. I continue to be interested in landscape design as a way of imagining different futures and materially disassembling and rebuilding the world; developing stronger theory is central to this reimagination.

The three intentions of the dissertation—broadening how site is understood historically in landscape practice, calling for socioecological responsibility, and developing critically reflective landscape practices in socioecological design—matter because landscape practice has the capacity to both conceptualize and materialize new spatial conditions. For landscape practices, specifically, self-reflection is needed to ensure that as new worlds are imagined and enacted they attend to the repair of past and ongoing violences against bio-physical systems and racialized bodies. One part of allowing for this repair is a need for more complex histories situated in critical theory capable of contextualizing how design practices are reflective of past social and ecological erasures. As site continues to be a space where power is revealed and enacted politically, culturally, and socially, site inquiry offers a starting place for such attention and focus.

Through the case studies and these intentions, I pose care as a potential response for the ways site and landscape continue to individualize socioecological responsibility. I suggest that care offers a political response to the individualizing of socioecological responsibility and historical causation. I position care as a framework that is attuned to the uneven power dimensions of human-driven environmental change while constantly reinforcing self-reflective relational analysis. Environmental philosopher Maria de la Puig Bellacasa writes care is as much, or more, a way of thinking and relating to the world as it is a specific idea of “caring.”<sup>42</sup> I develop care as a way to build practices of resistance toward hegemonic power structures, not as a conventional mode of stewardship or as a pleasant, ‘caring’ distraction. In positioning care as a response to the ways power

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<sup>42</sup> (Puig de la Bellacasa 2017). Puig de la Bellacasa builds on ideas of care developed by feminist care scholar Joan Tronto who has described an ethics of care as the practices we do to “maintain, continue, and repair our ‘world’ so that we may continue to live in it as best as possible.” The ‘we’ in care ethics is intentionally vague to recognize how care often falls disproportionately on bodies, environments, and forms of life with less social power and mobility. Central to this idea of ‘we’ is the relational self who is connected to other subjects, spaces, and processes through unequal power relationships. (Tronto 1993) 156.

works unevenly, I acknowledge that care practices themselves create new power relations even as they work to undo others.<sup>43</sup>

One way I continue to focus care as a critical response is through continuous relational analysis. It matters how site and landscape come into being through historical and ongoing socioecological relations in order to form good relations with ourselves, our work, and our communities. The focus on ecological performance within contemporary landscape practices, for instance, simplistically suggests a goal where nature self-regulates and environmental systems adapt and thrive without human regulation.<sup>44</sup> This attention toward non-human agency distracts from the ways nature is not pre-determined but always shaped in relation to human actions. The focus on relationality takes several forms in the case study chapters. In chapter three, for example, I focus on the ways white supremacist environmental mapping in landscape architecture is reflective of racial formation during the early twentieth century through progressive reforms and scientific standardization. I focus on the ways this case study is not an isolated instance of racist design theory but shapes and is shaped by social and historical processes of racial formation.

Alternatively, in chapter five, I show how the adoption of contemporary ecological theory by landscape practice has not been considered relationally. In this case, I focus on the ways landscape practices draw on ecological thinking toward particular end goals without considering how environmental knowledge is shaped in response to social, political, and economic histories.

Indigenous science scholar Kim TallBear describes how being in good relation with ourselves is

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<sup>43</sup> Science scholar Michelle Murphy warns—without rejecting the potential of care ethics—that care needs to stay critical and responsive to the ways care ethics themselves produce new structures of power. (Murphy 2015)

<sup>44</sup> This perspective tends to treat ecological theory has something that can be selected to fit a designers intentions. For example, (Reed and Lister 2014) discuss the advantages of designing led by ecological process without specificity for how or why ecological methods should be used (other than flexibility); (Thompson 2013) discusses the transition toward indeterminacy in landscape practice driven by capital and neo-liberal motivations; and (Cantrell and Holzman 2016) suggests that contemporary design should incorporate new technologies to develop ecological systems that no longer need human support.

powerful tool for dismantling hegemonic power structures.<sup>45</sup> Similarly, feminist science scholar Donna Haraway writes of making “kin” as a process of building relations between people, animals, and land that can weave plural worlds.<sup>46</sup> Drawing attention to the historical relationships between site and landscape becomes critical for interpreting how urban landscapes are assembled relationally in order to work toward socioecological practices that seek to maintain and be in ‘good relation.’<sup>47</sup>

***Key terms: site, urban landscape, becoming-with***

At the core of this dissertation is an argument about language and meaning, and a critique of the ways landscape theory and practice remain focused on essentialist meanings through language. In part, this focus stems from a failure in both landscape theory and practice to recognize that knowledge is always situated and power-laden, as is the language of site and landscape.<sup>48</sup> The ongoing search for essential knowledge within landscape theory, such as attempting to reconstruct meanings of landscape from the French *paysagiste* or the German *landschaft*, fails to recognize that what counts as essential is a reflection of power and history.<sup>49</sup> Reflecting on the ways language shapes our perceptions of the world, three terms—site, urban landscape, and becoming-with—stand out and need further unpacking in the context of this dissertation. For each of these terms, I do not assume

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<sup>45</sup> (Tallbear 2019) 24-25.

<sup>46</sup> (Haraway 2015) 161.

<sup>47</sup> “Being in good relation” is discussed extensively by Indigenous scholars to give language to the ways life is always related and connected temporally as well as spatially. I was introduced to what it means to be in good relation through various Indigenous family members who raised me to refer temporally to both ancestors and decedents (relations) as well as spatially to the places and lands we live with. I have found academic language for being in good relation through Glen Coulthard, Leanne Betasamosake Simpson, and Kim TallBear. (Coulthard and Simpson 2016, Simpson 2017, Tallbear 2019)

<sup>48</sup> (Howett 1987, Meyer 2005, Corner 2006) all discuss the importance of site in historical contexts but continue to overlook or not seriously interrogate the role of power in historical formations of site.

<sup>49</sup> (Stilgoe 2015)

a fixed meaning as their meaning has shifted even over the course of writing this dissertation. I situate these terms to give context and perspective in my analysis.

**Sites** contain the memory and life of landscape. Art historian Miwon Kwon writes that site is measured subjectively through memory and experience, and objectively through cartography, property, and policy and represented through stories, maps, and drawings.<sup>50</sup> In *Site Matters*, Burns and Kahn bring together essays that do not treat site as a singular construct, showing through diverse examples of history, policy, and ecology how site is socially and materially constructed.<sup>51</sup> In the collection, for instance, Robin Dripps writes that site is both the explicit and implicit result of uneven power relations. Robert Beauregard is more specific, noting that contemporary readings of site are derived from colonial practices of occupation and ownership, while Kristina Hill argues that sites are largely representational.<sup>52</sup> *Site Matters* works to develop a clear interpretation of site, and is an important source on which to ground the argument developed in this dissertation.

The representational power of site is vast, extending from the drawn and written lines of maps and planning documents, into material and structural practices of zoning and property.<sup>53</sup> The representation of site through property maps, forest conservation areas, transportation routes, and political borders illustrates how site can define and give meaning to layered politically, socially, and ecologically contested geographies. Sites are also discursive as much as they are material, with representational and communicational structures bounding sites as social arenas that provide opportunities for some and constraints for others.<sup>54</sup> Science historian Bill Rankin notes how the

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<sup>50</sup> (Kwon 2002) 1-9.

<sup>51</sup> (Burns and Kahn 2005)

<sup>52</sup> Dripps (59-91), Beauregard (39-58), and Hill (131-156) in (Burns and Kahn 2005)

<sup>53</sup> (Cosgrove 2008a, Crampton 2001, Harley 2001, Hirt 2012, Kurgan 2013)

<sup>54</sup> (Bourdieu 1991)

representational power of site can “act as a stand-in for the original landscape, as well as the potential to obscure, naturalize, and erase underrepresented narratives and processes.<sup>55</sup>

Sites can reveal but also exclude and erase. They are never neutral. Historian George Lipsitz notes that the shared politics of many urban sites is predicated on the exclusion of others, often along racial lines.<sup>56</sup> As such, sites can be spaces of control that displaces and excludes based on race, gender, and identity. Critically, Lipsitz notes that often sites of erasure—sites that reflect and bury uneven power relations—have intentionally come to be described as normative and natural within urban spaces.<sup>57</sup> In this dissertation, I treat site as both space where power is collapsed through normative representations that hide difference, and as layered collections of diverse socioecological relations that continue to emerge despite attempts by the former. These two ideas of site—as reflective of power and highly subjective—are intimately related as maintaining dominant spatial constructions of site found in maps and property often depends on the flattening other, more subjective, ways of knowing site.

Landscape as a material and discursive reality, rather than as a visual framework, is central to my analysis of the urban landscape. The **urban landscape**, the second idea considered here, refers to the shared environmental systems, infrastructures, economic linkages, settlement patterns and land uses, and histories and cultures that constitute a regionally diffused urban area.<sup>58</sup> Within these shared socio-spatial systems, urban landscapes do not represent a particular spatial condition but rather traverse multiple types of city, county, and state boundaries. In the late 1980s and 1990s, landscape scholars, including environmental historians and political ecologists, began to grapple with the multiple meanings found in urban landscapes, noting that landscape is both inadequately

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<sup>55</sup> (Rankin 2016) 2.

<sup>56</sup> (Lipsitz 2011, 2007)

<sup>57</sup> (Lipsitz 2011)

<sup>58</sup> (Pickett and Zhou 2015)

understood within urban spaces and that idea of landscape potentially offer a broad enough framework with which to analyze urban complexity.<sup>59</sup> Geographer Matthew Gandy, for example, notes that when cities and urban landscapes are analyzed in terms of their precise historical and political context, the “urban becomes a space of multiple possibilities driven not just by the logic of capital but emerging from a series of socioecological, technological, and ideological entanglements.”<sup>60</sup> Gandy’s introduction of socioecological entanglements foregrounds the urban as a layered and thick space not bounded by a particular place and shaped collectivity through networked relationships.

Likewise, ecological systems are rendered urban through institutions and economies that transform ‘nature’ into managed resources.<sup>61</sup> Urban political ecologists such as Nik Heynen have furthered Gandy’s reading of the urban as a socioecological entanglement. Geographer Eric Swyngedouw and media scholar Jennifer Gabrys have both illustrated how nature becomes urban through a constant process of urbanization in which new urban subjects, bodies, spaces, and temporalities emerge as distinct and shared forms of life.<sup>62</sup> Becoming urban is not simply a process of urbanization, these scholars insist, but the many ways in which social, political, and ecological

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<sup>59</sup> Much of landscape theory has focused on definitions of *what* landscape is or is not. These studies, while building work on theories of landscape practice, have not been particularly helpful for understanding *how* landscape comes into formation. This existing work has often focused on the linguistic roots of landscape, attempting to link landscape meaning with rather narrow European conceptions of land, often in a search for more ‘productive’ roots of landscape architecture as a mix of art, science, and engineering. For example, landscape scholarship has turned to the French word *paysagiste* or the German *landschaft* as two examples of landscape-like words that often have broader meanings in their respective languages. The irony of returning to European languages in an attempt to get away from picturesque connotations in English has not been addressed. Yet, in focusing only on questions of *what*, landscape theory remains self-referential and circular. Literature on what is or is not landscape includes: (Doherty and Waldheim 2015, Waldheim 2014, Waugh 2013, Corner 1999c, Davis and Oles October 2014, Jackson 1984, Stilgoe 2015)

<sup>60</sup> (Gandy 2018) 98.

<sup>61</sup> (Smith 2010)

<sup>62</sup> See (Gandy 2002, Heynen, Kaika, and Swyngedouw 2006, Kaika 2005, Swyngedouw 2006) for more on how urban space is assembled through socioecological processes. Of these scholars, Jennifer Gabrys explores becoming most explicitly through embodied ecological practices that include moss, sensors, and walking in (Gabrys 2012).

processes are constituted through shared relations and manifested in space. The urban landscape then, as a spatial material-discursive entanglement, is defined by its continuous becoming.

Finally, the third idea I engage with is **becoming-with**. Drawn from feminist science studies and relational ontologies, becoming-with is an ethic and aesthetic where the messiness and specificity of site opens new possibilities for design rooted in care, vulnerability, and plurality. Feminist science scholar Donna Haraway has continued to develop the concept of becoming-with as a counter to the ways human exceptionalism limits engagement with environment and the more-than-human world. “We know,” Haraway writes, “that becoming is always becoming *with*, in a contact zone where the outcome, where who is in the world, is at stake.”<sup>63</sup> More than an idea of interconnectedness, becoming-with suggests becoming comfortable with the entangled ways that human and more-than-human life are continuously shaped through each other and ongoing structures of knowledge, power, biophysical material. I use Haraway’s idea of becoming-with to understand how site and landscape continuously shape and are shaped by each other as well as ongoing political and cultural structures.

Through the idea of becoming-with, I approach the urban landscape as always in a process of formation. The ongoing relational formation of landscape decenters humans—and designers—as the central agents in temporal landscape change. While human effects on landscape may be uneven, becoming-with challenges that humans are exceptional or external to the broader biophysical world. Becoming-with forces attention, responsibility, and care to how humans effect the world unevenly to work toward “becom[ing] with each other or not at all” as Haraway explains.<sup>64</sup> Becoming-with the urban landscape means to continuously relocate, as philosopher Rosi Braidotti notes, “the sites, bodies, and processes of spatial participation or site work.”<sup>65</sup> Becoming-with may

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<sup>63</sup> (Haraway 2008) 244.

<sup>64</sup> (Haraway 2016b) 4.

<sup>65</sup> Rosi Braidotti (2006) in (Gabrys 2012) 2926.

be a more apt way to understand how spaces and subjects are incorporated into and expanded through ecological communities than standard timeframes and linear growth. Becoming-with the urban landscape suggests new landscape practices that resist essentializing site through spatial and temporal practices. Rather, it works toward site practices that are situated and boundless, lively and active, material and metaphor, human and nonhuman.<sup>66</sup>

Representing the fluidity of landscape through the boundaries of site helps to frame the immeasurable scale and complexity of what it means to be human. Therefore it is not surprising that landscape literature and traditional practices continue to rely on easy categories of site and landscape, despite all the ways they defy categorization. But it is also through the boundaries of site that humans have been able to exclude themselves from the dynamics of the biophysical world and limit “our capacity for imagination and caring for other worlds.”<sup>67</sup> In the following chapter, I look more closely at the ways literature and landscape practice have sought to categorize site and landscape. Through literature and methods incorporating landscape theory, political ecology, and science and technology studies, I suggest how the continued categorization of site and landscape remakes binaries of nature and society, often erasing the plurality of site. Drawing out the historical traces that live within these categories opens new worlds, new stories, and new practices of design.

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<sup>66</sup> Media scholar and landscape architect Jennifer Gabrys has also asked in reference to becoming-with, “what are the material and collective expressions of urban bodies and collectives that are always in formation,” or rather, that resist categorization? (Gabrys 2012) 2923-2924.

<sup>67</sup> (Haraway 2016) 50.

## Chapter Two

### Toward disciplinary plurality: literature and methodology

#### 1. *Landscape frameworks*

Landscape theory and practice have long acknowledged site and landscape as distinct yet entangled categories. The three case studies in this dissertation contextualize within history how attempts to blur the categorization of site and landscape have often resulted in new distinctions between the two, remaking normative categories of nature and society. Writing in 1991, landscape critic Elizabeth Meyer noted that landscape theory had dwelled too much on the conceptual roots of landscape resulting in “theory [that] is still too derivative” of art and ecology.<sup>1</sup> Meyer’s argument that landscape practice is “neither an art nor a science,” but that it must “have its own object of knowledge” persists as the boundaries of landscape continue to be redrawn along artistic and scientific lines.<sup>2</sup> The development of a specific body of knowledge that Meyer called for in 1991 has remained underdeveloped in part because of a continued reliance within design practice and literature on modern scientific discourses that produce binaries of inside and outside, mind and body, nature and city, human and nonhuman.<sup>3</sup>

Normative scientific practices in twenty-first century Western thought are driven by efficiency focused on ideas of productivity, linear progress, and growth, as well as replicability through material evidence.<sup>4</sup> Positivist methodologies that distinguish mind from body—embodied and lived experience—to create the conditions for replicable and generalizable conclusions have

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<sup>1</sup> (Meyer 1991a) 158.

<sup>2</sup> (Meyer 1991a) 158.

<sup>3</sup> (Davis and Oles October 2014, LandscapeArchitectureFoundation 2010-present)

<sup>4</sup> (Puig de La Bellacasa 2015) 697. For additional critiques of positivist methods: (Daston and Galison 2007, Flyvbjerg 2001, Tsing et al. 2017, Keller 1985, Rose 2001)

shaped modern approaches to scientific practice. Landscape theory and practice has increasingly employed these tools of normative science, such as quantifiable environmental metrics, to prove that landscape design is legitimate and legible within modern professional frameworks that prioritize growth and progress.<sup>5</sup> This trend follows what science historians Lorraine Daston and Peter Galison have noted about increased reliance on seemingly objective practices in Western society. Daston and Galison reveal, however, that objectivity based on replicable evidence is a fairly recent idea, entering European scientific practices only in the mid-nineteenth century.<sup>6</sup> Critics of positivist science such as Daston and Galison argue that in seeking generalizable truths, positivism overlooks how power unevenly shapes experiences of the world while denying multiple lived experiences.<sup>7</sup> Extending their critique, I argue that landscape design and practice have normalized singular site responses for similar reasons toward generalizable and efficient knowledge. Drawing on a range of scholarship and literature from geography, environmental history, and feminist science studies, I show how the continued categorization of site through normative categories leads to the regulation of life by limiting socioecological responsibility.

While landscape theory and practice has remained focused on debates over the scientific merit of landscape design, the disciplines that landscape practice often looks to for theoretical guidance—including art, geography, and ecology—have increasingly moved beyond disciplinary boundaries to recognize the ways that environment and society are constituted through one

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<sup>5</sup> The “Landscape Performance Series” by the Landscape Architecture Foundation is an example of this move toward quantifiable and metric based landscape data; see: (<https://www.landscapeperformance.org/>)

<sup>6</sup> (Daston and Galison 2007)

<sup>7</sup> In addition of Daston and Galison, see (Gómez-Barris 2017) 1-9 for more on positivist methods that deny lived experience.

another.<sup>8</sup> Meyer's recognition of the need for landscape-specific critical inquiry in the early 1990s highlights the ways landscape design remains reactive when it relies on re-representing and reproducing foundational knowledge from related disciplines. In response, this dissertation addresses the self-referencing cycle that Meyer describes within landscape theory by examining the ways site and landscape are conceptualized historically to contribute to actualizing diverse and self-critical landscape practices in contemporary design.

The history of landscape theory ranges from the invention of perspective painting in Italy in the sixteenth and seventeenth centuries to the creation of capitalist land tenure in eighteenth century England.<sup>9</sup> While vast in terms of scholarly output, most landscape design history and theory still roots itself in European definitions of landscape as a visual ideology.<sup>10</sup> As art historian E. H. Gombrich and cultural theorist Raymond Williams have each explored, this traditional idea of landscape was concerned with the practical delineation of land.<sup>11</sup> In contemporary North American landscape theory, landscape has remained largely confined to such traditional and European definitions. This limited interpretation of landscape as a practice of "separation and observation," as Williams notes, has persevered even as scholars have studied every day and vernacular landscapes, as in the case of J.B. Jackson, or the hierarchies created between landscape iconography, land tenure, and property as in geographers Stephen Daniels and Denis Cosgrove.<sup>12</sup> Likewise, geographer Clarence Glacken has considered how perceptions of landscape form relative to Western

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<sup>8</sup> See (Davis and Oles October 2014)for debates about the scientific value of landscape architecture; (Heynen 2017)as a good example of the ways human geography has been self-critical and demanded more of itself in terms of intersections. Additionally see (Demos 2016, Hetherington 2019) as an example that brings together art practice with critical theory to blur lines between both. Finally, see Aarhus University Research on The Anthropocene as an example of an academic effort to cross disciplinary boundaries between art and science (<https://anthropocene.au.dk/>).

<sup>9</sup> (Cosgrove and Daniels 1988, Gombrich 1985)

<sup>10</sup> (Mitchell 1995, 1994, Cosgrove 1998)

<sup>11</sup> (Gombrich 1985, Williams 1973)

<sup>12</sup> (Jackson 1984, Cosgrove and Daniels 1988)

mythologies and philosophies of the natural environment, as has landscape historian John Dixon Hunt.<sup>13</sup> More recently, landscape theory has turned to urban geography and planning, considering how space is assembled and experienced through socio-political structures as in the scholarship of Henri Lefebvre and David Harvey.<sup>14</sup>

These theoretical references form the basis of much of landscape practice and they continue to reinforce European enlightenment thinking that divides mind from body and humans from environment. Although some, such as landscape architects Ian Thompson and Pierre Belanger, have attempted to move past these definitions of landscape, their critique often still stems from a European perspective of landscape.<sup>15</sup> Belanger, for example, in attempting to dismantle how landscape is reflective of state power, continues to ground critiques of landscape generally in capitalist notions of property.<sup>16</sup> Starting from a critique of European concepts of landscape continues to focus landscape scholarship on the need for some essential meaning of landscape, rather than how alternative ontologies of landscape may be possible outside these normalized frameworks. While such scholarship has been important to grounding how landscape is understood within a North American context, such examples of landscape scholarship represent a narrow view of what landscape can be. This limitation has resulted in scholarship that is largely self-referential, while critiques of the ways the cultural mediation of landscape is situated and power-laden has remained largely unexplored.

Within this body of canonical landscape scholarship, the work of geographer Denis Cosgrove remains an important contribution for how landscape emerged within European frameworks. Through the “idea of landscape,” Cosgrove critiques the ways landscape as an idea is

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<sup>13</sup> (Hunt 2000, Glacken 1967)

<sup>14</sup> (Lefebvre 2000, Harvey 2006, 1990, Schmid 2008)

<sup>15</sup> (Thompson 2013, Belanger 2007)

<sup>16</sup> (Bélanger 2020)

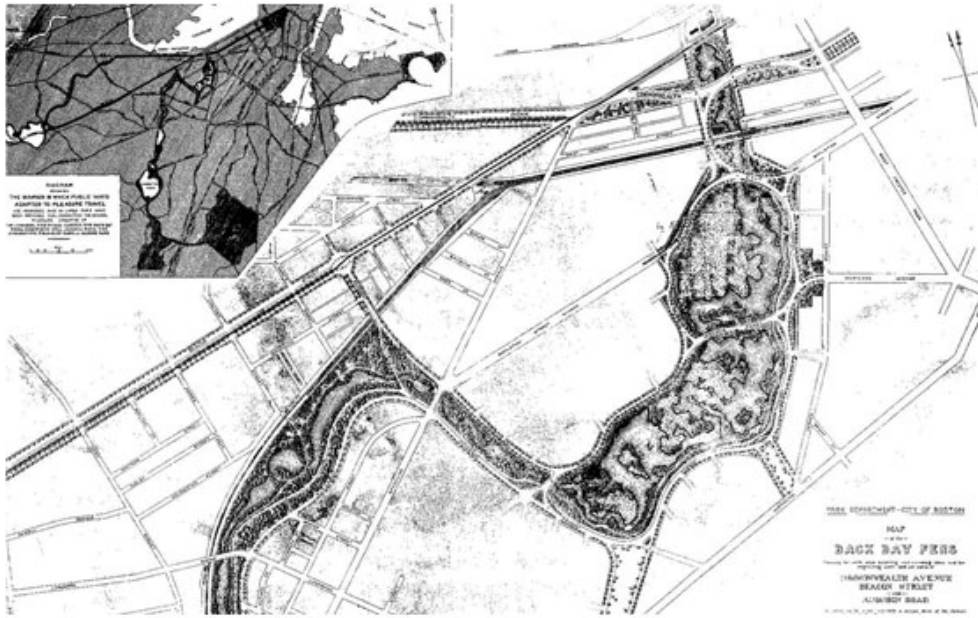
reflective of social power. The idea of landscape, Cosgrove argues, is a visual ideology through which different social groups have historically framed themselves and their relations with “both land and with other human groups.”<sup>17</sup> This social formation in turn produces the material spaces that compose the built environment. Cosgrove argues that the idea of landscape was not an essentialist category, but a way of viewing land and a discursive mode of interpretation “closely bound up with the practical appropriation of space” that is derived from the “renaissance humanists’ search for certainty rather than a vehicle of individual subjectivity.”<sup>18</sup> While the idea of landscape was made legible through material spaces such as perspectival painting, cartography, and land enclosure, the social formation of land was driven by regimes of capital regulated by political powers that resulted in a temporally flattened perspective of land and landscape.

These dual ideas of landscape—that it is both a rational frame for interpreting human mediation of land and as a subjective view reflecting power and political position—continue to frame debates within landscape theory and practice, particularly the interpretation and application of environmental knowledge. While Cosgrove established landscape as a visual ideology via cultural geography, landscape practice has long sought ways to make landscape definable through environmental knowledge. In the United States, landscape architecture was first defined as such by designers as such by Fredrick Law Olmsted, who often used local environmental qualities to drive and organize design proposals. Olmsted’s design for the Boston Fens in 1879, for example, used the circulation of water through filled urban land to promote environmental and civic cleanliness. *[Image 1]* Olmsted’s design for the Boston Fens suggests that environmental, in addition to visual,

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<sup>17</sup> (Cosgrove 1998) xiv.

<sup>18</sup> (Cosgrove 1998) 46.



[Image 1] Frederick Law Olmsted's design for the Boston Back Bay Fens (1885, asla.org)

concerns, have long been central to how landscape practice interprets specific sites, somewhat contradicting Cosgrove's notion of landscape as primarily a visual ideology.<sup>19</sup>

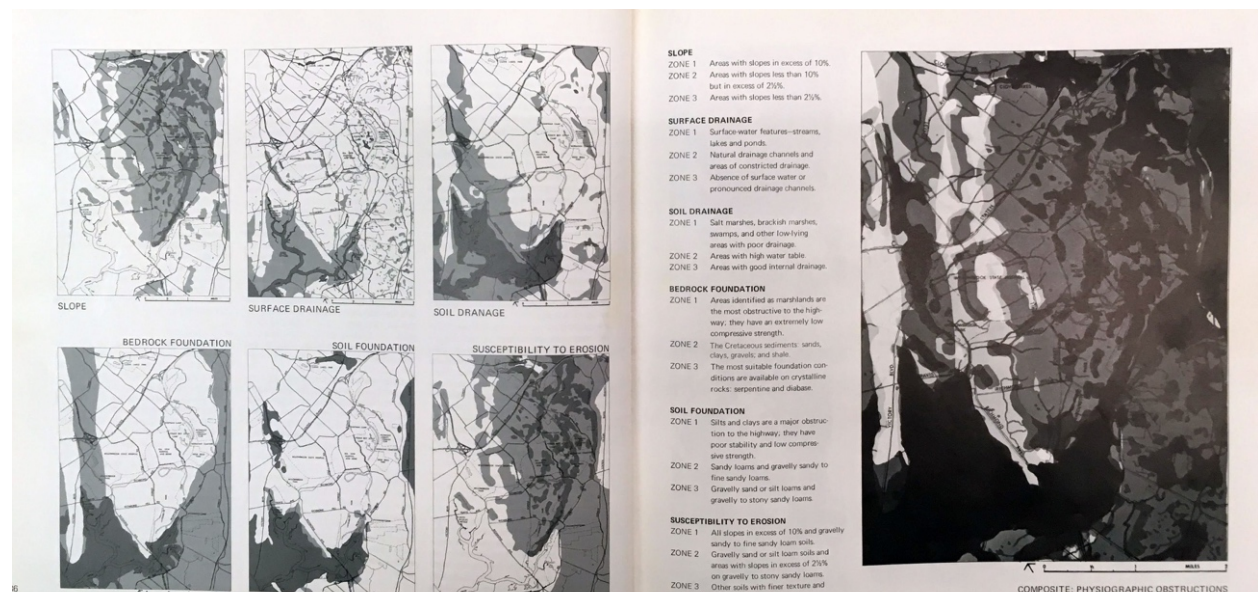
There is also a rich landscape history in the 1910s and 1920s as landscape architects drew on complex and local environmental knowledge to promote residential gardens and civic spaces. Landscape architects and designers Martha Brooks Hutcheson, Jens Jensen, and Elsa Rahmann, all advocated for native plants to be the primary material for any American landscape, a position that is echoed in Warren Manning's professional work.<sup>20</sup> One finds a similar framework toward environmental knowledge as recently as the 1960s. As ecological systems theory developed by Howard Odum and others shaped environmental sciences in the 1960s and 1970s, environmental analysis became central to the organization of landscape design. Leading this reorganization was the

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<sup>19</sup> (Howett 1998, Way 2013)

<sup>20</sup> (Way 2009) 191.

publication of landscape architect and environmental planner Ian McHarg's *Design with Nature* in 1969 which coincided with the beginning of the modern environmental movement as well as the popularization of ecological systems theory.<sup>21</sup> While local environmental knowledge was previously a key feature of site interpretation and analysis, McHarg promoted an efficiency-based approach to environmental decision making that reduced socio-ecological complexity to narrow environmental metrics.<sup>22</sup> McHarg's widely adopted design approach argued that the landscape architect was central to environmental management, a position that both blamed the public for environmental decline and advocated for paternal environmental stewardship. McHarg's method of site analysis often erased social and cultural processes or masked them with environmental metrics, such as reasoning that social demographics led to poor environmental resources in Philadelphia.<sup>23</sup> [Image 2]



[Image 2] Ian McHarg's 'Ecological Method' layered environmental data through maps, seen on the left, to determine optimal site responses for landscape design. This approach, a precursor to GIS, resulted in a flattening of site and reduction of site variable. (Design with Nature, 1969)

<sup>21</sup> (Odum 1970, McHarg 1969) While systems theory was developed in the early part of the twentieth century it did not become mainstream in ecological science until the early 1970s through the work of Howard Odum.

<sup>22</sup> (Herrington 2010)

<sup>23</sup> (McHarg 1967)

In the 1980s, Richard Foreman advanced the field of landscape ecology as a model for interpreting complex urban relationships through spatial patterns, helping to broaden interpretations of urban nature.<sup>24</sup> Since the late 1990s, environmental knowledge within landscape practice has often been deployed as a metaphor for complex urban growth as part of theories of landscape and ecological urbanism. Landscape urbanism builds on the work of McHarg and Foreman, framing landscape through landscape ecology while emphasizing a positivist approach to landscape analysis with strong links to contemporary representational practices. Landscape urbanism has also been driven by new geo-spatial technologies that build on ecological efficiency methods developed by McHarg and Forman. I next explore the consequences of landscape urbanism on site plurality in contemporary landscape practice.<sup>25</sup>

### *Theory into practice*

Over the past century, landscape theorists have sought out strategies for interpreting environmental knowledge so as to not rely on binaries that distinguish between humanity and ideas of nature. This work often addresses the ways idea of nature are not predetermined but shaped through cultural frameworks. As landscape historian Joachim Wolschke-Bulmahn has noted, “ecology and nature ... are ideas. They are human concepts to help us better understand our environment.”<sup>26</sup> How design therefore engages knowledge about landscape and site is deeply tied to ideas of what counts as natural, but also what counts as cultural. In positioning landscape as the central logic and organizing principle of urban space, theories of landscape urbanism, and later ecological urbanism, developed over the past thirty years have looked to Cosgrove’s landscape idea in attempts to side-step dualisms

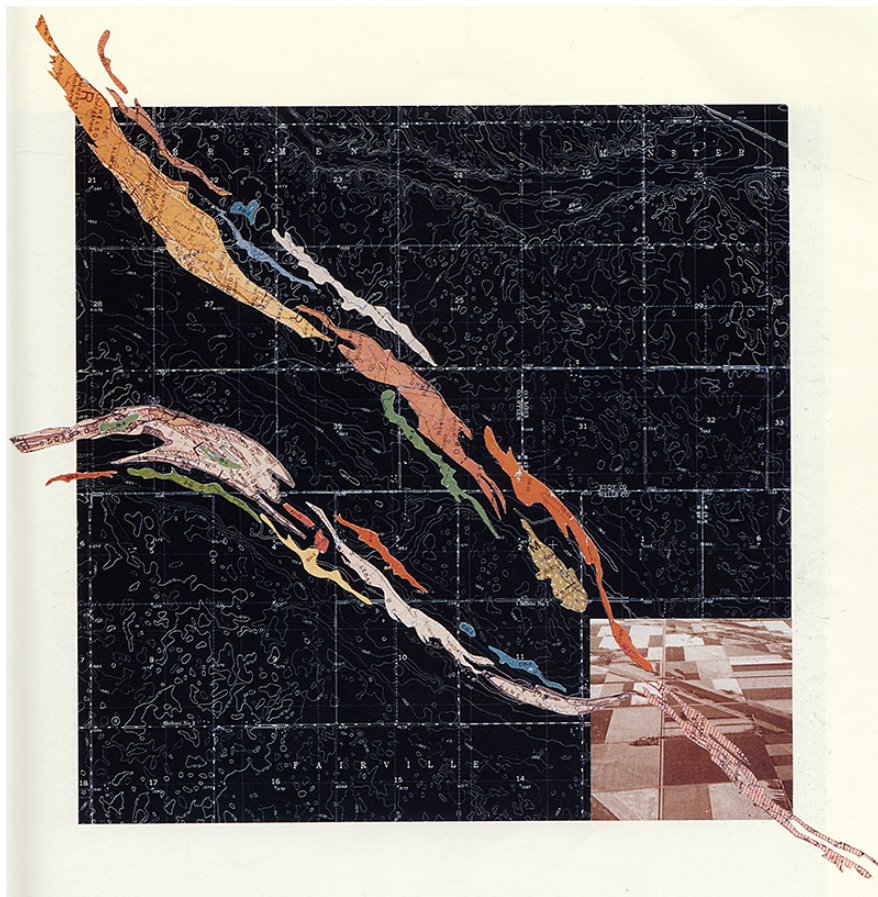
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<sup>24</sup> (Forman 2008)

<sup>25</sup> (Waldheim 2006)

<sup>26</sup> (Wolschke-Bulmahn 1999)180.

of nature and culture. Landscape urbanism engaged urban environmental systems by drawing on the infrastructural aspects of designs by Fredrick Law Olmsted, the regional planning of planner Benton Mackaye, the ecological determinism of landscape architect Ian McHarg, and the eidetic methodology of designer and critic James Corner.<sup>27</sup> [Image 3] Proponents of landscape urbanism note that while urban sites have value as social and cultural spaces, they have not always called for site plurality. Instead, scholars of landscape urbanism are often advocating for landscape practices driven by “speculative capital, private interests, and individual choices.”<sup>28</sup>



[Image 3] James Corner’s ‘eidetic’ mappings incorporating geo-spatial information with temporal, climatic, and phenomenological ‘unseen’ landscape processes is foundational to what would become increasingly complex landscape representations through landscape urbanism. Driven by increased access to geo-spatial data and improved digital technologies, landscape practices of the past several decades have built off the initial analog mappings of Corner. The example here is from *Taking Measures Across the American Landscape* (1996).

<sup>27</sup> For more on the roots of landscape urbanism see: (Waldheim 2006, Corner 1999a).

<sup>28</sup> (Waldheim 2016)85. Also pages 69-78.

In transplanting disparate narratives from various periods of landscape practice, scholars of landscape urbanism position landscape as semi-autonomous systems, arising in the wake of neo-liberal and post-Fordist economies. Landscape urbanist Charles Waldheim, in an early writing on landscape urbanism, cites the decentralizing of Detroit and the socially-void modernist architecture of Ludwig Hilberseimer as an admirable model of how landscape can become a driver of urbanism.<sup>29</sup> Likewise, infrastructure that would typically exist within engineering is embraced by landscape urbanists such as Stan Allen and Pierre Belanger as desirable for organizing urban form because of infrastructure's scalable and performative qualities.<sup>30</sup> In drawing attention to neo-liberal urban formation and modernist engineering, it is often unclear whether landscape urbanism is advocating for or against the political and economic conditions that produce post-industrial landscapes. For example, Waldheim does not mention racial and economic inequities that have emerged and heightened in the context of decentralization when discussing Detroit. Framing landscape as autonomous from socio-economic and political systems, as Waldheim often does, whether this is through liberal economics or self-regulating infrastructures, suggests that contemporary social and environmental conditions of inequity are inevitable or at least out of range for consideration for designers. Such limited framings have also informed landscape practice, reproducing its failure to recognize and examine how landscapes and urban spaces are power-laden.

In part, such uncritical positioning within landscape urbanism results from drawing on an over-simplified reading of Cosgrove's landscape idea as a visual and subjective framing of land. Cosgrove writes that what makes the idea of landscape relevant is that it shapes and is shaped through dominant structures of power, property, and capital.<sup>31</sup> In response, James Corner has

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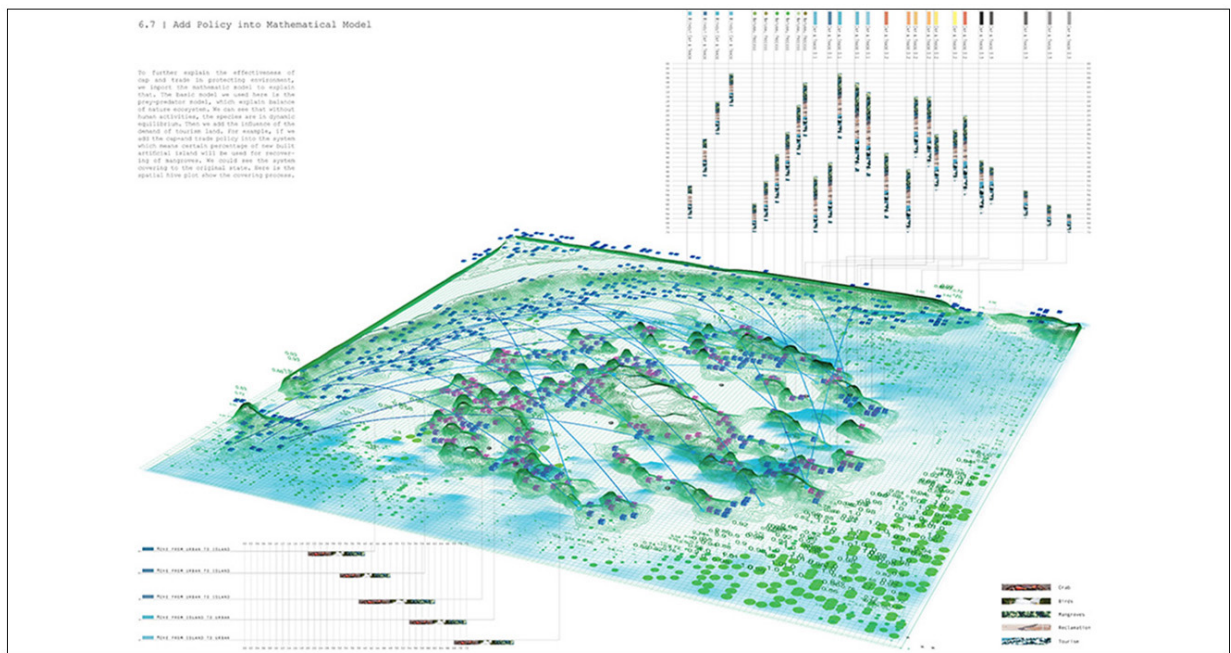
<sup>29</sup> (Waldheim 2016) 89.

<sup>30</sup> (Waldheim 2016) 11.

<sup>31</sup> (Cosgrove 1998) 11, 25, 41, 46.

written that “without image there is no such thing as landscape, only unmediated environment.”<sup>32</sup>

While there are many subjective readings of land, Cosgrove would argue, what becomes landscape is a reflection of dominant ideologies of power. Yet, Corner and other landscape urbanists miss Cosgrove’s reading of power, resulting in a simplified and narrow reading of what constitutes landscape. While landscape urbanism illustrates that landscape can be expanded to include many types of spaces—infrastructures, ports, airports, highways—without challenging how power shapes ideas of landscape, the meaning of landscape remains thin. [Image 4] Importantly, for this dissertation, landscape urbanism has become a dominant idea in landscape practice, particularly for the ways landscape urbanism has promoted the autonomy of nature while overlooking how ideas of nature reflect political and societal power. Thus, landscape urbanism created the conditions for normative epistemologies of nature to shape homogenous readings of landscape through the continued constrained categorization of site.



[Image 4] Landscape urbanist practices have often sought to develop urban form through modeling and simulating urban space, such as this new ecological city proposal by Eduardo Rico and Enriqueta Llabres (2018).

<sup>32</sup> (Corner 1999b) 153.

Beyond presenting a limited lens, landscape urbanism fails to heed Cosgrove's warning that by focusing on the rational aspects of landscape, landscape can be wielded to support ideologies of economic and racial hierarchy.<sup>33</sup> Geographers Matthew Gandy and Greet De Block critique how proponents of landscape urbanism prioritize the engineering of urban landscapes as ecologically dynamic and adaptable while overlooking how those same landscapes are produced in relation to neo-liberal expansion that excludes and divides.<sup>34</sup> De Block questions the accuracy of claiming to move infrastructure from the realm of engineering to urbanism, citing the ways nineteenth century designers worked with what would be characterized as infrastructure today, such as Olmsted's hydrological engineering of the Boston Fens. De Block worries that defining the boundaries of landscape in relation to capital production, while continuing to draw on scientific methods that promote the natural sciences over the social, will produce the same normative, monofunctional infrastructures that landscape urbanism claims critique.<sup>35</sup>

The lack of attention to the role of power and property is particularly relevant to landscape urbanism's treatment of site, that Waldheim has described as a space of economic or infrastructural transition.<sup>36</sup> In the search for clear boundaries to landscape as a place, idea, or framework, landscape urbanism has drawn attention away from site specificity rooted in memory and cultural experience in favor of rational logistics of post-industrial sites of capital contraction and accumulation.<sup>37</sup>

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<sup>33</sup> (Cosgrove 1985)

<sup>34</sup> (De Block 2016, Gandy 2015)

<sup>35</sup> (De Block 2016) 382. De Block references Ian Thompson (2013), noting that "one of the ironies of the 'battle of the urbanisms' is that New Urbanism and Landscape Urbanism are both uncritical of capitalist urbanization and suspicious of governmental intervention." (Thompson, 16). De Block continues that the central position focusing on (pseudo-)scientific rationales rather than socio-economic problems or aspirations creates a populist stance within urbanism.

<sup>36</sup> Interview with Charles Waldheim, <https://scenariojournal.com/article/an-interview-with-charles-waldheim/>

<sup>37</sup> For more on the rise of landscape urbanism, particularly the role of visualization in shaping ideas of landscape see: (Corner 2006, Hunt 2000, Reed and Lister 2014, Reed 2005, Margolis and Robinson 2007, Orff 2016, Berrizbeitia and Van Valkenburgh 2009, Waldheim 2016, 2006).

Geographers Paul Robbins and Sarah Moore label the tendency to position post-industrial spaces as a natural result of capitalist growth as a form of “ecological anxiety.”<sup>38</sup> In resisting responsibility for environmental change by abstaining from investing in environmental agency, Robbins and Moore contend that ‘ecological anxiety’ prioritizes ecological rather than socio-ecological processes, remaking and formalizing binary distinctions between humans and nature. By emphasizing ideologies and practices of rational science, scholars of landscape urbanism overlook the ways landscape is reflective of historical processes, constantly re-constituted through social and environmental knowledge.<sup>39</sup>

### ***Site practices***

While landscape urbanism has attempted to refocus landscape practice to the realm of engineering, site-attentive contemporary landscape practices have continued to make socioecological site processes central to the design process, treating site as plural, multiple, and co-constituted.<sup>40</sup>

Landscape theorist Elizabeth Meyer has led this effort since the early 1990s by exploring the role of site in generating diverse landscape practices. In a series of three essays published between 1997 and

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<sup>38</sup> (Robbins and Moore 2013) 4.

<sup>39</sup> (Thompson 2013) describes the edges of landscape practice, including one type of contemporary practice he calls ‘indeterminacy,’ in which design agency is forfeited in favor of letting ecological process run their course without human input. Thompson notes that focusing on site specificity would require acknowledging human history and that this would get in the way of such ‘indeterminist’ project strategies such as those employed by James Corner Field Operations (Thompson’s reference).

<sup>40</sup> (Scott 2017) 43. Throughout the twentieth century, site became a way of exploring the latent qualities of a space. In the work of Dan Kiley, for example, the site in relation to its context (or lack of context), as in the work of Thomas Church and Garrett Eckbo, and the multiple biophysical forces at play within a distinct site, as in the work of Ian McHarg. Today, the language of landscape architecture, flexibility, systems, resilience, process, and change suggests an absence, or shift, in site. Garrett Eckbo’s 1938 thesis, “Small Gardens in the City,” proposed eighteen garden variations for a San Francisco lot. The design range illustrated how landscape design could be both site specific while not being site constrained. As systems-based ecology replaced climax-based ecology over the course of the twentieth century, the flexibility of ecological science and the formalism of design were unfairly framed as opposites.

2005, Meyer expanded the theoretical terrain of landscape through the language of site. In “the Expanded Field of Landscape Architecture,” Meyer positions landscape architecture in conversation with Rosalind Krauss’ post-modern art treatise “Sculpture in the Expanded Field” to illustrate how site operates as a hybrid spatial and temporal terrain that transforms landscape into more than a visual image.<sup>41</sup> In the 2005 essay “The Post Earth Day Conundrum,” Meyer contends with site readings that privilege the knowable and observable environment, responding that “there is no inside and outside, human being and external world, even in the final reckoning, no discrete self and separate other.”<sup>42</sup> Meyer argues that site is always reflective of the ways society and environment are constituted through one another. Finally, in “Site Citations” from 2005 and part of the *Site Matters* volume, Meyer traces the history of site within the practice of designed landscapes, positing that site is situated and specific to its historical and physical contexts. Together, Meyer uses these essays to both call for more scholarship on site and to illustrate how sites are active spaces that reflect culture and politics as much as a mode of shaping the material landscape.<sup>43</sup>

Attention to the specificity and potential of site has also been central to other feminist scholarship in landscape history and theory, as well as in landscape ecology. In addition to Elizabeth Meyer’s exploration of site as a hybrid space, Catherine Howett provided one of the first comprehensive theoretical strategies for connecting the aesthetic and the ecological through the language of site.<sup>44</sup> Likewise, urban landscape historian Thäsa Way has brought anthropologist Clifford Geertz’s use of “thick descriptions” into discussions of the urban landscape to parse how urban sites register plural and complex histories through the thickness of ground, memory, and

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<sup>41</sup> (Meyer 1997)

<sup>42</sup> (Meyer 2005) 193.

<sup>43</sup> In the essay “Site Citations” in *Site Matters*, Meyer calls for “more complete account of site in twentieth-century” and “more landscape histories that include descriptions and analyses of the actual sites where construction has occurred.” (Meyer 2005) This echoed by (Beardsley 1998, Kwon 2002).

<sup>44</sup> (Howett 1987)

time.<sup>45</sup> Art historian Miwon Kwon has focused on the importance of site in locating oneself in relation to place and belonging.<sup>46</sup> Finally, landscape ecologists Kristina Hill, Joan Nassauer, and Nina-Marie Lister have drawn on feminist theories of plurality and multiplicity to consider how connecting ecological process with site histories allows for greater flexibility in landscape design.<sup>47</sup> Kristina Hill, for example, notes that using scientific methods within design is a creative performance with moral consequences, similar to storytelling. Hill argues that memory and experience need to inform landscape knowledge in similar ways as scientific inquiry.<sup>48</sup>



[Image 5] Rendering for fountain at the International African American Museum in Charleston, South Carolina. Shells outlining references to bodies of African slaves appear and disappear as water fills the fountain. (image: Hood Design Studio)

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<sup>45</sup> (Way 2013)

<sup>46</sup> (Kwon 2002)

<sup>47</sup> (Nassauer 1995, Hill 2016, Lister 2007)

<sup>48</sup> Hill suggests thinking of ecological patterns and systems as armatures, i.e. the patterns and system upon which many other species and systems depend (Hill 2016).

Similarly, site remains critically important to spatial practice. Landscape designers Walter Hood and Mario Schjetnan use their built work to illustrate the ways that sites hold deep, multivariant, and often troubled cultural memories. Walter Hood's design for the International African American Museum in Charleston, South Carolina, for example, uses water and shells from the Atlantic Ocean to form a fountain that traces the extents of a slave ship and outline bodies that would have been confined to the ship.<sup>49</sup> In this case, site is both physical and temporal as the fountain fills and drains, revealing body shapes in the outlines of shells. In Hood's design, site surpasses the designed space, changing with the movement of water and reaching between West Africa and the American South through the use of materials. *[Image 5]* Likewise, Schjetnan's design for Xochimilco Park in Mexico City constructs cultural identity through infrastructural and ecological recovery of water histories in Central Mexico.<sup>50</sup> Projects by Kate Orff and SCAPE, Julie Bergmann of D.I.R.T, and Gilles Clement make visible specific ecological processes at site-specific scales, illustrating how human care and responsibility are embedded in socioecological practices. At the Vintondale Reclamation Park, for example, Julie Bargmann looks to the potential of site to enact participatory processes through socioecological processes, including the cleansing of water through a passive treatment system where the color of water changes, revealing its chemical composition as it passes through different cleansing plants.<sup>51</sup> *[Image 6]*

Landscape practices driven by site interpretation illustrate how site holds complex meanings that accumulate over time. This work has importantly focused on the ways site is shaped by layered social, cultural, and political histories, but it has dealt less with the ways site is and continues to become an entity that then in turn shapes those same histories. I build on this gap, exploring how site is plural and co-constituted with and through landscape. By bringing scholarship and methods

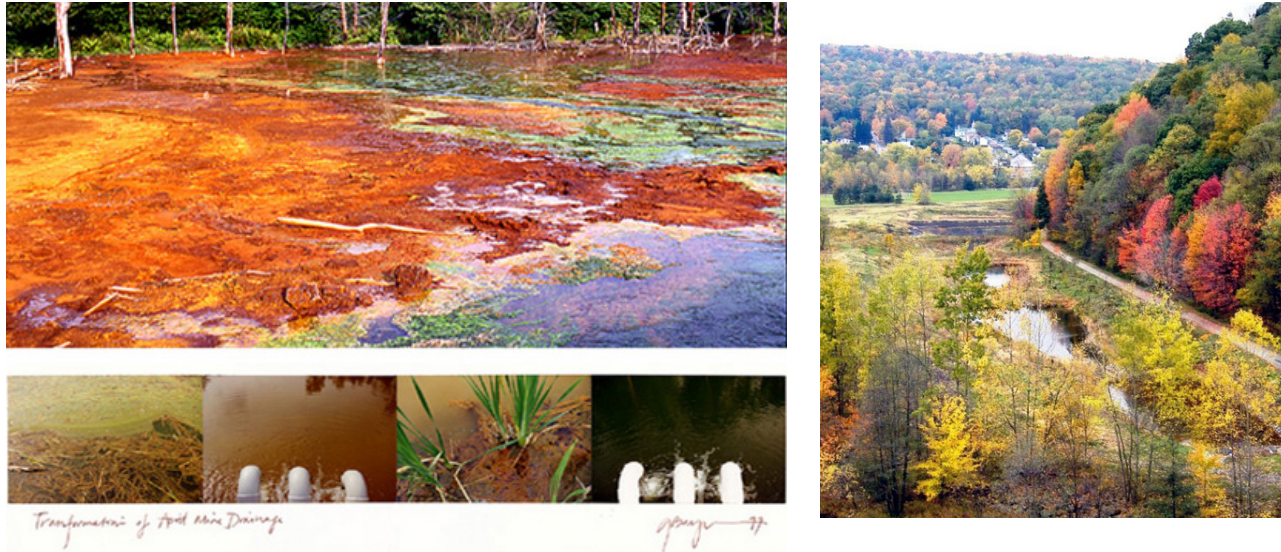
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<sup>49</sup> (HoodDesignStudio 2019)

<sup>50</sup> (Beardsley 2007)

<sup>51</sup> (Bargmann and Levy 1998, Clément 2015, Orff 2016)

from urban political ecology, environmental humanities, and science and technology studies into conversation with landscape practice, I work to advance landscape theory to assist in shaping landscape practice beyond self-repeating frameworks.



[Image 6] Julie Bargmann and Stacy Levy's design for the Vintondale Reclamation Park, Pennsylvania offers a powerful vision for designing through local and situated environmental conditions. A water cleansing system, seen here, addresses a history of industrial contamination while new planting maintains the story of that history through changing vegetation. (images: D.I.R.T. studio)

## ***II. Scholarship outside landscape practice***

### ***Nature-society scholarship***

Nature-society scholarship explores how environment and society are co-constituted, producing what geographers Bruce Braun and Noel Castree describe as 'social nature.' Primarily developed within human geography, nature-society scholarship, including political ecology, provides a strong framework for how landscape and site reflect political conceptions of nature. Specifically, I look to

this scholarship for the ways it has examined how cultural conceptions of nature shape environmental decision making through relationships between material infrastructure and the relationality of landscape. Braun and Castree consider nature to be socially produced in three primary and related ways. First, knowledge of nature is infused with socially and cultural specific bias; second, the social dimensions of nature are not limited to knowledge of nature; and third, social nature materially and physically re-constitutes nature, internalizing natural systems as social processes.<sup>52</sup> Nature-society scholarship contextualizes landscape and site as the result of entangled power-laden social and environmental practices.

An important contribution to the literature about political and cultural dimensions of environmental change is the idea of socioecological entanglements, or that the social and ecological are intimately linked and shaped through one another.<sup>53</sup> *[Image 7]* Urban geographer Erik Swyngedouw, along with Matthew Gandy, have built upon Donna Haraway's cyborg concept to shown how urban infrastructure and social relations are entangled and "perpetually transforming the socio-physical metabolism of nature" by combining "the powers of nature with those of class, gender, and ethnic relations."<sup>54</sup> Similarly, Maria Kaika uses ideas of metabolism and circulation to narrate interrelated tales of the modern city, showing how urban transformation can be read through the flow of water, people, and capital.<sup>55</sup> Metaphors of circulation and metabolism have been important for the historical formation of landscape and are seen in the examples of cartography and regional planning I examine.

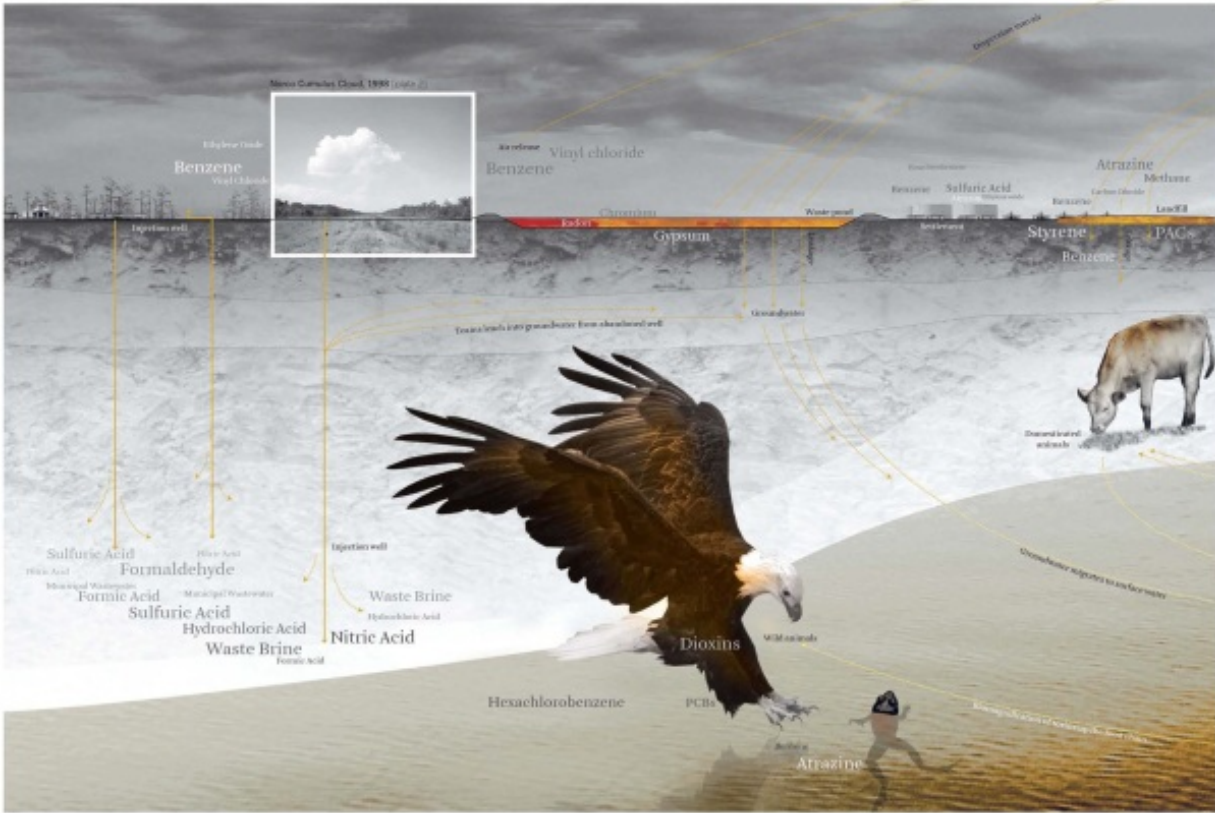
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<sup>52</sup> (Braun and Castree 1998) 5-17.

<sup>53</sup> This idea has been explored at length by geographer Matthew Gandy, see: (Gandy 2015, 2013, 2014, 2018) for more.

<sup>54</sup> (Swyngedouw 2006) 37 and (Haraway 2016a).

<sup>55</sup> (Kaika 2005)



[Image 7] A key idea I draw on from nature-society scholars is the notion of socioecological entanglements. This drawing by the author, completed for *Petrochemical America* (2014), examines the entangled relationship between oil production and infrastructure, aquatic life, and accumulated toxicity in various animal life.

Geographers Nik Heynen, Swyngedouw, Kaika, and Gandy particularly, have developed theories that constitute urban political ecology, or how environmental systems are porous and non-linear, creating an expanded idea of what constitutes nature and what is considered nature within urban contexts.<sup>56</sup> As Swyngedouw examines in his study of urban water systems in Spain, urban space is always defined relative to broader circulations of nature and politics.<sup>57</sup> Swyngedouw illustrates how urban nature is produced through social and political intersections by examining the ways power circulates through environmental knowledge, in this case between state power and local

<sup>56</sup> (Carse 2014, Gandy 2014, Graham and Marvin 2001)

<sup>57</sup> (Swyngedouw 2004) for water and urban transformation.

government's control of hydrologic infrastructure.<sup>58</sup> Swyngedouw's scholarship reveals how uneven geographical processes are inherent to the production of urban landscapes, arguing that urbanization is predicated on particular types of power relations "indefinitely connected [to] physical and social processes."<sup>59</sup> Implicit in this approach is the argument that nature and environment are not limited to particular spaces; they circulate, reflecting structures of power, politics, and culture. Literature developed within urban political ecology frameworks offer a useful perspective for how nature and power are co-constituted in urban landscapes, a perspective that helps interpret site and landscape as plural categories shaped through a range of social, political, and ecological factors.

Through case studies, urban political ecology scholarship disrupts what is traditionally viewed as nature, revealing how urban systems such as water infrastructure or garbage dumps are shaped through specific historical processes that entangle city and nature and society and environment.<sup>60</sup> Likewise, urban political ecology scholars disrupt notions of site and landscape, revealing the ways urban space is never stabilized or normalized but rather always in a process of dynamic unfolding. Site then, must be considered as a collection of human and more-than human life that exists in distinct relation to the politics, productions, and management of life. The idea of the stabilized site as a strategy for defining the boundaries of dynamic urban space is explored more in chapter four.

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<sup>58</sup> (Braun and Castree 1998, Carse 2014, Evernden 1992, Heynen 2014, 2016, 2017, Heynen, Kaika, and Swyngedouw 2006, Kosek 2006, Ogden 2011, Kaika 2005)

<sup>59</sup> (Heynen, Kaika, and Swyngedouw 2006) 2.

<sup>60</sup> For waste and environmental justice from an urban political ecology perspective see: (Heynen 2014, Harvey 1996, Cronon 1991); For rail networks see: (Gandy 2014).

### *Science and technology studies*

Scholars in science and technology studies (STS) critically examine how scientific knowledge production shapes and is shaped by societal conditions, including the ways perceptions of scientific objectivity are layered with normative political and cultural values.<sup>61</sup> They critique the expansive ways scientific knowledge and technological systems are shaped by societal conditions and discursive practices within specific histories.<sup>62</sup> This scholarship draws from a wide range of disciplines but has been largely developed by feminist science scholars often trained in positivist scientific methods including Donna Haraway, Karen Barad, Evelyn Fox Keller, and Sandra Harding.<sup>63</sup> Their scholarship challenges assumptions of objectivity within science and the ways Euclidian or Cartesian worldviews do not allow for inquiries of the world through different subjective experiences. In response, these scholars have studied the ways normative scientific epistemologies attempt to understand the world abstractly, often by bounding the porosity and subjectivities of human experience. In studying the spaces, networks, and relationships that allow knowledge to be developed, this scholarship has resulted in, as anthropologist Anna Tsing has suggested, a new type of science studies that engages scientific practice as a way of “mobilizing publics ... and trespass[ing] across the boundaries between the natural and the humanities.”<sup>64</sup>

By challenging the ways nature-society scholarship may perpetuate nature-society dualisms, STS scholars examine how seemingly objective practices are entangled with historical causation and social difference not limited to race, gender, or class. In this way, STS offers a more interdisciplinary approach to examining socioecological entanglements than political ecology. As historians of science Lorraine Daston and Peter Galison demonstrate through their study of

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<sup>61</sup> (Daston and Galison 2007)

<sup>62</sup> (Keller 1985)

<sup>63</sup> (Haraway 1988, Barad 2007, Keller 1985, Harding 1991)

<sup>64</sup> (Tsing 2011)

photography and scientific inquiry, modern notions of objectivity reflect the society in which they are produced, and scientific knowledge itself always carries political and cultural values.<sup>65</sup> Daston and Galison draw attention to the relatively recent popularization of objectivity since the late nineteenth century, and the rapid ways it has transformed modern society by promoting linear practices of progress, control, and quantitative growth. STS scholarship offers a useful critique about how the focus on tenants of modern science—replicability, scalability, and universality—can reproduce narrow views of what constitutes nature when applied to landscape practice. Critiques of modern progress and growth, particularly as they relate to scale and what is lost in scaling, underlie much of my argument. I take up these ideas further in chapter three as I examine the ways modern science was used to justify racist site readings through the language of ecological determinism.

Critical science scholarship also considers how science is constructed through concepts of infrastructures, bodies, and toxicity and the effects on the relationships between each. Drawing on an STS approach to infrastructure, for example, anthropologist Ashley Carse writes, “global infrastructure doesn’t so much impact local, regional, and national projects as forge relationships of interdependence with them. As infrastructures jostle for territory, they produce environments, a subject rarely discussed in social and historical studies of technology.”<sup>66</sup> Carse applies this thinking to the Panama Canal, focusing on how the landscape is the infrastructure, including the forest, animals, plants, people, and materials, of the canal itself. Carse unsettles distinctions between technology and society by considering infrastructure as “not a specific class of artifact or system, but an ongoing process of relationship building” made through individual lived experience, biophysical process, and territorial projects.<sup>67</sup> Likewise, Traci Brynne Voyles shows how examining nuclear toxicity in New Mexico through an STS approach can reveal how western knowledges of landscape

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<sup>65</sup> (Daston and Galison 2007)

<sup>66</sup> (Carse 2014) 14.

<sup>67</sup> (Carse 2014) 5.

are constituted through racial and spatial policies and politics that render certain bodies and sites design-worthy through discourses of productivity, waste, and pollution.<sup>68</sup>

Finally, I draw on STS scholars and methods to better understand how design matters in relation to biopolitics. As the writing for this dissertation progressed, questions of life, including who and what is allowed to live, continued to arise as it became increasingly clear that normative site readings often result in the regulation of life. Most simply, biopolitics are concerned with how life-making is inseparable from power. Biopolitics stems from Foucault's ideas of biopower which is concerned with how biological life comes to be "known and conditioned through various mechanisms and techniques—power/knowledge relations—that constitute a specific form of modern power."<sup>69</sup> The idea of biopolitics as a mechanism that reveals how power shapes environmental conditions has immense potential for landscape practice as it is concerned with how nonhuman life is valued, maintained, and regulated to create the conditions for particular landscapes to thrive while others decline. *[Image 8]*

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<sup>68</sup> (Voyles 2015)10.

<sup>69</sup> Foucault summarized in (Krupar and Ehlers 2019)2. See also (Biermann 2016, Foucault 2007) for the biopolitics of landscape and environment.



[Image 8] Drawing on STS scholarship, landscape practice has begun to look critically at the ways scientific knowledge is produced within particular power relationships. In this drawing and mapping, Leah Kahler examines how acts of breathing create varying ideas of health, depending on who and where breath is being produced and consumed. Kahler examines the ways marginalized and racialized bodies have been regulated through air and breath in the form of fertilizers and pesticides—materials directly tied to landscape maintenance. (Leah Kahler, 2019)

***Environmental humanities***

The environmental humanities refer to a broad range of scholarship that asks humanistic questions concerned with meaning, ethics, and responsibility in researching and addressing environmental questions. Similar to nature-society scholarship and STS scholarship, the environmental humanities do not make normative distinctions between humans and nature, noting that environmental issues are always entangled with humanness, labor, economy, and politics. Rather, this area of scholarship considers what it means to be human today as environmental change challenges the boundaries between humanness and other-than-human actions. Literary scholars such as Stephanie LeMenager and Stacy Alaimo have explored how living with oil in almost all facets of modern life remakes

nature along human exposure and embodied toxicity.<sup>70</sup> Similarly, anthropologists such as Anna Tsing, Eduardo Kohn, and Gastón R. Gordillo have advanced multi-species and more-than-human scholarship as a way of dismantling human boundaries through ethnographic work. This scholarship often uses non-human life to raise contradictions about relations between human actions and environmental change, particularly in global capitalist and colonial contexts.<sup>71</sup>

The environmental humanities builds on STS, posing that environmental questions cannot be solved with science or technology alone. Philosopher Maria Puig de la Bellacasa, for instance, worries about how a growing dependency on “techno-scientific futurity” asks humans to technically rather than socially solve our way out of environmental challenges.<sup>72</sup> In response, Puig de la Bellacasa argues that new ecological ethics and aesthetics must also be part of environmental responsibility and decision making to rethink how humans engage environmental systems. In particular, environmental humanities scholarship often crosses human and more-than-human boundaries by challenging western epistemologies of object and subject that rethink Bruno Latour and Donna Haraway’s critiques of modern nature-society dualisms.<sup>73</sup> Tracing the materiality of interspecies interactions, for example, Haraway considers how modern science has constructed genetic, microbial, digestive, and ecological connections to demonstrate the ontological impossibility of extracting a human, let alone an intentional mind, from the messy relations of the world.<sup>74</sup> Anthropologists Tim Ingold and Anna Tsing build on this approach through material and multispecies ethnographies that explore how the animate qualities of atmosphere and socio-

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<sup>70</sup> (Alaimo 2016, LeMenager 2017)

<sup>71</sup> (Ingold 2012, Tsing 2015, Kohn 2013, Gordillo 2014)

<sup>72</sup> (Puig de La Bellacasa 2015)

<sup>73</sup> “A vital materialist ontology in environmental geography has been strongly influenced by Latour’s and Haraway’s famous critiques of the modern Nature-Society dualism” in (Lorimer 2012) 595.

<sup>74</sup> (Haraway 2008)

ecological networks of mushrooms, respectively, illustrate their diverse entanglements in political, economic, and cultural systems.<sup>75</sup>

The environmental humanities also influence approaches to art practice and environmental history. Environmental historians examine how claims made about nature and environment are always reflective of historical causation.<sup>76</sup> Environmental historians including Linda Nash and Sara Pritchard trace historical material processes of water infrastructure development to draw relations between state-building efforts, embodied health, and environmental legacies.<sup>77</sup> In art practice, art historians and critics T.J. Demos and Emily Eliza Scott look at art through practices of material inhabitation that treat environment as a “world we live in, not just a world we look at” to frame environmental art as reflective of human histories.<sup>78</sup> Likewise, art-practices such as Ursula Biemann and the collective World of Matter have explored the accelerated rate of contemporary environmental change through film and other time-based media to illustrate “planetary ecologies.”<sup>79</sup> Site-specificity has remained a theme of environmental art practices such as Robin Mackay, who has used critical cartographies to explore relations of place in a world is arguably mapped and ‘sited’ within global capital systems.<sup>80</sup>

This larger body of scholarship considers how environment and society are constituted through each other to contextualize some of the issues that landscape design—both theory and practice—continue to grapple with in relation to how site and landscape are understood. *[Image 9]* As recent work from political ecology, science and technology studies, and environmental humanities show, categories of human and environment cannot be disentangled. For landscape

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<sup>75</sup> (Ingold 2013, Tsing 2015)

<sup>76</sup> (Worster 1990, 1977)

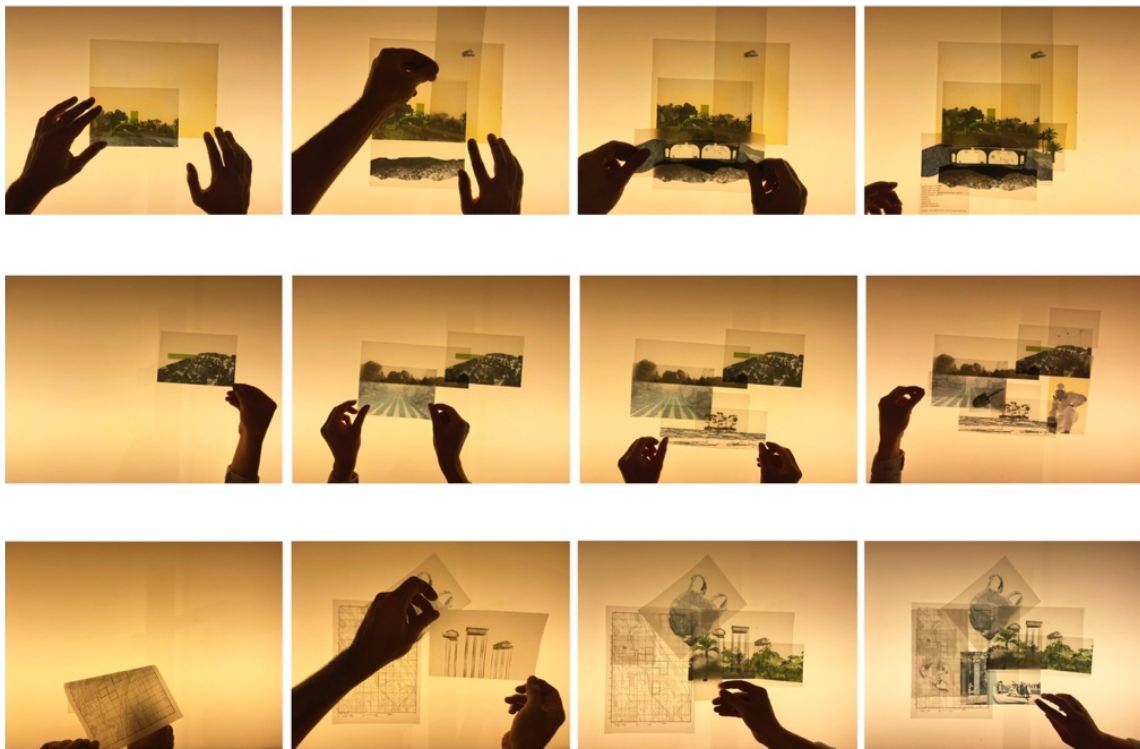
<sup>77</sup> (Pritchard 2011, Nash 2013)

<sup>78</sup> (Demos 2016, Scott and Swenson 2015)

<sup>79</sup> (Biemann 2018, WorldofMatter 2016)

<sup>80</sup> (Mackay 2015); also (Tsing et al. 2017) for more on the ghosts and monsters of the Anthropocene.

theory and practice, these bodies of knowledge don't just represent content, they are simultaneously approaches, frameworks, and methodological templates to produce research that advances non-linear and plural landscape practices from within design. My arguments in this dissertation align with these broader ideas, and I draw on literature from the environmental humanities for their dual approach to developing content and frameworks that are flexible and open to change as human-environmental relationships change.



[Image 9] Environmental humanities scholarship often considers how knowledge about a place is represented, particularly through contemporary art practices. In studying neighborhoods of south Seattle through film, photography, and collage Rich Desanto, Asya Snejnevski, Lauren Wong explore urban site plurality through a mix of site methods. (2018)

### ***III. Relational methodologies***

#### ***Situated knowledges***

I ground this dissertation in a feminist relational methodology that operates as a framework to examine relations between subjects and structures. Geographer Doreen Massey describes relationality as the coalescing of space in relation to other subjects and structures co-constituted through complex power relations where “spaces, subjects and processes are constantly crystallized, grounded, assembled and transformed, conceptualizing space itself as constituted through relations that extend beyond a singular place.”<sup>81</sup> Likewise, post-colonial theorist Edouard Glissant suggests that relationality names the visible and invisible “relation[s] between different people, places, animate and inanimate objects, visible and invisible forces, the air, the water, the fire, the vegetation, animals and humans.”<sup>82</sup> A relational methodology treats knowledge as partial and situated rather than universal and generalizable in order to understand how relations between systems and structures come into being. A relational methodology is particularly appropriate for the study of site and landscape because it contributes to blurring boundaries between humans and environment, creating a set of approaches that cultural critic Macarena Gomez-Barris describes as explicitly challenging “frames of disciplinary knowledge that bury the subtlety and complexity.”<sup>83</sup> A relational methodology questions *how* structures emerge and are supported, as opposed to *why* they exist or *what* they are, to understand how networks of knowledge and power are maintained.<sup>84</sup> This methodological framing offers a direct critique of the ways landscape knowledge has been created and self-repeated within narrow frameworks focused on definition of what landscape is, rather than asking how landscape and site come into formation. A relational methodology does not seek to

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<sup>81</sup> (Massey 2005)

<sup>82</sup> (Glissant 1997) quoted in (Diawara).

<sup>83</sup> (Gómez-Barris 2017) xv.

<sup>84</sup> Haraway referenced in (Swyngedouw 2006) 4.

solve research questions but to create methods for understanding how research questions unfold to allow for ways of knowing and understanding that create opportunity.

While a relational analysis offers a research approach rooted in multiplicity, approaching research as “situated knowledge” grounds findings in subjective and embodied experiences.<sup>85</sup> Situated knowledges treat knowledge as partial yet always relational frames of analysis. This partial framing is meant to promote nonnormative ways of knowing and perceiving. Haraway introduced situated knowledges to challenge “official ideologies about objectivity and scientific method,” arguing that knowledge is always situated within a socially produced context.<sup>86</sup> Situated knowledges position findings relative to broader structures, while objectivity comes by learning to converse with these encoded structures. Geographer Gillian Rose extends Haraway’s framework of situated knowledge to the visual realm, challenging the way images are seen by particular people looking in particular ways.<sup>87</sup> For example, critical cartography is a set of methods that uses a situated knowledge approach to interpret research as both objective and subjective by visualizing underrepresented spaces within a conventional map. This approach allows for multiple interpretations without prioritizing a singular view. Together, relationality and situated knowledges offer a methodology for revealing the forces that name and make known site and landscape.

Finally, relational and situated knowledge open the possibility for thinking through care as a methodology. Central to an idea of care is the relational self who is connected to other subjects, spaces, and processes through unequal power relationships.<sup>88</sup> In addition to the framework of care introduced by Puig de la Bellacasa, philosophers and geographers Rosi Braidotti, Shiloh Krupar, and Elizabeth Grosz help bring together environmental humanities and care ethics through concepts of

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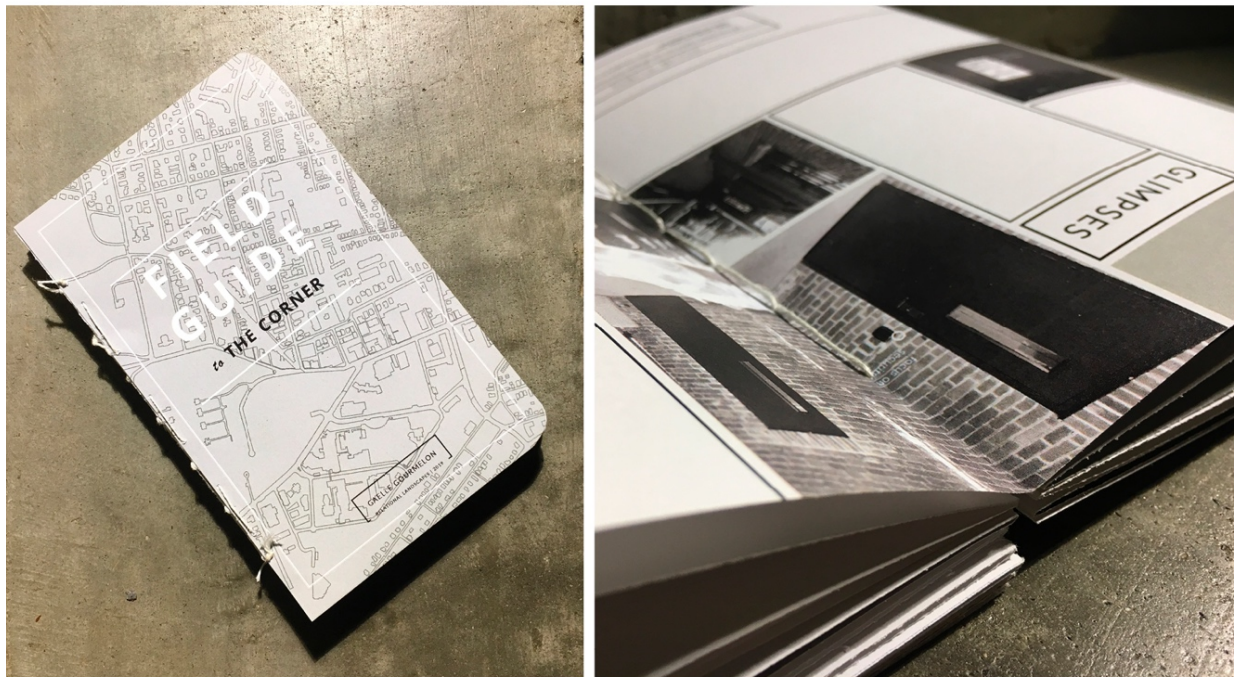
<sup>85</sup> (Haraway 2008) 244.

<sup>86</sup> (Haraway 1988) 576.

<sup>87</sup> (Rose 2001, Spirn 1998, Berger 1973)13.

<sup>88</sup> (Lawson 2007) 1-3.

relationality. The work of these three scholars offers a potential theoretical grounding for addressing power within landscape processes without forfeiting personal ethical and aesthetic responsibility. Braidotti draws on and expands Haraway’s approach to situated knowledge by exploring the ways human and nonhuman life are the result of “nomadic interconnections” formed through in-between-ness, mobility, and cross-references to social and historical contexts and material and discursive senses.<sup>89</sup> Braidotti poses that ethics of care must focus on both human life – *bios* – and the political subject – *zoēs* to form ethical approaches that are accountable, situated, and specific. In short, Braidotti’s ethics reject relativism and consequences in favor of ethical accountability that is relational to one’s own political position and privilege. This attention to positionality and relations is central for landscape to become-with as it introduces forms of research that decenter the designer as sole expert while remaining rooted in critical analysis and historical context. [Image 10]



[Image 10] Landscape designer Gaëlle Gourmelon uses a situated methodology to study a landscape they know well, developing a field guide that is meant to situate the reader within various histories and time periods to being ‘seeing’ everyday landscapes in new and more complex ways. (2019)

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<sup>89</sup> (Braidotti 2006)

## ***Methods***

Seeing differently allows us to think differently. Decolonial novelist Sylvia Wynter has described how the overrepresentation of humanness, and by extension nature, from white European and male views has perpetuated narrow ways of knowing the world. Wynter argues that a range of creative methods will allow for multiple knowledges that can frame the world and what it means to be human differently.<sup>90</sup> Wynter's call for multiple ways of knowing the world is an important framing device for this dissertation, challenging landscape practice that remains conceived within European colonial frameworks that separate humans from their environment, creating limited possibilities for what is considered natural and what is considered human. As Haraway notes, struggles over power and control are often struggles over how to see and controlling representation shapes normative knowledge.<sup>91</sup>

Knowledge about design, particularly historical knowledge, tends to be stored in maps, drawings, and texts. This knowledge is never dormant, it reemerges and is remade through design precedents, through written words, and through republished drawings. Maps and drawings are not only representations of knowledge, they are themselves are shifting subjects of research that reveal what was and has been considered valuable knowledge.<sup>92</sup> This dissertation engages in a relational approach, using archival and discourse analysis to challenge normative imaginations of site and landscape as discrete subjects. Archival research draws on historic empirics, while discourse analysis recognizes the specificity of landscape and site that is socially, culturally, and politically produced.<sup>93</sup> Chapter three (site as scale) and chapter four (site as material) use primarily historical analysis. For these chapters, I draw on five primary archives including, the University of Washington Special

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<sup>90</sup> (Wynter 2003)

<sup>91</sup> (Haraway 1988)

<sup>92</sup> (Stoler 2008)

<sup>93</sup> (Geertz 1973, Haraway 1988)

Collections, the King County Archives in Seattle, Washington, Seattle Municipal Archives, the Warren Manning Papers at the Lowell Historical Society University of Massachusetts—Lowell, and the Warren Manning Collection at Iowa State University. In addition, chapter four and chapter five (site as process) engage site field work combined with textual and visual discourse analysis as their primary method of analysis.

*Archival analysis* uses archival materials to read for situational and behavioral criteria within the historical context in which the work was produced.<sup>94</sup> I pair archival analysis with discourse analysis to illustrate how traditional academic scholarship about the built environment upholds positivist practices that claim knowledge to be universal and objective. Archival materials contain the afterlives of particular environmental, social, and political moments in time, while discourses that reveal authorship and agency also circulate through archival material.<sup>95</sup> I use detailed historical examples to understand how ways of knowing have emerged, while allowing for the specific historical cases to drive my inquiry and reveal new perspectives. The combination of archival and discourse analysis was particularly useful in developing chapter four focused on the *Earthwork* symposium. In this chapter, I combined archival work at the University of Washington and at the King County Archives with site research. As most of the materials about the *Earthworks* symposium were official documents from the symposium directions, it became important to connect their ‘official’ narrative of the event with property sale records, letters from community members, and my own impression of the sites today to connect official narrative with multiple narratives of public perception.

Allowing research to unravel through the action of research itself is a situated and reflexive practice that also has precedent in design.<sup>96</sup> Geographer Gillian Rose describes this research practice

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<sup>94</sup> (Rose 2001, Foucault 2002)

<sup>95</sup> (Stoler 2008)

<sup>96</sup> (Dee 2012)

as one that emerges “out of its context but differentiated from it.”<sup>97</sup> This suggests that knowledge is always grounded in context, meaning that both how archival knowledge is interpreted and what materials are included in archives are reflective of the time and place in which they are assembled.<sup>98</sup> Positioning both myself and the archives I examine is a key part of my interpretation. My own a positionality, as a trained landscape architect and as a historian, means that I will inscribe power to particular types of archival knowledge. Positioning myself throughout the archival process is a practice of situating knowledge with the understanding that knowledge situated will never be objective or universal. As such, archives are reflective of particular power dynamics that do not excuse historical materials as ‘products of their time’ but that require situating them within processes of historical formation.

For example, I began chapter three with the intention of reading Warren Manning’s 1919 National Plan as a critical cartography that could help situate the role of regional planning in shaping broader site approaches in the early twentieth century. The focus of the chapter changed dramatically once I entered Manning’s archives at Iowa State and the University of Massachusetts, and it became clear that Manning’s invocation of race and environment were not tangential but central to his design ideology. As I continued researching, I noted the lack of attention previous scholars had given to Manning’s representations of race and environment. Re-positioning Manning’s writing and design practice through an lens of environmental racialization begins to address Wynter’s call for a greater range of knowledge types. Previous scholarship on Manning has focused on design outcomes, rather than how Manning’s work was shaped by particular structures. Reading Manning’s archives from these existing perspectives celebrates the outcomes of an individual designer and overlooks—I would argue intentionally because of the depth of racist ideology in his

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<sup>97</sup> (Rose 2014) 47.

<sup>98</sup> (Preston 2003, Haraway 1988)

work—how Manning’s design practice was made possible through the subjugation of non-white representation and knowledges.

Along with archival analysis, I engage in *discourse analysis* to examine how knowledge is communicated in order to produce dominant ways of acting and thinking. Critical discourse analysis of archival materials reveals how seemingly benign site analysis is actually shaped through subjective and conditioned world views.<sup>99</sup> Michel Foucault describes discourse as the social systems expressed through language and symbols that shape power relations. Shaping social systems through expressions of power create processes of discursive formation. Discourse analysis therefore attends to how processes of discursive formation emerge and act on the world. Central to this method is a close attention to the circulation of power: who is using discourse for power, who is the audience, what is said, and retrospectively what is not said or seen. For Foucault, discourses are shaped through objects—text, visuals, and practices—that carry beliefs and attitudes that produce knowledge and in turn power. I use Foucault’s method of discourse analysis to identify how discourses, through textual and visual archives, shape knowledge-power; who and what are the dominant systems of power and how this effects the assumptions that underlie the text and visuals.<sup>100</sup>

Through discursive analysis, archives then are never just archives, they are powerful tools for understanding how discursive control is exerted over physical spaces through material practices. For design practices, discourse analysis includes recognizing how discourse is not contained to language and text alone but also drawings and other forms of representation. Importantly, visual discourses and textual discourses might vary, even when they seem to present similar information from similar authors. Discourses also produce material effects, and vice versa. This production has important

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<sup>99</sup> (Preston 2003)7.

<sup>100</sup> (Foucault 2002)

implications for design practice as the material, built environment is never neutral. Built space is discursively reflective, and if discourse analysis is always about how power and dominant narratives are revealed through various types of representation, then the built environment is an example of the material outcomes of discursive power. Rose, for example, points to the importance of visual discourse analysis as representations that enact the material world, a process that begins when a drawing, an essay, or a thought is put out into the world.<sup>101</sup>

Visual representations begin a process of normalization through discursive formation. If particular types of representations, such as images, drawing, maps, or text are overrepresented, they will re-create the status quo. For example, one way that design discourses circulate is through cartographic representations that contain multiple types of information reflective of the maker and the audience.<sup>102</sup> Cartography has historically been wielded as a form of knowledge imbued with power, and its practices are steeped in rational and positivist epistemologies used to maintain what Foucault describes as “power-knowledge.”<sup>103</sup> In all three case studies, I examine primary source maps as forms of visual discourse analysis. In each of these cases, the maps were created to reflect normative, Cartesian worldviews from the perspective of a particular designer or government agencies, including the United States Geological Survey and Federal Bureau of Mines. Cartesian cartography views the world from a rational, top-down coordinate system. Critiques of this perspective have pointed to the ways that claims to objectivity and timeless accuracy are always

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<sup>101</sup> (Rose 2014, 2001)

<sup>102</sup> (Berrizbeitia and M’Closkey 2015)

<sup>103</sup> (Cosgrove 2008b, Harley 2001) 53. Harvey also describes three types of space which are useful for understanding how maps function through power relations: absolute space which exists independently of outside forces, relative space which is the relationship between objects that relate to each other, and relational space which holds that there is no such thing as “space outside of the processes that define it.” As maps are often mistaken for objective depictions of spatial conditions, Lefebvre’s understanding that space is always produced through the position and frame of who and what is doing the representing is useful for understanding the ways cartography has historically reproduced power through positivist methodologies. (Harvey 2006) see also (Schmid 2008) 28.

imbued with artistic decisions in terms of projection, composition, and graphic representation of selected material.<sup>104</sup> These maps represent, quite literally, a singular worldview. Critical visual discourse analysis then becomes an important tool for telling the plurality of stories not represented by the Cartesian worldview.<sup>105</sup>

Finally, I am interested in how revealing diverse site narratives through historical studies of site and landscape can open new possibilities for landscape practice. In addition to the archival and discourse analysis, I also engage in field work that combines what artist and scholar Natalie Loveless describes as “research-creation” through direct observation. *[Image 11]* This has primarily formed the methods for chapters four and five. Loveless describes research-creation as a practice of experimentation that rigorously builds on creative experiences in design, art-making, and other forms of creative production.<sup>106</sup> Research-creation methods might be characterized as knowledge that emerges through creative experience, in my case from over ten years of design practice working with urban sites and landscapes. I draw on this experience in my field work, particularly how I think through time, as all landscapes contain traces of past sites. In chapter five, I engage with discourse analysis from a perspective that is grounded in my design experience. Here, I build critiques and questions of socioecological responsibility that stem directly from design practice and experience. The critiques Specifically, I use eidetic and ideogram collage as a way of assembling information that combines field experiences, historical information, and processes that may often be unseen or

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<sup>104</sup> (Cosgrove 2008b)

<sup>105</sup> (Flyvbjerg 2001)

<sup>106</sup> (Loveless 2019). Additionally, Leanne Simpson in “Land as Pedagogy” (Simpson 2017) also describes how meaning can be found through experience and doing, arguing that Western contexts are always situated in decontextualized knowledge. Simpson writes, “Individuals carry the responsibility for generating meaning within their own lives; they carry the responsibility for engaging their minds, bodies, and spirits in a practice of generating meaning. Within Nishnaabewin, I am responsible for my thoughts and ideas. I am responsible for my own interpretations ... This is deliberate, ethical, and profoundly careful within Nishnaabewin because to do otherwise is considered arrogant and intrusive with the potential to interfere with other beings’ life pathways.” Once an individual has gained knowledge through their lived experience, they become responsible for sharing that knowledge. (156)

under-represented such as social histories, temporal environmental information, and subjective experiences.

I began this chapter by exploring the ways landscape practice has engaged site in scholarship and practice, and I have begun to note the shortcomings and gaps in this research regarding the effects of racialization, the suppression of non-human life, and technoscientific futurity in landscape theory and practice. In the following three chapters, I explore each of these ideas through a specific case study to develop theory about landscape practice that moves beyond self-referential and chronological lineages. By focusing each of the following chapters on a specific instance of site, I examine how normative categorizations emerge, and subsequently how this categorization regulates ‘multiple realities and saturated differences’ of site. Through these case studies, I build toward care as design methodology capable of responding to the plurality and on-going temporal formation of site by examining the ways site and landscape have been conceptualized and categorized within specific historical contexts.



*[Image 11]* I use research-creation to analyse research in progress. Here, I combine archival material, site observation, and collage are used to trace the transfer of materials between military waste sites in western Utah. I find this method particularly useful for research in-progress as shifting how I am looking at material or re-assembling research in new ways often reveals connects previously unseen. This method also helps me continuously situate myself in research questions as collage, drawing, and making force ongoing decisions regarding intention (by author, 2016)

## Chapter Three: Site as Scale

### Scaling site and racial formation in Warren Manning's National Plan

#### *Introduction: site, race, and environment in the National Plan*

In 1923, landscape architect Warren Manning wrote a nine-page essay titled, “The Negro Problem,” in which he stated that a “selective process” was needed to manage the increasing assimilation of Black Americans and immigrants into northern United States cities.<sup>1</sup> In that same year, *Landscape Architecture*, the professional journal that would later become *Landscape Architecture Magazine*, published a 23-page brief of Manning's National Plan, a planning atlas for the United States that argued for social and political unity through the management of national-scale environmental resources.<sup>2</sup> *[Image 1]* The National Plan sought to solve societal ‘problems’ brought about by new urban growth in the early twentieth century United States by remapping state boundaries based on biophysical characteristics such as soil profiles, water resources, and transportation infrastructure. *[Image 2]* Manning's National Plan has long been read within landscape history as an example of speculative environmental management and praised for suggesting landscape designs based on biophysical features rather than political borders.<sup>3</sup> Yet, in the context of Manning's segregationist essay “The Negro Problem,” the National Plan reveals itself to be deeply entangled with race, nationalism, and white supremacy through the making of space.

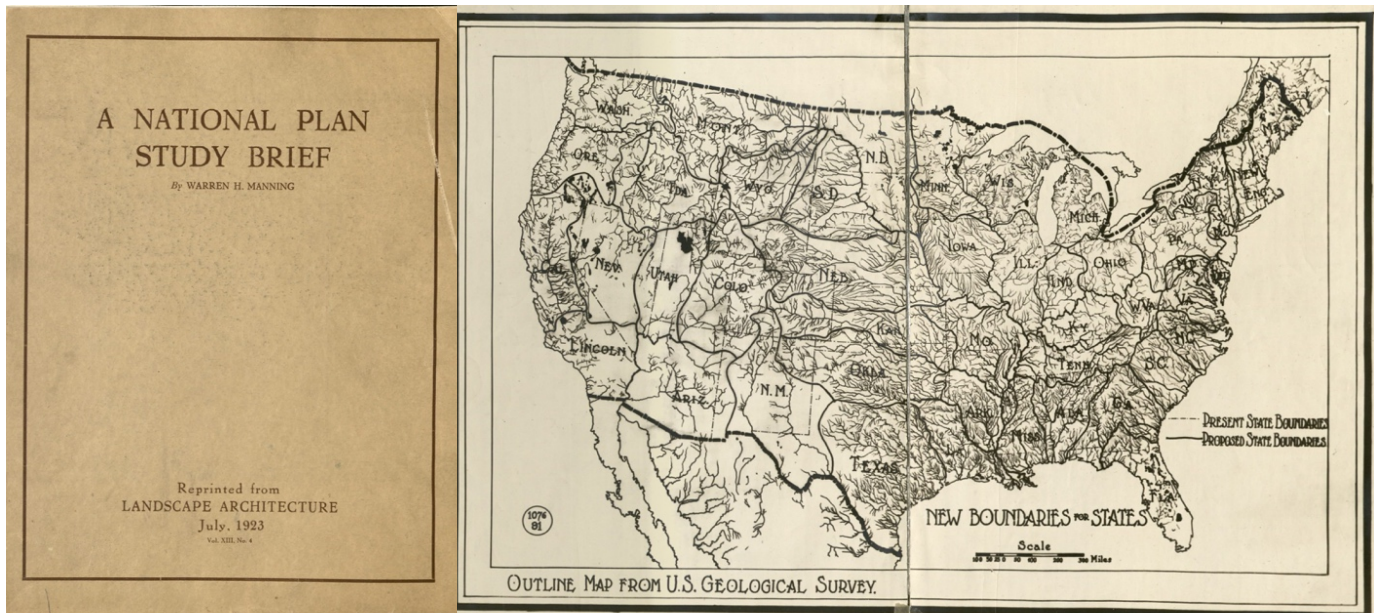
In this chapter, I examine how the National Plan conceptualized the nation as a singular and generalizable site to maintain a white supremacist future for the United States. Through visual and textual analysis, I show how National Plan operates as a site of epistemological slippage through

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<sup>1</sup> (Manning June 1923)

<sup>2</sup> (Manning 1923)

<sup>3</sup> (Alexakis 2017, Karson, Brown, and Allaback 2017, Neckar 1989)



[Image 1] (left) Cover from 1293 issue of the National Plan printed in *Landscape Architecture Magazine*.  
 [Image 2] (right) Pages from the National Plan showing new state boundaries along water and topographical routes. While the state lines have changed, the national boundary remains dominant and unchanged.  
 (Warren Manning Papers, Iowa State University)

practices of standardization and racial formation that result in the erasure of socioecological difference. I argue standardization and racial formation are enacted by a process of scaling seen through the regulation of site, first at the scale of plant life through horticultural standardization and later through the limiting of non-white life at the national scale. In the first pages of the National Plan, Manning connects nationalism, nature, and white supremacy, writing that the United States is a “world unit especially fitted as the home for the white race, a race whose dominion over the earth is rapidly being completed.”<sup>4</sup> In promoting the United States as place for the ‘dominance’ of the white race, the National Plan limits non-white life through landscape improvement while also working to converse and preserve landscape resources for the maintenance of white life. This biopolitical strategy becomes clear as Manning establishes that the United States as the ‘unit’ for the ‘white race’ because of distinct social and environmental characteristics.

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<sup>4</sup> (Manning 1919) 6.

The United States, Manning argues, is distinct from other “seats of modern civilization,” such as Europe, because it has not “been broken in a series of small units by mountain ridges and valleys and developed a series of distinct and antagonistic groups of peoples.” In addition to creating a social justification for the United States’ ‘dominance’ through groups of people, Manning describes the landscape of the United States as having “favorable” topographical and hydrological “units” that “proceed without interruption,” suggesting an inherent national identity shaped through ‘natural’ features.<sup>5</sup> To argue for the ‘dominance’ of the ‘white race,’ the National Plan distinguishes between landscapes that should be preserved and those that should be improved, demonstrating how racial discourses intersect with environment to produce places that are marked for the preservation of life and other that are marked for exploitation and resource extraction.”<sup>6</sup>

The first part of this chapter focuses on how increased scientific standardization and racial formation intersect during the Progressive Era of the early twentieth century to shape an ideology of improvement. I argue that Manning was influenced by his training in horticulture to ‘see’ the multiplicity of the American landscape as a standardized ‘unit.’ I consider how Manning’s early career led to scaling knowledge about the garden to the nation through practices of standardization that reconfigured urban and public space as ‘rational’ ideas of property coalescing around national identity based on ‘normal’ white life.<sup>7</sup> In the second half of the chapter, I look in detail at the ways the National Plan worked to maintain white supremacy through specific examples of water, soil, swamps, and land conservation. I conclude by positioning the National Plan as central to landscape history and as an example of the ways site plurality has been erased through ‘rational’ and ‘standard’ landscape knowledge. I begin the dissertation with this case study to introduce the idea of care as political alternative to the failures of scale. Finally, race becomes a lens through which to interrogate

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<sup>5</sup> (Manning 1919) 7.

<sup>6</sup> (Voyles 2015) 15.

<sup>7</sup> (Bhandar 2018) 33-75.

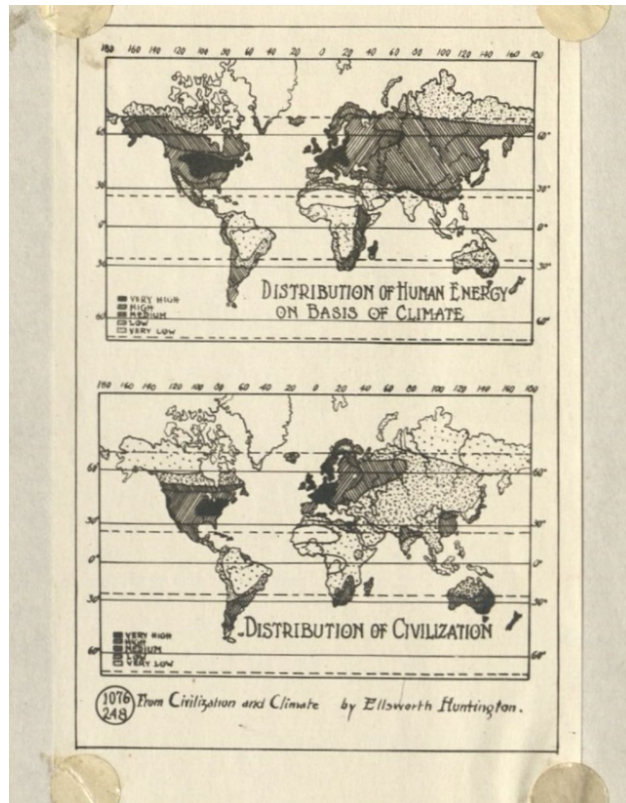
assumptions of normalized, homogenous readings of landscape and site, as landscape history has long overlooked racialized spatial histories in favor of environmental ‘neutrality,’ a position that itself reflects a racialized history of non-white erasure.

The entanglement of space and race is evident in the opening pages of the National Plan as Manning positions the United States as the “dominant place” for the “best health of white men.”<sup>8</sup> Manning writes, “there cannot be another America discovered. In the central portion of North America ... is the hope of the white race. Unless the white man can adapt himself in new ways to climate as well as other factors.”<sup>9</sup> *[Image 3]* Adaptation of the landscape for the ‘white man,’ or at least the construction of an adaptation narrative, becomes an important biopolitical tool that links race and space in the National Plan. Through the preservation and improvement of landscape to support white life, the National Plan constructs a narrative of the American landscape as a generalizable site uniquely suited for the white race. As the Plan continues, it outlines cartographic and management strategies for re-organizing the United States based on ‘natural’ qualities to continue to assert its identity as a nation and global power. The National Plan illustrates how visual representations rooted in environmental criteria are always political and subjective, as the ‘rationalized’ Plan remains grounded in white supremacy. In the context of this dissertation, I argue that the National Plan limits non-white space and life by constructing the nation as a universal, standardized unit that reinforces hegemonic ideas of site within a single history and future predicated on the conservation of white life.

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<sup>8</sup> (Manning 1919) 6, 10.

<sup>9</sup> (Manning 1919) 11.



[Image 3] National Plan maps illustrating Manning’s use of global climate data to argue for environmental determinist policies. Here temperate climatic zones illustrate the reach of ‘civilization.’  
 (Warren Manning Papers, Iowa State University)

Warren Manning (1860-1938) is remembered within the field of landscape architecture as a Progressive Era designer, a founding member of the American Society of Landscape Architects, and a student of Fredrick Law Olmsted. First trained in horticulture, Manning built over 100 projects in the US between 1896 and 1938 and his professional interests centered on developing national environmental planning. The intersection of Manning’s horticultural and planning interests resulted in the National Plan, a 400-plus page planning atlas first published in 1919 and subsequently as a 23-page brief in *Landscape Architecture* in 1923. The Plan sought to prevent poor environmental planning that, in Manning’s view, would lead to societal ills, including fractured national identity, weak economic growth, food insecurity, and overall poor national health.

The plan is layered, both in writing and drawings, with language that generalizes environmental characteristics along racial lines to create an argument for the United States to maintain a “dominant position as a world unit.”<sup>10</sup> The maps of the National Plan reinforced hegemonic and racialized notions of landscape, even as Manning understands them to be rationally and scientifically accurate. This focus on scientific accuracy is expressed in the introduction to the Plan by then Secretary of the Interior Franklin Lane. Lane praises the plan for its vision to “scientifically” “make America prosperous and its people serviceable,” illustrating the extent to which the Plan gained popularity with government officials. The introduction by Lane shows how the Plan is not merely a ‘product of its time’ but complicit in the racial formation of the United States.<sup>11</sup>

The National Plan uses white supremacist views to develop ‘rational’ cartographic representations that position the American landscape as ‘natural.’ [Image 4] By conflating the American landscape as both ‘rational’ and ‘natural,’ the National Plan frames white settlers as the original inhabitants and the group most entitled to citizenship, a common white settler strategy as historian Sherene Razack explains.<sup>12</sup> As the American landscape becomes rationalized through the Plan’s cartography, the multivariant and diverse landscapes of the United States are transformed into a single, standardized site. Site is traditionally understood in landscape design as a physical location, constrained by temporal or spatial boundaries, for design intervention. Manning frames the United States as a whole ‘unit’ that it is defined by fixed, spatial boundaries, an idea developed from a background developing horticultural standards. Visually, the maps in the Plan maintain this view

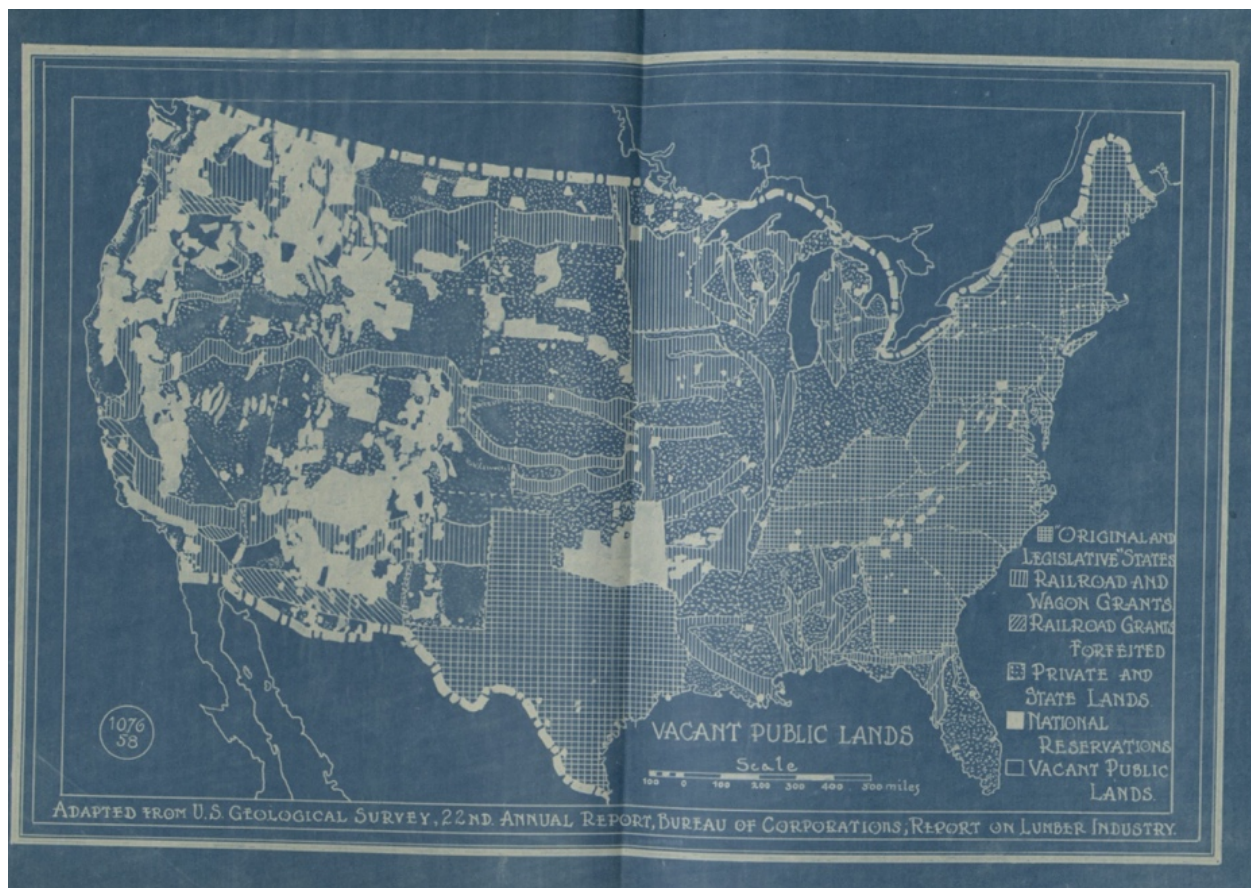
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<sup>10</sup> (Manning 1919) 5.

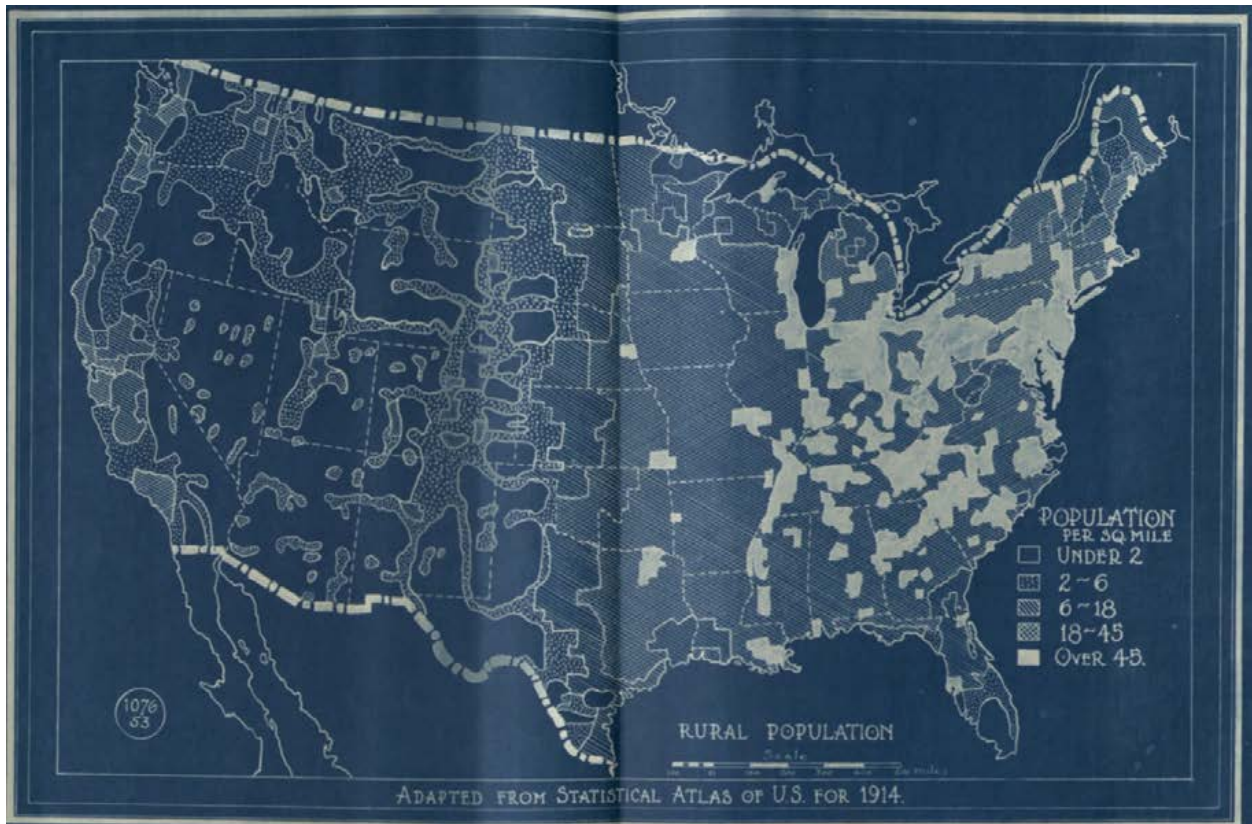
<sup>11</sup> (Manning 1923) The Plan was distributed and read widely by government officials at the time, earning praise from then Secretary of the Interior Franklin Lane, Arthur Powell Davis, the nephew of John Wesley Powell and Federal Director of the Department of Reclamation), and William Smythe, author of *The Conquest of Arid America* and prominent advocate for arid expansion.

<sup>12</sup> (Razack 2002)

with a single, thick white line defining the edges of the United States as the most prominent representational feature. [Image 5] The translation of knowledge by scaling the idea of a standard 'unit' for horticulture to the nation is key to my reading of the National Plan, and central to understanding how the Plan operated within a larger project of racial formation.



[Image 4] Throughout the National Plan, the U.S. is rendered as 'natural' and 'untouched' prior to European arrival. By linking race with the construction of a place, the National Plan constructs a narrative that the U.S. is inherently a 'white' space. (Warren Manning Papers, Iowa State University)



[Image 5] The map's information is always made to conform to the political edges of the United States. The one consistent exception to this representational strategy is the mapping of waterways, as Manning draws the Great Lakes reaching into Canada. (The Warren Manning Papers, Iowa State University)

Constructing the nation as a standardized site is made evident through dual processes of epistemological scaling and racial formation. Together, these two processes create the conditions for an epistemological slippage where knowledge about biological life is scaled to determine 'inherent' qualities of people and nations. By scale, I refer to the ways Manning moves between scales of knowledge to conflate biological and racial discourses into material policies through the Plan's maps and diagrams. I develop an argument of scalar failure—that the National Plan leads to the inscription of racialized environmental knowledge as standard environmental knowledge—through the lens of anthropologist Anna Tsing's theory of non-scalability.<sup>13</sup> Tsing argues that scale and

<sup>13</sup> (Tsing 2019)

scalability have driven modernist progress and growth, creating an always unfinished project of scalability that “only allows us to see only uniform blocks, ready for further expansion.”<sup>14</sup> Tsing writes that relationships change as scales changes and that in scaling without changing how relationships form, scaling eliminates the diversity of the world.

Landscape historian Robin Karson writes that Manning’s references to racial segregation and white supremacy are “tragically flawed,” but shouldn’t obscure his contributions as a designer.<sup>15</sup> In doing so, Karson overlooks how Manning’s invocation of race grounds the National Plan and is situated within a larger context of racial formation. Sociologists Michael Omi and Howard Winant describe racial formation as “the sociohistorical process by which racial identities are created, lived out, transformed, and destroyed.”<sup>16</sup> Manning writes in the introduction to the Plan that its main purpose is to “lead people to visualize, think of, and to work in the interests of the United States as a whole” toward a “future be determined more by ... racial considerations.”<sup>17</sup> In referencing a future drawn along racial lines it becomes clear that Manning’s essay on the ‘Negro problem’—a euphemism for eugenics and environmental racism—cannot be read only as a ‘tragic flaw’ but rather as part of a ‘sociohistorical processes’ of racial formation and integral to how Manning understood landscape and site.<sup>18</sup> This integral grounding becomes clear through efforts to standardize landscape and nation to reinforce a hegemonic idea of site and to advance a white supremacist future for the United States.

Manning’s background in horticulture reveals the slippage that occurs when environmental knowledge developed at garden scale, in this case horticultural standards, are transferred to a

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<sup>14</sup> (Tsing 2019) 143.

<sup>15</sup> (Karson, Brown, and Allaback 2017) 32.

<sup>16</sup> (Winant and Omi 2015)109.

<sup>17</sup> (Manning 1919) 285, 288.

<sup>18</sup> (Karson, Brown, and Allaback 2017) 32. (Nelson and Harold 2018) for more on the link between eugenics and the Negro Problem, particularly the chapter, “Eugenics at the University of Virginia and its Health Disparities” by P. Preston Reynolds.

national scale, shaping supposedly ‘rational’ ideas about environmental knowledge. The failure of scale and standardization of site is seen as the National Plan translates horticultural standards into bodily metaphors of health and circulation to argue for civic improvement for a healthy national body. The National Plan’s focus on national civic improvement through the scaling of environmental standardization was not unique during the early twentieth century, and similar effort are seen in the development of the National Park system, eugenics, and racial anxieties of the health of the national body in the 1910s and 1920s.<sup>19</sup> The National Plan contributes to a project of racial formation by operating in conversation with similar projects, such as land surveying as a technology of power and dispossession, eugenic anxieties about purity and hygiene, and swamps and other ‘wasted’ landscapes as racialized spaces in need of erasure to construct a social narrative of who does and does not belong to the nation.<sup>20</sup> Racial formation is continuously reinforced in the Plan through cartographic representations that treat the United States as a bounded object and continued textual references to the ‘dominance’ of the ‘white race,’ suggesting the ways discourses are formed through intertextuality.<sup>21</sup>

### ***Scaling the Garden***

Born into a family of horticulturalists in 1860, Manning’s father ran a prominent nursery north of Boston, Massachusetts. Manning’s approach to horticulture was heavily influenced by his father’s “Victorian fascination with plants,” particularly his father’s emphasis on using native North American species, such as “Clethera, Adams Needle, Minnesota Honeysuckle, White and Rocky

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<sup>19</sup> For more on interrelated efforts on civic improvement through landscape environment see (Taylor 2016)

<sup>20</sup> (Razack 2002) 2.

<sup>21</sup> (Rose 2001)

Mountain Blue Spruces, and Double Perennial Sunflower” in garden design.<sup>22</sup> As Manning’s career progressed from horticultural nurseries to landscape architectural practice and regional planning, Victorian horticultural ideas of categorization and standardization would continue to shape Manning’s broader views of nature. For Manning, standardization would bring regularity and predictability to the American landscape. The need for standardization is a central assumption underlying the National Plan and key to understanding the failure of scale in the National Plan.

A legacy of horticultural standardization is evident in Manning’s treatment of selective, native plants at the garden scale and specific ‘native’ environmental units at the national scale. This idea was first explored early in his career through the development of native plant name standards. In 1887, the year before he began work in the Olmsted office, Manning published a series of articles on plant standardization in which he advocated for the addition of the word “American” to common plant names in an effort to create consistency in naming from Europe varieties. In explaining the rationale for such a change, he wrote,

We [the United States] have on our own mountains and deserts and plains a wonderful flora and great additions have been made to the gardens of the world from these sources. We think of Japan and China as the most wonderful natural gardens of the world. We have had many hardy, charming plants from these places, but their flora is no more wonderful or interesting than our own and no one country has added more to European gardens than us. A host of trees and shrubs might be named that were carried from the United States and that were celebrated, indeed. One great division of hardy shrubs the Rhododendron, Azalea, Kalmias, and others allied to the family might be called “American” plants as so many of them were taken from this country. Our people are too often ready to accept a foreign plant because it is foreign, whereas equally as beautiful nature will not be received with favor.<sup>23</sup>

As Manning begins to equate biological life with national identity, nation and nativism become linked through standardization and the management of biophysical life.

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<sup>22</sup> (Karson, Brown, and Allaback 2017) and (Autobiography by Warren Manning. 1934-1938, Warren Manning Collection, Center for Lowell History, University of Massachusetts) 4.

<sup>23</sup> (“Native plants in our gardens,” by Warren Manning. No year. Box 7, folder 19, Warren Manning Collection, University of Massachusetts).

On the need for plant standardization, Manning wrote in the same essay, “the bringing of order from disorder must be gradual. It is important that simple but comprehensive rules be adopted that will eventually cover the whole of plant life.”<sup>24</sup> This statement suggests the need for comprehensive knowledge about the whole of the United States in order to assure a predictable and stable future where ‘disorder’ will be tamed through the management of life. In both Manning’s discussion of plant life and the nation, consistent and comprehensive knowledge is desired that will shaped the ‘whole’ of plant life as well as national life. This earlier work suggests that Manning’s interest in biological consistency arose within larger conversations advocating for native plants. Horticultural standardization is grounded in a well-documented legacy of spectacle and control that promoted environmental racism, eugenics, and colonialism, ideas seen in Manning’s pride toward native plants as exclusive to strengths of the United States.<sup>25</sup>

As Manning continued in landscape architecture, he began to see landscape as distinct scientific units that could be measured and cataloged, similar to plant catalogues and arboretums. On a train trip from Boston to Asheville, North Carolina while surveying for plants in the 1890s, Manning wrote in his journal that both that the scale and diversity of plant life in the United States renders “the whole country an arboretum.”<sup>26</sup> At the time, Manning was working for Fredrick Law

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<sup>24</sup> (“The practically of an improved use of popular plant names,” by Warren Manning. 1887, box 12. Warren Manning Papers, Iowa State University).

<sup>25</sup> (Anker 2001, Schiebinger 2005)

<sup>26</sup> (Autobiography by Warren Manning. 1934-1938, Warren Manning Collection, Center for Lowell History, University of Massachusetts) 36.



[Image 6] The Biltmore Estate, Asheville, North Carolina. Photo by Warren Manning. (no date, The Warren Manning Papers, Iowa State University)

Olmsted as the primary horticultural designer at the Biltmore Estate in North Carolina.<sup>27</sup> As part of the Olmsted firm from 1888 to 1896, Manning worked on a range of high profile projects, including selecting the plantings at Biltmore, a task that included acquiring more than 10,000 plant specimens, only 500 of which Manning estimated were duplicate species. [Image 6] This task of surveying and taking stock of plant life was not unlike what Manning had done for most of his childhood and

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<sup>27</sup> Manning was educated through apprenticeship, first through his family's nursery and horticulture business and then as a designer and horticulturalist for Fredrick Law Olmsted between 1888 and 1896. With Olmsted, Manning would lead the planting design on a number of high profile projects, including at the Biltmore Estate in Asheville, North Carolina and the 1893 Chicago World Expo. To each of these projects, Manning brought a wealth of horticultural knowledge developed during his upbringing on his family's nursery. Despite extensive practical knowledge, Manning's lack of formal education became an increasing concern for Fredrick Law Olmsted Jr. as the Olmsted firm grew. Manning believed he was fired from the Olmsted office by Olmsted Junior because he lacked formal training, and in 1896 he began his own practice. See (Autobiography by Warren Manning. 1934-1938, Warren Manning Collection, Center for Lowell History, University of Massachusetts) and (Neckar 1989, Berrizbeitia and M'Closkey 2015).

young adult life, but the Biltmore represented an important scalar turning point. While working on the Biltmore, Manning, with Olmsted and Gifford Pinchot, tested how scientific forestry could be improved through standardized planting, growth patterns, and cultivation.<sup>28</sup> Through the Biltmore forest, landscape became a standard scientific unit that could be recorded through drawings and maps, tested for productivity, and eventually standardized for consistent forest production.<sup>29</sup>

Manning's work at Biltmore began to fulfill a need he saw for more large-scale scientific data about the environmental conditions of the United States which would help frame the country as a whole.<sup>30</sup> In a 1909 essay on civic improvement, Manning cites Biltmore as a good example of how increased landscape surveying and resource management can provide better "data" that can support the development of new national agricultural regions through the development of "great fields" and the clearing away of "some useless dams and drained meadows."<sup>31</sup> Here, landscape data is beginning to be used to advocate for landscape improvement. While working on the Biltmore forest, Manning begins to see the landscape less as a collection of diverse, individual plant species and more as a bounded scientific unit in the form of the forest that could be measure and managed. The idea that scientifically gathered landscape data would present a full and complete picture of the country is evident in the National Plan, as well. On the first page of the National Plan, Manning writes,

[we] must gain a better knowledge of this United States as a whole ... the permanent success of [the] country will depend on upon a comprehensive and exact knowledge of the conditions and requirements that lead to prosperity and adversity. We must help to lay down

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<sup>28</sup> (Autobiography by Warren Manning. 1934-1938, Warren Manning Collection, Center for Lowell History, University of Massachusetts.)

<sup>29</sup> For more on the links between eugenics, the conservation movement, the forest service, and standardization see, (Allen 2013).

<sup>30</sup> Manning worked to develop and patent a 'single-man' survey device between 1910 and 1922. In 1923 he received the patent #1448981. The device was developed in response to what he saw as a lack of good survey material. (One Man Surveyor, by Warren Manning. no date, box 17, Warren Manning Collection, Center for Lowell History, University of Massachusetts). Similarly, in speaking engagements, Manning refers to Biltmore as a "test" (Speech in "Park and Cemetery," by Warren Manning. 1902, box 110, folder 13, Warren Manning Papers, Iowa State University).

<sup>31</sup> (article in "The Bostonian," by Warren Manning. 1909, box 12, Warren Manning Collection, Center for Lowell History, University of Massachusetts).

and execute a national plan that will make prosperity dominant and reduce to a minimum the adversity that comes from a lack of foresight and initiative.<sup>32</sup>

In this statement, Manning makes it clear that the goal of ‘permanent’ national success will be achieved through greater data, and more importantly, through consistent data that frames the United States as a ‘whole.’

The ideological slippage that occurred through the scaling of horticultural knowledge is also found in Manning’s evolving understanding of landscape, particularly in relation to the garden. In an 1893 letter to the Indiana Horticultural Society Manning writes that gardening is “little more than a trade,” whereas landscape is “so comprehensive that it may take up houses, lawns, gardens, orchards, meadows, mountains, and even the sky, with the stars, to the remotest nebulae.”<sup>33</sup> He continues, “the garden, in contrast to the landscape,” is a “limited, defined and exclusive space, antithetical to the word landscape.”<sup>34</sup> In this letter, Manning sees landscape as more spatially inclusive than gardens, precisely because of its ecological and spatial diversity. Similarly, this letter suggests a distinction between landscape and the garden based on categories of ownership and property implicit in their scale. Yet, in Manning’s calls for standardization among plant species as well as national environmental knowledge, he argues for comprehensive knowledge about the ‘whole’ unit, suggesting that although landscape contains multiplicity, knowledge about landscape should be unified and consistent. This drive for standardized landscape knowledge is an example of non-scalability where the input—landscape—ranges while the output—site or the nation—remains ‘exact,’ ‘comprehensive,’ and ‘permanent’ based on Manning’s understanding of the standard ‘unit.’ It also suggests a changing view of property expressed through scale, from the private garden as an

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<sup>32</sup> (Manning 1919) 1.

<sup>33</sup> (“The Purpose and Practice of Landscape Architecture,” by Warren Manning 1983, box 13, Warren Manning Collection, Center for Lowell History, University of Massachusetts.)

<sup>34</sup> (“The Purpose and Practice of Landscape Architecture,” by Warren Manning 1983, box 13, Warren Manning Collection, Center for Lowell History, University of Massachusetts.)

expression of individual ownership to landscape as a reflective of national identity formed through open and collective, albeit racialized, public space.

Standardizing landscape through racialized public space and national identity positioned landscape as central to improvement ideologies of the early twentieth century. In this context, Manning's pursuit of environmental improvement through standardized data was not exceptional. The Progressive Era, the height of which occurred between 1904 and 1912, was a period of condensed racial formation that saw a wave of social and racial reforms around housing, sanitation, and immigration. The period was also one of significant urban growth; the urban population of the United States increasing from 40 percent to 52 percent between 1900 and 1920.<sup>35</sup> The Progressive Era can be characterized as arising in direct response to urbanization, becoming the "first large scale national political movement in American history that sought to grapple with environmental dilemmas like waste, pollution, resource exhaustion, and sustainability."<sup>36</sup> Importantly, the period placed tremendous faith in scientific expertise, including professional expertise through landscape architecture, urban planning and social work to reduce waste and promote national efficiency.<sup>37</sup> The progressive ideology of improvement sought to create a more unified national identity by linking bodily health with national health often through metaphor of circulation and cleanliness that were layered with racialized ideas of hygiene. The focus on racialized bodily and national circulation during the Progressive period created a framework that legitimized racial assimilation and control

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<sup>35</sup> The growth of the city and the simultaneous advancement of surveying technologies brought about a new level of scientific accuracy that allowed for the United States to be visualized as a material and objective whole for the first time. (Rose 2016)

<sup>36</sup> (Stradling 2004) 10. Manning writes in the introduction to the *National Plan* that the American landscape needs a "co-ordinated plan for the development of our resources and people ... we shall enter a new era of progressive growth." In the context of Progressive reform, categorization became synonymous with national progress. A civilized society was the goal of democracy, and conservation provided a means of improved efficiency and order that "would strengthen America's claim to civilization's crown." (Manning 1919) 5.

<sup>37</sup> (Robertson 2012) 6.

through public space by framing landscape as a pulsing circulatory system in need of preservation and improvement.<sup>38</sup>

As Manning became more interested in cities, he began to see plants and horticulture as key for civic improvement. In 1907, Manning writes that “ornamental plants become in the hands of the civic horticulturalist the garments of civic improvement.”<sup>39</sup> Similar to Manning’s distinction between gardens and landscapes as well as the focus on scientific forestry, this statement suggests that horticulture is no longer confined to the ‘limited, defined, and exclusive space’ of the garden nor to individual property. Civic improvement aided by horticulture becomes a means of producing nation and citizenry by creating a unified national identity through place.<sup>40</sup> As horticultural tending transitions toward the realm of the ‘civic horticulturalist,’ managing the landscape becomes a way of managing ‘comprehensive’ property and racialized public space through environmental improvement.

Utilizing plants as the garments of civic improvements becomes a means of creating a unified civic body—or at least ‘clothing’ them—through horticultural improvement. This transition, from garden to landscape and landscape to city illustrates a process historian Adam Rome describes as typical of the progressive period. Rome suggests that gardening, once the order of residential spaces, was during the early Progressive period folded into national objectives of efficiency and purity alongside process of urbanization and immigration in the early twentieth century.<sup>41</sup> Building from Rome’s perspective, I would suggest that this transition was also the result of change in scale, as private gardens were replaced by public landscapes at the same time that urbanization was shifting

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<sup>38</sup> (Stradling 2004) xi.

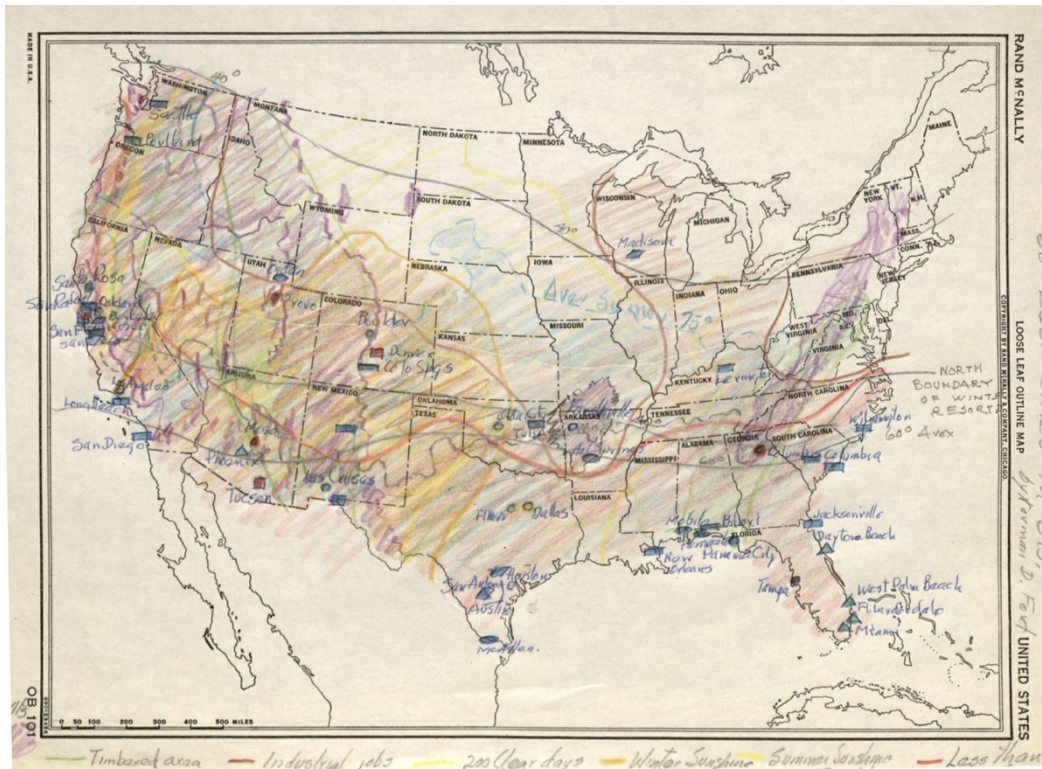
<sup>39</sup> (“Address to Horticultural Expo at Jamestown, Virginia, by Warren Manning. 1907, box 11, Warren Manning Collection, Center for Lowell History, University of Massachusetts.)

<sup>40</sup> (Razack 2002) 2-4.

<sup>41</sup> (Rome 2008)

how urban public space was developing for collective and community use in the context of increased standardization and scientific expertise.

As individual gardens transition to public landscapes as a spaces of collective national formation, similar standardized thinking extended to the national scale through ‘rational’ United States Geological Survey (U.S.G.S.) topographical maps. The U.S.G.S. maps allowed environmental characteristics to be mapped with “exactness in detail” at the national scale, creating a blueprint for building national identity through mutually defined space.<sup>42</sup> In 1879, the U.S.G.S. released their first U.S. national map. The easy availability of the U.S.G.S. map as a public document allowed Manning



[Image 7] The availability of the national scale maps allowed Manning to translate mapping skills he developed in the Olmsted office to a larger scale purpose. The maps of the National Plan were created using an overlay method that Manning learned from working closely with landscape architect Charles Eliot in the Olmsted office. While Eliot is often cited with developing the overlay mapping technique, historical accounts note how Manning and Eliot work closely together to develop the technique. (no date, Warren Manning Papers, Iowa State University)

<sup>42</sup> (Manning 1919) 23. Manning continues, “we need more exactness in detail as to the boundaries and character of the land units, such as desert, bad lands, dry farming lands, irrigated or irrigable lands, fresh water swamps, salt water marshes, basins where water can best stored for domestic use, irrigation, power, or for its beauty in scenery.”

to undertake mapping at a new scale. The 1909 U.S.G.S. map—which Manning called the most “important issue of the government”—is used as a base map for much of the National Plan, as it offered a consistent representation of the nation as if it were a unified whole.<sup>43</sup> As Manning traveled by train between Boston and Chicago, North Carolina, and California selecting plants for Biltmore and other projects, he recorded the scale and diversity of horticultural landscapes he saw, often with colored pencils to create layered mappings.<sup>44</sup> *[Image 7]*

As methods of standardized horticultural knowledge were translated to the national scale, the work of standardization—producing regularity and predictability—shifted from tending and maintaining individual plant life to regulating civic and national life. In building a case for why the United States is particularly suitable for “civilization,” Manning effectively renders certain landscapes undesirable for white life, forming the basis of the National Plan’s argument for landscape “improvement” through lands deemed unsuitable for the ‘white race.’<sup>45</sup> Traci Brynne Voyles notes that processes of racial formation describe how environmental characteristics are made material through racialized discourses that are then applied to particular bodies and places. In the next section, I relate Voyles’ argument to the National Plan to show how the Plan’s cartography of water, soil, swamps, and national parks uses racialized discourses of land and people to enable and at times embody nationalist projects of environmental and resource management.<sup>46</sup> Scale, standardization,

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<sup>43</sup> (Manning, 1919) 205.

<sup>44</sup> (Manning) patent #1448981, 1923. The availability of the national map also made it possible for average citizens to be geographical experts, which Manning embraced in creating the National Plan through the development of a survey device that he patented in 1923. The availability of the national scale map allowed Manning to translate mapping skills he developed in the Olmsted office to a larger scale purpose. The maps of the National Plan were created using an overlay method that Manning learned from working closely with landscape architect Charles Eliot in the Olmsted office. While Eliot is often cited with developing the overlay mapping technique that would become a precursor to Ian McHarg’s ecological method and subsequently the basis for Geographic Information System (GIS), historical accounts note how Manning and Eliot work closely together to develop the technique. Together, they transformed a light box into a drawing station as they worked to layer site information into thick plans, creating maps of Massachusetts and the Boston area. (Berrizbeitia and M’Closkey 2015)

<sup>45</sup> (Manning 1919) 10-11.

<sup>46</sup> (Voyles 2015) ix.

and race are further entangled in the National Plan through specific biopolitical examples that limit circulation of nature and bodies to construct a single narrative and site of the United States.

### ***Biopolitical circulation and the failure of scale***

As the American landscape was rendered legible through standardized and racialized environmental knowledge in the National Plan, the nation was being figured as a natural body. Similar to how Manning describes plants as the ‘garments of civic improvement,’ Progressive Era metaphors of bodily circulation were drawing new relationships between changes in the U.S. population and the urban landscape to create a “selective construction of a ‘common’ national history and desired national future.”<sup>47</sup> Progressive Era projects of improvement placing pollution in opposition with cleanliness, waste against efficiency, and growth as a signal of modern civilization often employed bodily and circulatory metaphors to describe the biophysical environment, often with racialized implications.<sup>48</sup>

The National Plan uses the preservation of white life to mark certain sites for ‘improvement.’ Swamps, for instance, which Manning describes as a “menace” to the white race, become a space for improvement as they represent both a place that was unhealthy for the white race and a place of refuge for non-white populations.<sup>49</sup> Likewise, landscapes already suitable for white civilization are deemed worthy of preservation, including temporal forests and rivers that have historically supported European agriculture and timber building.<sup>50</sup> Manning marks landscapes for environmental protection and exploitation through ideologies of white supremacy rather than through the

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<sup>47</sup> (Kosek 2004)119.

<sup>48</sup> (Allen 2013)

<sup>49</sup> (Manning 1919) 80.

<sup>50</sup> (Razack 2002, Di Palma 2014, Voyles 2015, McKittrick 2013)

disparaging of non-white life. For instance, Manning cites eugenicist Ellsworth Huntington, author of *Civilization and Climate*, in the Plan's instruction to explain how areas that are too humid or too rainy are not "favorable to the health, strength, and vigor of both the body and mind of the white man."<sup>51</sup> The focus on white supremacy further constructs a standard view of nature, where the only life that matters, or even exists, is white life. This distinction between landscapes that should be preserved and those that should be improved illustrates how racial discourses intersect with environment to produce places that are marked for the preservation of life and other that are marked for exploitation and resource extraction."<sup>52</sup>

The regulation of non-white life is seen in Manning's invocation of biological threats to white life, establishing a structure of biopolitical relations meant to preserve the "the white race" through varying degrees of landscape conservation that favors white life and landscape extraction that curtails non-white life.<sup>53</sup> Manning writes in the Plan, "we can well compare our country to the human body" where "our city parks that were once little patches, have now become systems and circuits. These will be small units in the great national circuits."<sup>54</sup> Circulation also extends beyond the city, into rural and less populated areas. Manning continues, "the rail and water traffic ways being the veins and arteries, the wires and wireless waves the nerves, the power as the energy of the nation, and the people who the body politic, the directing forces, the heart and soul of it all."<sup>55</sup> As part of this bodily framing, regional planning becomes an "extension of the city into the county" as urban growth in the Plan becomes "part of the greater plan of state and nation, taking advantage of land units that are tributary to the city, and upon which the city's prosperity will depend."<sup>56</sup> In this

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<sup>51</sup> (Manning 1919) 10.

<sup>52</sup> (Voyles 2015) 15.

<sup>53</sup> (Manning 1919)

<sup>54</sup> (Manning 1919) 20.

<sup>55</sup> (Manning 1919) 21.

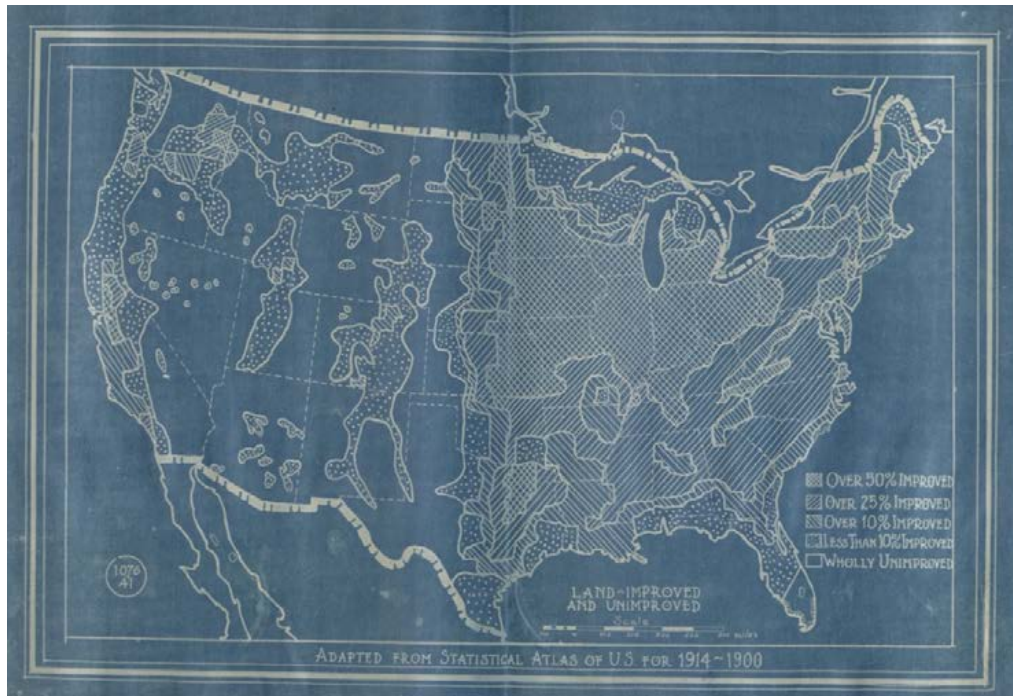
<sup>56</sup> (Manning 1919) 34-35.

framing of the urban landscape, circulatory metaphors of human health become a way of imagining a healthy national body. Unlike contemporary scholarship on urban metabolism that recognizes the porosity between human bodies and their environment, Manning frames both the body and nation as closed units meant to “avoid waste.”<sup>57</sup>

The comparison made by Manning in the Plan between the national body and the human body implies that there is a standard human body. As Manning makes clear, the National Plan is meant to secure the dominance of the ‘white race.’ The standard body for Manning is a white body, a framing that is revealed as the National Plan connects environments unsuitable for the ‘white race’ with the same landscapes slated for ‘improvement.’ [Image 8] As the National Plan is organized through a lens of improvement, the landscapes that Manning marks for improvement—swamps, deserts, cities—also marks particular bodies for improvement, contributing the regulation of non-white life. This regulation is illustrated through the improvement of water, soil, swamps, and land conservation to either weaken or strengthen the standard, white national body.

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<sup>57</sup> (Manning 1919) 2; for urban metabolism see (Heynen, Kaika, and Swyngedouw 2006, Swyngedouw 2006).



[Image 8] 'Lands-Improved,' referring to lands converted to agriculturally productive land was a critical strategy for enacting biopolitical racial formation. Often these lands 'unimproved' were deserts, swamps, and other spaces deemed unsuitable for white life. (Warren Manning Papers, Iowa State University)

### *Water*

Water gives and takes life and its regulation is central to constructing the ideal national body. Water is described in the National Plan as “inexhaustible and perennial, returning again and again to be used. It is the only perpetual motion.”<sup>58</sup> The National Plan explicitly connects water health to circulatory health, writing, “the circulation of water is the arterial life system of the nation.”<sup>59</sup> In other words, water is the blood and lifeline of a healthy national body and thus can be used to regulate health for white people. While the National Plan notes that the water resources of the United States are unmatched, the health of water power remains threatened, as “rivers of no other

<sup>58</sup> (Manning 1923) 126.

<sup>59</sup> (Manning 1923) 126.

civilized country are so poorly developed.”<sup>60</sup> Ensuring water health for industrial and capital growth then becomes a means of ensuring national health to secure property values and populations. To ensure the health of water and nation, the National Plan suggests placing half of the nation’s water in protected forest reserves and to use the other half to support industry.

The industrial use of water is marked for hydrological development supporting industrial growth. The Plan refers to water marked for industry as ‘water power,’ suggesting a relationship between the power and health of water, as though the ‘arterial life’ of water is also bodily power and vigor. For instance, the Plan notes that industrial ‘water power’ is “so inexhaustible and perennially renewed [that it can] be used again and again.”<sup>61</sup> In this instance, water marked for industry has strength and power, but it can also be exploited to strengthen overall national health. Water conserved in forest reserves, by contract, is marked as “protected.”<sup>62</sup> This protected water is also meant to contribute to the nation’s health but through purity and stability, rather than power and movement. On the Plan’s maps these two forms of water are redrawn outside of state lines so that “power can be developed with economy in large units” at the national rather local or state scale.<sup>63</sup>

*[Image 9]* By redrawing water resources outside state boundaries but within national boundaries, water is meant to work for the advancement of a stronger and healthier nation. In the context of ‘arterial life,’ water becomes the lifeline of national unity. The management of water, therefore, becomes not only a metaphor of circulation but a resource to be regulated and controlled for the improvement of the broader national landscape.

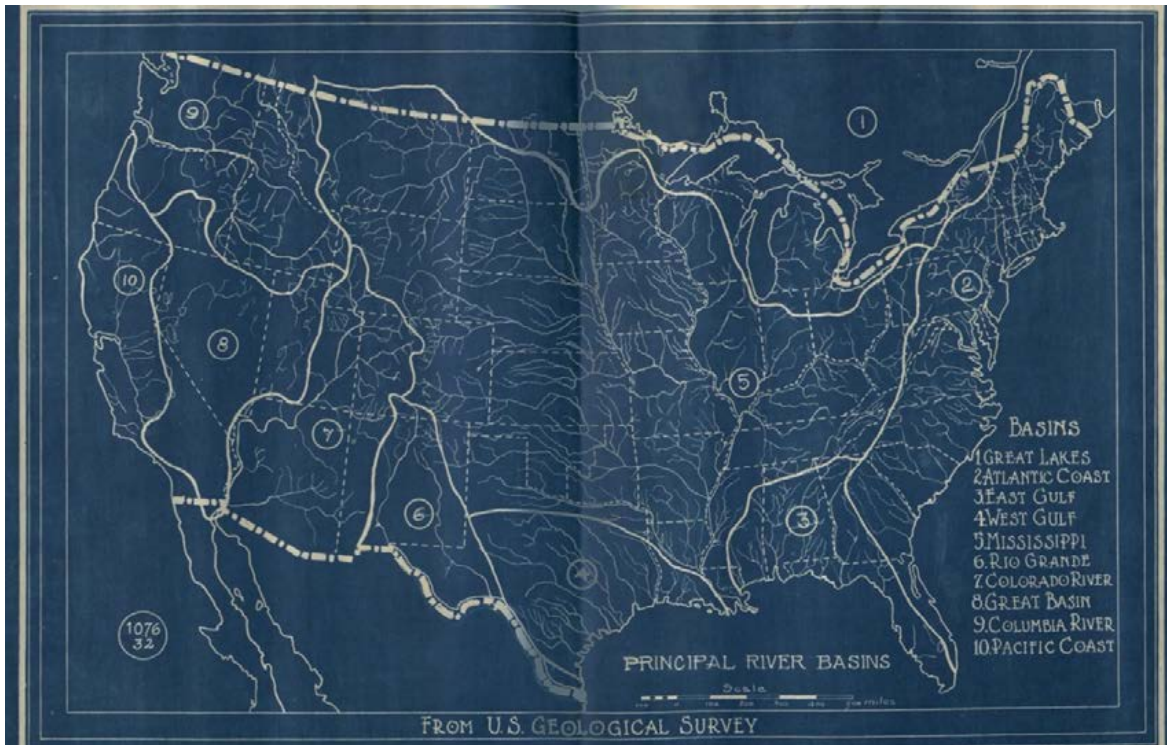
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<sup>60</sup> (Manning 1923) 126.

<sup>61</sup> (Manning 1919) 70-79.

<sup>62</sup> (Manning 1919) 129.

<sup>63</sup> (Manning 1919) 131.



[Image 9] The management of water, through preservation and improvement, formed the basis for managing other bio-physical features in the National Plan. (Iowa State University)

### *Soil*

Maintaining soil fertility becomes a way of regulating life at the national scale as ‘poor soil’ is converted into strong agricultural land. Manning writes soil “is our greatest resource. It not only produces food and clothing, but also light, power, and structural material, to say nothing of the beauty of landscape that is coming to be recognized as a great natural assist.”<sup>64</sup> [Images 10 and 11] In other words, a strong citizenry is created through strong soil that produces plentiful agricultural resources. Conversely, poor national health is caused by soil scarcity and poor soil health, the Plan argues.<sup>65</sup> Similar to water resources, management of soil health becomes a way of regulating non-white life. Manning compares the United States’ soil resources to Europe, the two world units he

<sup>64</sup> (Manning 1919) 72.

<sup>65</sup> (Manning 1919) and (“Constructive and Cooperative Recreation.” National Conference on Outdoor Recreation, May 1924. Box 3, folder 25, Warren Manning Papers, Iowa State University).

considers true ‘civilization.’ On Europe, Manning writes in the Plan, the “European population is already drawing heavily upon its soil resources. It seems that nature has destined the United States as the region of greater increase in population and resources for the white race of the next century.”<sup>66</sup> Manning’s connection between soil resources and racial superiority is echoed in other eugenics literature of the time. Eugenics advocate Edward East, for example, also stressed the importance of soil maintenance in creating racially pure national and natural environments in *Mankind at the Crossroads* (1923).<sup>67</sup>

While the Plan notes that the United States is ‘destined’ to be great because of its soil resources, the preservation of threatened soil fertility is a continued focus of the Plan. Similar to water, soil resources must be closely maintained by both preserving strong soil and improving damaged soil. Unlike water, which can be developed for ‘inexhaustible’ industrial and economic growth, soil is treated through a lens of scarcity. More specifically, Manning links threatened soil fertility with foreign population growth. He notes that “food stuff costs are rapidly increasing because of farm acreage and yield has not kept pace with the population increases,” noting that changing population numbers are the result of recent immigration.<sup>68</sup> The Plan poses that to meet increased population agricultural needs, lands that do “not yield profits” such as deserts and swamps should be managed for “improved drainage and irrigation.”<sup>69</sup> Equating land and improvement with agricultural output has roots in European notions of property that base the value of land (and people) on quantifiable agricultural yield and that emerged via “racial regimes of ownership” in North America.<sup>70</sup>

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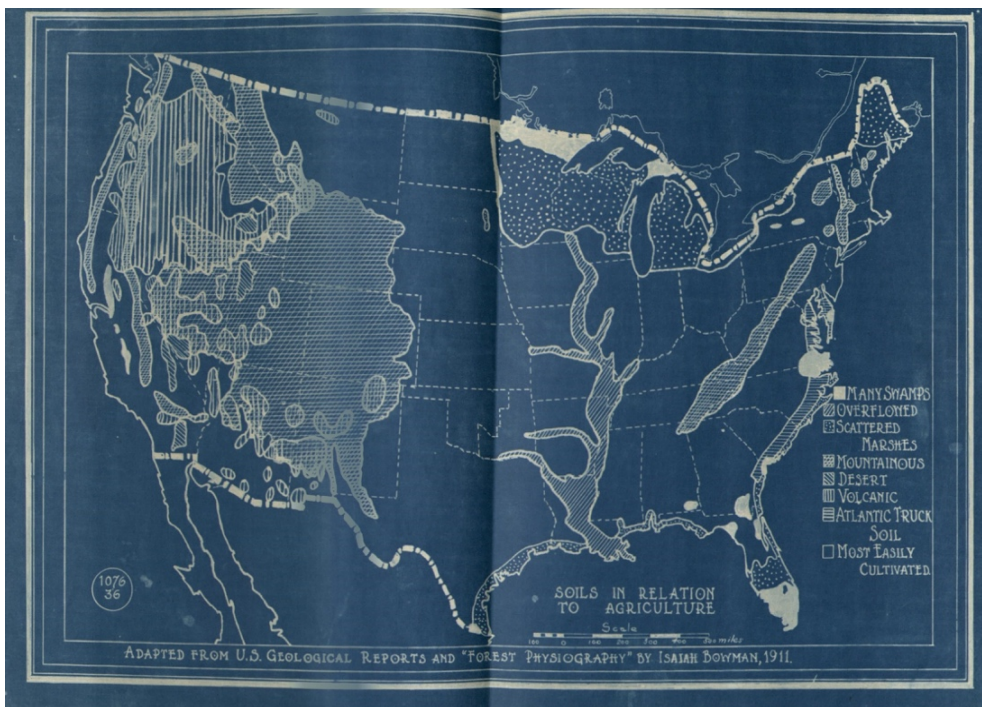
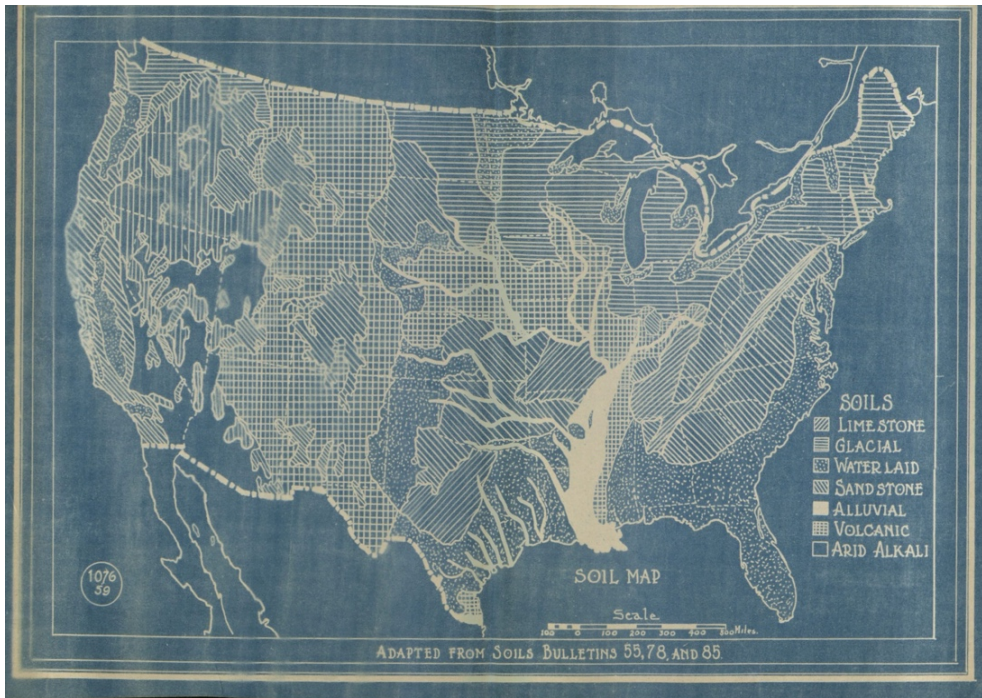
<sup>66</sup> (Manning 1919) 80.

<sup>67</sup> (East 1923)

<sup>68</sup> (Manning 1919) 72.

<sup>69</sup> (Manning 1919)73.

<sup>70</sup> (Bhandar 2018) 48.



[Image 10 and 11] The soil maps of the National Plan reinforce an ideology of improvement by focusing on the capacity of soil to produce agriculture. Coupled with maps of race and citizenship, the National Plan begins to draw narrow lines between how site is conceptualized as productive for white citizenship while limiting non-white life. (Warren Manning Papers, Iowa State University)

Soil health continues to play a central role in the Plan's assessment of immigration. Another section of the Plan on 'foreign immigration' notes that if "if immigration remains very small" soil resources will not be taxed, suggesting that limiting immigration could protect "our greatest natural resource."<sup>71</sup> As the Plan unfolds an argument around immigration, it focuses on racial assimilation. Manning writes that it takes "three generations and education to make a foreigner truly an American." Notably, Manning excludes "peoples not of Caucasian blood, as negros, Indians, Chinese" from his framing of assimilation, while continuing in the same paragraph to claim that immigrants are likely to settle in places that "corresponds closely to their old home climate."<sup>72</sup> For instance, Manning notes that Black Americans who have migrated to northern states will inevitably "go back" to the southern United States with the "return of cold weather."<sup>73</sup> This suggestion not only overlooks a history of forced slavery and relocation to the southern United States, but it positions Black Americans as a 'natural' part of the southern landscape, a theme that is also echoed in the 'Negro Problem' essay. *[Image 12]*

Connecting race with biological traits is predicated on the notion that every person has a 'natural' environment, and situates the National Plan within projects of eugenics and scientific racism that were occurring alongside Manning's development of the Plan. Manning's readings of Huntington and East suggest that he was aware of and working in conversation with the eugenics movement of the early twentieth century.<sup>74</sup> In the National Plan, the naturalization of race is actualized through soil management, a common eugenics trope, specifically the treatment of swamps and deserts. In identifying lands for soil improvement to increase agriculture, the focus

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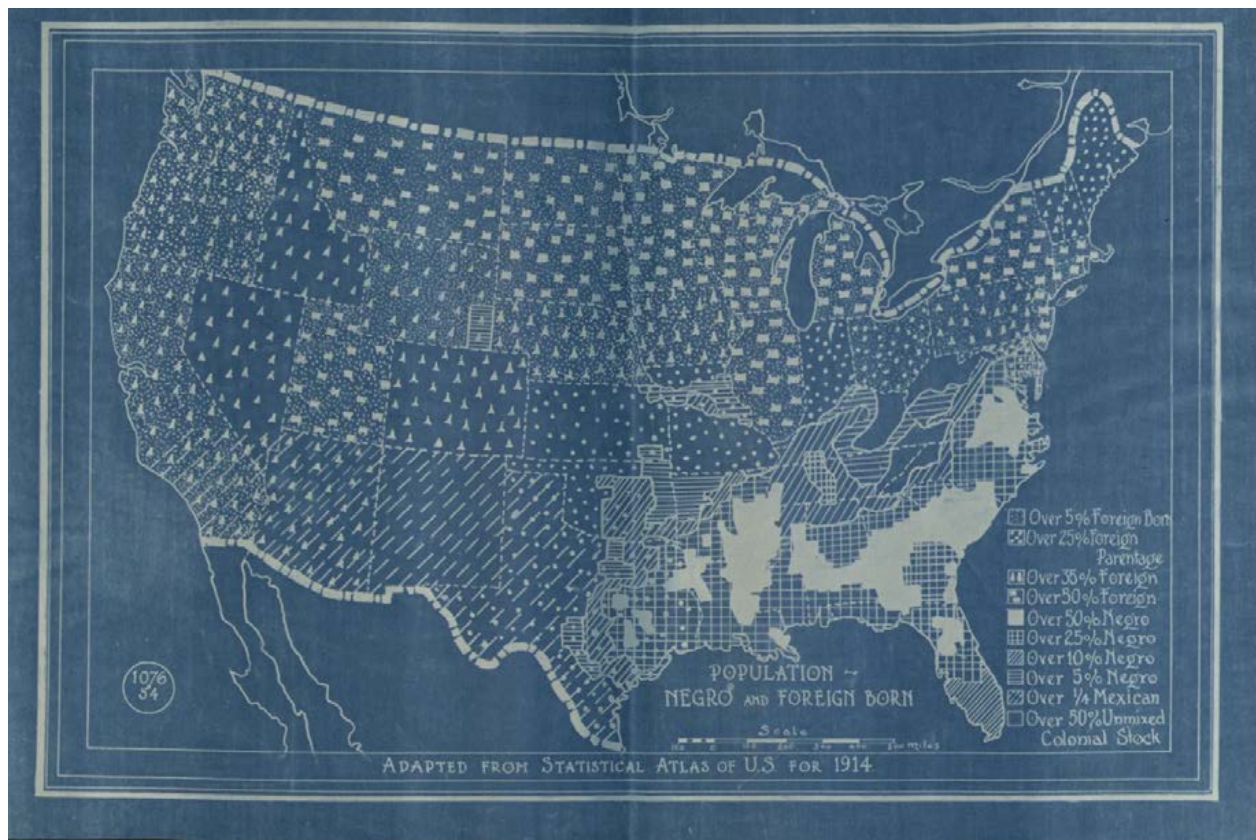
<sup>71</sup> (Manning 1919) 203.

<sup>72</sup> (Manning 1919) 200.

<sup>73</sup> (Manning 1919) 200.

<sup>74</sup> (Nelson and Harold 2018) for more on the link between eugenics and the Negro Problem, see the chapter, "Eugenics at the University of Virginia and its Health Disparities" by P. Preston Reynolds featuring events that took place as Manning was employed by the university. Also see (Robertson 2012) for the relationship between land conservation, national parks, and eugenics.

turns to the drainage and irrigation of swamps, deserts, and other climates unsuitable for ‘white men.’ Land improvement becomes not only a project of shaping biophysical regions but also the peoples who live there. While preserving soil fertility for white, American farmers becomes paramount to national progress, environmental assimilation re-enforces the United States as a singular and rationalized unit where non-white people become natural features in the landscape.<sup>75</sup> An example of the connections made between soil health and scarcity for the preservation of a white citizenry is seen in the regulation of non-white life through the environmental management of swamps.



[Image 12] Map of ‘Negro and foreign born’ population. Paired with the soil and agriculture maps (images 10 and 11), the National Plan’s attention to resource scarcity arises through comparisons with immigrant and non-white populations, including Black and Indigenous people. (Warren Manning Papers, Iowa State University)

<sup>75</sup> (Robertson 2012) 22.

## *Swamps*

The “swamps and overflowed lands” section of the National Plan begins with the assessment, “the areas of greatest rainfall are mostly within tropical regions, where dense forests and atmospheric conditions do not favor the development of a white race,” followed by swamps “are the greatest single menace to public health.”<sup>76</sup> Environmental scholar Valerie Kuletz theorizes that land becomes disposable not because of inherent qualities of the land itself but rather through discourses of race, gender, and class.<sup>77</sup> This is particularly true for swamps, which historically have been seen to pose both social and environmental threats to the maintenance of white life. Swamps in the southern United States, for example, represent a place of refuge and safety from white control and order and they often offered a space for living and fostering intimacy and kinship outside of the geographical relations created by white land ownership and enslavement.<sup>78</sup> Likewise, swamps were seen as places inaccessible and causing disease for white life and order. Swamps then pose a particular threat to white life because they unsettle notions of order and power in racialized landscapes as both social and environmental threats. Similar discourses of threat are seen in the National Plan as swamps are rendered disposable to work toward a unified national unit. Swamps limit the livability of white life as their atmospheric conditions ‘do not favor the development of a white race.’ In response, the National Plan proposes draining swamps in order to develop more land into agricultural districts.

The National Plan advocates for draining swamp land by modifying state lines to “bring the whole of a drainage basin into a state.”<sup>79</sup> This process will transform large swamps currently divided by state lines into an organized system of federal control. In organizing swamps outside state boundaries, the Plan projects an image of regional environmental planning that will allow swamps

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<sup>76</sup> (Manning 1919) 79-80.

<sup>77</sup> (Kuletz 1998)

<sup>78</sup> See (McKittrick 2013) for the role of landscape in shaping discourses of plantation histories and (Johnson 2020) for swamps as Black spaces and places of kinship for maroons in the southern United States.

<sup>79</sup> (Manning 1919) 82.

and waterways to flow without political limitations. However, since the reorganization of swamps is meant to reduce their ‘menacing’ qualities to better support the ‘white race,’ the management of swamps at a national level can also be seen as a way of coalescing national environmental power into a singular unit. The organization of swamps outside state boundaries then becomes less about letting ecological regions flow and more about constructing an image of transformation where undesirable lands are ‘improved’ to maximize national agricultural yield for “distinctive uses for man.”<sup>80</sup>

Throughout the Plan, the preservation and improvement of landscape plays out along racialized lines. The managed circulation of water—purifying, life-giving, and inexhaustible—projects an image of a nation rich in resources to support the development of agricultural lands that can continue to support white life. By contrast, the unsuitability of swamps for the livability of the ‘white race’ is also seen as swamps are marked for hydrological draining and management. While the circulation of water regulates how soil produces racialized life in agricultural districts, threats to soil fertility are used to legitimize regulating racialized landscapes such as swamps and other lands where “climate, rainfall and the animate forces of nature [are] unsuited to the development of a great civilization,” as the Plan notes.<sup>81</sup> The regulation of water through soil and swamps illustrates the ways environmental discourses are racialized to produce new natures meant to construct the American nation as a biological formation, a political body as much as a biophysical body.

### *Conservation lands*

In addition to metaphors of bodily circulation in describing water, soil, and swamps, particular bodies are rendered part of the natural environment through land conservation. While the Plan and

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<sup>80</sup> (Manning 1919) 33.

<sup>81</sup> (Manning 1919) 14.

“The Negro Problem” both advocate for Black populations to remain in the southern United States because of racialized climatic views, Native Americans are also reconfigured as part of the natural landscape. Manning writes in the Plan that cities should expand into the western U.S. as a precaution to avoid high population densities and the potentially unsanitary conditions they bring. In this part of the plan, Indian reservations are combined with scenic reservations to conserve “vanishing wild life.”<sup>82</sup> The preservation of Indigenous land is framed as necessary to preserve the natural character of the nation, akin to national parks. On Indian reservations Manning writes,

some of the land set aside of the Indians will be allotted to individuals or opened to public entry or combine with scenic and forest reservations. Some of the land will be taken over by white settlement as the Indians merge with the white population. Probably the Indians themselves are now better fitted for citizenship.<sup>83</sup>

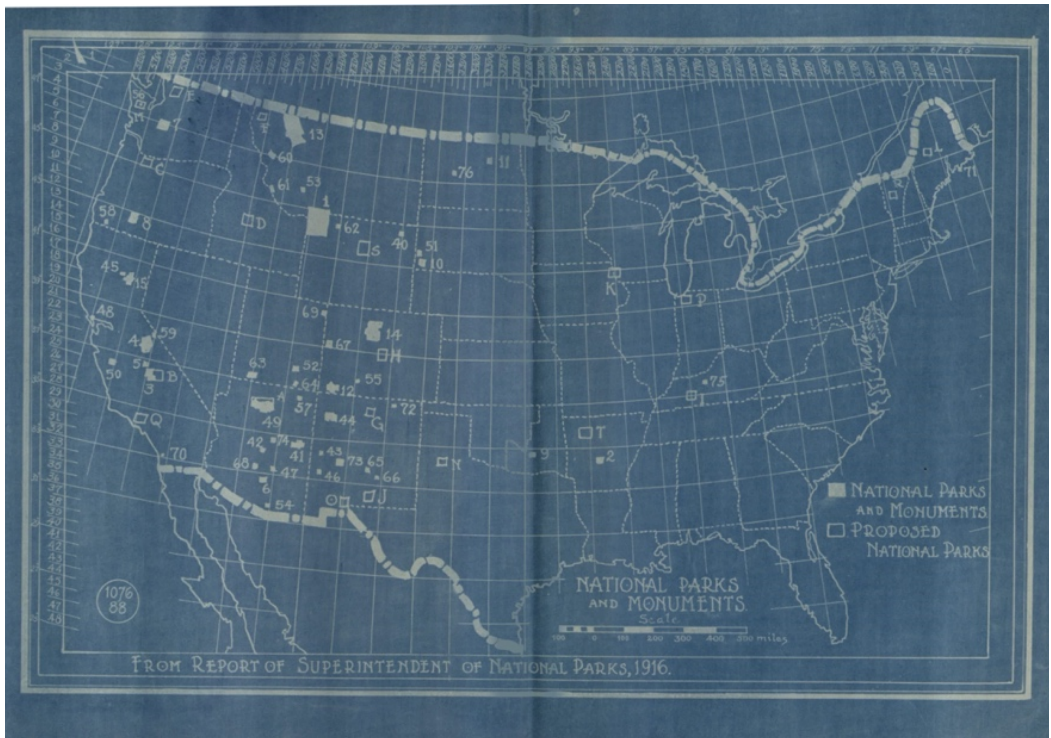
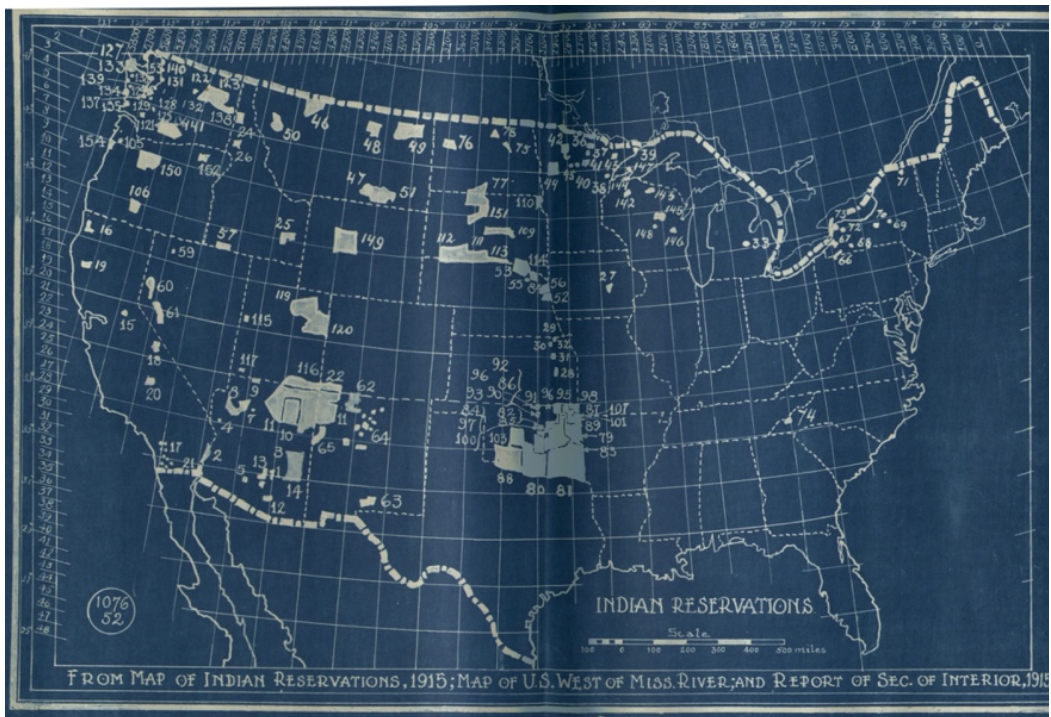
In this assessment, Indigenous people are seen as a preserved and inherent layer of the natural fabric of the nation. The naturalization of Indigenous people in the Plan excludes them from citizenship, which is framed as the right of white settlers. Throughout, the Plan makes few references to Indigenous peoples and only in reference to national park lands and wildlife conservation. [Image 13 and 14] This exclusion and narrow framing points to the ways Manning assumes settler colonialism as a standard truth, where Indigenous groups are relegated to a preserved past that allows white settlers to see themselves as the ‘natural’ inhabitants of a place.<sup>84</sup> Grouping Indigenous peoples with the natural landscape reveals the ways Manning does not see Native people as fully human, and subsequently how the maintenance of conservation lands becomes a project of maintaining white citizenry.

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<sup>82</sup> (Manning 1919) 22.

<sup>83</sup> (Manning 1919) 211. Notably, Native Americans were granted citizenship in 1924, five years after the first publication of the National Plan and one year after it appeared in *Landscape Architecture Magazine*. While Manning suggests that native populations will be better ‘fitted’ for citizenship after merging with white populations (suggesting the whiteness is the basis for citizenship and sustained proximity will lead to citizenship), this could also potentially be read as an example of the white imaginary beginning in discourse before material realization.

<sup>84</sup> (Razack 2002)



[Image 13 and 14] National Parks and Native lands become one in the same as the National Plan naturalizes Indigenous people into land conservation districts. (Warren Manning Papers, Iowa State University)

### *Cartographic afterlives: site as racial formation*

Racial difference is integral to Manning's cartographic vision for seeing and interpreting the American landscape, creating a 'rationalized' National Plan. The white supremacist assumptions that underpin the National Plan link white racial superiority with particular landscape conditions to create a set of maps that are never neutral. The National Plan that Manning sees and positions as an objective, scientific report is the outcome of a process of scaling that folds a diversity of landscape knowledge into a standardized national site. The racialized standardization of the National Plan becomes clear through the engaged use of biological metaphors that continuously promote the American landscape as inherently linked with the dominance of the 'white race.' Through the management of water, soil, swamps, and conservation spaces through metaphors of bodily circulation, the National Plan works to regulate non-white life by creating favorable conditions for the success of white life. In promoting the United States as a white space and in turn a place of white life, the National Plan limits the heterogeneous circulation of nature through national boundaries to counter the changing urban and immigrant character of the United States in the early twentieth century.

Geographer Gillian Rose notes that visual images are never innocent, they are constructed through various knowledges, practices, and technologies.<sup>85</sup> For the National Plan, the nation drawn as a bounded site is necessary to maintain Manning's white supremacist views of the United States as pre-ordained for 'dominance.' Framing the nation as a biological unit within the confines of a national map creates a political framework guided by racist biological laws that results in a "hierarchically structured and racially homogeneous community" based on the model of an ideal white, male body and standardized through national identity and property.<sup>86</sup> While Manning

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<sup>85</sup> (Rose 2001)

<sup>86</sup> (Casper et al. 2011) 11.

acknowledges that “many [regional and state] boundaries are political compromises [that create] engineering makeshifts, illogical and uneconomic situations,” the Plan reinforces national unity through the cartographic identity of a nation that is always whole and inherently healthy, strong, and valuable.<sup>87</sup>

As racialized environmental knowledge circulates within the Plan, the boundaries of the nation remain static. Continuously drawing focus to the nation as a unified object erases and hides site and landscape diversity that lives within the cracks and details of the U.S.G.S. base map. The standardized representation of the United States as a solid, yet largely void space, is a representational project of erasure that eliminates entanglements and relationships that depend on particular scales and results in the production of space itself. As landscape knowledge is standardized through a racialized lens in the National Plan, scale becomes a tool of erasure that remakes the nation into an ideal and healthy body. Tsing writes on the failure of scale, where “native entanglements, human and nonhuman, must be extinguished; remaking the landscape is a way to get rid of them.”<sup>88</sup> Drawing on Tsing’s theory of non-scalability, I suggest that positioning landscape as a standard unit or site, without accounting for changes in inputs such as cultural and environmental difference, the American landscape is remade as standardized and homogenous nature.

The National Plan illustrates the ways acts of drawing have been used to exonerate the designed landscape from the spatial structures of racial violence and white supremacy that they that often working to maintain, a legacy that landscape history has to yet to fully address. Here, I am not speaking generally about all designers, nor am I denying the many origins of landscape architecture, including contributions from women, immigrants, and progressive social policies. To read Manning and overlook his views on race does not implicate the practice of landscape architecture as

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<sup>87</sup> (Manning 1919) 27.

<sup>88</sup> (Tsing 2019) 151.

inherently racist but rather it shows how knowledge about landscape and site contain their own practices of historical production and exchange within structures and cultures of white supremacy.

Landscape historian Joachim Wolschke-Bulmahn has written that past landscape architects are often describe through terms of “ecological goodness” that confer moral authority to the designer while remaining ignorant of the broader social and political issues they embody and reproduce. This is a dangerous conflation in Manning’s case, as his moral framing of nature is one of racial bias that enacts violence by conferring greater value to particular forms of life, and in particular one group of humans, to promote white supremacy. Perhaps Manning is just more explicit than others in landscape practice who have explored similar topics of scale, regionality, and environment through regional-scale mapping. The regional and environmental mappings of John Wesley Powell, Benton MacKaye, and Ian McHarg, for example, have been considered as largely positive examples in landscape practice for how ecological systems, rather than political boundaries, can guide environmental management.<sup>89</sup> Is their continued reference in landscape practice attempts to validate landscape practice and design of the built environment as apolitical? After all, if an environmental plan can be seen as ecologically based and not politically grounded, it exonerates the designer from the politics of landscape. Yet, as the case of the National Plan illustrates, mapping environmental regions without political boundaries is far from apolitical.

Situating historical formations of site within socio-political systems works to build practices of care. Care practices focus on how power constructs uneven social formations, including race and gender dimensions, to response to the erasure of difference. The National Plan is the first case study in the dissertation because it offers a clear example of how landscape knowledge has been used to reinforce a hegemonic idea of site that shapes in unacknowledged ways the regulation of life, in this

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<sup>89</sup> (Cooper 2020, John-Alder 2020, Easterling 1999) See Cooper for John Wesley Powell, John-Alder for Ian McHarg, and Easterling for Benton MacKaye.

case through racial formation. The example of the National Plan exposes the ways environmental knowledge is never apolitical but highly reflective of socio-political contexts. At the same time, it illustrates how landscape representation shapes and is shaped by socio-political contexts. For this dissertation, the National Plan reveals the ways landscape has been mapped and represented to create and reinforce hegemonic views of site that continue today.<sup>90</sup> Throughout this dissertation, I argue that the hegemony of site remakes binaries between nature and society, limiting our capacity for care through socioecological responsibility. The ongoing racial formation that the National Plan contributes to is seen in urban landscapes today, requiring strategies that can resist the momentum of racial formation. Central to resisting this limitation are more stories that uncover what lies under the dominance of normative site practices. Recovering these stories are acts of care.

In the National Plan, configuring the nation as a singular site, albeit one constructed through the erasure of difference, was central to the maintenance of a pure and white citizenry. This

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<sup>90</sup> The racialization of seemingly ‘neutral’ environmental planning is evident in Manning’s later work, a subject deserving more investigation and that falls outside the scope of this dissertation. While the National Plan is Manning’s more explicitly racist document, it reframes much of his professional work, raising a series of additional research questions and projects. In 1914, the same time that Manning began serious production of the Plan, he also began working more regularly in the southern United States. This overlap, combined with “the Negro Problem” essay, raises potential questions about Manning’s relationship with white nationalism, particularly because several of his southern projects focused on both Black autonomy and segregation. For example, Manning consulted on landscape designs at both the University of Virginia and Tuskegee College. The Tuskegee campus was designed by David Williston, the first professionally trained Black landscape architect in the United States, and the two are said to have worked closely together. At the University of Virginia, Manning was hired to complete a campus plan by university president Edwin Alderman, a noted eugenicist, in 1904, aligning closely with the timing of Manning’s work on native horticulture and turn toward eugenics. Again, this overlap in time suggests a potential influence that need further research. Perhaps most interestingly, Manning was able to apply ideas from the National Plan in two prominent urban planning projects in Birmingham, Alabama and Atlanta, Georgia in 1916 and 1922, respectively. In both of these projects, Manning uses hydrology and topography to advocate for particular urban patterns that favor residential development toward locations with stronger natural resources, and infrastructural and industrial development toward areas with less desirable areas. As both of these cities were segregated at the time, non-white residential development was also relegated to the areas Manning sites for industrial use. Contemporary landscape projects such as Tom Leader Studio’s *Railroad Park* in Birmingham, for instance, sits at segregated intersection where Manning used ecological determinism to justify differing urban development patterns. The legacies of these two projects remain underexplored, particularly the ways landscape conservation was used to physically segregate Black Americans through the material and built landscape.

maintenance is seen through the regulation of site, first at the scale of plant life through horticultural standardization and later through the regulation of non-white and ecological diversity at the national scale. At the garden scale this regulation of life is rather gentle, effecting individual plants. As Manning translates horticultural knowledge to the national scale, however, the regulation of life shifts as power coalesces. Studying the National Plan reveals how an emphasis on scientific standardization—seen in the organization of horticultural standards and cartography—coupled with ecological determinism, created the conditions to reduce the living, breathing landscape to a political tool shielded by seemingly neutral environmental planning.

## Chapter Four: Site as Material

### Tracing material afterlives in King County, Washington

#### *Introduction: extraction*

In December of 1979, heavy rains eroded the driveway of Mr. and Mrs. Walter Gray, causing a small mudslide that washed out their driveway. The Grays had lived at 21507 42<sup>nd</sup> Avenue South Kent, Washington for 61 years “without incident of mud or water.”<sup>1</sup> Despite a record 11.85 inches of rainfall that December, the Grays were confident that the mudslide was caused by new erosion taking place directly uphill from their house. Earlier that year, the King County Arts Commission had completed a new public artwork, *Johnson Pit #30* by the artist Robert Morris, in a former gravel quarry uphill of the Gray’s house. The artwork was part of an August 1979 symposium and exhibition, *Earthworks: Land Reclamation as Sculpture* that had been organized to directly confront issues of environmental damage caused by resource extraction.

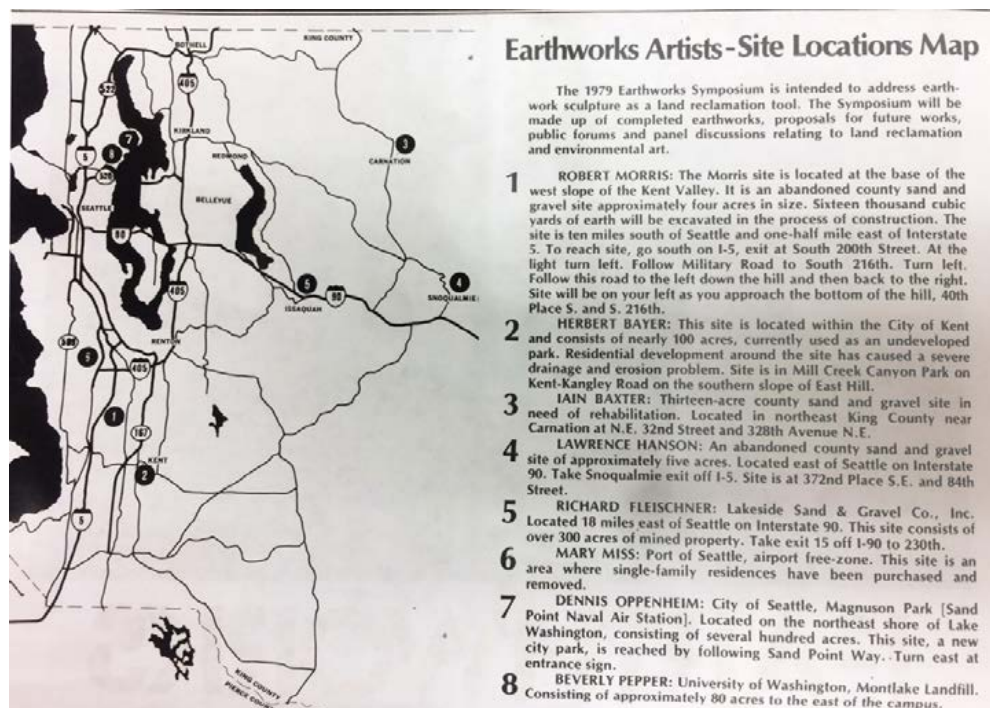
The *Earthworks* symposium invited eight land artists to propose re-designs for publicly owned gravel and waste pits around urban King County, Washington between 1978 and 1979. The symposium was intended to create new strategies for the “rehabilitation of technologically abused land” that was otherwise considered to be “scars that dot the landscape,” as King County Arts Commissioner Jerry Allen described the former gravel pits.<sup>2</sup> Morris’ design for Johnson Pit in Kent was the only proposal of the eight that was constructed. Construction of *Johnson Pit #30* required logging the overgrown gravel pit of young firs and alders, and re-extracting fill soil to transform the pit into a terraced landform of neatly mowed grass planes. Its construction was not without

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<sup>1</sup> “Earthwork Sculpture a Partial Washout,” Lettie Gavin. December 20, 1979. *The Seattle-Post Intelligencer*. Box 1747, folder 1, King County Archives.

<sup>2</sup> Herbert Bayer completed a second earthworks in Kent, Washington in 1982. This project was not part of the original *Earthworks* symposium but part of a “spin-off” project a year later.

controversy. For much of 1979 the Arts Commission received letters from neighbors near Johnson Pit, almost all voicing strong opposition to what was supposed to be a new, public landscape. As the highly engineered terraces began to sag and drift soon after construction, public complaints continued to come to the King County Council and Arts Commission.<sup>3</sup> Neighbors wrote letters of complaint, asking “whether the design had been checked by anyone who knows about soil and water run-off?”<sup>4</sup> Others were less kind, calling the sculpture “elitist” and a “con job;” one letter voiced their opposition to the sculpture in the form of a six part song set to the tune of “My Country, Tis of Thee.”<sup>5</sup> [Image 1]



[Image 1] Locations of eight original *Earthwork* locations. Site #2 by Herbert Beyer was added later, in 1980. (King County Archives)

<sup>3</sup> See King County Archives, Series 278, Box 5 for additional letters of complaint. The complains were not only from neighbors, letters include complains to the Arts Commission from the public for misuse of funds and from engineering and design professionals voicing concerns for not being included in the symposium process. See King County archives Series 278, Box 1 for audio recordings from the symposium event, including a question and answer session where local landscape architects take over the session to voice their dislike of the symposium organization and outcomes.

<sup>4</sup> “Letter to the Arts Commission,” by WM Vaughn, December 20, 1979. Box 278, folder 5. King County Archives.

<sup>5</sup> “Letter of Complaint,” by Jerry Peterson, no date. Box 278, folder 5. King County Archives; “Earthworks: My country, tis of thee,” by Frank Chesely, 1979. Box 278, folder 1. King County Archives.

In this chapter, I consider how the afterlives of gravel pits disrupt notions of sited property as site materials continue to shift with dynamic and temporal landscape movements. Through field work and archival research, I examine how as the sites associated with *Earthworks: Land Reclamation Sculpture* were reclaimed as ‘environmentally whole’ they produced new, neo-liberal ideas of nature that fractured not only ecological systems but the social infrastructures that tied them together. I pose that gravel pits associated with the symposium represent a fractured network of sites as a microcosm of a larger landscape condition that has been disrupted by resource extraction. I argue that while the symposium was intended to “create new tools for rehabilitation,” this goal was never achieved as the symposium remade normative distinctions between ‘damaged’ and ‘healed’ nature. While chapter three of the dissertation considers how site is scaled to fit landscape through the example of Manning’s National Plan and chapter five examines how landscape is scaled to fit site within contemporary ecological discourses, this chapter illustrates how sites and landscapes become inscribed on each other through infrastructure development and resource extraction.

I examine three publicly owned, former gravel pits in King County, Washington to illustrate how conceptions of new nature form in the afterlife of infrastructure development. *Johnson Pit #30* is the focus of the chapter and I insert ethnographic moments from field work at two other gravel sites on Maury Island and at Union Bay Natural Area, both in the Seattle region. These two other pits were considered as part of the symposium and by comparing across the sites, I show how the three gravel pits are linked through a larger infrastructural network. Comparing reclamation across the three sites, while focusing on Johnson Pit, also illustrates how reclamation creates differing ideas of what counts as natural and ‘cured’ as the afterlives of the three pits tell very different stories of environmental repair through material afterlives. [Images 2, 3, 4] By examining how site was conceptualized through the infrastructure of gravel in the mid-twentieth century, I argue that the discrete categorization of site at Johnson Pit and the *Earthworks* symposium produced a fragmented

landscape that normalized the disruption and suppression of other-than-human life. Central to this argument are the ways practices of reclamation and remediation are themselves often infused with broader power dynamics.



*[Image 2] Johnson Pit #30 (2019, photo by author)*



*[Image 3]* Vashon Island Pit (2019, photo by author)



*[Image 4]* Union Bay Natural Area (2017, photo by author)

In this chapter, I am critical of the ways traditional reclamation has depended on the binaries of damage and repair to reinforce power dynamics between nature/urban and site/landscape. I argue that despite the focus on art to develop new tool of reclamation, the *Earthworks* projects continue the work of traditional reclamation by attempting to re-create stable images of ‘repaired’ landscapes. In this critique, I draw on ideas of ‘cure’ developed within queer disability studies, particularly the writing of Eli Clare, who argues that normative frameworks of reclamation that seek to restore an untouched idea of ‘nature’ operate within an “ideology of cure.”<sup>6</sup> Clare argues that an ‘ideology of cure’ seeks to restore the environment to ‘natural’ or ‘normal’ without critically assessing how ideas of ‘natural’ and ‘normal’ are always constructed relative to power hierarchies. An ‘ideology of cure’ therefore assumes first that cure is possible and, second, that ‘cure’ is the goal of restoration, an idea that suggests environmentally ‘damaged’ landscapes need to be saved from themselves. I draw on Clare’s framing of cure to compare what is considered ‘normal’ and ‘natural’ across the three gravel pits as the sites have adapted over time to reveal new environmental conditions that are reflective of past actions.

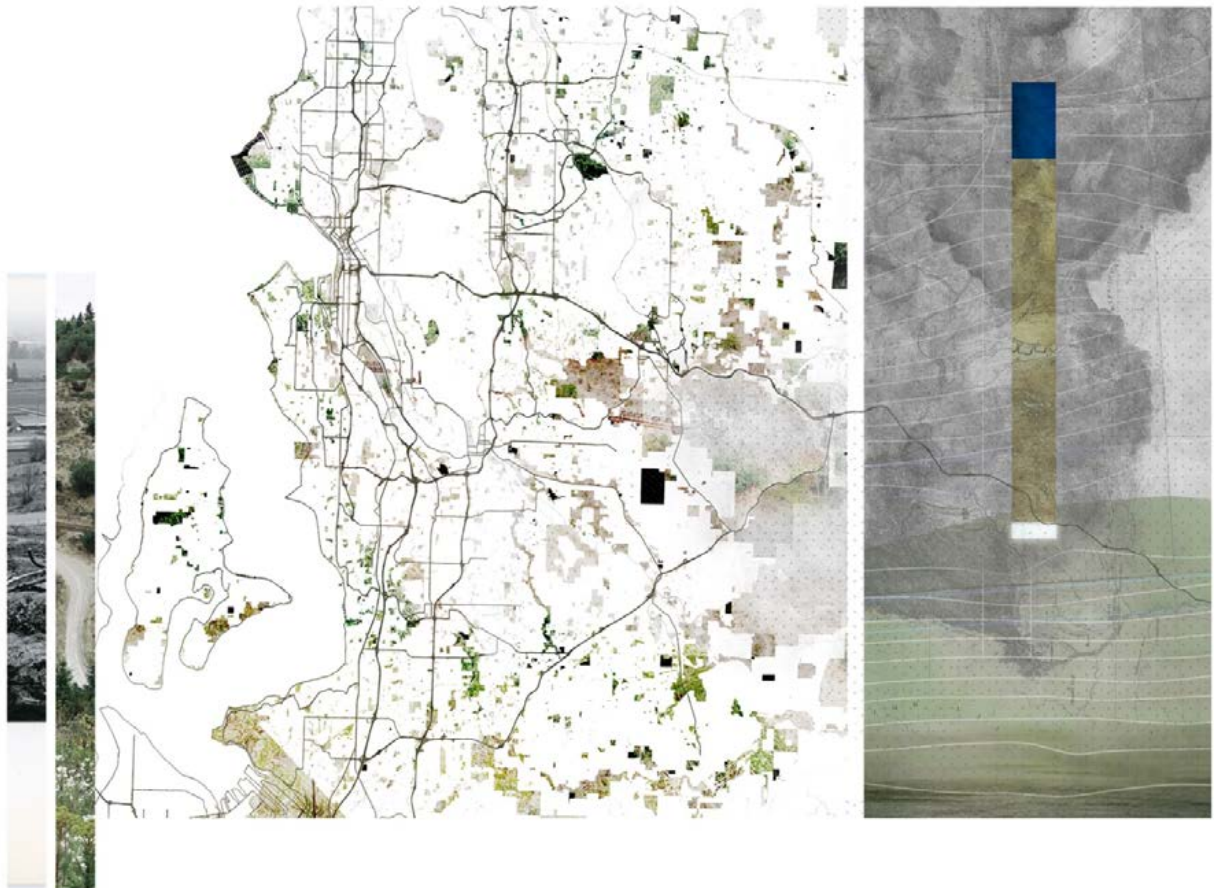
Binaries of damage and repair are revealed as I travel between the three gravel sites, documenting the ways ongoing site maintenance does or does not allow for extractive histories to be exposed through land and vegetation. *[Image 5]* In one instance, I find myself standing on a hot, steep eroding edge of Maury Island looking across the Puget Sound to Seattle. Today I am visiting the Vashon Gravel Pit, a site that looks remarkably different than *Johnson Pit #30*. When the King County Arts Commission developed the *Earthworks* symposium in 1978 and 1979, they selected sites from a list of 104 publicly owned surplus gravel pits.<sup>7</sup> The Vashon Island Pit, confusingly located on Maury Island, made the short list as a possible site for artist Larry Hansen, but the site was ultimately

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<sup>6</sup> (Clare 2014)

<sup>7</sup> For the entire list of King County Surplus gravel pits in 1973 see King County Archives, Series 1742, Box 1, Folder 2.

not selected for the symposium. Today, a rusting mining conveyer belt hangs precariously overhead as I make my way down a steep hillside of Common Tansy (*Tanacetum vulgare*) and Himalayan blackberry (*Rubus armeniacus*). The lines of the former gravel operation are still clear in the hillside, softer and more weighed down than the ones at *Johnson Pit #30*. At the top of the hill, just before the traces of the former mining terraces start, is one of the largest stand of Pacific Madrone in Washington State (*Arbutus menziesii*, qw əqw əy-ɪlch).<sup>8</sup>



[Image 5] Collage mixing archival materials, cartography, and field work to explore relationships between the three gravel sites (by author, 2018-2019).

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<sup>8</sup> (Turner 2014)

Anthropologist Gastón Gordillo writes that rubble is a “conceptual figure that can help us understand the ruptured multiplicity that is constitutive of all geographies as they are produced, destroyed, and remade.”<sup>9</sup> In this chapter, I examine what Gordillo would describe as rubble, the waste and debris left by the gravel extraction, in western Washington to consider how the afterlives of these materials continuously remake infrastructural sites. I pose that such sites can be understood as a contact zone where nature and culture become emmeshed through infrastructural ruins.<sup>10</sup> The ruptured multiplicity that Gordillo describes occurs as the gravel pits are continuously stabilized through infrastructural management, even as water, wind, and time shift the materials of each. For *Johnson Pit #30*, efforts to maintain a particular image of the former gravel pit tells a story of site and landscape that remakes binaries between rural and urban, individual and networked sites, and the role of infrastructure in maintaining those relations. Alternatively, on Maury Island the legacy of infrastructural development creates entanglements, uncomfortably blurring binaries of natural and unnatural and past, present, and future.

Visible traces of gravel history remain at *Johnson Pit #30* and the Vashon Island Pit. By contrast, at the Union Bay Nature Area signs of its history of extraction and waste are harder to find. Once a week I walk between the University of Washington and the Center for Urban Horticulture through the Union Bay Natural Area. Union Bay is constructed on fill soil from waste and debris creating during the University Village Shopping Center construction, making it perhaps one of the most urban places in Seattle. It is also home to one of most biodiverse ranges of bird habits in the Puget Sound, as it is one of the few areas of uninterrupted shorelines on Lake Washington.<sup>11</sup> This third site is one the original eight selected for the *Earthworks* symposium. Artist Beverly Pepper, one of two women invited to participate in the symposium, proposed a large incision through the site as

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<sup>9</sup> (Gordillo 2014) 2.

<sup>10</sup> (Pratt 1991)

<sup>11</sup> (Klinge 2007)

a memorial to the waste that constructed this landscape.<sup>12</sup> Today, the site is carefully maintained as a natural habitat area and one has to look closely for signs of the layered site traces that lay beneath the soil. *[Image 4]* Linked to the other two sites through a history of materials, the ground at Union Bay contains a history of marshland, swamp, and landfill. From saplings waiting to be planted, to re-grading the water's edge, on-going site maintenance at Union Bay reveals how an image of nature is continuously reproduced on site, covering over a history extraction and fill even as the site remakes habitat for plants and animals.

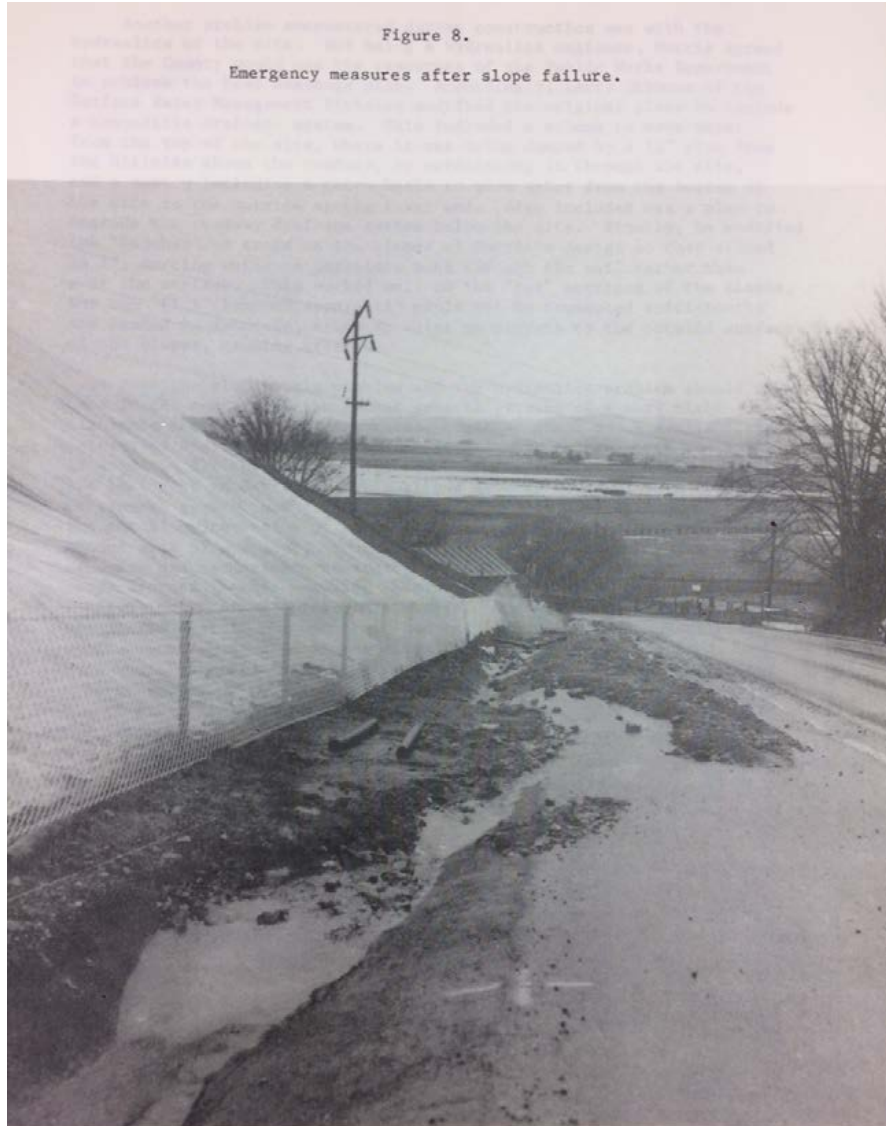
### ***Stabilizing site***

In the spring of 1980, after the Gray's driveway washed away, King County installed a new drainage system and re-sculped one of the terraces of *Johnson Pit #30*, beginning a process of land stabilization that continues today. *[Image 6]* In attempting to stabilize the shifting materials of the gravel pit *Johnson Pit #30*, the King County Arts Commission remade the history of resource extraction in western Washington appear as a tidy, linear project of extraction and repair. Yet, this approach overlooks many of the environmental conditions—steep topography and mineral deposits, high water reserves, and rapid vegetal growth—that made the gravel pits sites of extraction initially. Ironically, in trying to create an installation that would bring a stronger public ethic to the environmental consequences of resources extraction, Morris and the Arts Commission transformed *Johnson Pit* into a highly manicured space of picturesque landscape. In seeking to transform the pit into a newly naturalized space, Morris' design transformed a site that the community had viewed as 'natural,' in that the pit was seen as being full of trees and vegetation, into a landscape that was seen

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<sup>12</sup> (Morris and Commission 1979)

as unnatural and foreign by neighbors, as the spontaneous trees were replaced by neatly manicured grass planes.



[Image 6] Efforts to stabilize the hillside and save the earthwork resulted in “emergency measures after slope failure” at the Johnson Pit site. (King County Archives, Series 1747, Box 2.)

Together, the three gravel pits create a series of infrastructural contact zones that continue to produce and re-produce nature to create the conditions for neo-liberal landscape practices that have depended on fragmented and individualized site knowledge.<sup>13</sup> The 1979 symposium was initiated at a time of increased economic austerity and decentralization in United States, particularly around public infrastructure.<sup>14</sup> In the 1960s and 1970, as art engaged the forms and systems of urban infrastructure through what Rosalind Krauss has described as an “expanded field” of sculpture, urban infrastructural systems continued to maintain notions of an urban fabric largely through methods of stabilization that reinforced material stability over temporal environmental change.<sup>15</sup> The symposium’s organization and implementation benefited, and in many ways was made possible, from the decentralization of multiple extraction sites from a larger resource network. In treating the eight selected pits as individual sites rather than a network of sites, the symposium framed issues of environmental damage as distinct cases of damage and repair that resulted in the individualized production of nature at each site. Today, of the 104 surplus gravel sites King County owned in 1978, most have been largely absorbed into the urban landscape as they have been sold to developers as strip malls, schools, and planned communities.<sup>16</sup> *[Image 7]*

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<sup>13</sup> I focus primarily on Johnson Pit #30 because of archival and research materials availability, but my site visits to Vashon Island Pit and Union Bay Natural Area have been critical in shaping how I understand *Johnson Pit #30* in relation to broader extraction networks.

<sup>14</sup> (Smith 2007)

<sup>15</sup> With revisions of land use laws in the 1950s-1970s, infrastructure became a primary zone of negotiation between the built environment, the urban field, and the bio-physical environment. For more see, (Krauss 1979).

<sup>16</sup> A review of land use records combined with property searches in the King County Road Vault records show the 104 surplus gravel pits are now a football field Tyee Middle School in Bellevue, Washington, for example. “Record of Gravel Land Sales and Leases.” 1947-1972, box 32, folder 4. King County Archives.



[Image 7] Gravel and waste sites, Seattle area, King County Washington. Map drawn by author from combination of GIS and surplus gravel pits sites, King County Archives.

Rather than drawing attention to the wide-spread impact of mining in King County and western Washington, the symposium gained support from federal and private mining operations for promoting an individualized site approach. The King County Arts Commission, responsible for the symposium, gained financial support for the project from a combination of funding from the National Environmental Agency, Federal Bureau of Mines, and private donors.<sup>17</sup> The Federal Bureau of Mines, in particular, was a strong supporter of the project. At the time, the proximity of mines to urban centers was creating negative public perceptions of mining because mines created

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<sup>17</sup> “Earthworks Symposium Financial Statement,” no author. 1979. Box 278, folder 2. King County Archives.

stark images of ruined and damaged landscapes. The Federal Bureau of Mines reasoned they could improve public perceptions of mining through art while passing remediation responsibility onto the Arts Commission which would ultimately cost less money for the Bureau of Mines. This economic logic became a central driver of the symposium. It was often noted in symposium organizing correspondence between Arts Commissioner Yankee Johnson and the Bureau of Mines that land art sculpture would be cheaper than soil and water clean-up at numerous sites.<sup>18</sup> This economic logic, however, depended on dividing the gravel pits that littered King County into a difficult to trace opaque and fragmented landscape. Thus the symposium capitalized on hopeful and optimistic images of art as sources of repair for environmental destruction rather than draw attention to mining as a wide-spread process with extensive and far-reaching environmental impacts.

### ***Territorial expansion through material extraction***

Sand and gravel represent the most heavily extracted material group on the planet, ahead of fossil fuels and biomass.<sup>19</sup> Urban space is configured and reconfigured through sand and gravel, a process of infrastructural relations that science scholar Karen Barad suggests produces new spaces and understandings of space through materials practices.<sup>20</sup> Extensive gravel extraction in King County, Washington during the first half of the twentieth century produced a shifting infrastructural landscape that continues to move with cultural and bio-physical forces today. In the second half of the century, efforts to stabilize the movement of gravel engendered what was

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<sup>18</sup> “Comparative Cost of Executing Robert Morris’ Design vs. reclaiming the Kent gravel pit by traditional methods,” by Yankee Johnson, July 9, 1979. Box 278 – 1, folder 2. King County Archives; “Earthworks Project, King County, Washington,” Director, Bureau of Mines. December 28, 1978. Box 278 – 1, folder 2. King County Archives.

<sup>19</sup> (Torres et al. 2017)

<sup>20</sup> (Barad 2007) 140.

imagined as new sites for socio-ecological art and urban development through targeted reclamation efforts. These efforts to reclaim gravel sites by filling them with clean soil and returning them to a so-called pre-extractive condition is rooted in larger history of urban expansion of road building and construction.

Road building has long been a tool of territorial expansion and settler colonialism.<sup>21</sup> The first roads to receive federal funding in King County were built for military purposes to fight the Nisqually, Muckleshoot, Puyallup, and Klickitat tribes during the 1855 “Puget Sound War.”<sup>22</sup> These roadways were located in what is now Duvall and Sammamish, Washington, wealthy and largely white suburbs of Seattle. Gravel extraction in Washington State began in order to facilitate military logistics toward Indigenous dispossession in the 1850s. In the 1890s, King County began buying land for gravel extraction through eminent domain in order to support growing settler populations that required roads.<sup>23</sup> In turn, this created a need for more mining operations, thus beginning a cycle of road development to allow for mining access, and mining access that would allow for more roads to be constructed. County road maps from the 1890s and 1900s show areas for gravel extraction highlighted, often with newly surveyed roads planned to supply access. These so-called “mine-to-market roads” created an industrial network that would become foundational to the planning of urban road networks in the first half of the twentieth century.<sup>24</sup> New gravel pits required new road access, which was often acquired through eminent domain. In 1908, for instance, property just south of Lake Sammamish was surveyed for a gravel pit and roadway that would allow access to the pit. The roadway is now Lake Sammamish Parkway, an important central artery in Issaquah, Washington. *[Image 8]* There are perhaps hundreds of miles of similar mine-to-market roadways that

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<sup>21</sup> (4 Culture 2009)

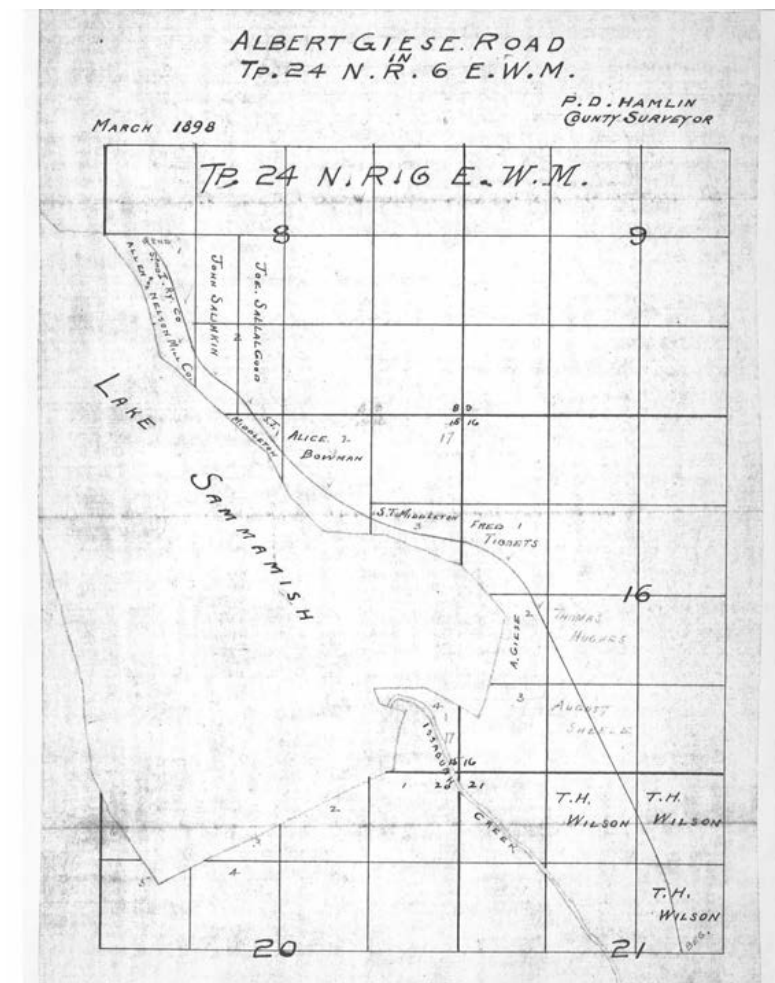
<sup>22</sup> (4 Culture 2009)

<sup>23</sup> The earliest record I found of this was from 1896 but there is nothing suggesting the practice started then. “King County Road Map Vault” King County Archives. Accessed September 2018.

<sup>24</sup> (4 Culture 2009) 13.

were first developed to support resource extraction and over time became central to urban expansion.<sup>25</sup>

The process of gravel extraction increased again between 1940 and 1970, during which time the population of King County grew from just over half a million people to 1,100,000. It was the largest sustained population growth in the county's history.<sup>26</sup> Prior to 1940, the county had



[Image 8] Lake Sammamish Mine to Market Road Survey (King County Road Map Vault).

<sup>25</sup> “King County Road Map Vault” King County Archives. Accessed September 2018.

<sup>26</sup> “Gravel pit property and sale records,” no author. King County Property Records, 1896-1973. Box 32, folder 4. King County Archives.

supplemented its gravel needs with removal from the Skykomish River, but as the road construction increased a more reliable source was needed closer to the urban core of Seattle.<sup>27</sup> Beginning in 1940, King County underwent a massive gravel pit buying mission. Between 1942 and 1972, the County owned and operated over 600 gravel pits ranging from half an acre to 900 acres in size.<sup>28</sup> These surface mining pits were used to build embankments and foundations for everything from small residential roads to the thoroughfares that connected with the I-5 interstate, filling in areas of King County that had previously been farmland or undeveloped lands. By the mid-1970s, this rapid infrastructural expansion had slowed. As a result, the county was left with over 100 vacant gravel and road waste sites by 1973.<sup>29</sup>

These two moments of gravel extraction in western Washington, first at the turn of the twentieth century and then in the years after World War II, mirror periods of urban growth nationally. As gravel was increasingly needed for road construction, the expanding network of extraction sites during the twentieth century can be understood as a method of urban production where eminent domain was used to expand settler claims through both resource extraction and road construction. By 1973, as urban development slowed, King County designated 104 of the gravel pits as surplus or fully extracted.<sup>30</sup> This designation required that the pits be ‘reclaimed,’ a process that usually involved filling the sites with clean soil to create topography that would function similarly to pre-pit conditions. Washington State Department of Natural Resources, the Federal Bureau of Mines, and King County set stringent regulations for the reclamation of gravel sites, a process that often meant reestablishing the contours of the land by filling the pits with clean soil to restore hydrological and vegetal systems. While King County was responsible for enforcing these

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<sup>27</sup> “Gravel pit property and sale records,” no author. King County Property Records, 1896-1973. Box 32, folder 4. King County Archives.

<sup>28</sup> (Morris and Commission 1979)

<sup>29</sup> “Record of Gravel Land Sales and Leases.” 1947-1972, box 32, folder 4. King County Archives.

<sup>30</sup> (Morris and Commission 1979)

reclamation laws, the publicly owned pits under King County's jurisdiction were exempt from their own clean-up laws. As such, many of the King County pits were left in various states of abandonment after gravel had been extracted, often eroding, sliding, and spurring new vegetation growth.<sup>31</sup>

In 1977, the King County Arts Commission began brainstorming for a project that would bring public attention to questions of environmental change and land use through art. After stumbling across a list of surplus gravel pits, Arts Commissioner Jerry Allen proposed the pits as the subject matter for a new arts initiative. The symposium was conceived as an urban project in which creative ways of studying the gravel pits could become responses to "pressures of urbanization"<sup>32</sup> The intention of the symposium was threefold: to establish public responsibility for lands in need of reclamation, create a national precedent for alternatives to traditional reclamation, and to realize public art in new and exciting forms.<sup>33</sup> The life of gravel therefore parallels urban growth, while concern for the after-life of gravel extraction mirrors the rise of the environmental movement of the 1970s, and the collapse and re-structuring of Northwest land-based resource economies in the 1980s.<sup>34</sup> The Vashon Island Pit and Union Bay Natural Area exhibit these changes as both transitioned from active mining and disposal sites in the 1970s to recreational and natural conservation areas in the 1990s and 2000s.

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<sup>31</sup> King County Code 21.42.120 governed quarry and mining operations, calling for "topography in the substantial conform of the land area immediately surrounding." In "Symposium Overview," by King County Arts Commission, 1979. Box 278, folder 1. King County Archives.

<sup>32</sup> "Symposium Overview," by King County Arts Commission, 1979. Box 278, folder 1. King County Archives: 2.

<sup>33</sup> "Letter to Bill Fitch, Director Bureau of Mines," by Craig Langager, November 15 1978. Box 278, folder 1. King County Archives.

<sup>34</sup> (Klinge 2007)

### ***Re-producing nature through site selection***

The *Earthworks* symposium was originally titled *Land and Elements*, suggesting a reciprocal and direct relationship between landscape and the materials that it is shaped by and shapes.<sup>35</sup> In changing the name to *Earthworks: Land Reclamation as Sculpture*, landscape and site are activated as spaces capable of producing new socio-ecological conditions. The symposium title suggests that not only is sculpture entangled with land reclamation but that land reclamation is produced through sculpture. In part, this entanglement depended on rendering certain sites simultaneously natural and unnatural, such that sculpture could become a form of reclaiming sites from both the dangers of untamed nature and from the destruction of extractive mining. In a letter from Yankee Johnson to County Councilmember Gary Grant in July 1979, for instance, Johnson noted that *Johnson Pit #30* would create a “passive park, amphitheater, or work of art that may be used for public benefit rather than restor[ing] to its original state.”<sup>36</sup> This framing of the project, that it can either be a passive public park or a ‘restored’ landscape, positions the possibility of a public, open space as oppositional to a landscape that has been restored to an ‘original’ condition. The impossibility of creating both a public space and a ‘restored’ landscape challenges the narrow ways reclamation is framed within the symposium.

Central to the symposium’s framing is the idea of reclamation. Queer disability scholar Eli Clare notes that reclamation and restoration ideology fills Western thought about nature and environment through the idea that everything that has been ‘damaged’ or ‘scarred’ by modern society can be ‘cured’ in order to be seen or perceived as ‘natural.’<sup>37</sup> [*Image 9 and 10*] While the symposium was interested in addressing environmental questions, particularly how mining impacted

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<sup>35</sup> “Symposium Overview,” by King County Arts Commission, 1979. Box 278, folder 1. King County Archives: 1.

<sup>36</sup> “Comparative Cost of Executing Robert Morris’ Design vs. reclaiming the Kent gravel pit by traditional methods,” by Yankee Johnson, July 9, 1979. Box 278 – 1, folder 2. King County Archives.

<sup>37</sup> (Clare 2014) 206.

the “energy crisis and endangered farmlands,” reclamation was also seen as a social project that would encourage “political acceptance of the [arts] among county departments and [the] county council.”<sup>38</sup> While traditional mine restoration sought an “original state” pre-mining condition, reclamation in the symposium’s framing was intended to have a public benefit while also addressing state and federal reclamation goals to heal the “scars” of “industrial abused land.”<sup>39</sup> Yet, building on Clare’s framing of cure, the symposium’s reclamation goals are a narrow and reductive framing that flattens the site by prioritizing a visual ‘cure’ to the scars of industrial land use.



Figure 2.

Johnson Pit #30 as clearing commences.

*[Image 9] Johnson Pit #30 during construction, ‘healing’ the ‘scars’ of the site through additional logging and land clearing (King County Archives).*

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<sup>38</sup> “Earthworks: Progress Report” by King County Arts Commission, February 20, 1980. Box 278, folder 1, King County Archives: 5.

<sup>39</sup> (Berger 2002) for more on links between mining reclamation and design. See “Symposium Overview,” by King County Arts Commission, 1979. Box 278, folder 1. King County Archives, for more on the ‘damage’ and ‘scars’ of extraction on landscape resources.



Figure 3.

Johnson Pit #30 cleared and grubbed.

[Image 10] Johnson Pit #30 during construction and after the overgrown site has been cleared (King County Archives).

The narrow framing of reclamation within the symposium documents further limits what counts as nature within the afterlives of the gravel pits. The goal of reclamation depends on constantly producing ‘good’ nature or environmental conditions that are not visually interpreted as environmentally damaging. Geographer Neil Smith describes the process by which nature is produced as occurring through the commodification of raw materials such as gravel, followed by the consumption of nature through goods, such as roads. Historically, Smith argues, nature was produced through raw materials, such timber, water, or minerals and given value through capitalist production. Beginning in the late 1970s and in response to environmental movements of the 1960s and 1970s, environmental regulations began to transform the ways nature was produced into what

Smith calls “good” and “bad” nature through extraction.<sup>40</sup> In reclaiming formerly excavated mining pits as sites for public art, the symposium sought to produce “good” nature in that it was apparently no longer damaged, or contributing to broader environmental damage.

The symposium outlined detailed criteria for site selection that centered around sites that were both publicly visible and ones that could be publicly “healed.”<sup>41</sup> By pushing sculpture off and beyond the pedestal, site selection for the symposium focused on sites that could be publicly seen as repaired or cured. This selection required reproducing sites as ‘natural’ even as the pits continued to be spaces of active mining, waste depositories, or poorly functioning ecosystems. The jury invited eight artists to submit proposals, with instructions that,

the focus of the symposium will be *Earthworks as a Land Reclamation* tool. It is important, therefore, that the proposed work has a substantial impact on the entire site. We would expect considerable topography change. However, the work must leave the site ecological sound, and must conform to all King County and Washington State regulations governing the grade, water drainage, soil composition, foliage, and health, safety and welfare standards. The work must be low-maintenance or no-maintenance.<sup>42</sup>

Johnson Pit illustrates the production of nature toward public good, suggesting an ideal site where there is a “small operation in or near urban areas ... where the quarries have not been restored to benefaction use after mining. The first Earthworks site is an example of a gravel quarry which has been left derelict.”<sup>43</sup>

While drawing attention toward the re-use of the site for so-called public good, it was often unclear who and what composed the intended public, and whether the symposium was meant to

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<sup>40</sup> (Smith 2007) 17.

<sup>41</sup> “Symposium Overview,” by King County Arts Commission, 1979. Box 278, folder 1. King County Archives: 5.

<sup>42</sup> “Jury instructions,” Earthworks, King County Arts Commission, February 1, 1979. Box 1742, folder 1. King County Archives.

<sup>43</sup> “Earthworks Project, King County, Washington,” Director, Bureau of Mines. December 28, 1978. Box 278 – 1, folder 2. King County Archives.

produce designs for public use or just to shift public perception. A December 1978 letter from the national director of the Bureau of Mines to the John Hough, Assistant to the Seattle Bureau Secretary, stressed the importance of the symposium as a forum for improving public perceptions of mining. While emphasizing that the Bureau does not have the authority to oversee the symposium project, it was critical that the *Earthworks* symposium be a “means to return a quarry to beneficial use as combination urban park and art form.”<sup>44</sup> Symposium coordinator Craig Langager agreed, noting that earthworks will “result in a visual resource affecting all stratas of society.”<sup>45</sup> Yet, throughout symposium literature little or no mention is made of environmental repairs, suggesting a disconnect in how ecological systems were understood in the context of social and public perceptions of nature.

Although the symposium sites were selected for their context relative to urban centers and visual promise, they were treated as largely individual spaces. In discussing the role of site in contemporary land art, art historian Miwon Kwon notes that the actual location of a site specific art work is subordinate to the site as a field of knowledge or intellectual and cultural exchange.<sup>46</sup> The design brief issued to jurors in 1978 specified that,

the choice of site is paramount. Not only do particular sites make special demands, but also, particular works have particular requirements, the right amount of space and light, the presence or lack of specific natural features, the right materials ... beyond these obvious material relationships, there is a subtle, conceptual link between the earthwork and its site.<sup>47</sup>

With this context in mind, Kwon notes a distinction between site and place, suggesting that site has the potential to transcend place and through landscape materials to become something greater.

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<sup>44</sup> “Earthworks Project, King County, Washington,” Director, Bureau of Mines. December 28, 1978. Box 278 – 1, folder 2. King County Archives.

<sup>45</sup> “Getting A Symposium “Off the Ground”; A Process In Itself” by Craig Langager in *The Arts*. July 1979. Box 278, folder 5, King County Archives.

<sup>46</sup> Kwon also draws a sharp distinction between site and place, noting that site has the potential to transcend place to be conceived as something more through the material of landscape. Kwon notes that the emergent and temporal qualities of site is made evident by shifting and fluid conditions. (Kwon 2002)

<sup>47</sup> “Symposium Overview,” by King County Arts Commission, 1979. Box 278, folder 1. King County Archives: 1.

Kwon writes, “landscape’s emergent and temporal natural is not evidenced by the medium itself but by the fluid and shifting occupations that it sponsors.”<sup>48</sup> Selecting Robert Morris’ proposal for *Johnson Pit #30* is an example of selecting a site based on context rather than place meaning. Johnson Pit was the only one of the eight symposium sites that was both visually recognizable as a former mine and that was being actively and visually being reclaimed by vegetation and environmental change. Iain Baxter and Richard Fleischner’s proposals were both adjacent to active mining operations in Carnation and Tolt River, Washington and were seen unrealistic because of their proximity to active sites and distance from urban centers. Similarly, proposals by Mary Miss and Beverly Pepper for gravel waste sites at the Seattle-Tacoma International Airport and the Union Bay Landfill, respectively, were publicly accessible but the edges of these sites lacked the clear edges of a mining pit.<sup>49</sup> [Image 11 and 12]

Morris notes in the keynote address to the symposium in August 1979 that art should not be used to “wipe away technological guilt,” adding that art is often seen as “acceptable as long as it is cheaper than nature.”<sup>50</sup> Letters between the Federal Bureau of Mines and the King County Arts Commission suggest this is true. For the Bureau of Mines, the symposium represented a financially viable alternative to traditional reclamation that they also hoped would improve the public image of surface mining. In a 1979 letter, the Bureau of Mines stressed their continued support for the project, noting a traditional fill reclamation of Johnson Pit #30 would cost just over \$140,000 whereas the sculpture project, including artist fees, would cost under \$130,000.<sup>51</sup> Additionally, because the project was on public land, environmental remediation was not required, shortening the project length and cost while reaching the public sooner. The itemized construction costs for the

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<sup>48</sup> (Kwon 2002)

<sup>49</sup> (Morris and Commission 1979)

<sup>50</sup> (Morris and Commission 1979)

<sup>51</sup> Letter to Bill Fitch, Director Bureau of Mines,” by Craig Langager, November 15 1978. Box 278, folder 1. King County Archives.

Morris sculpture shows that \$82,000, the majority of the \$135,000 final budget, was spent “moving dirt and planting grass.”<sup>52</sup> As the cost between the two methods of reclamation is minor, less than \$5,000 drawn from a variety of funding sources, it is difficult to understand financial benefits as a major driver of the symposium’s support. Yet, the Arts Council continued to frame the project through a financial lens, as did the Bureau of Mines, who contributed \$35,000 toward the project, for what they hoped would change public opinion in favor of surface mining.<sup>53</sup>

By focusing on design responses that were decentralized and deregulated, the symposium created the conditions for neo-liberal site responses that are largely economically driven and motivated by private institutional forces. Geographer Nik Heynen describes neoliberalism becoming wide-spread in the late 1970s through the rejection of government interventions in economic regulations and collective controls in favor of individual decision making toward utopian promises.<sup>54</sup> This financial framing reveals how nature is produced and reproduced through the selection of sites. For the neighbors around *Johnson Pit #30*, the existing gravel pit had socioecological value, but for the organizers of the symposium it was an “abandoned ... scar on the landscape.”<sup>55</sup> Financial incentivization through the production of ‘good’ nature then became a key way that gravel sites gained value, even as their reclamation side-stepped state remediation laws.

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<sup>52</sup> “Earthworks Symposium Financial Statement,” no author. 1979. Box 278, folder 2. King County Archives.

<sup>53</sup> “Earth Sculpture Draws Blasts from Officials,” by Louis Corsaletti in *the Seattle-Post Intelligencer*, December 26 1979. Box 1747, folder 1. King County Archives.

<sup>54</sup> (Heynen 2007) 3. Heynen describes neoliberalism: “In the most general sense, the term refers to an economic and political philosophy that questions, and in some versions entirely rejects, government interventions in the market and people’s relationships to the economy, and eschews social and collective controls over the behavior and practices of firms, the movement of capital, and the regulation of socio-economic relationships.”

<sup>55</sup> (Morris and Commission 1979) 16.



[Image 11] Mary Miss, Sea-Tac Site, 1979 (King County Archives).



[Image 12] Beverly Pepper *Earthworks* site at Union Bay Nature Area, 1978 (King County Archives).

### *Infrastructure as contact zone*

As a new idea of nature was being produced through the financialization of the former gravel pits as neo-liberal sites, the former gravel pits were also activated as infrastructural spaces, creating a contact zone that blurs human and other-than-human life. Geographers Stephanie Wakefield and Bruce Braun note that often desirable environmental qualities are extracted to work for human agents to create more livable environments. At the same time, infrastructure suggests a set of tools or apparatuses that inscribe human values about nature onto the landscape.<sup>56</sup> Infrastructure serves as a key connector in the production and commodification of nature, creating a contact zone between urban space and extractable, raw nature, which Smith describes as biophysical environment that has not yet been folded into capitalist production.<sup>57</sup> Mary Louise Pratt uses the term “contact zone” to describe spaces where power unfolds unevenly, often as struggles between asymmetrical power relations.<sup>58</sup> Pratt’s use of the contact zone has been extended to frame often uneven power dynamics between humans and other-than-human relations.<sup>59</sup> In this example, the idea of a contact zone is useful for understanding how infrastructure often negotiates power hierarchies, either reinforcing or blurring normative binaries. In this sense, the former gravel pits can be understood as spaces of infrastructural negotiation where uneven power dynamics that produce binaries of nature and urbanity, natural and unnatural, healed and damaged are entangled and dissolved.

This dissolving of hierarchical binaries is seen at the Vashon Island Gravel pit, for instance.

The pit was bought by King County in 1961 to supply gravel for a Seattle-Tacoma International

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<sup>56</sup> For more on the various uses of infrastructure and how it relates to nature and landscape see (Carse 2014, Pritchard 2011, Braun and Wakefield 2019, Graham 2001, Salomon 2016)

<sup>57</sup> (Smith 2010, 2007)

<sup>58</sup> (Pratt 1991) Pratt uses the term ‘contact zone’ to explain spaces where power meets and is reconfigured. The use of contact zone is not about re-making binaries but rather examining how uneven expressions of power (often in the form of binaries) come together. By examining how power is expressed in these spaces it offers an opportunity to rethink and reassemble binaries that enforce uneven power hierarchies.

<sup>59</sup> See (Isaacs and Otruba 2019) for special issue on Pratt and more than human contact zones.

Airport runway expansion in 1961-1962. Although located across the Puget Sound from the airport, it was considered more efficient and cost-effective to ferry the gravel between construction sites.<sup>60</sup> Unknown at the time, the top several feet of material at the Vashon Island Pit was contaminated with arsenic and lead spread from the Asarco Tacoma Smelter in Tacoma, Washington, located six miles by water to the south of the pit. Washington Department of Ecology mapping of the copper smelter's arsenic spread show the Vashon Island Pit soil at over 100 parts per million, making it one of the most polluted areas in King County.<sup>61</sup> While the pit was active, contaminated gravel was unknowingly spreading arsenic across the Puget Sound. More recently visiting the site, I see a Blue Heron on the shoreline, suggesting that this 'toxic' landscape houses vibrant ecosystems. Today, the Vashon Island Pit is a popular, informal park while *Johnson Pit #30* is largely empty.

Infrastructural hierarchies maintain power dynamics at the pits selected for the *Earthworks* symposium. The maintenance of *Johnson Pit #30* as a passive landscape without erosion, for instance, works to maintain urbanism as dominant to nature by inscribing a clear visual and physical boundary between the pit and its suburban context. In this in-between space, vegetation and soil collide with time and weather as infrastructure reveals the material relations between.<sup>62</sup> As earth fell and began to fill the site, young firs and alders took root in the abandoned gravel pit and it began to be seen as a 'natural' space by the neighbors.<sup>63</sup> Morris' design, in clearing and remaking the site, failed to gain public approval or 'reclaim' public perceptions of mining. Prior to Morris' design, neighbors reported bird sounds and other wildlife sightings, commenting that the pit was a source of natural beauty for the community. "There is precious little natural beauty left in our county, and what's left

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<sup>60</sup> "Record of Gravel Land Sales and Leases." 1947-1972, box 32, folder 4. King County Archives.

<sup>61</sup> (Washington State Department of Ecology 2019)

<sup>62</sup> For materiality from environmental history see (Stroud 2003); for tracing landscape materials see (Hutton 2013); for more on infrastructure from the perspective of anthropology, see: (Ingold 2013, Carse 2014)

<sup>63</sup> "No piece of public art in the Northwest has been complained about by so many and seen by so few as ... THE EARTHWORK," by Deloris Tarzan in *The Seattle Times*, September 23 1980. Box 1747, folder 2. King County Archives.

is becoming endangered,” as neighbor William Whisler is quoted in the *Seattle Times*, a feeling expressed as well by the Gray’s and other neighbors.<sup>64</sup> Likewise, the design did not restore ecological functions across the site. Instead, through its stabilization the site became a passive landscape that required clearing and logging a hillside, a move Councilmember Phil Barden called a “con job.” Barden noted, “my feeling is that nature already had rehabilitated the pit ... some guy came along, took out a forest, dug a big hole and sent the county a bill.”<sup>65</sup> In this sense, Morris creates a picturesque landscape that requires a particular ‘view’ of passive ‘nature’ to be maintained and reinforced. In 1973, land artist Robert Smithson dismissed the picturesque with the assertion that “the absolute garden will never be regained,” suggesting that attempts to recreate passive landscapes within working sites created false understandings of nature and culture.<sup>66</sup> [Image 13]

As Johnson Pit was transformed from a naturally appearing space—in that it supported bio-physical life—into a carefully maintained mono-culture of grass it began to require infrastructural maintenance. Anthropologist Ashely Carse explains that nature can become infrastructure through focused investment and management as human politics and values are inscribed on the landscape.<sup>67</sup> Similarly, Carse argues, infrastructure can become nature through the absence of such work. Where soil erodes and rubble shifts, infrastructure becomes a means of navigating the instability caused by bio-physical forces. In the winter of 1979 when the newly constructed Johnson Pit began to shift and erode, drawing widespread complaints from neighbors, the hillside was quickly reestablished

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<sup>64</sup> “No piece of public art in the Northwest has been complained about by so many and seen by so few as ... THE EARTHWORK,” by Deloris Tarzan in *The Seattle Times*, September 23 1980. Box 1747, folder 2. King County Archives.

<sup>65</sup> “Earth Sculpture Draws Blasts from Officials,” by Louis Corsaletti in *the Seattle-Post Intelligencer*, December 26 1979. Box 1747, folder 1. King County Archives.

<sup>66</sup> Smithson as quoted in (Beardsley 1998) 87.

<sup>67</sup> (Carse 2014)

through the installation of a new drainage system.<sup>68</sup> This began a process of interventions that continues in an effort to maintain the site as a static form, seemingly void of weather or time.

Despite the King County Arts Commission framing that the site was an industrial “scar,” the gravel site was largely seen as a natural space within the community. To “spend \$150,000 of taxpayers money to decimate a hillside is virtually unbelievable,” neighbor William Whisler complained.<sup>69</sup> But, perhaps for the neighbors of Johnson Pit, industrial scars and natural beauty were not incompatible. Yet, as the pit began to blur lines between nature and industry, Morris’ design reasserts this binary by re-sculpting the hillside and beginning a process of establishing spatial



[Image 13] Making a ‘big hole,’ Johnson Pit #30 construction, 1979 (King County Archives).

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<sup>68</sup> For additional complaints against the project see King County Archives Series 278, box 5 for public complaints and King County Archives Series 1747, Boxes 1 and 2 for negative magazine and newspaper reviews of the project.

<sup>69</sup> “Earthwork Sculpture a Partial Washout,” Lettie Gavin. December 20, 1979. *The Seattle-Post Intelligencer*. Box 1747, folder 1, King County Archives.

control through site stabilization. In this process of stabilization, the gravel pit becomes re-naturalized, or made to appear natural, through a passive design made possible only through the clearing and re-contouring of a site that was already viewed as natural by the public.

The efforts to keep this soil instability in place creates an infrastructural site per Carse's definition as the existing 'natural' site is transformed into a maintained and stable site. As the Art Commission sought to reinforce the site with a new drainage system, Morris continued to frame the site as static object on which art was expressed,

Western art is an art of objects requiring different spatial settings as well as perceptions ... all twentieth century art seems compelled by a type of Cartesian projection which will view every visual experience by a vertical plane interposed between the viewer and the world. We expect to encounter objects which will block our vision at a relatively close range. Seeing is directed straight out, 90 degrees to the wall or at an object never far from a wall.<sup>70</sup>

For Morris, Johnson Pit was no longer part of larger network of extractive development, it was an art piece meant to be viewed within traditional artist modes. Perhaps because Morris did not see *Johnson Pit #30* as a reflection of broader socioecological material movements, the site needed to be actively maintained in order to gain a more clear definition of space.

Scars often tell stories. At the Vashon and Union Bay pits materials have shifted and settled, revealing their histories through the movement of materials. In expressing concern about *Johnson Pit #30*'s stability, the project becomes divorced from the site and its materiality. Seattle landscape architect Richard Haag and *Landscape Architecture Magazine* editor Grady Clay both noted in August 1979 that the earthwork was largely performative, calling it a "manufactured situation." Clay went on to note, "we are a cover-up society."<sup>71</sup> Clay's comment connects the same parallels Clare draws between disability, ecological restoration, and ideologies of cure. Through the stability of site, *Johnson Pit #30* no longer told a story through its scars. The ongoing effort to stop the movement of soil

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<sup>70</sup> Notes by Robert Morris, no date, Series 1747.1, Box 2, Folder 8. King County Archives.

<sup>71</sup> Haag and Clay quoted in "Who shall define earthworks?" by Mayumi Tsutakawa in *The Seattle Times*, August 20 1979. Box 1747, folder 1, King County Archives.

and debris became about maintaining the sculpture, always working toward an unattainable idea of a ‘cured’ landscape.

### *The site-less site*

In August of 1979, shortly after the symposium and during construction of Johnson Pit, King County Arts Commissioner Parks Anderson resigned from the arts commission. Anderson cited the “anti-intellectual” focus of the symposium as the primary reason for leaving the commission in his resignation letter.<sup>72</sup> While Anderson does not speak specifically to the reclamation goals of the symposium, the resignation letter suggests an anti-environmental focus as well, noting that the commission’s focus had been on “quality” art over local and regional social and environmental history. Anderson notes that the Arts Commission is meant to be facilitator of arts projects not “judges of arts quality.”<sup>73</sup> The letter continues as Anderson expresses disappointment and frustration with what he sees as the systematic support of traditional ‘quality’ art versus support for projects that would have a greater impact on the local public.

In the resignation letter, Anderson raises an important consideration about site and landscape in relation to the symposium. In drawing attention to the King County Arts Commission’s focus on “quality” art while having little regard for context, region, or history, Anderson illustrates how the symposium, and Morris’s proposal in particular, reinforced normative values about art by treating the sculpture’s site as essentially site-less. Science scholar Karan Barad suggests that, “material conditions matter, not because they ‘support’ particular discourses that are the actual generative factors in the formation of [space], but rather because matter comes to matter through

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<sup>72</sup> “Letter of Resignation,” by Parks Anderson, August 16 1979. Box 1742, folder 1, King County Archives: 1.

<sup>73</sup> “Letter of Resignation,” by Parks Anderson, August 16 1979. Box 1742, folder 1, King County Archives: 2.

the iterative intra-activity of the world in its becoming.”<sup>74</sup> Yet, in the *Earthworks* symposium we don’t see what Barad describes, how the site’s materials contribute to shaping the ways post-industrial sites can be remade. Instead, materiality is engaged only to the extent that it maintains stability rather than connections to broader economic and ecological systems, as expressed in the instability of earth, gravel, and time.

Today, *Johnson Pit #30* has a small stand of wildflowers and water at the deepest part of the site. *[Image 14]* The Grays, who complained of runoff and erosion from the sculpture in 1979, no longer live adjacent to the site. The site of their home which sat close to the lower, eastern edge of the gravel pit is now an apartment complex. Today, there is little evidence of visitors. Yet, the site is clearly and regularly maintained, as the grass is usually freshly mowed and trash cleared. The ongoing efforts to maintain the Johnson Pit #30 as a sculpture has rendered the site largely formless, the focus is always on the edges, which is now reinforced with steel fencing. The shifting of materials, the movement of the ground, and growth of plants are all ways that biophysical materials resist boundaries set to define what is seen as nature and what is not. If materials give meaning to a site because of the stories they tell within a larger context, as Barad suggests, then *Johnson Pit #30* seeks to do the opposite, becoming almost site-less as it works in isolation, largely void of humans and other life.

The isolation of the *Earthwork* sites from each other and from the public is seen in the other invited design responses. A *Seattle Times* article for August 1979 focused on the divergent nature of each symposium response,

Iain Baxter said his piece addresses the “gravel pits of human bodies,” those who seek to improve their physical well-being. Mary Miss proposed work by the airport is mainly for the immediate community, she explained. The large Fleischner work, said Craig Lanager, *Earthworks* coordinator, will be quite public in its audience because it is next to I-90 in

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<sup>74</sup> (Barad 2007) 140.

Issaquah. Larry Hanson, another artist, stated that his is part of the public and a distinction should not be drawn between “we and they.”<sup>75</sup>

As each artist pursued their individual interests, Mary Miss—working at Sea-Tac—was the only artist of the eight who consulted with the community and local designers about the site.<sup>76</sup>

*Seattle Times* art critic Dolores Tarzan wrote in 1978 that “rather than public money being used to dot existing parks with sculpture, [the symposium] money will create parks which in themselves are works of art. That makes art more than decoration, more than object. It becomes an experience.”<sup>77</sup> Today, *Johnson Pit #30* remains a curiosity, perhaps not the anticipated experience, its



[Image 14] Johnson Pit #30 (2019, photo by author)

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<sup>75</sup> “Who shall define earthworks?” by Mayumi Tsutakawa in *The Seattle Times*, August 20 1979. Box 1747, folder 1, King County Archives.

<sup>76</sup> “Earthworks as Public Art,” by Sarah Clark-Langager, October 1979. Box 278. 2, folder 8. King County Archives.

<sup>77</sup> “No piece of public art in the Northwest has been complained about by so many and seen by so few as ... THE EARTHWORK,” by Deloris Tarzan in *The Seattle Times*, September 23 1980. Box 1747, folder 2. King County Archives.

terraced and mowed landforms neither natural or unnatural. The sculptured landform exists between worlds even as it insists on maintaining boundaries between the natural and unnatural. In trying to fulfill ideas of both natural and unnatural landscape, it becomes neither as the mowed grass terraces seek to cure the site of a never curable history of environmental extraction. The notion of cure, as Clare has introduced, travels through the Vashon Island and Union Bay sites, as well.

The Union Bay Natural Area is actively maintained as a critical stop for migrating and resident birds, requiring active, year round maintenance. This site is not cured of its history as a landfill but it has perhaps found a more comfortable middle ground between histories of environmental damage and cure. Still, to visit the Union Bay Natural Area in March is to see rows of newly grown seedlings ready to go in the ground that maintain a particular image of the site as natural, as much as they are also a continued exploration of what is required to adapt to the effects of past actions. The Himalayan blackberry that covers much of the Vashon Island Gravel pit, for



[Image 15] New vegetation laid out for planting at Union Bay Natural Area, 2017. Photo by author, 8.5" x 11"

instance, is regularly eradicated with chemical pesticides at the Union Bay Natural Area. On Maury Island, arsenic is still attached to much of the gravel, soil, and debris.<sup>78</sup> [Image 15]

In this chapter, I examine how site is erased and buried, sometimes quite literally. Tracing gravel sites associated with the *Earthworks* symposium shows how landscape and site—and particularly infrastructure as their systemic underlay and overlay—are interrelated ‘expanded fields.’ [Image 15] The performative site specificity of *Johnson Pit #30* shows how an ideology of cure sought to claim post-industrial sites as ‘environmentally whole’ while fracturing them from broader socioecological networks. By tracing *Johnson Pit #30*, the Vashon Island Pit, and Union Bay Natural Area, I show how symposium created the conditions for the broader socioecological landscape to be fragmented into individual sites, leading to the suppression of ecological systems. Finally, through varying degrees of management and adaptation, the pits were transformed into infrastructural contact zones that continue to maintain artificial boundaries between ‘natural’ and ‘unnatural’ by reproducing normative ideas of ‘cured’ and ‘healed’ nature.

The desire to make ‘whole’ the *Earthworks* sites also suggests a fractured relationship with care, where responsibility for caring for the environment is individualized. This move toward individual performativity is reflective of the ways environmental management, architecture, and design have been expected to individually fulfil basic responsibilities for caring, often without social and environmental context or history. Care practices, as feminist scholar Joan Tronto suggests, are always developed through relationships. The *Earthworks* symposium reveals how care taking relations are fractured when environmentalism becomes about things rather than relationships. The focus within the symposium on ‘curing’ the ‘scars’ of the landscape also present an impediment to care as

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<sup>78</sup> King County Parks began a cleanup of contaminated soil per the Washington Department of Ecology mandate in September 2019. As of early-May 2020, the first phase of the project is complete and all the trails are capped with gravel and soil in the northeast part of the park and with gravel in the west part of the park. (King County Parks Department, 2020).

care practices are always a practice and an activity. Care is never finished, likewise a damaged landscape is never ‘cured,’ but neither is cure the goal. In response to the ways the *Earthworks* symposium creates artificial boundaries between perceptions of natural and unnatural sites, critical self-reflectivity that refuses categorizing nature as ‘good’ or ‘bad’ could offer an alternative to simplified environmental end-goals focused on designing and constructing ‘cured’ landscapes. I develop the idea of critical self-reflectivity as it relates to becoming-with and care practices in the final chapter.

The *Earthworks* symposium is indicative of a larger shift toward neo-liberal site treatments that would continue to occur in the design of public and urban landscapes through the 1980s and 1990s and leading toward more private and decentralized site responses. The three gravel pits explored in this chapter show how site is rarely one thing, revealing multiple conceptions of ‘nature’ within the boundaries of one site. In the case of Union Bay Natural Area, ongoing restoration efforts have allowed the site to ecologically adapt to changing conditions but social and political history of the site is often not made visible. At Vashon Island Pit, the site is well used by the public and ecologically vibrant but it remains contaminated with arsenic. Finally, at *Johnson Pit #30*, Robert Morris emphasized the image of stable reclaimed ‘nature,’ a position that pushed aside socioecological project goals. In looking at the individual sites rather than an entire network, the symposium also moves toward design as a mode of problem solving focused on technoscientific futurity, a topic I explore further in the next chapter.

## Chapter Five: Site as Process

### Unsettling indeterminacy in novel landscapes

#### *Introduction*

In 1999, the Parc Downsview Park<sup>1</sup> Competition called for design proposals that would transform a 320-acre former airbase on the periphery of Toronto, Ontario into an urban public park. Post-industrial and reused landscapes had long been within the scope of landscape practice, from the quarry remediation of Parc des Buttes-Chaumont in Paris in the 1860s to Gas Works Park in Seattle in the 1970s.<sup>2</sup> The Downsview competition, however, marked an important discursive shift in the ways site context, ecological process, and capital growth were treated in the design of urban landscapes. The competition brief for Parc Downsview specified that the winning project should be adapted and implemented over a 15 year period, suggesting that landscape—and site—were to be constructed through temporal processes. Second, the park competition asked that the winning proposal take into consideration how the park design might encourage future economic growth through urban development. In other words, the design brief asked for proposals where site processes would engender economic flexibility through ecological growth. Of the five shortlisted design schemes, this flexibility was deemed by the competition jury as most clearly expressed through temporal ecological processes.<sup>3</sup>

This final case study, site as process, examines the discursive ways that ecological process have been scaled to material sites within contemporary landscape practice. Beginning with the Parc Downsview competition in 1999, the chapter traces how ecological discourses in landscape practice

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<sup>1</sup> The name Parc Downsview Park is a nod to both English and French as the official languages of Canada (Czerniak 2001).

<sup>2</sup> (Meyer 1991b, Way 2013)

<sup>3</sup> (Czerniak 2001)

have shifted relationships with site since the early 2000s, often becoming surrogates for economic and political growth. The Downsview project was conceived of as an urban park in the competition brief, calling for a park that was as much as social as it was as natural.<sup>4</sup> In response, the competition and proposed design scenarios sought to counter the reduction and silo-ing of boundaries between the social and natural, and established a new discursive norm that might simplify the entangled co-creation of urban nature. Following the Downsview competition, the language of ecology has been increasingly used to justify indeterminate relationships with site, foregrounding performance, efficiency, and quantifiable metrics as rationale for organizing urban landscapes. In particular, the language of ecology as “model or metaphor” but “rarely as a descriptor of the natural world” became an important tool for describing urban growth after the competition, as landscape urbanist Charles Waldheim has noted.<sup>5</sup>

Through visual representation and ecological discourses, the Downsview competition normalized the metaphorical use, if not applied use, of ecological theory to advocate for site as a stable form, becoming a background to landscape that was represented as formless, autonomous, and indeterminate in contemporary urban spaces.<sup>6</sup> Similar to chapters three and four, this chapter contributes to answering how site has been conceptualized historically to either allow for or erase

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<sup>4</sup> (Mertins 2001) 30.

<sup>5</sup> (Waldheim 2016) 41.

<sup>6</sup> Writing in 2001, landscape architect Alan Berger wrote that Downsview would be fabricated “on and around” the site by “absorbing the reality of commercialism, capitalism, and market forces .. it forges a new model of landscape improvement.” In this strategy, site moves to the background as landscape is activated by a combination of ecological and market forces. (Berger 2001) More recently, landscape architect Brad Cantrell has advocated responsive technologies in landscape design where the end goal is landscape processes that self-regulate without human influence. (Cantrell and Holzman 2016) Similarly, Charles Waldheim has called for landscape autonomy to drive urban form as part of landscape urbanism. (Waldheim 2016) In 2013, landscape architect and theorist Ian Thompson followed up these claims toward site indeterminacy, citing Downsview as the project that turned away from site toward indeterminate landscape processes. (Thompson 2013) I am not advocating against similar ideas that look toward landscape strategy rather than form, but rather than site needs to be considered as part of landscape strategies. I am critical of practices that have looked too much toward ecology to ‘do the work’ without critically assessing how human-driven design can and will continue to shape so-called ‘autonomous’ projects.

the multiple realities of site. In this example, I examine more recent landscape practice through ecological process in the form of neo-liberal urban development and technoscientific futurity.

The language we use creates the futures we want to see. Commonly used words for describing contemporary landscape interventions, such as process, potential, autonomy, indeterminacy, unpredictability, and novelty were important in shaping the Downsview brief along lines of scientific and neoliberal expertise. Anthropologist E. Summerson Carr suggests that expertise is often enacted and practiced through new language to claim authority. Carr notes that the adoption of new language also distances this new expertise from social and political contexts to create knowledge “seen by its speakers as complete or whole unto itself—as representing a body of truths that exist independently of any other truth or knowledge.”<sup>7</sup> Increases in ecological language within landscape practice have arguably brought more and needed attention to urban environmental decline and recovery. Yet, the lack of specificity with which landscape practice use ecological language reflects the distancing Carr mentions. This distancing from other forms of knowledge, at the same time that designers advocate for stricter performance based metrics, threatens to not only undo work of environmental repair but also remake false boundaries between human and more-than-human life.

In the first half of this chapter, I consider how the Downsview competition promoted the language of ecology to advocate for process based design that is both dynamic and indeterminate, often replacing form-based site design in favor of process-driven strategies.<sup>8</sup> I argue the Downsview competition created the conditions for urban sites to be seen as stable voids while landscape without the confines of site became dynamic and self-organizing. I argue that in empathizing dynamic ecological processes that were abstracted from grounded site conditions, capital growth was folded

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<sup>7</sup> (Carr 2010) 26.

<sup>8</sup> (Thompson 2013)

into naturalized landscapes processes. This treatment of landscape without site, or site as a stable void, is problematic as it allows designers to claim neutrality as social and political practices are covered over by metaphors of ecological ‘autonomy.’ The second half of the chapter examines how the language of ecology has effected design practice through the example of novel ecosystems. I connect the categorization in landscape practice with my own site experiences navigating visual discourses and histories of novel landscapes along the Duwamish River in Washington State. The chapter considers how the same framings of indeterminacy that allow for designers to conceptualize site as flexible and dynamic also allows for the essentialization of site as generalizable. This misstep—often overlooking the actual site in favor of networks and systems that operate through a site—produces both possibilities and limits for process-based design.

### **1. *Parc Downsview Park***

Parc Downsview Park is a 230-acre former military airfield located just north-west of downtown Toronto, Ontario. In 1999 an international design competition was launched to transform the site into Canada’s first urban national park. The design competition brief placed emphasis on “natural processes to transform degraded site conditions” through opportunities that created “new as well as old ecologies.”<sup>9</sup> The competition brief placed further emphasis on the site’s potential by linking ecological growth with urban growth, stating that,

nature and humanity within it are to be treated as dynamic phenomena, constantly changing and interacting, no longer able to be described as a balanced state but ever new, and ever surprising. The design of the Park is to provide both an inauguration and a framework for change over time. It should anticipate an adaptive management approach in which the

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<sup>9</sup> (Mertins 2001, North 2012)

effects of interventions are monitored, adjustments are made, and new directions and configurations emerge.<sup>10</sup>

Through the language of change over time, environment and economy are linked in the design brief by “plac[ing] faith” in landscape to be an economic generator rather than municipal expense.<sup>11</sup> In both the winning entry, *Tree City [Image 1]* by the architecture office OMA and graphic designer Bruce Mau, and the second place entry, *Emergent Ecologies [Image 2]* by the landscape architecture firm James Corner Field Operations and architect Stan Allan, economic growth is naturalized, with trees, animals, and hydrology becoming the materials of economic growth. *Tree City* naturalizes growth by foregrounding environmental succession as analogous to economic development. OMA describes creating a successional forest where the density of new trees are analogous to urban form,

trees rather than buildings will serve as the catalyst of urbanization. Vegetal clusters rather than new building complexes will provide the site’s identity ... *Tree City* attempts to do more by building less, producing density with natural permeability, property development with perennial enrichment.<sup>12</sup>

At first, *Tree City* suggests breaking down distinctions between nature and the city. But, as the city becomes a forest and vice versa, the Downsview site and its history as a military airfield and a watershed divider recede to the background, or at best remain stable with the site’s surface becoming a space of economic development through environmental regrowth.

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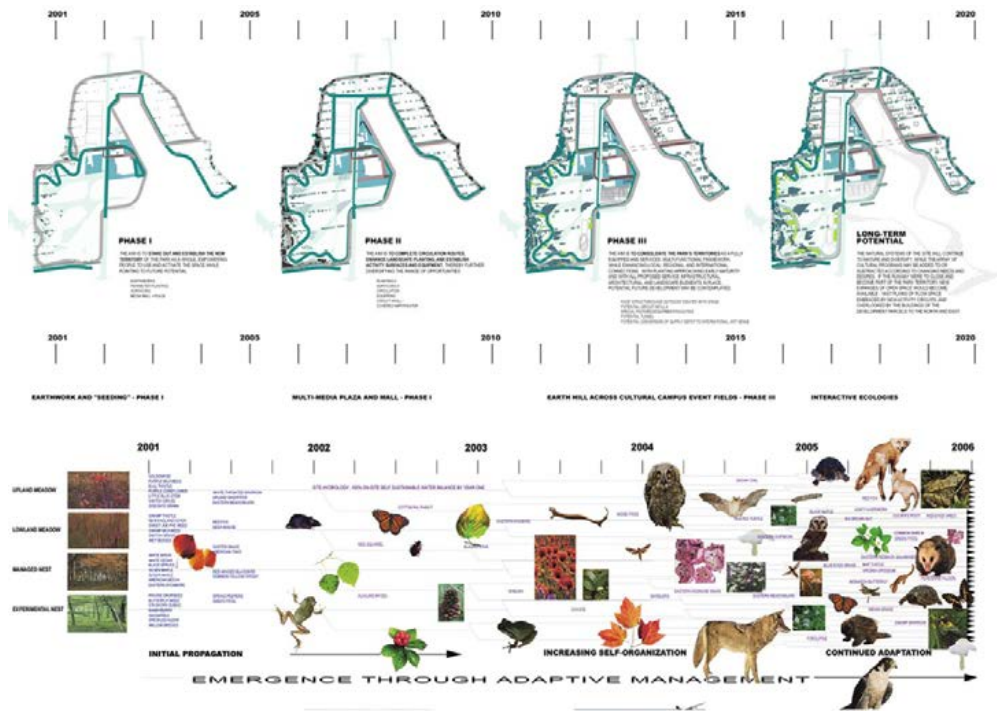
<sup>10</sup> (Mertins 2001) 30-31. The brief continues, “Today, scientific models, in particular, no longer promote static approaches to nature, and it is incumbent on competitors to rethink how a new public park could be commensurate with the evolving, patchy, even playful, complexity of today’s ecological thinking; and how this might underpin the creation of a public park whose mandate is pleasure, sociability, and openness, as well as enlightenment and responsible stewardship. The design of the Park should promote ways to cope with, and indulge in, the complex requirements of an evolving natural system, its cohabiting complex urban system, and the mutually emergent result. It should use the range of natural processes that are possible on the site to make functional improvements to water quality and habitat that would be, at the same time, sources of new pleasures, revelations, and habits for the diversity of people who will visit and use it.”

<sup>11</sup> (Berger 2001)132.

<sup>12</sup> (Czerniak 2001)78.



[Image 1] *Tree City* by OMA and Bruce Mau (1999) uses a pattern of various sizes of circles to represent ‘tree cities’ that will grow and expand over time, bringing new ecological function to the site. The planting of trees will engender new landscape and urban growth.



[Image 2] *Emergent Ecologies* by the New York based office, Field Operations, proposed a less formal approach to ecological emergence than the *Tree City* proposal. In *Emergent Ecologies*, new ecologies are seeded and expected to form through successional emergence. (1999)

Since the late 1990s, landscape practice has increasingly advocated for the “predominance of process over form,” suggesting that a site’s potential is in its future self.<sup>13</sup> The Downsview competition helped to legitimize this focus in two primary ways. First, it promotes a focus on the futurity of the site through formless representation, a strategy that distances designers in ways that often promotes blindness toward the political nature of their work. This strategy continues beyond Downsview. Landscape urbanist Charles Waldheim advocates for this distancing, noting that this focus “explicitly deploys and develops ecological claims for their distanced authorship ... these projects tend to make broader claims for the relative autonomy of ecological systems and their ability to shape future urbanization.”<sup>14</sup> Again, distancing authorship, whether through language, formless representation, or virtual communications has been cited as one mechanism for establishing and claiming disciplinary expertise.<sup>15</sup> Second, through the language and metaphorical application of ecological methods, designers have increasingly treated design as a practice of problem solving through a focus on metrics and productivity as a measure of design success.<sup>16</sup>

The focus on process over form is seen in the visual representation of the Downsview proposals in both *Tree City* and *Emergent Ecologies*, that furthers the disconnect between site process and site [in]stability. Although the language of ecology suggests that Downsview is a living, sentient site, the site representation never materializes as lived space. In both the *Tree City* and *Emergent Ecologies* proposals, Downsview remains a diagram. In “not plan[ning] a park,” as designer Bruce Mau states, *Tree City* catalyzes capital development through a flattening of landscape into a universal and generic surface that depends on abstracting site into a “terrainless diagram that plays little heed

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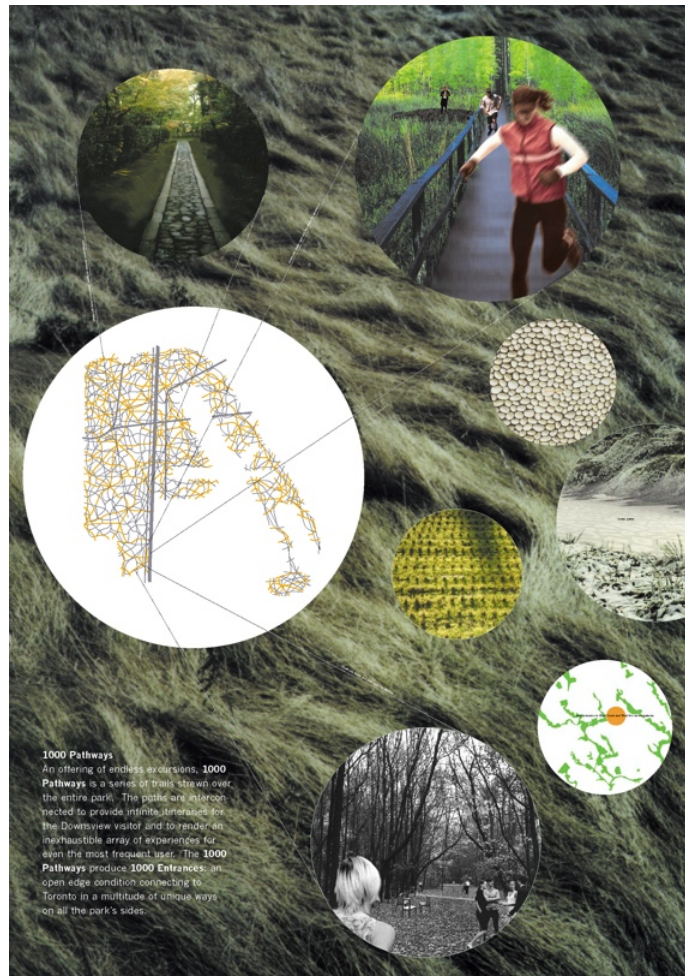
<sup>13</sup> (Giudici 2018) 66.

<sup>14</sup> (Waldheim 2016) 41.

<sup>15</sup> (Carr 2010)

<sup>16</sup> (Salomon 2016)

to site topography.”<sup>17</sup> If space does not exist “in itself” but is always and continuously produced through a combination of perceived, conceived, and lived relations, as Lefebvre proposes, then the Downsview projects fail to account for the non-linearity of time in producing space. [Image 3] By focusing on the futurity of space, through design, through process, and through redevelopment, *Tree City* treats site as pre-determined, a stable and preexisting space where nature and economy grow and are consumed.<sup>18</sup>



[Image 3] In the *Tree City* proposal, social programming is expected to form new public spaces. The design proposal focuses on informally programmed areas to promote movement and social formation. (OMA 1999)

<sup>17</sup> (Berger 2001)131. “The importance of nonuniversality as it refers to local ecology. Essentially, *Tree City* is read as a terrain-less diagram that plays little heed to site topography, even though a vitally important watershed bisects the site.”

<sup>18</sup> (Schmid 2008)

The shift in language toward site as a pre-given condition is certainly true of the Downsview competition documents that repeatedly refer to the former airfield as a “degraded” “open space.”<sup>19</sup> There are few references in either the competition brief or design schemes to the site’s history as a military base, Indigenous history, or that an important watershed boundary runs through the site. While *Tree City* does propose a strategy of soil remediation as the first phase of project development, it does so to effectively remove traces of the military history to create a blank ‘open space’ for Tree City to take root. The *Tree City* project statement describes the site as a space “ripe with possibilities,” which geographer Don Mitchell has noted then sanctions capital development as a benign, natural process.<sup>20</sup>

Rather than trying to design an ecological system that is specific to the site, the designers of *Tree City* state that “development [is] more significant,” an attitude that renders the physical design “redundant by subsequent social, economic, and cultural developments” as Waldheim as claimed about the competition.<sup>21</sup> The tightly controlled plantings, tree growth, and other new, but unspecified, emerging ecologies that will form as part of *Tree City* suggested a designed site regulated by the consumption of nature and economy, as the proposal linked the growth of trees with the growth of buildings. As Mitchell has explored, this framing drew direct links between the production of nature and the production of urban form to promote new peri-urban economic development.<sup>22</sup> Within this framework, site processes create a space of consumption for an already conceived of public rather than a space of ongoing production where who and what that constitutes the public can change and morph. In all the shortlisted schemes, landscape—conceived as a mix of linear time

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<sup>19</sup> (Mertins 2001) 30-33.

<sup>20</sup> (Mitchell and Deusen 2001, Polo October 2000) 16.

<sup>21</sup> (Waldheim 2001)

<sup>22</sup> (Mitchell and Deusen 2001)

and the growth of new natures—is allowed to be ‘wild,’ spontaneous, and unpredictable while site remains stable, formless, and lacking social depth.

In this narrative, ecological process alone is expected to do the layered and difficult work of the producing space. As *Tree City* designer Bruce Mau explained, “one of the team’s intents was to ‘introduce randomness’ and to allow the park to evolve overtime.”<sup>23</sup> However, in the refusal “to settle on a fixed shape [and] its insistence on growth and development over shape,” *Tree City* overlooks the complexity of site shaped through concurrent social and ecological processes.<sup>24</sup> In focusing the site of Downsview as a process, as evident in the use diagrams that are at once both highly specific and very general, *Tree City* draws attention to the future potential of the site rather than its past assembly. The design allows for processes to unfold on site but not with it, creating the conditions for temporal processes to continue unfolding and transforming the site even as history, culture, and politics remain the same. The stability of site refocuses attention toward landscape processes of temporality through emergence and performance but in a way that remains largely focused along modernist lines of singular and linear time. The non-linear and adaptive flexibility of *Tree City* and *Emergent Ecologies* site is conspicuously absent, suggesting an attempt to find stable form in a site that appears formless while landscape remains robust and dynamic. As the jury noted, *Tree City* seems to emerge as a “clearly autonomous” landscape of transformed nature, which both designers Julia Czerniak and Alissa North have critiqued as expressing an attitude of neutral “unpredictability” toward ecological and urban life.<sup>25</sup>

The erasure of site plurality in favor of ‘autonomous’ landscapes to advance metaphors of ecological process illustrates what architectural critic David Salomon has argued is a move toward utilitarian site processes that reject the hierarchy of modernist architecture. In other words, by

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<sup>23</sup> (Polo October 2000) 16.

<sup>24</sup> (Mitchell and Deusen 2001) 71.

<sup>25</sup> (Waldheim 2001, Czerniak 2001)

focusing on site utility designers are able to claim neutrality outside modernist hierarchies and binaries. By deferring to ecological metaphors that treat landscape processes as ‘autonomous’ from human action, designers are able to overlook the ways ecology is always political and always social. However, because ecology is always political and shaped through social and cultural perceptions of nature, focusing design practices on ecological process does not do away with power hierarchies. Yet, as design critics Waldheim and Czerniak have both suggested, the focus on banal ecological processes and performance in the early 2000s helped to normalize “utility and instrumentality” as a method of creating “efficient and productive model[s] for [design]” that continue to be prevalent in landscape practice today.<sup>26</sup> The formless topography of *Tree City* reinforces this oversight toward political agency as site remains a stable void that is validated and enforced by what landscape architect and gardener Julian Raxworthy has called the “quasi-science” that occurs when designers apply general ecological science to urban landscape design.<sup>27</sup> The Downsview proposals center ecological science as a seemingly rational method for framing site processes as autonomous and indeterminant, as Raxworthy suggests, shifting focus away from social and cultural site practices. Yet, in designing for ‘indeterminant’ sites that are ‘ripe with possibilities’ the Downsview competition also overlooks the ways sites are always co-constructed through ongoing socioecological entanglements.<sup>28</sup> *[Image 4]*

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<sup>26</sup> (Salomon 2016) 55.

<sup>27</sup> Raxworthy writes, “The computer, dislocating the self-consciousness implicit in representation, has naturalized the quasi-scientific process discourse, rendering representation to ‘workflow’, and site to ‘model’ and ‘simulation.’” (Raxworthy 2017) 88.

<sup>28</sup> (Polo October 2000) This indeterminacy clearly appeals to the jury, whose official statement praised the scheme for reflecting ‘its responsiveness to community interests and its respect for individual experience’ and for ‘the mix of randomness and choice that characterize current living conditions,’ as well as for being ‘conceived as a living entity, with all the indeterminacy of that condition. Jury member Ydessa Hendeles adds that the jury admired the project’s conceptual coherence and that ‘it is ripe with possibilities.’ 1-4.



[Image 4] Downsview Park (2020). Downsview Park today is managed by the Canada Lands Company, a private development company. The Park continues to boast an urban forest, seen here, as a central idea developed from the 1999 *Tree City* competition entry.

The Downsview competition established a framework for ecological indeterminacy within landscape practice, laying the groundwork for what Waldheim has described as design proposals awash with claims of indeterminacy, open-endedness, self-regulation, and postmodern ecology models of autonomous emergence ... a body of work [that] invokes the indeterminacy and self-regulation ascribed to natural systems and attempts to transfer these quality to the instruments of urban collectivity.<sup>29</sup>

This model of practice, a “radical ecological indeterminacy” as Waldheim describes it, works to distance authorship through the “self-regulation of emergent ecologies” that promote problem solving and scientific methods with landscape practice.<sup>30</sup> The language of Downsview creates the

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<sup>29</sup> (Waldheim 2016) 36-37.

<sup>30</sup> (Waldheim 2016) 45.

conditions for the stability of site to become a metaphor for disciplinary stability. The increased use of scientific language drawn from the natural sciences that perpetuates notions of objectivity within landscape practice continue to illustrate what Carr has described as the process of “diminishing sensory experience” through abstraction of form, of material interaction, or physical distance to establish expertise that blinds one from the political nature of their work.<sup>31</sup>

Following the Downsview competition there was a rise in landscape projects that made “claims for the autonomy of ecological process.”<sup>32</sup> This approach initially suggests an exciting entanglement of nature and urbanism through landscape. The example of Downsview, however, illustrates that in framing landscape through dynamic processes, site—layered, temporal, contested—essentially becomes a stable void. In the second half of this chapter, I critique how the use of ecological metaphor in the period after Downsview influenced site readings. I use the example of novel ecosystems to illustrate the potential of new ecological frameworks to entangle binaries of urban nature. I focus on the complexities that arise when such sites are treated in isolation from past social, political, and economic practices, what ecologist Ingrid Parker refers to as the “amnesia and blindness” of modern anthropogenic environmental practices.<sup>33</sup>

## **2. *From novel to relational***

Novel landscapes, landscapes altered by human influence but not actively managed by humans, have come to represent the resiliency of nature to thrive in the context of otherwise overwhelming losses

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<sup>31</sup> (Carr 2010) 1.

<sup>32</sup> (Waldheim 2016) 41.

<sup>33</sup> (Parker 2017) 160.

of biodiversity.<sup>34</sup> [Image 5] The Downsview competition does not explicitly mention novel ecosystems or novel landscapes but competition documents suggests the designers can simplistically operationalize discourses from the natural sciences to work outside historical, social, and political contexts. In this first part of this chapter, I use the example of Downsview to contextualize the rise of novel landscape discourses in landscape and design practices. While novel landscapes may contribute much needed ecological value among declining habitats, discourses about novel ecosystems within landscape practice have focused primarily on their normative categorization, emergence, and performance, reflecting similar uses of ecological language as a method for both distancing and legitimizing indeterminate site processes seen in the Downsview example. In the case of novelty, these framings often attempt to scale landscape processes to an individual site under a guise of universal application, overlooking how these landscapes exist as capitalist ruins amongst economic neglect and abandonment.

In landscape theory and practice, novel landscapes, spaces “altered by human action, but not actively managed,” have come to represent the resiliency of nature to thrive in the context of otherwise overwhelming losses of biodiversity, as the rise of novel ecosystems often signal the loss of other ecosystems.<sup>35</sup> These landscapes, whether they include new grasses within toxic dredge of the Great Lakes, deer habitat amongst radioactive ruins at Rocky Mountain Flats, or fish species endemic in dammed inland lakes, are increasingly looked to as precedents for how disturbed nature can flourish without human oversight.<sup>36</sup> This focus risks reproducing the same economic and

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<sup>34</sup> Ecologist Richard Hobbs defines novel ecosystems as “a system of abiotic, biotic, and social components (and their interactions) that, by virtue of human influence, differ from those that prevailed historically, having a tendency to self-organize and manifest novel qualities without intensive human management.” The (Hobbs, Higgs, and Harris 2009) definition of novel ecosystems remains the most cited, despite criticism for its narrow and somewhat static focus. (Higgs 2017)

<sup>35</sup> (Marris 2011) Marris is not an ecologist and ecologists have critiqued this definition as simplistic in terms of historical context. Marris builds off Hobbs’ view of novel ecologies while (Simberloff 2015) offers a view of novel ecology within a historical context.

<sup>36</sup> (Burkholder 2016)

political structures that initially produced the conditions for novel landscapes to emerge while continuing to frame site as a stable void without social, cultural, or political history. The amnesia that Parker describes is evident in how novel ecosystems are considered in landscape practice. Often, novel landscapes become tools for technoscientific futures without reflecting on the ways normative interpretations of nature and uneven capitalist power structure have historically impacted particular species and locations to create novel environments.<sup>37</sup>



[Image 5] Example of a novel ecosystem on the Connecticut coastline, USA (Photo by Peter Del Tredici from *Places Journal* 2014).

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<sup>37</sup> I draw on the term “technoscientific futures” from (Puig de La Bellacasa 2015) to refer to the ways scientific technology is often expected to ‘save’ humanity from environmental decline.

Novel landscapes are the result of anthropogenic environmental change. They are the result of capitalist growth and toxicity, the ghosts of industrial pollution and the spatial ruins of uneven and unchecked political power. In landscape ecology, this tension is increasingly being addressed with calls for methodological diversity, including drawing on methods from social science and humanities, that can better account for the ways novelty has arisen through anthropogenic processes that are both problematic in their capital formation and their material implications.<sup>38</sup> Greater attention to discourses surrounding novel landscapes matters precisely because they are the ruins of anthropogenic climate change. Revealing the ways novel landscapes are distinctly the result of human actions through histories and politics also reveals why novel landscapes matter in creating more plural and caring landscape practices. Yet, designers continue to approach novelty as largely ahistorical and apolitical opportunities for innovation outside human control and responsibility.

The framing of novelty as other-than-human spaces within landscape practice deserves critique. Celebrating the indeterminacy or unpredictability of novel landscapes without also considering how they form, ignores and erases people, communities, and memories of place that are often the most vulnerable to pollution, unregulated capitalism, environmental racism and settler colonialism. As environmental thinker Stacy Alaimo has asked, “who then exactly is the anthro in the Anthropocene?”<sup>39</sup> Or, for whom are novel landscapes novel? I problematize how novel landscapes, and novelty more broadly, have been utilized within contemporary landscape design to challenge how normative time, agency, and responsibility have limited design practice. I respond to these challenges by proposing how an ethics of care might be better centered in design research and practice.

In the following sections, I consider how novel landscapes have been understood through

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<sup>38</sup> (Morse et al. 2014, Truitt et al. 2015, Dooling 2015)

<sup>39</sup> (Alaimo 2016) 142.

discourses of categorization, emergence, and performance. In response to these normative framings, I position novel landscapes as relational spaces with distinct histories, memories, and timelines. Relationality considers how spatial effects are intertwined with multiple causalities constantly grounded and crystalized through ongoing and coproduced power relations.<sup>40</sup> Framing novelty through relational ontologies, including colonial dispossession and racial formation, I argue for a care ethics rooted in an attention and responsibility to the uneven effects of human-dominated actions in landscapes that have been abandoned, wasted, or otherwise historically overlooked within normative site readings.

### ***Novel landscapes***

In ecological literature, novel landscapes are characterized as unique outcomes of human caused environmental change. Most commonly, they describe abiotic or biotic systems that have been altered by humans to produce entirely new ecological relationships and compositions.<sup>41</sup> Importantly for their use in landscape design practice, novel landscapes are sites in motion, they are new, shifting ecological compositions. Novel landscapes have been further described by ecologist Richard Hobbs as creating a “new ecological world order,” distinguishing them from ecosystems that have maintained historical or hybrid patterns by their tendency to “manifest novel qualities without intensive human management.”<sup>42</sup> Unlike designed ecosystems that can, depending on their scale, produce operational ecology through ongoing management and adaption of resilient ecological systems,<sup>43</sup> novel landscapes typically arise from inadvertent human activities.<sup>44</sup> This severing from

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<sup>40</sup> (Massey 2005, Elwood, Lawson, and Sheppard 2017)

<sup>41</sup> (Hobbs, Higgs, and Harris 2009) 60.

<sup>42</sup> (Young 2014, Williams 2007)

<sup>43</sup> (Lister 2007)

<sup>44</sup> (Higgs 2017, Lorimer 2012)

history, or ‘haphazard novelty,’ is at the least problematic.<sup>45</sup> Hobbs’ definition of novel ecosystems draws a sharp line between novel, hybrid, and historical landscapes. This definition perpetuates the idea that novel landscapes are uniquely new, not formed through specific historical actions that often decrease overall biodiversity. While Hobbs’ definition of novelty has been widely criticized from within the ecological sciences for treating ecosystems as discrete and isolated, Hobbs continues to be cited within landscape architecture as the standard for novel ecosystem research. As recently as October 2019, the American Society of Landscape Architects offered a continuing education seminar on the role novel landscapes within design practice rooted in Hobbs’ definition of novelty.<sup>46</sup>

Novel landscapes offer alternative visions of what might constitute urban nature because they confuse and blur the lines between what has been considered natural and unnatural. Sites of novelty suggest how landscapes otherwise seen as wasted or ruined have value and can thrive and produce new forms life. Within landscape practice, however, the use of novel landscapes has tended to be characterized within limited definitions and methodological applications that are bias toward normative science and ecosystem services while diminishing the role and responsibility of economic, environmental, and political structures that create and perpetuate socioecological vulnerabilities.<sup>47</sup> As novel landscapes become experimental spaces of design, the past uses that created the conditions for novelty, such as industrial pollution and extractive practices, have at best been overlooked, or at worst, ignored or even exonerated. The recognition that novel landscapes today are not necessarily new, but newly seen and uniquely human warrants greater attention to the ways ecological discourse, but not necessarily ecological practice, has been leveraged within landscape practice and design.

Importantly for design practice, the growth of novel landscapes likely means the loss or extinction of other ecological and social systems. *[Image 6]* Novel landscapes represent what has

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<sup>45</sup> (Dooling 2015)

<sup>46</sup> (TheDirt October 2019) For an additional critique of Hobbs see, (Simberloff 2015).

<sup>47</sup> (Leichenko, McDermott, and Bezborodko 2015)



socioecological spaces of relationality and care.<sup>49</sup> Likewise, attention to maintenance and care within art and design have begun to add depth to discourses of novelty and urban nature.<sup>50</sup> Identifying the ways novel landscape are distinctly human illustrates the extent to which ecology is always political, always historical, and always social.

### ***Discourses of novelty***

Landscape practice has relied on modern positivist methods that value objectivity, rational process, and abstraction of people and place from grounded material realities.<sup>51</sup> While landscape urbanism has influenced design practices since the mid-1990s, the Downsview competition reflects an important turning point toward rational and normative scientific methods in landscape practice. Geographer Matthew Gandy has called out the case of Downsview specifically as an example of the ways scientific data is emphasized in urban redevelopment while social and political goals “remain uncertain, even if selective fragments of the original landscape persist.”<sup>52</sup> With this turn toward scientific utility, novel landscapes have emerged as a product of neoliberal environmentalism focused on ecosystem services and utilitarian restoration goals, which has quantified and rationalized both discourses and performances of nature within capitalist regimes. Within these frameworks, such as those of ecomodernism, which advocate for large-scale technological and environmental interventions akin to modernist infrastructure and planning, novel landscapes have been celebrated as experimental spaces for recalibrating how nature will continue to thrive despite human action or

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<sup>49</sup> See (Puig de La Bellacasa 2015, Ogden 2011, Tsing et al. 2017) for the blurry lines between science and culture, natural and unnatural.

<sup>50</sup> (Scott and Swenson 2015, Haraway 2016b, Tsing 2015, Mattern 2018)

<sup>51</sup> (Waldheim 2016)

<sup>52</sup> (Gandy 2016) 437.

inaction.<sup>53</sup> Alternatively, both art and ecology scholars have increasingly pointed to the co-constitution of material and lived relations in historic and spatial contexts, recognizing both the ruinous effects of biodiversity loss and the ways new forms of nature are inequitably conferred.<sup>54</sup>

### *Categorization*

The example of Downsview illustrates that as sites are organized relative to potential ecological processes, ecological language has been used to categorize their potential in terms of ecological services and redevelopment. With the focus on a site's potential, novel landscapes have become seemingly objective opportunities to argue for an increased role of design while simultaneously distancing the designer from unintended project outcomes. The categorization of particular landscapes as novel has been key to this distancing. New categorizations for site changes that are unexpected or unusual allows for landscapes that respond 'abnormally' to be seen as outside human agency and responsibility. *[Image 7]* Geographers Paul Robbins and Sarah Moore have described this a symptom of "ecological anxiety disorder," where rather than working to develop techniques for decision making and responsibilities around unprecedented environmental change, such changes are categorized as novel as a way of pushing aside undesirable or difficult political implications.<sup>55</sup>

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<sup>53</sup> (Ellis 2015)

<sup>54</sup> (Klein 2014, Demos 2017)

<sup>55</sup> (Robbins and Moore 2013) 4-6



‘categorization;’ the site is currently an informal dog park and trail network containing a monoculture of Common alongside one of the largest stands of Madrone in Washington State. (Photo and diagram by author)

One example of pushing aside the social and political questions that arise from unexpected environmental change has been seen by the increased agency of design at global scales through geo-engineering and terraforming.<sup>56</sup> In celebrating novel ecosystems as “great from a scientific point of view” because they “will be what we make of them,” climate change “creates a wealth” of opportunity, as ecologist and ecomodernist Erle Ellis describes.<sup>57</sup> While embracing the dynamics of ecological succession, where species and habitats have always formed unique assemblages outside human intervention, this position maintains an exceptional perspective of nature. The ecomodernist

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<sup>56</sup> (Baker 2019b)

<sup>57</sup> Ellis quoted in (Collard, Dempsey, and Sundberg 2014) 322.

categorization of novelty as objective and new severs the ecological system at play from context and history, not only reproducing the systems that created these new forms of nature but also covering over the ways much needed biodiversity is disappearing at accelerated rates. The objectivity portrayed by ecomodernism ignores and perpetuates the lack of attention to social, political, and economic difference that continues to plague urban and landscape design.<sup>58</sup>

Perhaps more critically, the perceived objectivity of novelty and the categorization of landscapes as novel because they exist outside human management implies that the human actions that created the conditions for novelty in the first place can be exonerated. If the ‘wealth’ of novel landscapes, as Ellis believes, results from anthropogenic climate change, then the value of novel landscapes can be easily lost and remade with future environmental changes. The absence and avoidance of politics seeks to mark such landscapes as discrete scientific objects by isolating them from the conditions that created them. Rather than implicated with socioecological histories, they are exceptional, unexpected, and unusual. The focus on categorization of novel landscapes as scientific objects renders new forms of nature as generic and generalizable, making projects of “ecological urbanism essentially islands within the wider dynamics of capitalist urbanization,” as Gandy has suggested.<sup>59</sup> The seeming objectivity of novel landscapes reduces ecosystem diversity to rationalized metrics that both erase the loss of biodiversity at a global scale, and that treat site as not only apolitical and ahistorical but as a stable void. The categorization devalues the effects of power and social difference in scientific knowledge, remaking novel landscapes along narrowly utilitarian lines of efficiency and productivity. Novel landscapes cannot be separated from the human activity in which they are embedded, at any moment or through any framework.

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<sup>58</sup> (Roy 2016)

<sup>59</sup> (Gandy 2015) 1311.

## *Emergence*

A second theme of novel landscape discourses is emergence, where it is suggested new, novel natures seem to emerge without site or history. Drawing attention to novel landscapes post-emergence, that is without thick historical contexts, further universalizes the ways new images of nature are created in relation to historic and ongoing environmental violence. While ecologists have pointed out that not all novel landscapes offer desirable effects, landscape practice has continued to embrace the emergence of novel landscapes as moments for design innovation focused on technoscientific futurity. For example, ecological processes such as the erosion of sediment that may house niche vegetation draws attention to the very real and much needed inclusion of otherwise degraded landscapes as spaces for landscape practice to lead design and restoration.<sup>60</sup> [Image 8]

In recent years, sediment and dredge has emerged as an underused and readily available resource that designers should make foundational to urban landscape projects. In the *Journal of Landscape Architecture* there have been 39 articles published since 2007 with dredge or sediment reuse as their central focus.<sup>61</sup> Sediment design work suggests one of the most exciting directions for future landscape practice, as it is an organic resource, a wetland nourisher, and space of critical habitat. This work has been extensive, as the number of academic articles suggests, from reusing dredge dumps for habitat in the Great Lakes to building soft shorelines that will reduce flooding in urban estuarian areas.<sup>62</sup> Yet, in published work on sediment, little mention is made of the political or economic conditions that produced these sediment dumps. Sediment is also a political material, one whose characteristics and behaviors are articulated with infrastructures, industries, labors and land practices, and livelihoods to produce uneven geographies.

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<sup>60</sup> (Burkholder 2016) 7, 11.

<sup>61</sup> *Journal of Landscape Architecture* 2007 through 2020.

<sup>62</sup> (Burkholder 2016, Davis and Oles October 2014)



[Image 8] Emergence and contaminated sediment comingle (collage by author, images courtesy of the EPA Archives)

The life of the polluted sediment of the Duwamish River in Seattle, Washington, for example, suggests the unspectacular ways that environmental climate violence moves—or is made to move—through materials that persist, decompose, and are reconstituted unevenly through the river’s sediment.<sup>63</sup> Between 1909 and 1913, the Duwamish River was slowly channelized into a narrow 11-mile channel, meaning the waterway no longer had the flexibility to shift or meander as a wide, muddy, and shallow estuary. In 2001, after nearly 100 years of industrial pollution, the Duwamish River was designated a Superfund site by the Environmental Protection Agency. With ecological decline caused by channelization and on-going industrial pollution, the river can no longer support salmon habitat, thus severing its historic role as a place for salmon life and food and cultural

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<sup>63</sup> (Moore 2012)

identity for the Duwamish people.<sup>64</sup> Along with ongoing pollution, the current pollution in the bottom of the river includes historic toxins from industries long-gone. The sediment of the Duwamish contains a material legacy of military extension through the production of war planes and fallen shipping containers carrying goods into the Port of Seattle, the muck of the industrial past becoming the political material of climate change.

Discourses produce material, built landscapes and vice versa. Images of restoration along the Duwamish celebrate the ways novel forms of nature seem to spontaneously emerge in banal urban sites along the river, despite a history of neglect and pollution. Images published by the National Oceanic and Atmospheric Administration (NOAA) of restoration sites along the Duwamish take decay as an opportunity, mimicking visual forms of ruination. *[Image 9]* By contrast, artist Tom Reese's photographs of the Duwamish suggest becoming comfortable with the strange beauty of river by highlighting the contradictions that emerge when industry, culture, and ecology collide and depend on one another. *[Image 10]* The NOAA restoration work lacks such a layered reading and continues to focus on the technological future of the river, as a place damaged yet full of opportunity. This approach strips the Duwamish from a history of anything other than the story of industrial pollution, effectively erasing the Duwamish people who lived and continue to live there.

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<sup>64</sup> In 1916, the Lake Washington Ship Canal in Seattle, Washington, opened, connecting the fresh water Lake Washington to the salt water Puget Sound. The canal project lowered Lake Washington's water level by over eight feet, and caused more than 1,000 acres of wetlands and the Black River, which drained Lake Washington, to run dry. To control the now open flow of water between Lake Washington and the Puget Sound, the Hiram Chittenden Locks were built to limit the flow of fresh and salt water between the two water bodies. Less known is how this hydrological control not only fixed the flow of the water around the Ballard Locks, but also transformed the Duwamish River, ten miles to the south, and with it the Duwamish people. The installation of the Ballard Locks to the north caused the Black River to the south to permanently disappear, severing an important spawning route for salmon and displacing over 300 Duwamish people indigenous to the area. The drying of the Black River also slowed the flow of water into the Duwamish River, causing the river to slow and becoming the justification for the channelizing the river. (Klinge 2007) 71-72.



[Image 9] Restoration by NOAA at the Boeing Superfund Site along the Duwamish River, Seattle, Washington. (Image by NOAA)



[Image 10] Ruins along the Duwamish River mimic the visual formation of restoration. (Photo by Tom Reese)

This conventional restoration narrative frames the Duwamish's current ecological moment not as a result of human neglect, but as a celebration of the ways nature continues to emerge independently from human actions. Rather than implicating how human forces have shaped systems that create landscapes like the Duwamish River, the restoration process has sought to remove humans, focusing instead on the resilience of nature to maintain itself. This restoration narrative fails to acknowledge the ways humanness is shaped through and in relation to all other moments and events. Indigenous writer and scholar Leanne Betasamosake Simpson, for instance, has used the term "land as pedagogy" to explain the ways people become responsible for what they know through land, a method of learning and relating knowledge between sites and places that is often ignored in western scientific practices.<sup>65</sup> Similarly, for the Duwamish people, they *are* the salmon.<sup>66</sup> To erase the river or its ecologies is to erase a people, their history, and their land.

Despite the varied subject matter—one wasted and one restored—the images of NOAA and Tom Reese are strikingly aligned, with similar lighting, composition, and objects. The eerie similarity of images of waste and images of restoration along the Duwamish trouble idea that novel landscapes simply emerge or that processes of wasting or restoration have linear timescales. The focus on emergence hides the potential conversations on the role of power understood within ecological resilience, or to query normative questions such as "resilience of what?" and "for whom" when applied to complex sites.<sup>67</sup> The remaking of Indigenous lifeways through settler-colonial landscapes,

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<sup>65</sup> (Simpson 2017) 156.

<sup>66</sup> The Muckleshoot word for the Duwamish River is Dx<sup>w</sup>dəw. The Duwamish River officially refers only to the eleven-mile urban section of the Green River, which is channelized, polluted, and aggressively managed. Where the river returns to its natural course upstream it returns to the benign sounding Green River. In this naming, Duwamish history is condensed and erased. The Duwamish people, who do not have federal tribal recognition because they cannot prove their existence through property, are named only in the suppression of nature, in a landscape where salmon can no longer spawn and where they have not a state-recognized ancestral claim. In drawing relations between salmon, water, and people, the Duwamish consider the salmon kin. To erase the salmon erases the Duwamish people. (Tu July 3, 2015)

<sup>67</sup> (Haines 2015) (Leichenko, McDermott, and Bezborodko 2015)

the protection of salmon while linked waterways remain polluted and under-regulated, and the restoration of riparian habitat through geoengineering rather than the restoration of human habitat through decolonizing, illustrate the continuously unfolding, interwoven, and often unexplainable abundance of meaning found within complex sites. The contradictions and complexities of sites such as the Duwamish defy the notion that natures emerge as new or novel, now or in the future. Nature does not merely emerge. Nor is it enough to simply celebrate environmental survival as novel landscapes are constructed and perform in relation to the systems that shape them. Focusing on emerging forms of nature that emphasize a site's future potential rather than the historical and ongoing narratives that shape such sites as constantly shifting within industrial, environmental, and economic structures limits how novel landscapes can be reimagined outside frameworks of wasted and ruinous or fixed and restored.

### *Performance*

The final theme found in discourses of novelty within landscape practice is that of performance. The focus on the performance of novel landscapes positions ecological impacts as economic and value based while reducing social nature to quantified ecological metrics.<sup>68</sup> Similar to the distancing from site that Waldheim describes as part of landscape urbanism and the framing of Downsview, the focus on site performance is part of landscape practice's turn toward methods borrowed from the natural sciences. Consider the Rocky Mountain Arsenal Wildlife Refuge outside Denver, Colorado. The 20,000 acre site managed by the U.S. Department of Fish and Wildlife and the comprehensive masterplan completed by the Denver based landscape architecture office, Design Workshop, seeks to reconsider how (un)natural waste binaries define clean-up histories of highly-polluted sites.

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<sup>68</sup> (Meyer 2008)

During World War II, the site produced biological and chemical weapons and later sarin for nuclear weapons during the Cold War. By 1983, the site was listed as a Superfund site by the EPA. Design Workshop's project documentation, however, is quick to note that "despite" this designation, the site was home to more than 330 distinct species that lived within the site's perimeter zone, "undisturbed" from urban development.<sup>69</sup> With this framing, the Rocky Mountain Arsenal Wildlife Refuge is an example of how performativity metrics have sought to falsely liberated novel urban nature from societal decision-making in favor of "naturally guided" metrics.<sup>70</sup>

In this example, the site's novel performance did not eliminate its embodied toxicity. The ongoing clean-up and design of the site has focused on the novel performance of the Arsenal landscape, exonerating the site's historic role in indigenous dispossession and military violence. As the site's designers have said in reference to the number of animal species on site: "without the history of chemical manufacturing, every acre would have certainly been developed long ago." While references are made to pre-military uses, they are timeless, static and unnamed with no more specificity than nods toward "Native" and "prehistoric people." While the military pollution has been largely cleaned from the site, design proposals have maintained the site's novel performance through a stabilized image of the landscape, which Design Workshop describes as "bucolic." The role of the designer, Design Workshop notes in *Landscape Architecture Magazine*, is to "get the hell out of the way and let things play out naturally."<sup>71</sup> Similarly, restoration photographs of the refuge published by U.S. Fish and Wildlife Service tend to focus on ecosystem growth, showing the site full of untouched and wild growth without acknowledging the ongoing biodiversity that exists at the refuge as both a remediated and urban landscape.<sup>72</sup> [Image 11]

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<sup>69</sup> (Kirkwood 2019)

<sup>70</sup> (De Block 2016)

<sup>71</sup> Design Workshop (2018) 111.

<sup>72</sup> (Kirkwood 2019) 94-112.



[Image 11] Performance: Clean up at the Rocky Mountain Flats has focused on productivity for human uses rather than its ongoing biodiversity as both a remediated and urban landscape. (Photo from U.S. Fish and Wildlife)

The success of the comprehensive master plan has been measured primarily through increased property values, ironically citing the ways the clean-up has made the land more desirable for urban development—the same land that Design Workshop notes has been able to support a wide range of wildlife precisely because it lacked urban development. The design response is full of similar contradictions. Yet, instead of making these contradictions “something for which we are obliged to take up responsibility” to develop an ethic of social responsibility to “see the beauty in the wounds of the world,” as geographer Shiloh Krupar suggests, the design process has focused on ‘fixing’ the site through increased property values and surveyed species numbers.<sup>73</sup> Discourses of performance, such as those surrounding the Rocky Mountain Arsenal, have focused on novel

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<sup>73</sup> (Krupar 2012) 312.

performance rather than the ways land and environment has underwritten processes of colonial dispossession under auspices of growth and progress. Looking past narrowly utilitarian and capitalist modes of performance recognizes how novel landscapes produce value in their cultural specificity. The Rocky Mountain Arsenal Refuge will not be cured of its past land uses through technoscientific futurities that overlook the site's history of military expansion. For the Rocky Mountain Arsenal, what might it mean to deeply question the history and memory of the name 'arsenal' through histories of social and capital performance that can shift perceptions of what counts as nature rather than seeking to increase nature through normative metrics?

### **3. *Toward care***

Climate change is a slow, human-enacted violence that disproportionately effects the most socially, economically and politically vulnerable people. Novel landscapes, and corresponding biodiversity loss, are a direct result of this violence. Without critical work focused on how novel frameworks were borne from what geologist Kathryn Yusoff suggests are “exclusionary construct[s] coterminous with the enslavement of some humans and the genocide of others,” the violence of climate change and the violence of erasure that results from exclusion will continue to shape and reinforce one another through a push for “universalism in ecological and planetary terms.”<sup>74</sup> Discourses of categorization, emergence and performance that have been used to describe novel ecosystems in landscape practice without historical context suggests a world view where design practices are a segue for capitalist imaginaries in the context of climate adaption, rather than an unsettling of what counts as nature. A focus on maintaining the status quo in landscape practice threatens a future

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<sup>74</sup> (Yusoff 2018) 53.

grounded in social justice as it ignores the ways landscape practice has historically failed to grapple with an inheritance of violent land dispossession and the ways environmental burdens have long been shouldered by Black and brown bodies.

Design as an explicitly ecological and political project must counter this form of universalizing social nature that continues to be rooted in historical and ongoing violence against Indigenous and anti-colonial efforts.<sup>75</sup> Robbins and Moore write that ecological thinking can create an inability to act in ecological ways because of a fear of further effecting the negative normative influence of humans on the earth's ecosystems. To overcome this "anxiety," Robbins and Moore propose that we must accept the "radical ruptures made possible by understanding and articulating the politics of novel ecologies."<sup>76</sup> The rupture that Robbins and Moore describe has the potential to unsettle modernist conceptions of time that have looked straightforward and always committed to the future. By unsettling commitments to modernity that continue projects that separate nature and culture, novel ecologies have the potential to become thick sites of struggle that can either proliferate or eliminate historical processes of environmental destruction that have long ignored extinction of Indigenous people and ecologies as collateral damage.

Sites always leaves traces. Anthropologists Nils Bubandt, Elaine Gan, and Anna Tsing call these traces ghosts, writing,

Ghosts remind us the we live in an impossible present—a time of rupture, a world haunted with the threat of extinction. Deep histories tumble in unruly graves that are bulldozed into gardens of Progress ... the small, partial, and wild stories of more-than-human attempts to stay alive. Ghosts, too, are weeds that whisper tales of the many pasts and yet-to-comes that surround us. ... The landscapes grown from such endings are our disaster as well as our weedy hope.<sup>77</sup>

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<sup>75</sup> (Sundberg 2014)

<sup>76</sup> (Robbins and Moore 2013) 12.

<sup>77</sup> (Tsing et al. 2017) G6-7.

Novel landscapes are filled with ghosts, or perhaps they are themselves ghosts arising from death, extinction, and rebirth. Discourses of novelty in landscape practice reveal the ways site knowledge is never insulated nor isolated from history or institution and ideology. Landscapes cannot come into being through site processes without also considering how sites hold and reveal traces of life, past and future. To be open to possibilities, and to indeterminacies, as suggested by the language of the Downview competition, also requires developing a rigorous practice that allows for multiple possibilities shaped by the site itself. This can come in multiple methodological forms, not only models and metrics but in media such as stories, fictions, and lived experience. [Image 11]



[Image 12] Traces, or ghosts, of three layered and transboundary waste sites, Western Utah, USA.  
(Collage by author)

Novel landscapes are formed relationally and through time. Nuanced understandings of the ways categorization, emergence, and performance remake normative timescales is needed to avoid absorbing novel landscapes back into uneven and universalizing environmental structures. Lacking this attention, novel landscapes will continue to romance the ways nature emerges and thrives amid economic and political processes that hinder socioecological resilience, as in the case of Downsview and not unlike the ecological determinism expressed by Manning. (In)determinacy, then, is not a surprise, it is a selective reading and active choice. While landscape practice has learned, and designers have advanced the field through an increasingly strict approach to scientific logic, these constraints in methods and outcome are perhaps no longer needed for the advancement of urban ecologies, which continue to thrive between the blurry lines of modern objective science and cultural memory. The example of novel landscapes shows how sites newly seen are more than stable voids, they are always populated with ghosts and ruins, reflecting how the categorization of site regulates life past and present.

Novel landscapes reflect how life—and whose life—is allowed to thrive in sometimes messy and ambiguous ways in urban landscapes. In the case of site as process, landscape is allowed to expand and run wild but only after specific insertions, in particular ways and under particular circumstances. The suppression of life through geoengineering large infrastructure along the Duwamish or in the militarization of Indigenous lands such as Rocky Flats suggests that ecological process can run amuck when it advances normative sites readings through dominant ideologies of nature. Engaging the politics of novel landscapes means explicitly addressing the responsibility of creating new ecological systems even as we seek to maintain and restore others. Yet, novel landscapes have been developed in landscape practice through ecological language that either creates tokens of futurism or process of historic erasure, depending on how they are actively engaged. A willingness to engage the politics of novel landscapes opens possibilities for surprise and accepts

failure, but more importantly, it makes care an active project that works with the ambiguity of newly seen forms of urban nature and their shared relations. Reflecting on how politics, history, and location have produced the conditions for novel landscapes to emerge illustrates how ecology is always human and relational, creating the conditions for designers to more critically and rigorously engage approaches to care in the design of future natures.

## Chapter Six: Coda

### Toward Sites of Lively Care

#### *Site and the regulation of life*

This dissertation started with the question: how would acknowledging urban landscapes as sites always becoming through shared relations frame the potential for new landscape practices that more fully engage the responsibility of living in a more-than-human world? As I worked to respond to this question by examining how site and landscape have been conceptualized and categorized historically, the regulation of life through uneven expressions of power—human and more-than-human—became a reoccurring theme. By historically situating the production of site and landscape within particular social, environmental, and political contexts, I show through three case studies how normative site readings are predicated on and lead to the regulation of life. By regulation of life, I am referring to the ways life is managed through knowledge, discourses, politics, and practices. In the three case studies I have drawn on archival and discourse analysis to illustrate how this regulation takes place through racial formation (chapter three), the fragmentation of ecological systems (chapter four), and the advancement of neoliberal and technoscientific futures (chapter five).

Landscapes have always carried traces of multiple sites assembling and eroding over time as ecological functions change and as sociohistorical formations shift. Still, sites remain as layers and collective archives of time, memories, and materials. As landscape is increasingly a central organizing concept for the design of urban space through landscape design practices seeking to “recover” the flow and flexibility of natural processes, these layers of history become critical knowledge.<sup>1</sup> In this dissertation, I contextualize within history how attempts to blur the categorization of site and

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<sup>1</sup> (Corner 1999c)

landscape have often drawn more discrete distinctions between the two, remaking normative categories of nature and society that cover over site multiplicity. Together, the case studies illustrate how past site practices have often centered on the search for a universal meaning of site and landscape, eroding how sites and landscapes are shaped through collective knowledge and experience. This search for essential knowledge is an issue that continues to plague landscape practice, and one that I address in the case study chapters as a search for disciplinary and professional legitimacy. In response, I pose that site is always part of engaging landscape and that by examining the unruliness of site we may reimagine the power relations within landscape itself.

Despite the powerful ways that landscape operates as both frame for conceptualizing socioecological questions and as a material practice for imagining and enacting more just socioecological worlds, landscape practice, even with the best of intentions, remains bound to narrow ideas of linear growth and progress. In part, this limitation is linked to professional models tied to capitalist service economies.<sup>2</sup> This is only a partial explanation that overlooks how landscape practice and designers have agency outside conventional professional models. This agency is seen in chapter three through the development of a powerful planning atlas widely read by governmental officials, and in chapter four in the ways former gravel sites have been remade as public spaces outside traditional planning regulations. Despite the individual and collective power of landscape practice, landscape design has remained limited by a continued focus on linear growth and progress, as in the example of working with novel landscapes in chapter five. Throughout the case studies, I show how a lack of critical theory and historical reflection within landscape theory and practice has continued to simplify that what counts as landscape is a reflection of the limits of essential knowledge.

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<sup>2</sup> See (Fleming April 2019) for more on the role of landscape practice in politics and government and the suggestion that landscape professional practice has been overly constrained by capitalist labor structures.

The continued search for essential knowledge in landscape practice remains an impediment to developing theory and practices that are self-reflective, and an impediment to developing practices of socioecological care. Instead, building from science and technology studies that seek to situate knowledge in the context of power, I argue that landscape theory and practice has continued to overlook how knowledge is never essential but always situated and power-laden. Exploring how site is conceptualized historically reveals that what counts as essential knowledge is always a reflection of power and history. Examining the ways site and landscape are constituted through each other and made visible through relations of society, environment, and power also reveals that ways landscape practice is reflective of these systems. Perhaps most critically, from a relational and biopolitical perspective, the creation of ecological life through the design of landscapes often results in the loss of other life, suggesting that knowledge about site and landscape is always shaped relationally within power-laden contexts.

Urban landscapes are perpetually being remade as sites formed through collective knowledge and experience. This is as true today as it is historically. Through the case studies, I demonstrate how site and landscape have been remade and recategorized to maintain dominant social conditions by covering over, pushing against, and erasing the ways both urban sites and landscapes are assembled through ongoing and layered socioecological relations. Burns and Kahn in *Site Matters* write that “context is what the site is not.” While acknowledging that sites have “multiple realities ... saturated with difference” that shape “dynamic relational constructions,” they continues to ask, “how, then, to define the confines of urban sites?”<sup>3</sup> What if the question was not how site is defined but what are the conditions that would allow ‘multiply realities’ and ‘saturated differences’ to exist and be

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<sup>3</sup> (Burns and Kahn 2005) 286 and 294.

expressed within and through site? Answering this latter question requires looking at how site has been understood historically within landscape practice.

In chapter three, *site as scale*, I bring Warren Manning's National Plan (1919-1923), a document that has been largely overlooked in landscape history, into conversations of scale and racial formation.<sup>4</sup> I examine how the National Plan conceptualized the nation as a singular and generalizable site to maintain a white supremacist future for the United States. I show how National Plan operates as a site of epistemological slippage through practices of standardization and racial formation that result in the erasure of socioecological difference. I argue standardization and racial formation are enacted by a process of scaling seen through the regulation of site, first at the scale of plant life through horticultural standardization and later through the regulation of non-white and ecological diversity at the national scale. As methods of standardized horticultural knowledge were translated to the national scale, the work of standardization—producing regularity and predictability—shifted from tending and maintaining individual plant life to regulating civic and national life. This regulation results in the strategies of landscape improvement that focus on preserving white life through land conservation and limiting non-white life through landscape control. The maps of the National Plan illustrate the ways acts of drawing have been put to work to exonerate the designed landscape from, while often working to maintain, spatial structures racial violence and white supremacy. This is a legacy that landscape history has to yet to fully address, and a framing that broadens environmental histories from the perspective of design and visual representation.

The second case study, *site as material*, explores how the boundaries of site were stabilized and destabilized through landscape materials in the 1979 land art symposium, *Earthworks: Land*

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<sup>4</sup> (Karson, Brown, and Allaback 2017) The National Plan is mentioned only in the introduction to this monograph on Manning's design career.

*Reclamation as Sculpture*. I suggest the *Earthworks* symposium be read as a performative project through an ideology of cure that remade former gravel pits to appear as ‘environmental whole.’ In this chapter, I show how the afterlives of gravel pits disrupt notions of sited property as environmental materials continue to shift with dynamic and temporal landscape. Through varying degrees of management and adaptation, the pits are transformed into infrastructural contact zones that continue to maintain artificial boundaries between ‘natural’ and ‘unnatural’ by reproducing normative ideas of ‘cured’ and ‘healed’ nature. Care is never finished, likewise a damaged landscape is never ‘cured,’ but neither is cure the goal. In response to the ways the *Earthworks* symposium creates artificial boundaries between perceptions of natural and unnatural sites, critical self-reflectivity that refuses categorizing nature as ‘good’ or ‘bad’ offers an alternative to celebrating individual site performativity.<sup>5</sup>

Finally, in chapter five, *site as process*, I trace how ecological discourses within landscape practice in the late 1990s and early 2000s created the conditions to distance the designer from site as site was discursively transformed into a stable void reflective of neoliberal environmentalism. I argue this distancing resulted in the ‘naturalization’ of economic processes, furthering technoscientific landscape futures that are not historically or socially contextualized. I look at the Downsview Park Competition as an example of how individual designers used language from environmental and ecological sciences to explore the lines between natural and unnatural. By adopting particular discourses from these adjacent disciplines, designers involved with Downsview approached the competition from a position of human exceptionalism, unable or unwilling to place themselves within broader socioecological systems and relations at play on the site. In the second half of the chapter, I show how the adaption of ‘quasi-scientific’ methods in landscape practice have treated

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<sup>5</sup> Both (Smith 2007, Robbins and Moore 2013) discuss how concepts of ‘good’ and ‘bad’ nature are produced to legitimize extractive infrastructural practices and ‘preserve’ other forms of nature.

sites as largely apolitical and ahistorical by adopting language from ecological science.<sup>6</sup> I show how a focus on process-based design was used to simultaneously abstract site and claim greater scientific expertise in landscape practice. I argue this distancing is harmful as it re-creates distinctions between human and environmental responsibilities, impacting our ability to care.

The three case studies build toward landscapes of becoming-with, an idea I explore through a politics of care. Sites are always landscapes of becoming: they are made through relational processes that extend beyond their physical boundaries. The relationality of site helps situate why historical formation matters. As Tsing suggests, growth and process spreads, “leaving ruins.”<sup>7</sup> By ruins Tsing is referring to not only material conditions, but all that is left behind in the wake of modern growth. We might also understand landscapes becoming as always leaving ruins, the materials, relations, experiences, and memories that are left or forgotten through practices of becoming. In the three examples, I show how power has been produced through site to enact practices of forgetting, creating ruins while attempting to ‘fix’ landscapes in place. This production of power is seen through the production of citizenship in the National Plan, the production of nature in *Johnson Pit #30*, and the production of growth in Downsview Park and novel landscape discourses. Framed relationally, this production requires segmenting knowledge that results in the loss of socioecological life, creating ruins that are pushed aside, erased, buried to allow for the production and maintenance of general and universal site knowledge.

What is left in the wake of scale is a harmful remaking of normative site knowledge. Manning’s National Plan, for instance, becomes more than a study of regional environmental potential as it uses environmental knowledge to reinforce hegemonic and racialized notions of landscape. It matters that the National Plan conflates race and biology, society and environment, and

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<sup>6</sup> (Raxworthy 2017) 88.

<sup>7</sup> (Tsing 2019) 144.

landscape and site, just as it matters that the celebration of novel landscapes as resilient in chapter five allows neoliberal urban development to push aside environmental justice concerns. Examining entangled site histories reveals the ways landscape practice has been complicit in erasing site particularities through racialization, the suppression environmental systems, and the privileging of generalizable scientific knowledge. Naming this erasure is critical to remaking how landscape practices read, interpret, and assemble sites to challenge and resist the ways normative site readings have divided and erased both social and ecological memories.

Site reveals multiplicity and it is through the suppression of site multiplicity that the case studies come together. In the suppression of site multiplicity, the case studies show how care can operate as design methodology capable of resisting site erasure. I develop care as a way to build practices of resistance toward hegemonic power structures that recognize site multiplicity through attention to intertwined historical formation, socioecological responsibility, and critical self-reflectivity. In all three chapters, the inability to interpret site as something more than a pre-determined or given condition leads to the remaking of normative site readings. This is indicative of a larger condition in landscape practice that frames site as a stable void, that is without history or context. This practice of producing stability is seen in the way Warren Manning draws the United States as an empty frame, or in the formless topography of Downsview Park, as well as the closely maintained drainage of *Johnson Pit #30*.

In response to the challenges of the site as not being a pre-determined form has resulted in treating site as indeterminate and therefore outside human agency, as in more recent instances of landscape urbanist theories.<sup>8</sup> Yet, the indeterminacy of site, in that something is not exactly known, established, or defined, does not excuse behavior that ignores the relationality of site. For this

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<sup>8</sup> (Waldheim 2016, Thompson 2013)

reason, I position care as central to how indeterminacy is framed and how humans move with and through indeterminate spatial processes. I suggest that framing site as indeterminate is not much different from a pre-determined site, as both remain focused on an essential understanding of site that resists ‘multiply realities and saturated differences.’ I would also suggest that refusals to read site through plurality remains a primary reason landscape theory continues to be circular and self-referential, focused on landscape definitions (what) rather than relations (how).

### ***Becoming-with***

Through the three case studies, I show how over the past 100 years, landscape practice have moved away from a myth of control that favored bounded, predictable, and efficient sites and landscapes toward an acknowledgement of “sympoietic” systems that favor unbounded, collective, and unpredictable sites and landscapes.<sup>9</sup> In the National Plan, for example, Manning looked to large-scale mapping to find answers about environmental uncertainty, speculating about an unknown environmental future. More recently, landscape practices look to find design potential in ecological indeterminacy from the natural sciences, as explored in chapter five. As designers have sought ways to work toward sympoietic systems, I show how these efforts are stymied by anxiety and uncertainty about design agency and responsibility within a profession that this already weakly situated outside capitalist structures for recognition and understanding. What then are the conditions that would make possible the expression of ‘multiply realities’ and ‘saturated differences’ within site? In revealing and critiquing how sites have been maintained historically through normative site readings

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<sup>9</sup> (Haraway 2016b) 58. Haraway draws on the term “sympoiesis” from Beth Dempster. Haraway equates sympoiesis as ‘becoming-with’.

that remake hegemonic structures through scale, materiality, and process, I propose a fourth possibility for site practice, becoming-with.

Donna Haraway writes that “becoming is always becoming *with*, in a contact zone where the outcome, where who is in the world, is at stake.”<sup>10</sup> Rooted in plurality and vulnerability, becoming-with rejects that idea that site is pre-determined, indeterminant, void, or fixed. Rather, becoming-with is central to developing practices of care by affirming site as a space where landscape continuously becomes through relational socioecological subjects, systems, and processes. As Haraway suggests, relational processes of becoming are linked “co-productions of economics and ecologies, of histories and human and nonhuman critters [that are] relentlessly relational, sympoietic, and consequential.”<sup>11</sup> In framing landscape practice as ‘consequential,’ becoming-with suggests a design ethic and aesthetic where the messiness and specificity of site opens new possibilities for design rooted in relational practices of care.

Becoming-with the urban landscape means to continuously relocate, as philosopher Rosi Braidotti notes, “the sites, bodies, and processes of spatial participation or site work.”<sup>12</sup> Central to Braidotti’s idea of becoming-with is relationality. A relational approach challenges the privileged place of normative human actions in relation to environmental change by engaging multiple causalities and framings of time. This positioning recognizes how spaces and subjects are constantly transformed through relations that extend beyond a singular place and how causation is built through intertwined structures, subjects, and uneven exercises of power.<sup>13</sup> In many ways this comes

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<sup>10</sup> (Haraway 2008)

<sup>11</sup> (Haraway 2016b) 49. Karen Barad continues, an ethics of entanglement entails possibilities and obligations for reworking the material effects of the past and the future ... Changes to the past don't erase marks on bodies; the sedimenting material effects of these very reconfigurings—memories/re-member-ings—are written into the flesh of the world. What if we were to recognize that differentiating is a material act that is not about radical separation, but on the contrary, about making connections and commitments? (Barad 2011) 150.

<sup>12</sup> Braidotti 2006 quoted in (Gabrys 2012) 2922.

<sup>13</sup> (Elwood, Lawson, and Sheppard 2017)

through in the telling of stories. For example, in re-telling the story of the *Earthworks* symposium through three related but distinct former gravel sites, I re-frame the art symposium within a longer, interwoven story of material extraction, soil contamination, and the creation of new ecological systems. In this new framing, progress, growth, and other forms of modern expansion often celebrated within landscape practice are instead critiqued for the ways they produce uneven power relations. Identifying the ways landscapes are relational illustrates the extent to which ecology is always political, always historical, and always social.

Critically for landscape practice, becoming-with provides alternatives to practices of growth that depend on the subjugation of the others. I illustrate how normative site readings have historically regulated particular forms of life, creating what Tsing refers to as “winners and losers” of progress.<sup>14</sup> But what happens when site is not ‘either or’ but ‘and/both?’ For landscape practice, the suggestion that site can simultaneously be more than one thing has the potential to fundamentally change the starting point of design and decenter growth and progress as the assumed outcomes for design and landscape practice.<sup>15</sup> As I have shown, the categorization of site has historically resulted in the regulation of life, reflecting power-laden structures of society and dominant culture. Resisting modern progress and growth that creates ‘winners and losers,’ is a distinction seen in discourses surrounding novel landscapes or in the selection of the sites for the *Earthworks* symposium. Drawing attention to these distinctions requires disrupting how site is conceptualized temporally. Haraway suggests that this disruption is possible by including the ‘co-production of economies and ecologies’ and ‘histories’ in practices of becoming. Becoming-with therefore suggests a non-linear approach to site readings based on past, present, and future relationships rather than sequential pre-determined conditions.

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<sup>14</sup> (Tsing 2019) 143.

<sup>15</sup> (Puig de La Bellacasa 2015) discusses decentering growth and processes through soil management practices that are responsive to relational processes.

Finally, becoming-with decenters time and authority to allow for a future project that engages care as an embodied and enacted socioecological practice. Relational care ethics, rooted in feminist critiques of care and labor, takes responsibility for the world as it exists, including the ugly parts. A relational approach to care suggests a critically reflexive design process that embodies ecological politics as a “social project of justice that tactically and aesthetically practices interdependence, vulnerability, and creativity.”<sup>16</sup> Together, care and relationality becomes an ethic that challenges the social processes, political institutions, and cultural norms of how the built environment is perceived, materially reproduced, and managed by human and more-than-human natures.

### *Sites of Lively Care*

To care for a particular landscape inevitability means caring for intertwined and thick histories, relational socioecological practices, and situated site knowledges. I explore these three ideas by looking to how each of the case study examples produces the need for practices of care. Care practices are the actions that arise from care ethics and that work to focus our attention to how socioecological life is constructed through unequal power relations and how we can construct new relationships rooted in mutuality.<sup>17</sup> Importantly, care practices focus on action rather than solely critique. By focusing on actions, practices of care tend to be concerned with how we built spatial networks of interdependence, how we attend to the ways historical relationships have produced the need for care, and how we take up social responsibility in our professional lives.<sup>18</sup> These three ideas

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<sup>16</sup> (Krupar 2012) 320.

<sup>17</sup> See (Tronto 1993, Puig de la Bellacasa 2017, Lawson 2007) for introductions to care from the perspective of geography and critical theory.

<sup>18</sup> (Lawson 2007)

of care are expressed in each of the case studies and form a basis for theorizing how care could operate as a design methodology.

I propose care as a design methodology that develops practices for how human and more-than-human life can collaborate through site to produce acts of socioecological maintenance that are attentive to the politics of life—what it means to live, and who lives—as enacted through landscape relations. Care has the potential to be a powerful methodology for design, as opposed to only a framework or method, in that it can conceptualize and situate histories, self, and process within power-laden knowledge structures. Care philosopher Maria Puig de la Bellacasa notes that care is as much a way of thinking and relating to the world as it is a specific idea of “caring.”<sup>19</sup> Care always begins from asymmetrical needs with the intent that as care becomes participatory and grows, it will create more equal power dynamics over time. Attention to power is an important aspect of care and central to how it differs from affective practices. While some care scholars use care as a form of affective politics, I am framing care through power relations. As such, practices of care themselves also form asymmetrical relations of power, as science historian Michelle Murphy suggests.<sup>13</sup> By care, I am not referring to the ‘good’ feelings of care, rather I want to draw attention to the ways care can be used to resist hegemonic power structures as a critical, political position within landscape practice.

Care has the potential to be a design methodology that can simultaneously examine how we build spatial relations of interdependence, how we attend to the ways in which historical and institutional relationships produce the need for care, and how we take up social responsibility in our professional practices.<sup>20</sup> This position foregrounds relational causation, specifically the ways human

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<sup>19</sup> (Puig de la Bellacasa 2017, Tronto 1993)

<sup>13</sup> (Murphy 2015)

<sup>20</sup> (Lawson 2007)

exceptionalism arises from uneven power hierarchies.<sup>21</sup> Puig de la Bellacasa develops care from ideas of feminist care ethics developed by Joan Tronto in the early 1990s. Tronto describes care ethics as how we “maintain, continue, and repair our ‘world’ so that we can live in it as well as possible.” The ‘we’ in Tronto’s explanation of care ethics is intentionally vague to recognize how care often falls disproportionately on bodies, environments, and forms of life with less social power and mobility. Central to this idea of ‘we’ is the relational self who is connected to other subjects, spaces, and processes through unequal power relationships. More recently, care ethics has been extended to address the ways collective action forms in response to reflections of power. As a design methodology then, care offers a way of researching and designing that is self-reflective of situated and power-laden knowledge production. Puig de la Bellacasa and Tronto’s framings of care brings up several important considerations for design practice, primarily the ways ethics and practices of care arise from lack of institutional care or threats of institutional harm.

With this in mind, I suggest three ways care practices could be developed in landscape practice to respond to the intentions I outline in chapter one. First, care practice calls for more stories of intertwined historical formation, which I explore in chapter three through Warren Manning’s National Plan. The example of the National Plan suggests as a strategy for historical maintenance and repair toward past spatial injustices through historical narrative as a form of repair. Second, care practices draw attention to the need for interdependent spatial relationships, demonstrated in chapter four as a response to fragmenting the after-lives of former gravel pits. Third, care centers socioecological responsibility in our professional and personal lives, which I show the need for in chapter five through the example of novel landscapes.

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<sup>21</sup> de la Bellacasa also notes that it is not useful to try and disentangle care from the messiness of the world in order to “avoid reductionist simplifications of the good and evils of care.” Noting the ways care can also perpetuate paternal stewardship or caring over individual choice, de la Bellacasa suggests that rather than giving up on care “because it is enlisted in purposes we might deplore, we need to have its meanings debated, unpacked, and reenacted in an implicated way that responds to this present.” (Puig de la Bellacasa 2017) 10.

Care is always an active practice that requires ongoing maintenance. Media scholar Shannon Mattern links care and maintenance, writing, “to study maintenance is itself an act of maintenance. To draw connections among different disciplines, is an act of repair or, simply, of taking care—connecting threads, mending holes, amplifying quiet voices.”<sup>22</sup> A practice of maintenance is then central to care work. The maintenance that Mattern introduces suggests the importance of working toward and maintaining the care of knowledge. I suggest that historical scholarship that is attentive to the care of knowledge and past spatial injustices can begin this work of historical repair. For instance, why have there not been more studies on the significance of Warren Manning to shaping landscape practice? Even in the context of progressive politics in the early twentieth century, which are full of patronizing racial contradictions, Manning remains a white supremacist. Yet, histories of his landscape practice have conveniently overlooked racial dimensions of his work. To look seriously at Manning’s work and legacy would require interrogating the very professional roots of landscape practice in ways that will likely be unfavorable to early professional practice. Yet, for landscape to be an intellectual practice—as both a way of interpreting and a way of working in the world—and more than a professional service it must become critically self-reflective. This will require framing historical causation through multiple experiences of site and landscape while telling more stories and attending to the potential for repair of past oversights.

While attention to historical repair can engender care practices that are better situated to respond to contemporary questions, practices of critical self-reflectivity are central to approaching repair and maintenance. Critical self-reflectivity refers to the process of questioning one’s own assumption and perspectives to reflect critically on the impact and origin of assumptions, feelings, and behaviors. In the same way that critical race studies requires naming whiteness to dislodge racial

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<sup>22</sup> (Mattern 2018)

power dynamics, critical self-reflectivity in landscape practice requires that designers name themselves and the impact of their positions, behaviors, and assumptions in their work.<sup>23</sup> The *Earthworks* symposium revealed a lack of critical reflectivity, particularly in the ways design can exaggerate normative ideologies that seek to ‘heal’ and ‘cure’ perceptions of damaged nature. In this instance, greater critical reflectivity to the ways human exceptionalism has shaped ideas about ‘good’ and ‘bad’ nature to produce ideologies cure would likely change how the sites of the *Earthworks* symposium are engaged. A design methodology that centers self-reflectivity also suggests the possibility of repair that works with interdependency, vulnerability, and plurality, rather than definitive solution driven theories.

Finally, care practices suggest developing acts of socioecological responsibility. In chapter five, I consider how designers draw on knowledge from the ecological and environmental sciences, often without properly situating how that knowledge is created. For example, ecological resiliency has been framed as a more flexible approach to environmental stewardship in landscape practice, often centering novel landscapes as examples of the resiliency of nature without human oversight.<sup>24</sup> As environmental disturbances destabilize how land is known through edges, borders, and properties, care practices offer possibilities that counter normative ways of knowing land through ecological resiliency. Like care, resiliency responds to disturbance, yet often resiliency in landscape practice seek to ward off disturbances to avoid unwanted futures, such as sea level rise or storm surges, in ways that reify socio-economic and racial disparities.<sup>25</sup> While resiliency can respond to particular needs on individual levels, as a framework for landscape design, it risks maintaining systematic structures—and with it the inequities—that are most likely to ‘bounce back’ from

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<sup>23</sup> (Razack 2002)

<sup>24</sup> (Leichenko 2011, Leichenko, McDermott, and Bezbodrodko 2015, Fleming 2016, MacKinnon and Derickson 2012, Baker 2019a)

<sup>25</sup> (Braun and Wakefield 2019, Baker 2019a)

disturbances. Care practices, by contrast, respond to disturbances brought about by uneven power dynamics by insisting on relational causation. Care practices are attuned to the ways ecological management gives life to some while restricting access for others. By recognizing the biopolitical relations embedded in contemporary ecological methods, care practices work to recognize how novel landscapes often become novel through human exceptionalism not socioecological diversity. As such, care as a design methodology becomes a way of resisting how normative site readings erase and push aside multiplicity.

Landscapes and sites continue to blur the lines between modern science and cultural memory, unsettling boundaries between various forms of life and in the process revealing new contradictions between political, cultural, and ecological systems. As we continue to form new conceptions of what counts as nature, the next conversations in landscape practice will need to be about how we can create the conditions to make possible compelling and just spatial and material practices while acknowledging the multiple and diverse ways landscapes come into formation. Understanding site is key to developing tools, practices, and methods capable of imagining and actualizing these landscape practices.

Representing the fluidity of landscape through the boundaries of site helps to frame the immeasurable scale and complexity of what it means to be human, but this has also resulted in limiting “our capacity for imagination and caring for other worlds.”<sup>26</sup> In engaging historical scholarship to examine how past landscape practices have conceptualized ‘site’ and ‘landscape,’ I show how sites assembled and layered through plural narratives are often remade as normative categorizations predicated on the regulation of life. I suggest that resisting this categorization will allow landscape practices to develop critical theories and practices that are less cyclical and more

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<sup>26</sup> (Haraway 2016b)

open to alternate ways of knowing landscape. In response, I position care as a methodology that is an embodied aesthetic and ethic that takes responsibly for the world as it exists to create possibilities for design rooted in interdependency, vulnerability, and plurality. In thinking and acting through care, landscape practice has the potential to become a practice of life, with the critical creative and intellectual capacity to engage land and its relations.

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