MINDING THE GAP:

USING EXPERIENTIAL URBANISM TO CONNECT WITH ENVIRONMENTAL PROCESSES

by

GWENDOLYN ANNE WOLFGANG

(Under the Direction of Douglas Pardue)

ABSTRACT

This thesis submits that experiential design can use direct experience to reconnect contemporary western societies to a natural environment that has become hidden through industrialization and modernization. Case studies were conducted in order to illuminate ways in which landscape architects and artists have worked to create experiences between people and environmental processes in urban settings. Case studies organized by natural typologies were evaluated for strategies used to connect visitors to natural processes through experience. Findings reveal that designers are increasingly setting up ever more direct experiences with natural processes and materials, which stand to create reconnection to and awareness of these processes. These lessons were then applied to a site in Athens, Georgia, where pedestrian experiences were created with a natural and historic Town Spring. The case studies and application suggest that experiential design offers a rich method for reconnecting people and natural systems in contemporary urban areas.

INDEX WORDS: Landscape architecture, Art, Environmental art, Experience, Eidetic, Haptic, Greenfields, Environmental Connection, Greenfields

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DEDICATION

To my family

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CHAPTER 1

INTRODUCTION

> "In the twentieth century, the social processes that bring this maelstrom [of modern life] into being, and keep it in a state of perpetual becoming, have come to be called 'modernization'." (Berman 16)

The matter of man's connection to and subsequent disconnection from the natural environment has long been a point of interest and debate. Grounded in the ancient dichotomy of man versus nature, this discussion paved the way for modern commentaries like Godfrey Reggio's 1982 film Koyaanisqatsi. This film, which cleverly addressed this issue by employing a series of time-lapse vignettes, portrays the modern world as one of bustling disorder and slight chaos by juxtaposing serene images of nature with more hectic scenes, such as commuter patterns in major metropolitan areas. Reggio's response draws attention to Berman's "maelstrom" and suggests to the viewer that the world is out of balance and thus oblivious to important connections with the natural environment. Koyaanisqatsi, which translated from Hopi means "Life out of Balance," cleverly represents these ideas through film, emerging viewers in a rich and provocative experience. By interrupting the ordinary, expected viewing experience, Reggio was able to make an argument that society's worldview was in need of adjustment. Issues identified in this film have gotten worse and continue have been explored in more recent popular culture like Edward Burtunsky's 2006 film Manufactured Landscapes.

This thesis explores how designers can work to create places that offer rich, provocative experiences with environmental processes in order to expand, maintain, and reclaim connections with environmental processes. In the past, without the benefit of today's technology, an

awareness and appreciation of natural processes sometimes meant the difference between survival and extinction. Without noticing basic environmental processes such as the habits of water, populations often had their communities flooded or even faced starvation. This is still the case today, only modern technologies, settings, and lifestyles serve to mask this awareness. The same technologies that have enabled and continue to enable cities to thrive are also increasingly hiding natural processes in the name of efficiency, to the detriment of peoples' and nature's health, wellness, and long-term sustainability. Within this context, it is possible to create more meaningful ways to connect with environmental nature.

The Gap

Tasks that once took time, patience, and careful study can now be accomplished in a matter of seconds; the World Wide Web, cellular telephones, and other technologies have given society the ability to instantaneously Google once-elusive environmental processes, eliminating the need for actual exploration. Things like bird calls, changes in light and climate, and the subtle nuances of water that might once have been encountered in the natural environment can now be discovered with a few clicks of a computer mouse or taps on a Smartphone. Trips by foot, boat, or even horseback that once took weeks can now be done in far less time with the aid of the automobile. The same trips can even be foregone altogether in favor of using online tools like Google Maps' Street View.

Since the industrial revolution, cities have been developing more and more rapidly, and in some cases, have resulted in positioning themselves further away from, hiding from, and eliminating the environmental systems that are fundamental to their survival and the health and quality of life of their citizens. Once a country dominated by greenfields and agricultural

landscapes, the United States is now home to more than 300 million people, 82 percent of whom were considered urban or suburban dwellers in 2010. With urban growth being just over one percent annual growth, these statistics suggest increasing numbers of people living in urban settings, yielding changes in respect to experiencing natural processes. People will be further away from the resources and environmental processes that many of them associate with nature ("People and Society"). In addition to the shift within this country, in 2007, the United Nations speculated that by the end of 2008, for the first time in history, half of the world population would be living in urban settings (Dugger). This global conversion means that over three billion people are now facing the same challenges of separation from the natural environment. Not only are places rich in natural processes often hidden, disconnected, and easily overwhelmed by myriad distractions in cities, but the nature of today's urban and suburban landscapes is such that, due to widespread and contagious urban sprawl, the scattered greenfields that remain are quickly disappearing from the urban landscape. The conditions and challenges they present for design define the post-industrial American landscape, as illustrated in cartoonist Robert Crumb's 1979 work, A Short History of America (Figure 1).

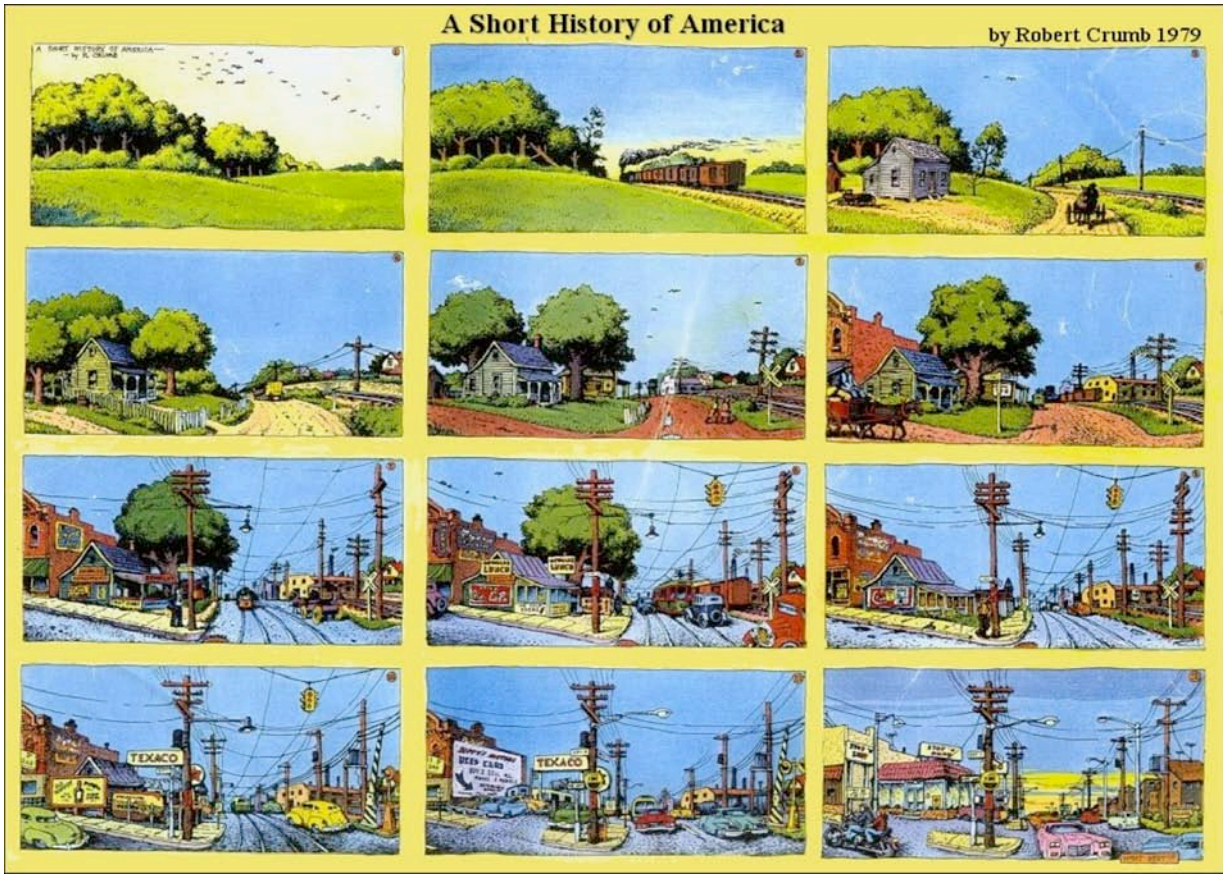

Figure 1: "A Short History of America," R. Crumb, 1979

With these growth patterns as the blueprint for contemporary development, the same type of development can only be expected to continue, or even amplify. This thesis builds on the idea that landscape architects can assist a contemporary urban society that is becoming increasingly disconnected from environmental processes, such as water systems and growth cycles.

Multiple authors cite technological advancements and modernization for the disconnect seen in contemporary society. From social critics like Marshall Berman, to designers such as Ian McHarg, Michael Hough, and Kristina Hill, all have come to the conclusion that modernity and its associated technologies, taken to an extreme, is a major source of this problem of disconnection. Modernization is again blamed for facilitating this disconnection when detailed by philosopher Marshall Berman in his book, All that is Solid Melts into Air: the Experience of

Modernity. Through this book, published in 1982, the author blames self-destructive qualities of modernization for distancing society from the critical connections it once had with its environment. Berman explains modernization as the product of multiple factors that work together to alter what was once an integrated system that was overtly connected to the natural environment. Berman's book sets up and describes a situation wherein society has advanced to the point that it is no longer aligned with the environmental processes that first shaped it.

Author Richard Louv recognizes that people have an innate need for and inherent right to connections with the natural environment ("Last Child," Athens). Those whose lives are void of these connections suffer from what Louv terms "Nature-Deficit Disorder," which he suggests is treatable with environmental exploration, nature play, and hands-on outdoor education. Louv notes that this disorder, which affects both children and adults, will only become more prominent in contemporary society if the current trajectory remains unaltered. As generations that grew up experiencing the natural environment continue to dwindle, society will be more disconnected as a whole. Louv was one of the first to articulate the phenomenon of children thinking of nature as an abstraction rather than a reality, paving the way for his advocacy of a return to awareness and appreciation of the natural world. Louv notes that it is critical to capture the interest of younger generations because they will be responsible for the future of the environment. His ideas build on those first discussed by theorists like E. O. Wilson, whose book Biophilia details people's instinctive intimacy with the environment and their subconscious need to be near and experience these systems.

Landscape architect and educator Kristina Hill, who builds on the work of earlier designers such as Olmsted, McHarg, and other environmental designers, suggests in her writing "Landscape as a System, City as a Landscape" that widespread, popular opinion holds that

society is, in fact, disconnected. This disconnection can be seen best when examining the change in technology and modernization that has occurred over the past several decades. She states that "the paradigm changes involved are becoming more evident by the day" and "underlie the major intellectual and aesthetic shifts" of the era (26).

Technology and modernization have major roles in shifting cultural norms and obscuring society's connection with environmental processes (26). While technological advancement may have the ability to augment some experiences, exposure to certain environmental processes may, on the contrary, become muddled by the accelerated advancements in technology. What cultural factors have contributed to this disconnection? Hill suggests technology and modernization as the genesis of the disconnection. She points to the ancient cities of Persia where towns were originally planned entirely around existing water systems. What may have been an obvious connection to the people of ancient Persia has since become camouflaged throughout the world, due largely to unchecked, rampant growth and the adoption of various technologies over the past few centuries. (29) In order to make his own life easier, man has engineered the complex, natural system of streams, lakes, and rivers to serve his own purposes. What transpired, which can be considered little more than a means to an end, resulted in urban landscapes dominated by plumbing, sewer systems, stormwater detention, and, perhaps most noticeably, streams and rivers rerouted through pipes and culverts. These mechanisms do little to capture the connection between man and water as an environmental system, but manage to deliver water when and where it is required in an efficient manner. This reduction in the visibility of, and therefore connection with, what is perhaps our most important system is unfortunate and consequential; there are now entire generations whose sole experience with these systems in urban settings is for it to be hidden and tucked away underground. By missing out on the subtle nuances of how

water and other environmental systems work, these generations run the risk of not understanding the ways in which these systems are connected to cultural constructs like economy and industry. Furthermore, if these connections are not understood, the relationship cannot be used responsibly and managed properly.

Recognizing the fact that, due to industrialization and modernization, society has grown increasingly disconnected from the natural systems that sustain and surround urban environments, landscape architects and artists have begun to cultivate new types of place in which rich, provocative experiences with natural processes are created to illuminate the relationship and make the inclusion of natural environment into city fabrics more meaningful with contextual and pervasive natural systems.

Rich, Provocative Experience

One's feelings towards his or her environment can often be linked directly to tangible experiences had in those places (Tuan 93). These experiences, both mental and physical, leave impressions that can influence actions and mark decision-making for a lifetime. Designers can exploit the influential properties of experience and harness that power to create the kinds of rich experiences with which they wish to leave site users, making the manipulation of experience invaluable as a design strategy.

Cities, people, and designers are increasingly seeking ways to reconnect to, and expand their critical connections with, natural processes. While design solutions for many natural systems are not widespread, landscape architecture and land artists have attempted to tackle this issue in the past, particularly in places that have experienced transformation. For example, during the industrial revolution, sites of ecological merit were sometimes transformed and repurposed as places of industry. Contemporary landscape architecture is seeing a trend of reclaiming these places, often for use as ecological restoration, park space, or even as a venue for history lessons. Landschaftspark in Duisburg Nord, Germany is one example of a landscape that is reconnecting to cultural, rather than environmental, systems (see Figure 2). This park repurposes the site's industrial leftovers to beautify and remediate the polluted landscape, a product of its days as a coal and steel production plant ("Introduction"). Other examples of reclaimed sites include James Corner's Fresh Kills, a former landfill, and West 8's Buckthorn City, which uses land reclaimed from the sea.

Figure 2: Duisburg Nord Landschaftspark, Duisburg, Germany ("Landschaftspark")

Using this kind of design, landscape architects and artists have sought to educate their audiences in many such places and expose viewers to environmental processes through rich, provocative experiences such as interruption and features that appeal to the senses. Are landscape architects using a set of strategies that is yet to be defined by the field? Identifying these strategies could prove to be very useful as landscape architects continue to design these kinds of spaces and employ these techniques in an effort to close the gap between environmental processes and urban places.

Research Questions

There are questions that surface from the assumption that advancements in technology have severed the connection society once had with surrounding environmental systems. Investigations into environmental processes from which people are disconnected, as well as causes and effects of this disconnection, begin this thesis. This is followed by ways in which

designers have tackled these issues through the cultivation of rich, provocative experiences in contemporary design.

How do rich, provocative experiences reconnect users to nature? What role or benefit does experience offer in facilitating reconnection? "To the degree that everyday inhabitants experience landscape, they do so in a general state of distraction, and more through habit and use than through vision alone" (Corner, "Eidetic Operations" 155). Here, Corner describes what he sees as a typical scene from a contemporary landscape, in which most people are too preoccupied and distracted to notice their environment in any great detail.

How have designers crafted places that reengage people with natural processes through the use of experience? Additional subquestions include 1) Where in urban settings do opportunities exist for reconnection? If designers can identify what is being lost and from where it is being lost, these can become prime sites for design interventions. 2) What could change if society was reconnected? Basic exposure could perhaps increase public awareness of natural processes, sparking greater interest in engaging environmental systems and reducing the frequency of negative occurrences such as nature-deficit disorder. In addition, the reconnection of natural processes has the potential to contribute to a shift in global attitudes towards the environment, particularly as they relate to urban development. 3) Finally, why are rich, provocative experiences good methods for reconnection?

Purpose

> "In many ways, the environmental crisis is a design crisis. It is a consequence of how things are made, buildings are constructed, and landscapes are used. Design manifests culture, and culture rests firmly on the foundation of what we believe to be true about the world. Our present forms of agriculture, architecture, engineering, and industry are derived from design epistemologies incompatible with nature's own. We have used design cleverly in the service of narrowly defined human interests but have neglected its

> relationship with our fellow creatures. Such myopic design cannot fail to degrade the living world, and, by extension, our own health." (Van Der Ryn and Cowan 9)

Given that design has the potential and the responsibility to connect culture and nature (Gobster and Hull 7), the primary purpose of this thesis is to find innovative ways that landscape architects have heightened awareness of environmental processes in urban settings through experience. It will focus on 'rich experience', an emerging branch of design, in order to make connections among art, ecology, and landscape architecture. The ideas presented in this thesis correspond with the progression of landscape architecture, including revelatory design, sustainable urbanism, landscape urbanism, and eco urbanism. The field is now poised to evolve even further by incorporating richer experiences and interactions with life-sustaining natural processes into the urban fabric.

The study of environmental nature, including water, is also particularly timely because of the numerous global campaigns centered on natural resources. Miscellaneous organizations, including The International Center for Integrated Water Resources Management (ICIWaRM), whose focus is on environmental management, advocate for everything from clean drinking water to conservation as they focus on this resource's supply and sanitation all over the planet. As the world faces global climate change and a population surge, careful management of this resource is now more important than ever.

A secondary purpose of this thesis is to uncover ways in which landscape architects have used designs specifically related to experience to improve society's understanding and heighten its awareness of environmental processes in increasingly urban settings. Introducing these strategies for connecting to the natural environment can suggest ways in which landscape architecture can support and take an active role in a world with more engagement with and understanding of its connections to environmental processes, potentially affecting the worldview

of and collective regard for the environment. Benefits of helping people see themselves as connected to natural processes could increase awareness of the processes and potentially lead to them becoming more sensitive towards the environment.

Limitations

This thesis is bound by several limitations, of which the most significant is the abstention of an exact definition for nature and environment. It is the goal of this thesis not to define the natural environment absolutely, but to converse productively about the topic. Scholars have been attempting to define "nature" and "environment" for generations, as evidenced by there being no one, clear definition for these socially-defined and -negotiated terms:

> "It is fair to say that before the word was invented, there was no nature. That is not, of course, to suggest there were not the entities and phenomena we now attribute to nature, but rather to say that people were not conscious of there being any such entity as 'nature.' For nature is, before all else, a category, a conceptual container that permits the user to conceive of a single, discernible 'thing.' " (Evernden 89)

Within the context of landscape architecture, the landscape educator D.W. Meinig illuminates the difficulty in defining nature and environment, which have been, and continue to be, intangibly defined in many different ways (Meinig 8). Accordingly, for the purposes of this thesis, nature and environment will refer to life-sustaining natural processes, or those processes without which human life could not exist, such as water or light. Additionally, this thesis works under the assumption of disconnection and will attempt neither to identify nor decipher all the reasons for this disconnection.

There are also parameters that limit the scale and study area of this thesis to cities within Western culture. There may be many places where disconnection is occurring, but this thesis will limit its discussion to urban realms. Likewise, while cities across the world are likely dealing with the same issues and generalities can be made pertaining to other regions, this thesis' focus is on Western cities, which can be cursory in regard to their efforts to deal with the natural environment in a way that is inclusive and productive.

Not ignoring that there are exceptions, such as Boston's Emerald Necklace and Central Park in New York, natural environments, and experiences with those environments, are difficult to find in many urban places in the United States. Downtown Atlanta, Georgia, for example, presents an especially challenging urban landscape; green space is limited, and the Interstate 75 and Interstate 85 connector bisects the city, often making for an unpleasant pedestrian experience. With such a disconnected landscape, it follows that finding opportunities to engage people in experiences with environmental processes is particularly challenging; moreover, the technology now available to people in cities (e.g. cell phones, mobile internet devices, etc.) and the fast-paced, hurried lifestyle of downtown dwellers make finding these opportunities all the more difficult, and therefore more critical, highlighting the need for places that create engaging experiences with nature in order to combat these factors.

It is also important to note that case studies, while offering valuable lessons from the past, must be looked at through the lens of time. What might now be a typical, or even repetitive space may once have been shocking and out of the ordinary. The case studies presented in this thesis should be considered in terms of their original conception and installation. These case study evaluations are somewhat subjective, having been made according to a set of specific criteria. Using other criteria could result in different findings.

Lastly, it is important to note that while the theory of disconnection is universal and can apply to many situations (i.e. natural elements, which this thesis studies, and cultural elements, such as industry and manufacturing, which this thesis does not discuss), this thesis' study is concerned only with disconnected elements of the natural, environmental variety.

Structure and Methodology

Within the realm of modern-day culture, this thesis will focus on cities, the people therein, and the life-sustaining, environmental processes that support and give meaning to both. While the terms "natural" and "environmental" mean different things to different people, this thesis designates life-sustaining natural processes as those processes in the environment without which human life could not exist. Such processes include light, climate, and those associated with water systems (for example, floods and droughts).

A focus on urban landscapes is of particular interest given cities' many complexities. Additionally, city dwellers may be the population that is most familiar with uncelebrated natural processes, as their most familiar landscapes typically include features such as piped rivers, culverts, and storm drains. Urbanites in particular have often been shielded from natural processes.

This thesis will highlight and document, through case studies, the approaches, mechanisms and devices through which designers have worked to reconnect people in urban settings with the natural environment. This thesis uses a case study methodology to examine how landscape architecture, over the last 50 years, has created rich, provocative experiences between people in urban environments and environmental nature. By examining disconnected landscape

typologies and subsequent case studies, conclusions can be drawn concerning best practices and the potentials of these types of designs.

The small number of selected case studies was chosen because of their ability to showcase nature play and a variety of natural elements to which people can be connected. Mark Francis' 2001 "Case Study Method for Landscape Architecture" was used to gather pertinent information about several different projects. Using a standard method to evaluate these places provides a foundation and straightforward method for qualitative comparison and also brings "to light exemplary projects and concepts worthy of replication" (16). By asking a standard series of questions and developing a framework against which to test case studies, Francis is able to draw conclusions about a group of sites. Typologies found through case studies can be used to categorize existing landscapes and allow for more informed, meaningful discussions about the ways designers have approached this problem in the past. The case studies presented in this thesis were chosen to represent one elemental natural processes. While projects often include connections to more than one of these processes, projects were categorized based on the signature design elements of the site. For the purposes of this thesis, experiences were evaluated using the three-part diagram as a guide (see Figure 3), making the assumption that rich, provocative experiences are a product of three factors: mentality, physicality, and intensity.

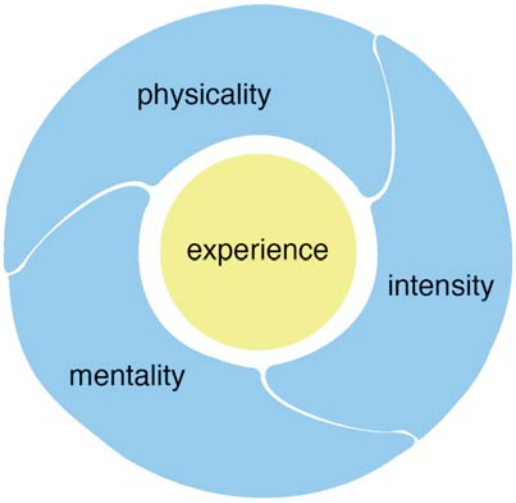

Figure 3: Components of Rich, Provocative Experience

Case studies were organized into three typologies based on broad natural content. These typologies are not comprehensive but rather a starting point for further discourse: 1) geology, 2) water, or 3) growth. After examining the case studies, projects were charted using the four square method, allowing for comparative evaluation. The horizontal axis runs the gamut of natural landscapes, while the vertical axis indicates the degree of intensity to which each project is experienced by the user, represented by a spectrum ranging from very tame to more wild experiences. This feedback provides additional information on which designers can draw as designs work to connect people with natural environments in the future.

CHAPTER 2

THE ARC OF DISCONNECTIVITY

Man's relationship with his environment has long been a topic of debate, but discussion on this relationship peaked in the 1960s and 1970s. On the heels of writings like Rachel Carson's Silent Spring in 1962 and the establishment of the Environmental Protection Agency in 1970, the United States began to see a dramatic increase in environmentalism. The inaugural celebration of Earth Day in 1970 helped to solidify these attitudes and trigger an explosion of environmental art. Art, popular media, and scientific theories all contributed to the new attitude towards nature and the environment. These sentiments can be seen through a number of occurrences in popular culture, including Godfrey Reggio's 1982 film Koyaanisqatsi: Life Out of Balance. The movement was still gaining traction in the 1990s, when young generations were presented with characters like Captain Planet, an environmentally-minded superhero, and recycling efforts took center stage, appearing both in schools and even in more unexpected arenas; the "Reduce, Reuse, Recycle" slogan and chasing arrows logo even made their way onto Happy Meal boxes at the fast-food giant McDonald's restaurants.

The correlating change in preferred urban design strategy (from sweeping industrialism to more sensitive contemporary practices) is chronicled in Richard Sennett's The Culture of the New Capitalism, in which he discusses the transition of the American economy into bureaucracy. "Bureaucracy seemed more efficient than markets." This "search for order...spread from business to government and then into civil society." He goes on to give examples of the push for efficiency in everything from schools to a variety of professions. Sennett believed this erases the

subtle nuances that make everything interesting and only compounds the problem of not being aware of nature (22).

Cultural geographers such as Jay Appleton have suggested, through theories such as prospect-refuge, that society has been perceptually disconnected from nature since the ascendance of modernism in twentieth century art and design. Physically, man was especially connected to the natural environment early in his history. However, man has traditionally perceived himself to be removed from, or above, nature. Man has always been connected, and yet his perception has always been that he's not. Since the beginning of time, man has seen himself in the role of nature's overseer. Society feels some ownership of nature, proven, if by nothing else, in the buying, selling, and ownership of land.

Perhaps the most telling change to this reliance upon the natural environment came with the industrial revolution. Industrialization brought a masked relationship with nature (Berman 16). Seemingly overnight, machines were performing tasks that humans once had to do. No longer were people limited by weather, light, or climate conditions. Inventions like clocks, indoor plumbing, night lighting, and air conditioning set off the steady march into contemporary culture and all of its technological privileges. Later, the World Wide Web ushered in a new phase of surrogate experiences, wherein one can choose to experience environments through the screen of a laptop or through even more portable devices like iPods, tablets, and cell phones.

Particular opportunities and challenges exist in urban settings. Kristina Hill's comments on technology's obscuring of natural processes in cities and contributing to the disjointed urban developments common in today's cities are explained through the "scrambled egg" scenario in which the parts of a city that were once whole have been broken into pieces and scrambled beyond recognition. She goes on to discuss the "burrito city" example in which the designer has

been forced to collect the scrambled egg and scoop it into a new type of landscape; Hill deems the "burrito city" the next stage of urban evolution ("Landscape as System" 32).

In densely-populated downtowns, the demands on a place's resources can often dictate development. Perhaps the efforts to run a city in an efficient manner have an adverse effect on the prominence of the surrounding ecosystem. Landscapes dominated purely by cultural systems and traditional urban infrastructure could help identify the very places where these critical disconnections occur. In addition to the aforementioned afflictions, these landscapes also supply characteristics that are ideal for interventions and reconnections. Opportunities such as large populations, the convergence of multiple systems, and a culture of innovation all work together to create ideal opportunities to recast 'nature' in an urban setting. This will need to be approached from outside of the realms of science and technology; German sociologist Ulrich Beck postulates that solutions to the problem may more likely come from fields like art. (Beck, Giddens and Lash, Reflexive Modernization, 31)

CHAPTER 3

EVOLUTION OF RICH, PROVOCATIVE EXPERIENCE

Landscape and experience are intensely intertwined. Experience is defined by and made stronger by a layering of both haptic, physical experiences, which are immediately read through coherence and complexity, and cognitive experiences, gleaned after time through mystery and legibility. It is the knowledge and recognition of these four qualities in a place that informs a user's experience (Kaplan 53). The richest and most provocative experiences link legibility with understanding of environmental nature. The intensity of the experience is also an important factor in many of these places, as the experience itself is often just as significant as the nature being experienced (Figure 2). Landscapes can successfully accomplish this rich, provocative experience by paralleling those descriptors with robust, thoughtful, and haptic experiences (i.e. rich, provocative experiences).

Psychologist and philosopher John Dewey, in his book *Experience and Nature*, concluded that people learn better from experience than from more passive methods, such as simply viewing or being told about a subject. When considering nature specifically, Dewey says, "experience…is no infinitesimally thin layer or foreground of nature, but that it penetrates into [nature], reaching down into its depths, and in such a way that its grasp is capable of expansion." (Dewey, 3a)

At the heart of this discussion is the notion that design can cultivate rich experiences between people and natural processes, which ultimately may build environmental values. Early designers' first impulses were to fix the problem of urban disconnections with the natural

environment by reversing its effects. Designers tried, in essence, to undo the damage that had been done through widespread modernization, and ecological restoration became the standard treatment for over-industrialized landscapes.

Landscape architect James Corner argues that designers must give a shock to the system, thus interrupting the monotony of ordinary urban landscapes, to get the attention of the intended audience. An increase in the use of haptic design in landscape architecture, which allows users of a landscape to engage multiple senses in various ways to experience a place, is one tactic suggested by Corner for creating rich, provocative experiences with natural processes in urban settings. This view is reinforced by author Richard Louv, who emphasizes the necessity for children's hands-on relationship with nature, and by social psychologists Rachel and Stephen Kaplan. The Kaplans' writings on environmental psychology find that a person's understanding of and preference for nature is largely based in his or her perception of a landscape, based on the four fundamental traits identified by the Kaplans. These qualities, while somewhat varied, are all tactile experiences that require considerably more involvement with a landscape than viewing scenery or other forms of passive engagement, necessitating rich experiences for full comprehension (Kaplan 53).

The framework of this thesis builds on existing landscape architecture theory and as such, plays host to the earlier trends in the field, such as new urbanism, landscape urbanism, and sustainable urbanism. With the exception of the earliest iteration of new urbanism, these movements have been expanding their scope to be more inclusive of the natural environment in urban design. As designers look towards the next evolution of urban design, which this thesis suggests is "experiential urbanism," integration of the urban grid and the natural environment

remains, but focus shifts from citywide planning efforts to more site-scale interventions and design.

New urbanists, whose mentality of keeping the natural environment close, but ultimately separate for its own protection, felt their theories had solved the age-old problem of man's complicated and capricious relationship with his environment by separating the two. If man and all of the calamity he brought with him were kept separate from natural areas, he would be unable to harm those natural resources; the solution was to design condensed cities that were removed from the natural environment, allowing that environment to thrive, theoretically unharmed by society.

Many agreed that new urbanism was a movement of merit, in that it recognized the importance of the natural environment. However, some believed that by focusing on environmental preservation, new urbanists had forgotten people in their plan. Landscape urbanists were especially critical of new urbanism, citing that if people were not included as a part of the environment, it would be next to impossible for them to understand and appreciate it. Landscape urbanists felt it was imperative to include, rather than omit, people in the natural environment. Landscape urbanists broke down the new urbanist model of separation and reconstructed it; instead of keeping the two apart, natural environments were woven into the urban fabric, allowing for the confluence of these systems (see Figure 4). One example of this integration was the installation of rain gardens where there was a lack of exposure to water systems. These types of projects helped to usher in an era characterized by a plethora of revelatory landscape interventions.

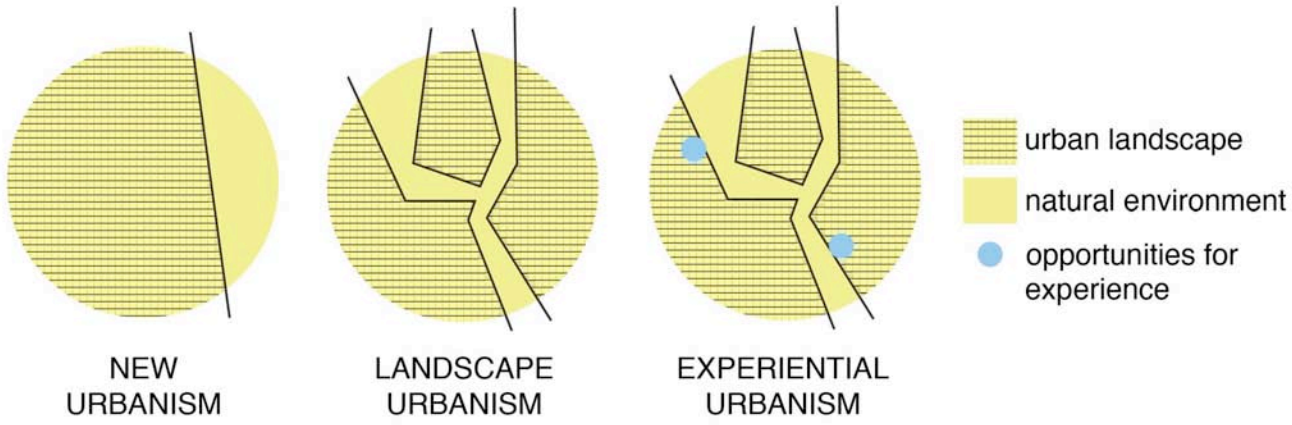

Figure 4: Evolution of Urbanism

1997 saw the landscape urbanism conference in Chicago, and was followed in 1998 by the special revelatory issue of Landscape Journal, entitled "Eco-Revelatory Design: Nature Constructed/Nature Revealed." In more recent years, revelatory design has been replaced by discussions on sustainability, and landscape urbanism has taken a backseat to ecological urbanism. Practitioners like James Corner, Charles Waldheim, Adriaan Geuze, and Mohsen Mostafavi took part in what would become common practice in urban design for the next few decades.

These designers also helped chaperon its transition to ecological urbanism. Citing prior urban design practices, Waldheim writes that the field has been "reactionary to the cultural politics and nostalgic sentiment of new urbanism" (Waldheim 22). The more proactive approach came with the moniker of "eco-urbanism," and paved the way for designers to give more weight to the existing, natural environments of urban spaces. Ecological urbanism aimed to address the criticism that established urban design practices had been too focused on ideals and that, moving forward, urban designers should instead focus on dealing with the existing urban condition (Waldheim 24).

A decade after the seminal conference in Chicago, landscape urbanism had given way to ecological urbanism. Ecological urbanism, which differed from landscape urbanism in that it is more socially inclusive of the environment, looked to ecology for inspiration in urban design.

Similarly, the art world saw a shift towards a focus on the environment. In 1978 Alan Sonfist, whose work evokes narratives by engaging with natural landscapes, created his Time Landscape in New York (Alan Sonfist). Sonfist took a corner lot in the city back to what it might have looked like before settlers had arrived. A native plant pallet was used, and the property was fenced off from neighbors when he was finished. While no invasive species were used in the original design, Sonist did not prevent them from coming in once the installation was complete. What ensued was an experiment in what might have been there had man not entered the picture ("Time Landscape," Alan Sonfist).

More recently, the urban landscape has become saturated with these types of revelatory designs, and, for some, the novelty has begun to wear off. If designers continue to recreate the same landscape over and over again, they run the risk of losing an audience whose attention is already pulled in many directions. While landscape urbanism provides the framework for the natural environment to be experienced in the city, initiatives like eco-urbanism provides the small-scale ideas that offer actual experiences. While weaving natural systems through the urban landscape is beneficial and is generally considered a vast improvement over aspects of new urbanist design, more recent movements along the lines of eco-urbanism and augmented landscapes are beginning to acknowledge that the experience is essential to successful new hybrid landscapes. Landscape architecture uses technology to express this complicated relationship by adaptively responding to environmental processes (Smout Allen 6-9). By

allowing for landscape users to have these new, provocative experiences with natural systems, designers can foster a reciprocal relationship between the two.

Throughout Second Nature, Adriaan Geuze explores the "City-Nature Symbiosis." Geuze, a founder of the firm West 8, believes designers do their audiences no favors by treating sites as singular, pristine properties with the potential to stand apart from the larger urban context. Geuze believes this approach to landscape architecture to be outdated and that until recently, landscape architects have "stubbornly continued to cherish the illusion of a nature that is authentic" (24). Instead of untouched, natural environments, the reality is that most new projects now occur on sites that are adjacent to cities and must be incorporated with existing urban infrastructure. Landscape architects should, therefore, consider their work as a building block of this larger urban system. In essence, landscape can be thought of as another type of infrastructure: one piece, working with the whole to function as the designer intends. Designers must recognize that there are multiple outside systems against which their designs should play; and by the same token, a landscape's potential to influence the systems around it should be understood and legible to the viewer.

Experience can be the next step in this evolution; as seen in the case studies, a variety of methods and trends in experience can be seen as a mode of reconnection. Haptic experiences are more indelible than those that offer a more passive experience (Corner, "Eidetic Operations"), and can be employed by landscape architects to reconnect people in urban environments to environmental nature. By developing a sort of "experiential urbanism" to follow new urbanism and landscape urbanism, designers may be able to mend the gap between natural and urban environments.

CHAPTER 4

CASE STUDIES

Selected case studies focus on projects/design interventions in the landscape where there exists a rich experience of the interplay between cultural systems, urban infrastructure, and environmental processes. Mark Francis' case study method, which focuses on a consistent set of questions to comparatively evaluate projects, was used to target the most important questions for each case study. Francis' case study method was used as an approach to deciphering the case studies and document information so that projects could be systematically charted and consistently compared.

Six projects were studied, two from each of the three typologies: geology, water, growth. This set of three was chosen to represent the wide range of natural processes present in the environment and because of their common prominence in parks designed for nature play. In addition to gathering basic information about each site, information was cataloged by seeking to answer the following questions: 1) Which natural systems were illuminated through the design? 2) What is the rich, provocative experience for people in the landscape? 3) Which lessons learned are applicable to landscape architecture? Francis' case study method provided the framework from which rich experiences were identified and evaluated.

"As the profession develops more of its own theory and knowledge base and communicates this more broadly, the case study method promises to be an effective way to advance the profession" (Francis 15). In this example, by studying the ways in which designers have tackled the problem of experiencing a reconnection between urban and natural systems,

successful approaches can be discovered and cataloged for use by designers of future landscapes. Case studies, identified primarily through a review of the literature, highlight both success and shortcomings in designs, which can then inform the next wave of designers as these types of projects continue to be popular amongst landscape architects.

Case studies were selected to showcase a variety of approaches for reconnecting people with environmental processes in urban settings. These case studies fell into one of three typologies, based upon the natural elements to which they connected viewers: 1) geology, 2) water, or 3) growth. Though some may fit into more than one typology, the case studies were categorized according to their signature design elements as a way to facilitate discussion. There may also be additional typologies, such as climate or topography, that could be included; these three typologies were chosen in order to develop a set of delineated and discussable environmental features that can be generally agreed upon as "natural" elements of the physical world. This thesis takes a closer look at two designed landscapes in each of the three typologies.

Typology 1: Geology

Teardrop Park

Teardrop Park (2004), by Michael Van Valkenburgh Associates and artist Ann Hamilton, is a popular outdoor space in New York that offers a unique, revelatory experience of environment in Manhattan (see Figure 7). Teardrop Park "is designed to address the urban child's lack of natural experience, offering adventure and sanctuary while also engaging mind and body" ("Teardrop Park," Van Valkenburgh). With a focus on geology, Van Valkenburgh presents sustainable practices of water harvesting and the exclusion of fertilizers and pesticides. Water is harvested and recirculated on site, affording a revelatory experience for those who witness it. The design uses natural stone and dynamic water play to cultivate rich experiences with those elements (see Figure 5).

Figure 5: Water features at Teardrop Park, New York ("Teardrop Park," Van Valkenburgh)

Rich, Provocative Experience

In addition to being presented with the large-scale boulders and a rock wall (see Figure 6), intimate engagement with sustainable water harvesting cycles provides a rich experience for users of Teardrop Park. Haptic design features, such as water play, set against the backdrop of natural stone and water, help visitors interact with natural systems in engaging and memorable ways ("Teardrop Park," Van Valkenburgh).

This park offers true rich, provocative experiences by presenting natural materials in a very tactile manner and affording opportunities for engaging with natural processes. Microclimates and an intricate water system are mentally stimulating for park users who can watch the water as it moves across the site. Lastly, the multiple dynamic water features provide a level of intensity to the site.

Figure 6: Rock Wall at Teardrop Park, New York ("Teardrop Park," Van Valkenburgh)

Figure 7: Teardrop Park, New York, plan ("Teardrop Park," Landscape Architecture Foundation)

Île Deborence, Parc Matisse

Parc Matisse in Lille, France is an almost twenty-acre park, comprised of several distinct spaces. In the center of a large, open space sits Île Deborence, sometimes referred to as Deborence Island, by garden designer Gilles Clement. A mass of rock sits in the center of the park and supports a forest, planted more than twenty feet above ground level (see Figures 8 and 9). The inaccessible landscape represents "the sum of the space left over by man to landscape evolution - to nature alone" ("The Third Landscape").

Figure 8: Deborence Island in Parc Matisse, Lille, France (Google Maps)

Figure 9: Deborence Island, Parc Matisse, Lille, France ("Parc Matisse")

Rich, Provocative Experience

This experience is presented through contrast; by situating the park in the center of such an open space, Clement has literally elevated its importance. Yet, for all this attention, the park still receives no visitors, as it is completely inaccessible. The resulting mystery and curiosity mark a new type of rich experience for users of the park.

The large scale and tactile quality of the rock offer a rich physical experience even though park users cannot get on top of the structure. This inability to do so, consequently, provides the rich mental component to the experience. Intensity is brought to the park through the use of contrast; by placing the large mass in the middle of a vast open space, Clement has developed an element of shock for visitors.

Typology 2: Water

Allegheny Riverfront Park

Allegheny Riverfront Park in Pittsburgh, Pennsylvania is a landscape that is centered on water, its related natural processes, and its impact on a site. Rivers like the Allegheny River, which can flood from time to time, were historically a deterrent for urban development, due to the issues that can arise during heavy rain and other large storm events. Pittsburgh, however, grew despite the river's flooding. Designed by Michael Van Valkenburgh Associates in the late 1990s, the Allegheny Riverfront Park is situated on a narrow stretch of riverfront property along the Allegheny River on the north side of the city's cultural district (see Figure 10). Pittsburgh, like many cities, was planned and developed in a specific way, because of the characteristics of its surrounding landscape. Industry, while a profitable venture for Pittsburgh, did not typically result in spaces that were people-friendly and were less than desirable neighbors for the upscale residential communities that sprang up around this time (Amidon 67). Pittsburgh was arranged according to the logic of topography, giving way to utilitarian zoning decisions. This nod to the natural environment, however, does not necessarily govern the methods by which society develops today.

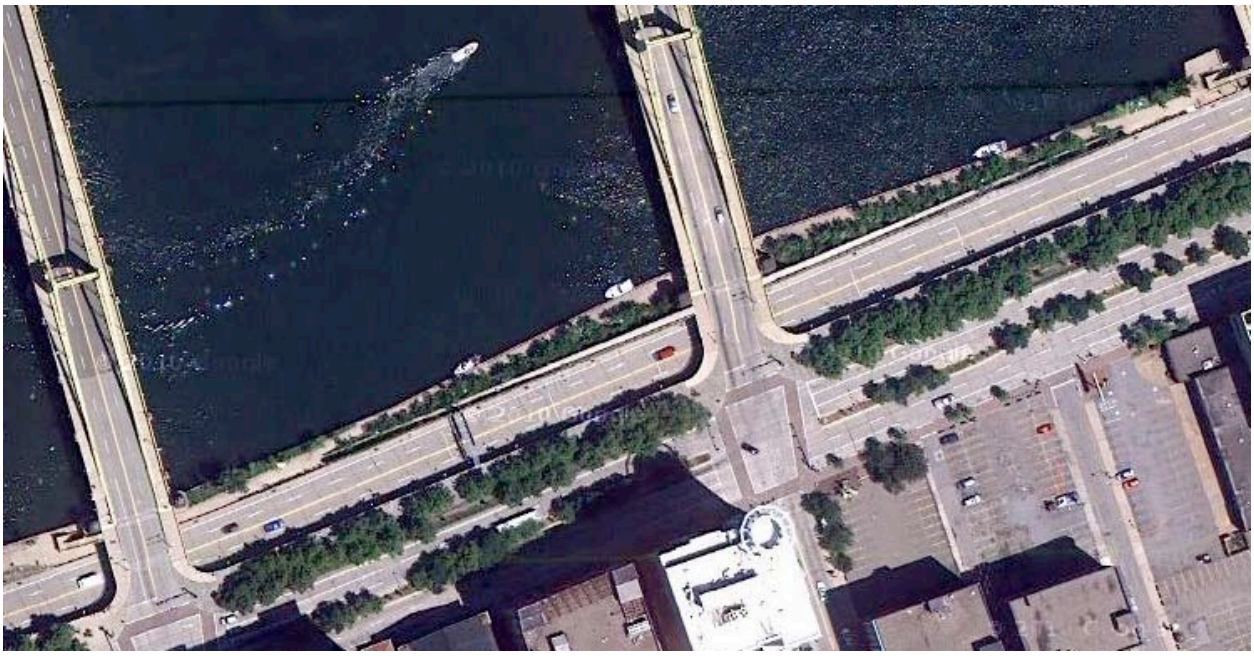

Figure10: Allegheny Riverfront Park, Pittsburgh, PA (Google Maps)

Rich, Provocative Experience

The rich experiences employed by Van Valkenburgh includes a planting palette that provides a new experience; the waterfront was planted with species that have the ability to regenerate after flooding, showcasing their connection with and dependence upon environmental processes. Frequent visitors to the park have the opportunity to witness the environmental processes firsthand. Over the course of a season, one might see plants that grow, bloom, and thrive before being uprooted by flood, becoming flood debris, and regenerating. Van Valkenburgh ensures that this flood risk remains at the forefront of park users' minds by placing visual reminders of flooding in their path (e.g. sidewalks were cast with impressions of flood debris). This small visual clue is another avenue for increased awareness of environmental processes. In addition to visual changes, the use of the park changes during a flood because visitors cannot access that area. Allegheny Riverfront Park also features collaboration with artist

Ann Hamilton, which provides a blueprint for the successful inclusion of art as a compelling way to engage users.

At Allegheny Riverfront Park, the rich experience is that of seeing the after effects of flooding and gaining a window into the power of water, prompting reflection on the connection to the natural environment. By placing the park in the floodplain, Van Valkenburgh puts visitors in a spot that was previously inaccessible to the public (see Figure 11). "The design of the park seeks...to create an experientially rich pathway from an urban upper level park over a major regional highway down to a lower level park at the river's edge. The lower level is deliberately wild in its native plantings, which can regenerate themselves after floods or ice flows. The upper level offers access to outstanding river views from refined bluestone walkways planted with stately London Plane trees" ("Allegheny Riverfront Park").

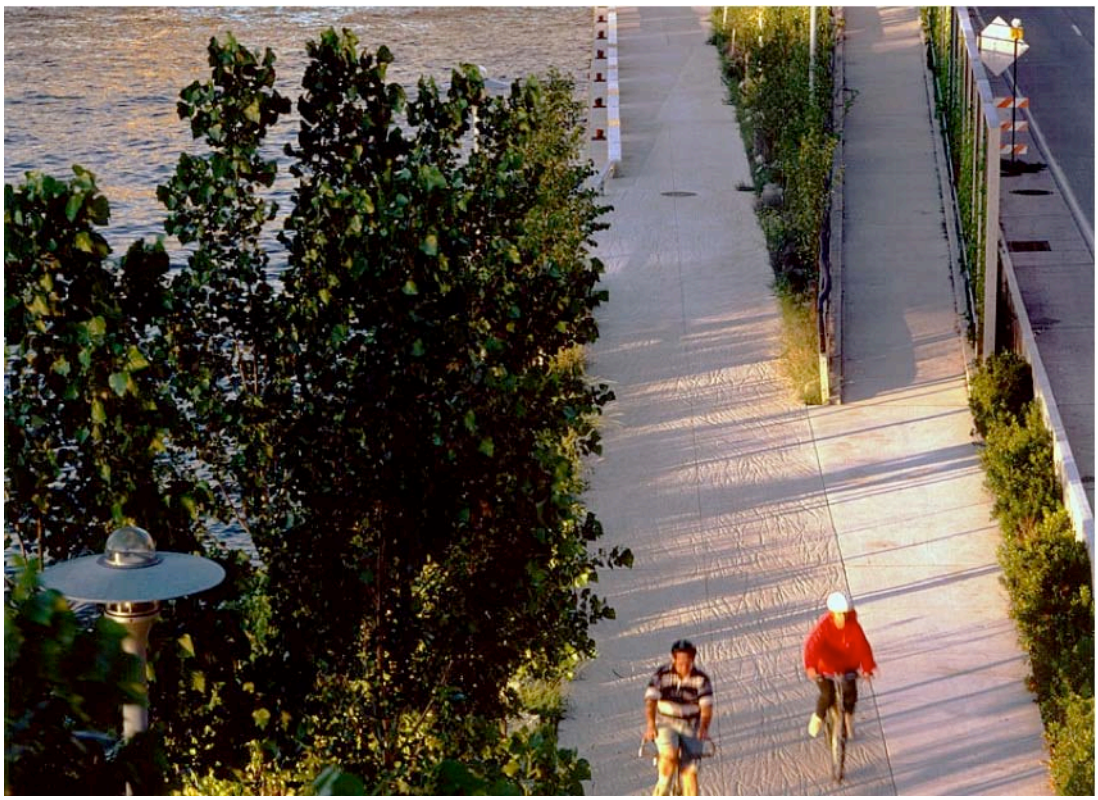

Figure 11: Allegheny Riverfront Park, Pittsburgh, PA ("Allegheny Riverfront Park")

Washington Canal Park

Also an exercise in revelatory design for dynamic, engaging systems, a plan for Washington Canal Park along the Anacostia River in southeastern Washington, DC also showcases water as an engaging environmental system. The site is made up of three small blocks along the Anacostia River. Kathryn Gustafson, whose firm Gustafson Guthrie Nichol created a design for the park, explained during a 2005 presentation that in order to avoid monotony and hold park users' attention, the design for each of the blocks focuses on a different action and is designed to combine people and environmental processes (in this case, water and innovative stormwater management strategies). Gustafson and her team designed a series of spaces through which visitors and water travel in tandem, unifying social and environmental processes (see Figure 12). The rich experience in this case is the close association with water. A person's experience mimics that of the water as both are conveyed, celebrated, and collected throughout the site, balancing the mutually beneficial relationship between man and nature that Gustafson believes is so important (Gustafson). Fore example, as water travels and is collected in a pool in the final block of this design, so do people travel through the site before collecting in an amphitheater.

Rich, Provocative Experience

In addition to the experiential landscape design, which presents multiple opportunities for physical connection, artist David Hess designed a series of interactive sculptures to be included in each of the three park blocks, which also promise to visually augment visitors' experiences at the park. Sculptures will measure the amount of water being captured and recycled by the site features, creating a tangible connection for park users, and one that can be mentally engaging.

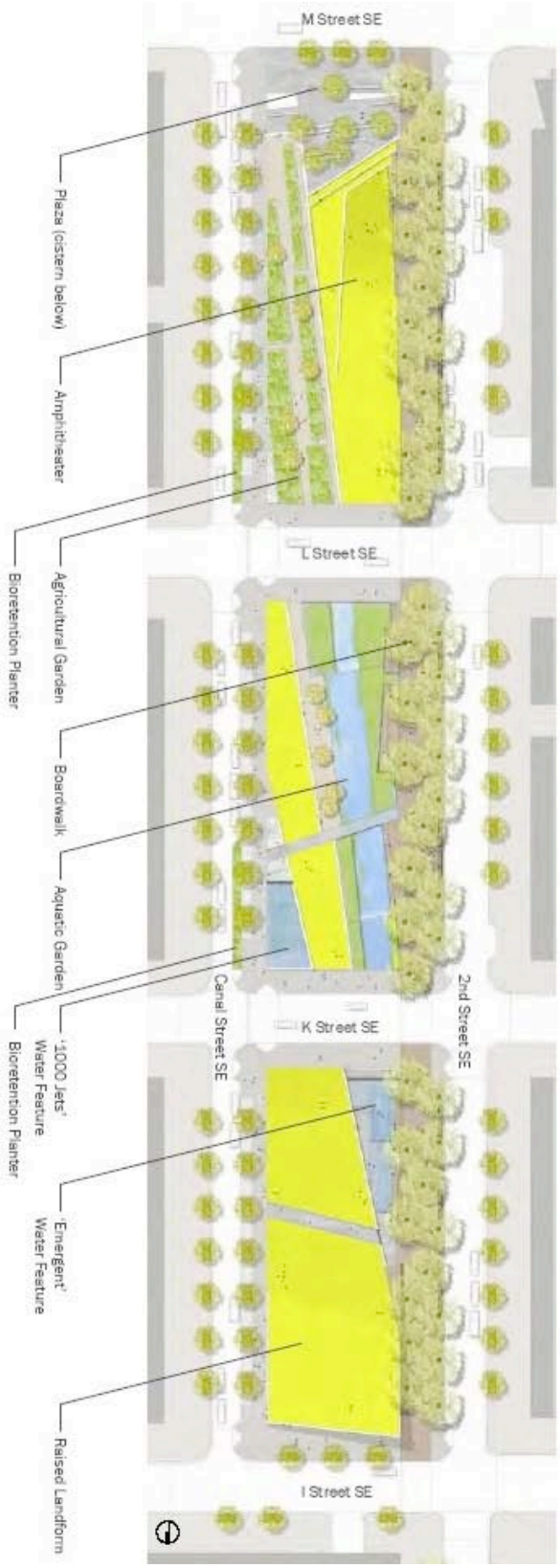

Figure 12: Gustafson Guthrie Nichol's design for Washington Canal Park, Washington, DC ("Canal Park Design")

Typology 3: Growth

Time Landscape

Time Landscape, a 1978 installation by artist Alan Sonfist, is also an example of a hands-off experience, though executed in a very different type of way. This park, situated at the northeast corner of West Houston Street and La Guardia Place in lower Manhattan, was conceived as a way to broaden "the idea of how nature can be reintroduced into the urban center" by contrasting the cultural history of Manhattan with the artist's interpretation of the natural history of the site ("Time Landscape," Alan Sonfist).

Rich, Provocative Experience

Sonfist took a highly visible corner and planted it with species that were native to pre-colonial New York. The landscape, which originally represented the three stages of forest growth (from saplings to mature trees) was then fenced off, making it accessible only to view, but not to walk through (see Figures 13 and 14). Theoretically, by eliminating the interference of man, the landscape could represent a truly natural landscape. This exercise presented a unique, new experience. By denying access to the space, Sonfist relies on curiosity and shock to facilitate an experience. With some of the physical opportunities removed, mental factors of experience become more heightened, aided by intensity, which is achieved because this unique space lies within the skyscraper–laden confines of New York's built environment.

Figure 12: Time Landscape, New York (*Google Maps*)

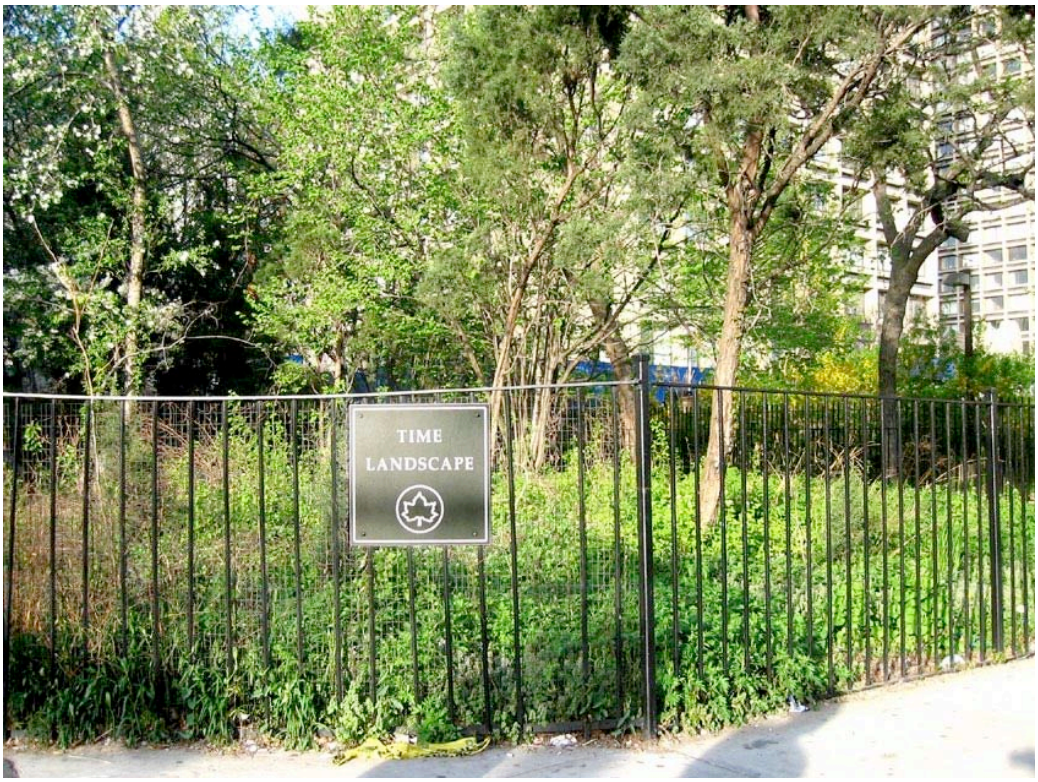

Figure 13: Time Landscape, New York ("Time Landscape--A Taste")

High Line

The High Line, New York's elevated linear park, is an example of a hands-off approach, inspired by the laissez-faire mentality, in which man has no interference and a landscape is left to develop on its own. The one-mile park, whose first section opened in 2009, offers an up-close encounter with wildness, particularly noticeable against such a metropolitan backdrop (see Figure 15). The designer, James Corner, has said that he was initially attracted to the project because the abandoned railway had "its own sense of melancholy and strange other worldliness in the city," highlighted by the impetuous juxtaposition of the elevated track's green ribbon against the grid of the city. (Corner, "Architect")

Rich, Provocative Experience

The rich experience brought to park users is a sense of discovery of wildness and growth. Park visitors are presented with a variety of spaces (see Figures 16 and 17), ranging from deliberately designed gardens and paths to more organic meadowscapes that have been self-sewn. Corner described the new type of experience in a 2012 interview. When asked about his favorite part of the park, Corner replied, "It's not that there's a favorite part, but it's that there's a favorite experience, and that is the duration of experience...you go through an amazing succession of episodes, and the choreography of that and the experience of that is really what, for me, is the most exciting and original part of this." (Corner, "Architect") By constructing this park in such an unusual setting, both physical and mental faculties are engaged. The unique layout of the park (elevated and linear) provides intensity unavailable in the adjacent urban fabric.

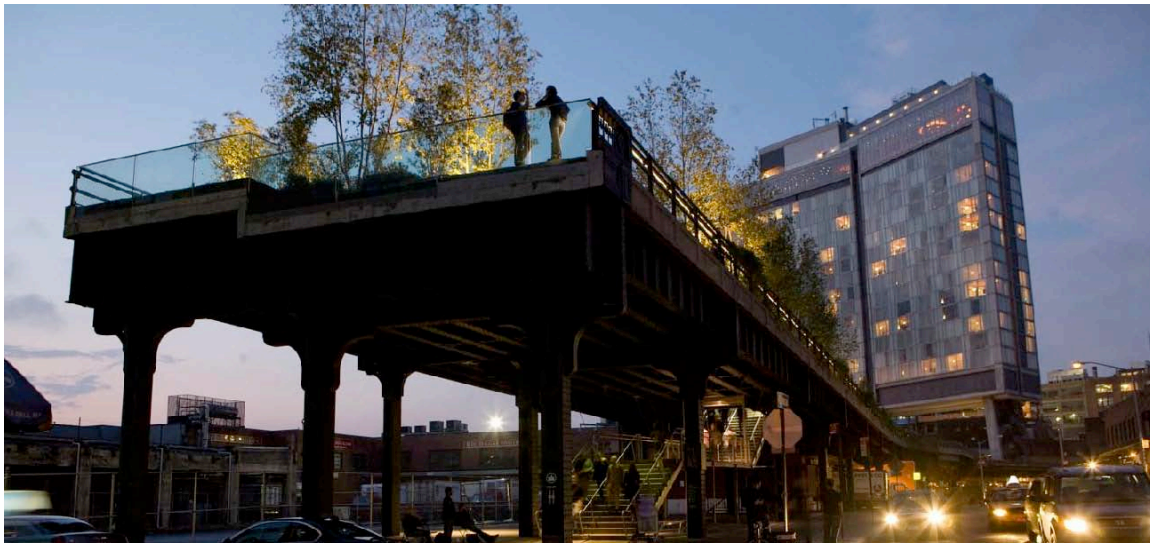

Figure 15: James Corner Field Operations' High Line, New York ("High Line, Section 1")

Figure 16: Partial Vignette, High Line, New York ("Plan for The High Line")

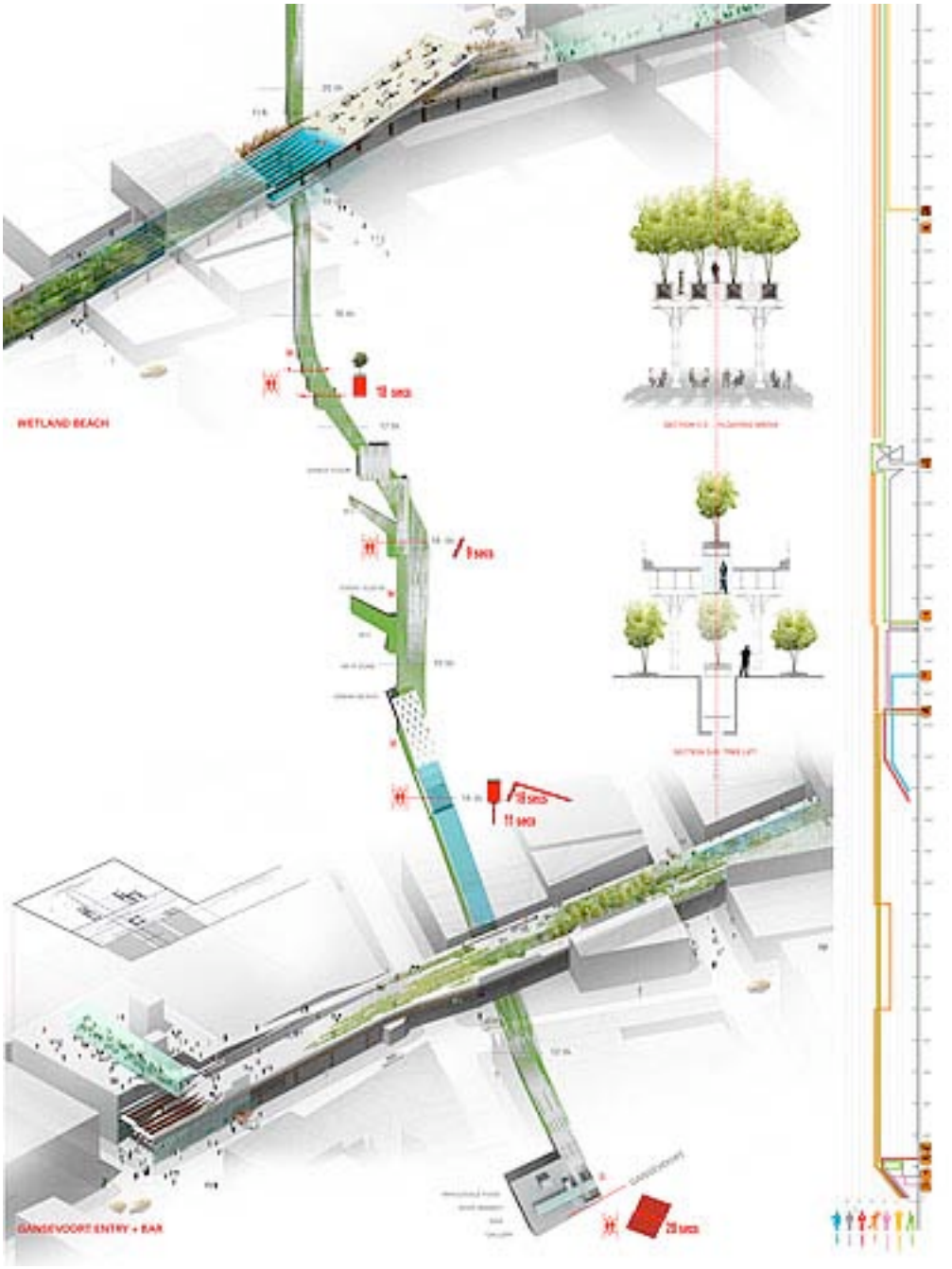

Figure 17: High Line, New York, partial plan (“The High Road, Pt. II”)

CHAPTER 5

FINDINGS

In order to compare and contrast case studies, each project is charted using Mitchell's contingent valuation method, in which benefits are measured using methodical rationale. (Mitchell, preface) Two axes are utilized, one reflecting a scale of natural environment (i.e. ranging from spaces dominated by cultural and societal features to those which focus on more natural elements), and the other measuring the degree to which engaging experiences are offered. Each of the case studies is analyzed, illuminating patterns that can be put to use by designers of future projects.

This thesis' evaluations are somewhat arbitrary and have been made according to a set of criteria, which if altered, would likely result in different findings. In respect to questions posed earlier in the thesis, these findings suggest that dynamic natural processes, such as water, can successfully connect people in the urban environment through the use of a variety of rich, provocative experiences. Connections to commonly held ideas of nature such as water, earth, vegetation and climate, are being facilitated by a number of experiential tactics.

As seen in several of the case study landscapes, experiences can be particularly rich when scale is considered by the designer. For example, in Teardrop Park, large boulders and rock walls force the visitor to consider these natural elements. Similarly, at Parc Matisse, the only material within reach is the rock beneath the forest itself. There is little else to consider but the rock when in close proximity to the park. Water at a grand scale is the focus of Allegheny Riverfront Park and, to a certain extent, also in plans for Washington Canal Park. To keep

viewers engaged, most successful projects work with a variety of scales, ranging from large and in-your-face to subtle microclimates. By employing a wide range of features and scales, a designer is able to harness the innate curiosity of the human mind, luring the visitor to seek out the unknown. With people already on a quest, what they find at the end of the journey is really up to the designer, putting the designer in a powerful position to relate whatever message he or she wishes (in this case, one of connection).

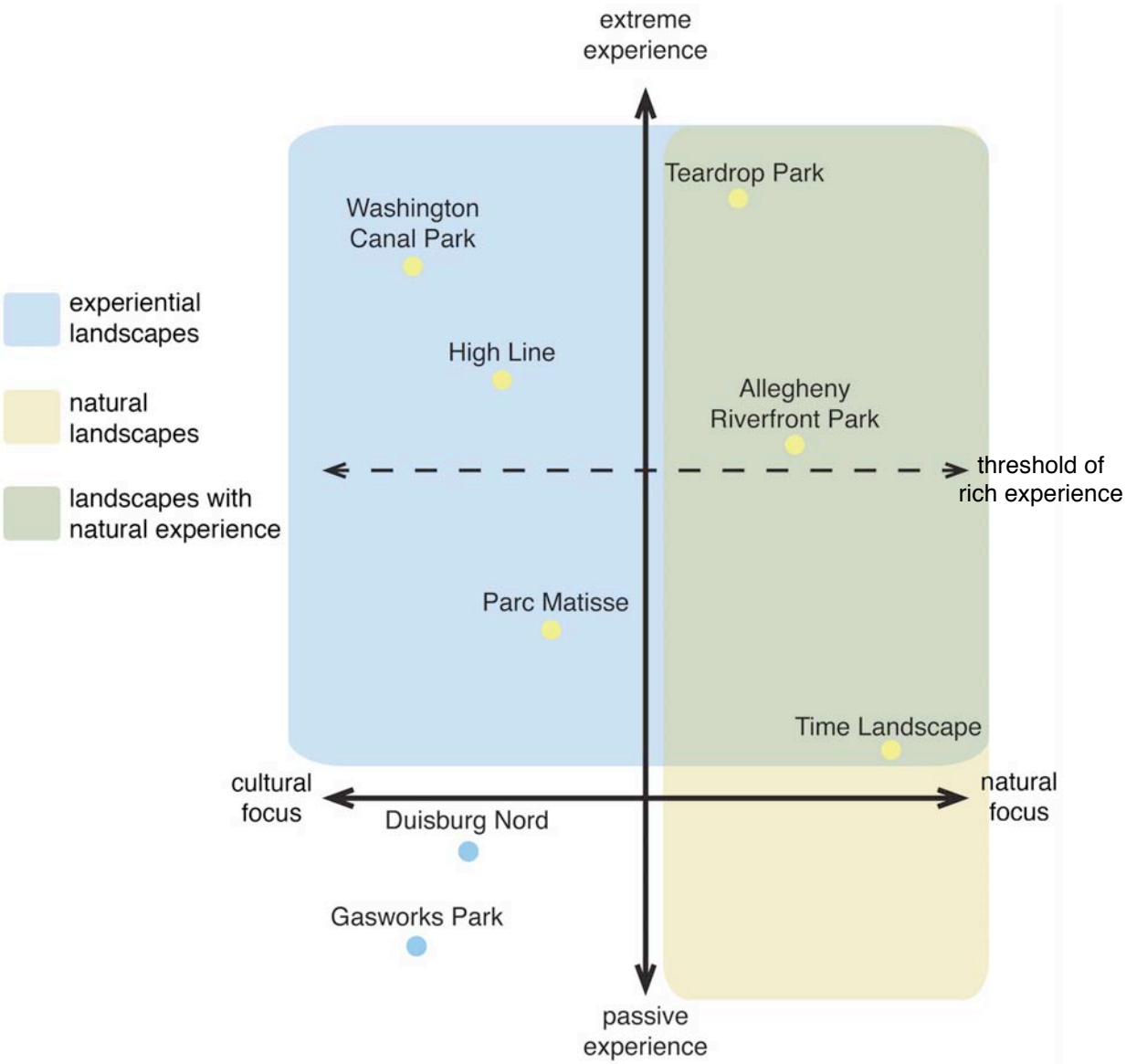

Figure18: Case Study Comparison

Case studies were chosen in order to study their experiential qualities, resulting in no case studies below the axis (in the passive experience area). Obviously, projects do exist beneath this line, but are not pertinent to this discussion. Likewise, many projects exist on the end of the natural scale (for example, Duisburg Nord or Gasworks Park, projects that offer rich experiences to cultural, rather than environmental, nature), but again, these were not necessarily an integral piece of the conversation. Because all case studies appear above the horizontal axis, a secondary axis was included to aid discussion and understanding of the projects considered to offer rich experiences and those offering extremely rich experiences. Projects considered to have most successfully reconnected people with environmental processes offered extreme experiences that engaged mutiple senses and included multiple components of rich provocative experiences. This supports the argument that rich and haptic experiences are more indelible, and therefore more successful, than passive experiences (Corner, "Eidetic Operations").

The resulting graph (see Figure 18) is a product of two factors: the degree to which a landscape is seen as natural, and also the type of experience had within that landscape. While both scales are subjective, they provide a framework for the discussion of key similarities, differences, and trends in landscape architecture related to experience. Landscape involving water play scored as particularly dynamic, suggesting that a focus on this natural resource is one way to cultivate a connection for visitors. Projects that relied more heavily on features such as views scored slightly lower on the scale because a scenic feature, while still a valuable strategy, provides a more passive experience. This thesis' focus is on projects that appear in the first quadrant, which exhibit rich experiences and are more natural.

Van Valkenburgh's projects rank high on both the environmental and experiential spectrums. The extensive use of natural materials (plant material, rock, and water) and natural

form combine to create a space that many feel could have existed outside of the city. The water moving throughout the sites is visually captivating and also provides opportunities for water play, resulting in high marks on the experience axis.

Discussion

Many lessons learned through the case studies can be applied to practice as landscape architects continue to complete these types of experiential projects. Common themes to take away include the use of dynamic natural systems, such as water, to engage visitors to the site, as one of the more obvious trends throughout these spaces is the inclusion of dynamic features. As a site constantly changes, through the movement of water, altered plant material, or by some other method, it causes people to take notice. Employment of dynamic and eidetic design can help a place be successful in its goal of critical reconnections.

In addition to successfully providing opportunities for reconnections with environmental systems, the case studies functioned as traditional parks spaces as well. It is important to offer a variety and robustness of experiences to cater to a variety of preferences and to ensure that the success of the space does not rest entirely on one design feature. (Future studies could include post-visit surveys to determine if the methods the designers used actually increased users' awareness or appreciation of environmental processes.)

The typologies discussed through these case studies are emerging and create new experiences with natural processes; in the future, as society becomes even more technologically advanced, additional typologies will emerge.

Regardless of the typology, there are findings that hold true when designers look to connect users and natural processes in the landscape. First, these natural processes, as suggested

by Kristina Hill, can indeed be treated as infrastructure. The fusion of natural systems with cultural, urban fabrics is an enriching combination. Secondly, the inclusion of art can provide opportunities for mental stimulation and an outlet for cognitive reasoning amongst visitors. Lastly, scale is an important factor in these places. Given that the natural elements to which designers are connecting users are parts of larger, global systems, scale can begin to help users relate in a very physical way to their environments.

CHAPTER 6

APPLICATION

Town Spring sits on the southern edge of downtown Athens, Georgia at the intersection of Spring Street and Fulton Street and is at the edge of the historic downtown, North Campus, and warehouse districts of Athens. Athens and the adjoining university began here because of its proximity to water. Today's designers have the luxury of abandoning this kind of restrictive planning because of advancements in the field of engineering. What was originally an important water source for the town has since been converted to surface parking lots for the University of Georgia. As it stands, the space is merely serviceable. It functions well enough as a parking lot, but does not beautify the university campus and offers little respite for students or pedestrians. Over years of development, the spring was piped, paved over, and all but forgotten (see Figure 19).

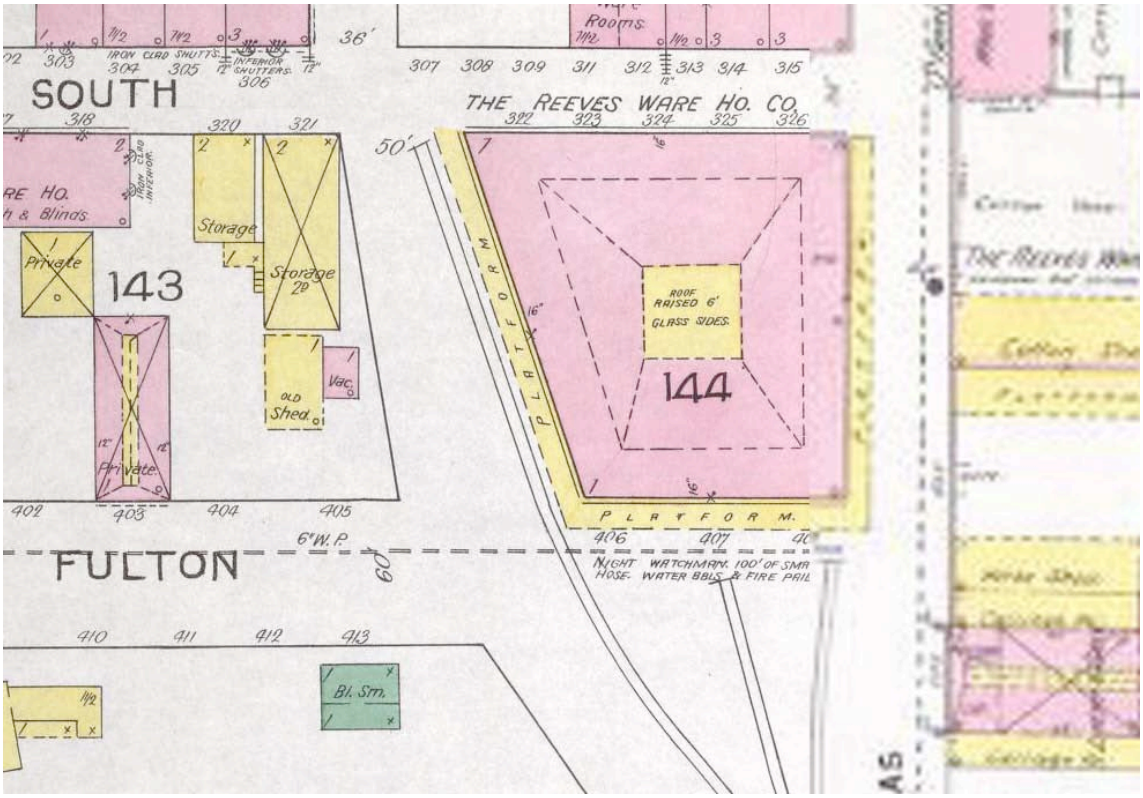

Figure 19: 1893 Sanborn Fire Insurance Map for Athens, Georgia ("Athens, Georgia")

Recently daylighted by the University, the small, uncovered patch which reveals the spring is overshadowed by the vast amount of surrounding asphalt and often goes unnoticed (see Figures 20, 21, and 22). Many students may walk past the site every day and assume it to be nothing more than weeds growing along the street. Without a more exciting and engaging site design, Town Spring will continue to be overlooked and unappreciated (Freeland).

Figure 20: Town Spring, Athens, GA, existing condition ("'Water Stories' are a Collection")

Figure 21: Town Spring, Athens, GA, emerging water ("'Water Stories' are a Collection")

Figure 22: Town Spring, Athens, GA, existing daylighting (Google Maps)

The field of landscape architecture has since evolved beyond the elementary idea of revelatory design. With the inclusion of engaging features, Town Spring could be a site that showcases the diversity of the environment and reinterprets the notion of revelatory design. Existing master plan proposals for the university's Northeast Precinct showcase, in addition to new structures, new combinations of open space and water features.

The existing collection of surface-level parking lots is indicative of the auto-centric patterns that so often plague today's urban landscapes. These underutilized and underperforming public spaces are exactly the type of landscapes that are ripe for redevelopment. The auto-oriented design typically associated with these landscapes can be softened through the use of alternative parking options, connectivity, and design features of a pedestrian scale (Ross 24).

Incremental urbanism, which works to redesign underutilized spaces, such as parking lots, could prove to be a valuable tool for University of Georgia planners. Though some may believe that a sweeping, single-phase "greening" of campus would be more effective than focusing on one small site, this piecemeal approach to redevelopment can have its advantages. Several authors have argued that incremental urbanism, which is characterized by making large-scale changes one small piece at a time, can often lead to smaller blocks and is better for travel networks, connectivity, and pedestrian activity (Gamble and LeBlanc 18-19).

New master plans for the campus, in addition to new buildings, focus on quality outdoor spaces for a more enjoyable pedestrian experience along Thomas Street, which is currently governed by heavy vehicular traffic. Open lawns and shaded walkways provide relief from the busy road and heat. Town Spring is also a focal point, with a more elaborate daylighting treatment shown at the corner of South Street and South Thomas Street (see Figure 23).

Figure 23: Northeast Precinct site plan, UGA (University Architects)

Not unlike the university's master plan, the schematic design created by the author that follows satisfies the same goals for the Northeast Precinct of the University of Georgia campus (see Figure 24). This plan also supports broader aspirations for the University of Georgia campus, which include efforts to daylight the extensive network of streams that now lay largely underground, having been piped and paved over for various reasons through the decades of campus and town development (Shearer).

The re-envisioning of the existing spring site was prompted by the realization that what is an important historical site for Athens and what will become an important part of the university's campus is currently severely underutilized, underappreciated, and unseen, as it is surrounded entirely with parking lots and is generally devoid of vegetation. As seen in several of the case studies, vacant and underutilized public space can become prime locations for interventions (Ross). Taking advantage of this site is enhanced by exploiting water as a dynamic natural system. Not only can the geometric rock outcrop feature perform an ecosystem service by slowing and capturing runoff, it can double as an aquatic playground for visitors to the site.

The visual impact of this design is twofold. First, parking is eliminated entirely. Just as Ross points out in her writings, surface level parking lots often take up prime pedestrian real estate (Ross). It is suggested that the parking spaces in this lot either be absorbed by the adjacent north campus parking deck, or be relocated to another parking structure. Secondly, in the new design, the majority of the lot is raised (sloping to a height of 15 feet at its peak). This volume mimics the approximate dimensions and height of the historic structure seen on 1893 Sanborn maps. While the sloping mass is not exactly the same as having a building on the site, it does match more closely the historic massing of this downtown district, and breaks up the giant void created by the current collection of parking lots.

This proposed sloping mass, whose lines roughly follow those of the roofline of the historic structure, offers several benefits for the site. Most importantly, the groundcover will contribute far less runoff than the current asphalt. Furthermore, the peak, accessible on the west side of the site, offers a point of prospect for users of the site. Trees border the eastern edge of the lot, to create a buffer between people and traffic on South Thomas Street.

The western slope has been designed as a geometric interpretation of the shoals and rock outcrop that may have originally accompanied the spring prior to the site being developed. Granite, common at springs, shoals, and rock outcrops across the region, is staggered to create informal seating in a small, amphitheater-like setting. This seating, oriented towards Fulton Street and Town Spring, gives visitors to the site an ideal view of the water processes occurring below. Moreover, because the granite is at varying heights, the site's function will change on a daily basis, depending upon flood or drought conditions. During a storm event, the spring may overflow, hindering even entry to the site. While unusable in the typical sense, this type of hindrance is exactly the type of inconvenience that can cause people to notice natural systems to which they may have become immune; for those who have been caught up in modern, technological advances, this type of landscape may be just the kind of interruption they need to trigger a connection with the environment.

What results is a space that speaks to the site's history as a meaningful piece of downtown Athens and also provides space for the showcasing and expression of natural water systems. The dynamic nature of this process can help viewers gain a better understanding of the resource and could be used as a teaching tool on campus. By turning the site into a real destination instead of something transitory (like a parking lot), awareness of the natural processes taking place can increase simply through augmented exposure.

Ample room for overflow and alternative drainage means the viewer's experience will consist of more than just watching as rainwater overflows along curbs and disappears into storm drains beneath the city, which is the most prevalent experience currently available. The opportunity to see water collect, drain, or even lay stagnant for a period of time on a site that is not entirely hardscaped is one that is currently unavailable in downtown Athens. Its location also affords the opportunity for potential connections to an experiential walk to the Oconee River, into which the water eventually empties, and which is in close proximity.

The 'water' typology was relied upon heavily in this design. Town Spring's historical significance as a method by which Athens received water for various uses makes it an icon of both cultural and environmental systems. By drawing attention to the dynamic habits of water throughout the site, users of the space will be able to witness the water cycle through environmental processes, such as flooding and inundated soils, as well as the modern engineering system during large storm events, including the capture of runoff from hardscaped surfaces.

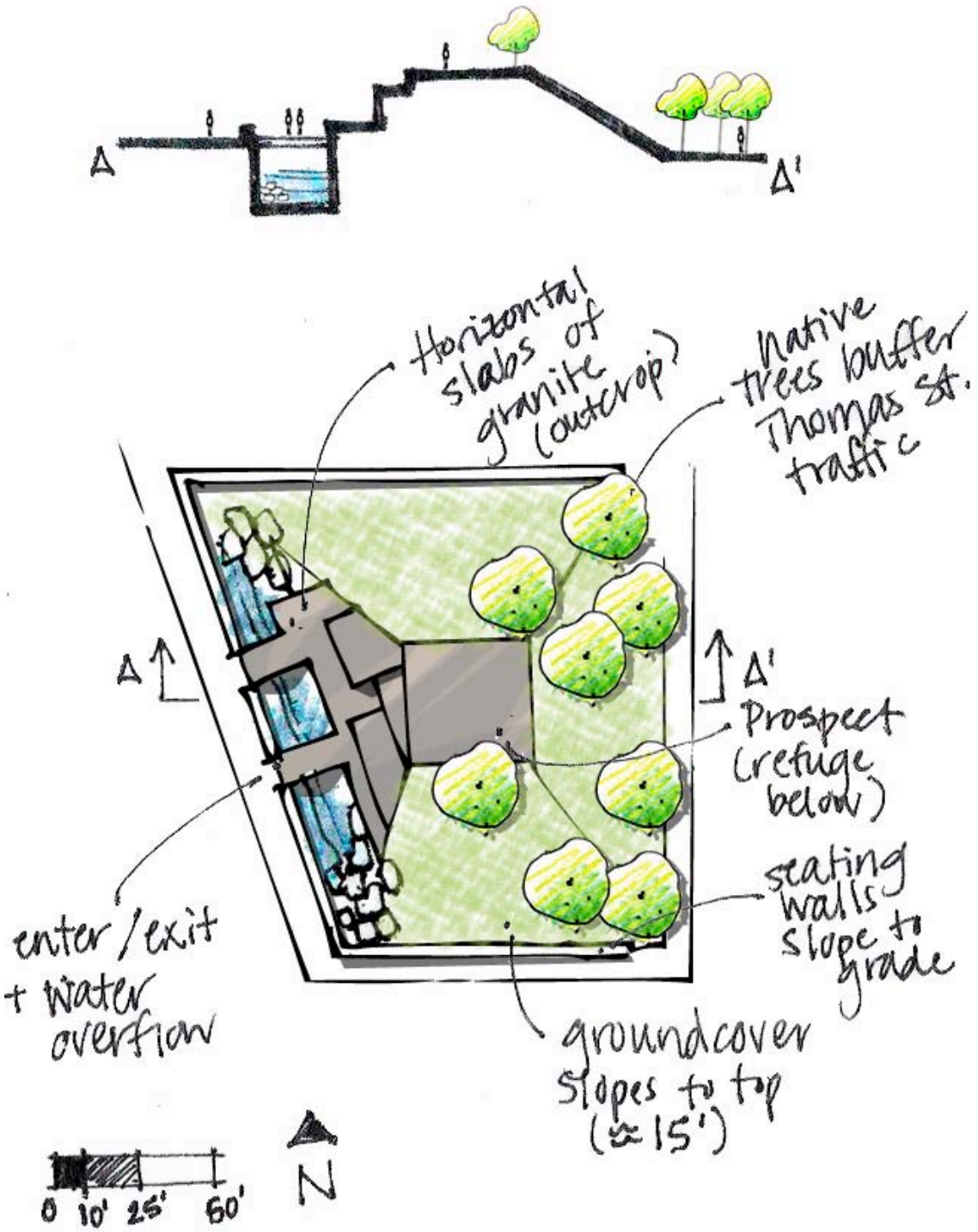

Figure 24: Schematic Design for the Town Spring site in the UGA Northeast Precinct

The resulting design draws on lessons learned from the case studies. Like several of the case studies, water is highlighted on the site. This essential natural resource can work well to capture the attention of pedestrians and draw them into the site where visitors can then watch as

water flows from the spring down to the river, or as it travels over the shoals during a rain event. Water's importance has been proven by the extensive attention it has received from both designers and worldwide humanitarian efforts. Furthermore, water is the environmental process that is hidden most throughout design and development. This very powerful resource can flood towns, dislodge foundations, and cause numerous other problems, prompting it to be combated with systems of pipes, culverts, sewers, and storm drains. Geology and growth typologies are also addressed on the site, as native plantings and granite features connect users to the local landscape.

As seen through case studies, one of the elements that can enrich a user's experience is an added layer of cultural reference and meaning. In this case, the geometry of the constructed granite rock outcrop takes its cues from the roofline of the historic structure and references architecture that was once a part of the site.

Experience varies greatly throughout the site, first from east to west as the spring and rock outcrop appear from the fading tree canopy, and again from north to south where the elevation change on site interacts with sun patterns to create varied experiences. The addition of a public art piece could also enhance the users' experience. Art pieces that showcase water in motion could expose viewers to the concept of interconnected environmental systems, in addition to introducing the calming effect of moving water to the space.

CHAPTER 7

CONCLUSION

Experience is a way of minding and mending the gap between cultural practices and natural processes in urban settings. Experiences with natural processes will forge life-long bonds with the processes, raising awareness and potentially creating advocates for continued reconnection. A variety of strategies, appropriate for various typologies, are employed to reconnect people to these systems.

Though only three typologies are explored through this thesis, there are likely many more. As urban environments continue to develop, so will the ways in which people experience the natural environment in those spaces. There is no way to know exactly what kinds of additional typologies will be added to future urban landscapes, but if landscape architects and designers pay attention to the ever-evolving relationship between environmental processes and cultural practices, they may be able to anticipate needs and develop sensitive, engaging new landscape typologies.

Joan Nassauer is associate director of research at the National Socio-Environmental Synthesis Center (SeSynC), one entity working towards the fusion of cultural and environmental processes. Nassauer has spent much of her professional career studying the nexus of ecological planning and human-dominated landscapes. The combination of the natural environment and social systems is exactly what makes urban landscapes so intriguing and is the topic of much of her writing, which delves into the synergistic relationship between a population and its environments (Nassauer 229).

As seen through the case studies and design application in this thesis, designers can take advantage of underutilized public space to explore the interface between cultural and natural systems. Strategies that employ experiential, sensory, and eidetic features are particularly successful and can provide a good framework for environmentally connective design; this advocates for what is potentially a new type of urbanism to follow landscape urbanism, eco-urbanism, and the like: experiential urbanism, facilitating a type of hyper-awareness of surrounding environmental systems and a celebration of their adjacencies with the urban fabric.

While the case studies are meeting some of the challenges that modernization and technology have brought forward, they could still do more. An even greater inclusion of rich, provocative experiences with geology, water, and growth could augment the messages being broadcast by these projects. Can a design be too rich or too provocative? In the current climate of landscape architecture, designers should take advantage of all opportunities (Corner). The value of this thesis is to illuminate the importance of this discussion. It is also important to consider the way successful projects strike a balance between scenic and interactive spaces; the environment could suffer if landscapes became overly hands-on, while landscapes that are entirely scenic run the risk of being overlooked and unmemorable for audiences.

If some of the richest experiences come from unusual or shocking designs, then perhaps today's landscapes need more of these designs until a tipping point is reached in respects to our present relations with natural processes. These landscapes start a dialogue, thus making people more aware; instead of being an afterthought, an unfortunate truth in many of today's urban landscapes, natural systems should begin to be thought of as a type of infrastructure. Just like transportation or commerce, it is another system to integrate into the larger picture, another piece

of the urban puzzle. If designers want people to see connections, they must present connections, not just free-standing, disjointed nods towards nature.

REFERENCES

Alan Sonfist. Alan Sonfist, 2012. Web. 31 March 2012. <http://www.alansonfist.com/>.

"Allegheny Riverfront Park." Michael Van Valkenburgh Associates, Inc. Michael Van Valkenburgh Associates, Inc., n.d. Web. 4 April 2012. <http://www.mvvainc.com/project.php?id=5>.

Amidon, Jane. "Allegheny Riverfront Park: Material, Event, Sensation." Michael Van Valkenburgh Associates: Reconstructing Urban Landscapes. Ed. Anita Berrizbeitia. New Haven, CT.: Yale University Press, 2009. 58-83. Print.

Appleton, Jay. The Experience of Landscape. London: John Wiley and Sons, 1975. Print.

"Athens, Georgia." 1893. Sanborn Fire Insurance Maps for Georgia Towns and Cities, 1884-1922. Web. 1 April 2012. <http://dlg.galileo.usg.edu/sanborn/Year/Athens1893/>.

Beck, Ulrich, Anthony Giddens, and Scott Lash. Reflexive Modernization. Sanford, CA: Stanford University Press, 1994. Print.

Berman, Marshall. All That is Solid Melts into Air: The Experience of Modernity. New York: Simon and Schuster, 1982. Print.

"Canal Park Design." JDLand: News & Photos from Near Southeast/Navy Yard/Capitol Riverfront/Ballpark District. JDLand, 2012. Web. 5 April 2010. <http://www.jdland.com/dc/images/canalpark-design-large-ggn.jpg>.

Carson, Rachel. Silent Spring. Boston: Houghton Mifflin, 1962.

Corner, James. “Eidetic Operations and New Landscapes.” Recovering Landscape: Essays in Contemporary Landscape Architecture. Ed. James Corner. New York: Princeton Architectural Press, 1999. 153-169. Print.

Corner, James. “Architect James Corner On NYC’s High Line Park.” Interview by Jill Fehrenbacher. Inhabit: Design Will Save the World. Inhabitat, LLC, 26 March 2012. Web. 5 April 2012. <http://inhabitat.com/interview-architect-james-corner-on-the-design-of-high-line/>.

“The High Road, Pt. II.” *NYC’s High Line*. Landscape + Urbanism. Web. 23 July 2012. <http://landscapeandurbanism.blogspot.com/2008/03/high-road-pt-ii-nycs-high-line.html>

Dewey, John. Experience and Nature. New York: Dover Publications, 1958. Print.

Dugger, Celia W. “Half the World’s Population Will Live in Cities Next Year, UN Report Says.” The New York Times. The New York Times Co., 27 June 2007. Web. 1 April 2012. < http://www.nytimes.com/2007/06/27/world/asia/27iht-27city.6363039.html>.

“Eco-Revelatory Design: Nature Constructed/Nature Revealed.” Special issue of Landscape Journal 17 (1998). Print.

Evernden, Neil. The Social Creation of Nature. Baltimore: The Johns Hopkins University Press, 1992. Print.

Francis, Mark. “A Case Study Method for Landscape Architecture.” Landscape Journal 20.1 (2001): 15-29. Print.

Freeland, Sara. “Historic Town Spring Restored.” Columns: The Online Newspaper for the University of Georgia Community. University of Georgia Office of Public Affairs, 28

July 2008. Web. 31 March 2012. <http://columns.uga.edu/news/fulltext/historic-town-spring-restored/>.

Gamble, Michael and W. Jude LeBlanc. “Incremental Urbanism: The Auto and Pedestrian Reconsidered in Greyfield Reclamation, Atlanta, Georgia.” Places 16.3 (2004): 18-21. Print.

Geuze, Adriaan. “Second Nature.” Topos 71 (2010): 40-42. Print.

Gobster, Paul and Bruce Hull eds. Restoring Nature. Washington, D.C.: Island Press, 2000. Print.

Google Maps. Google, 2012. Web. 5 April 2012. <http://maps.google.com>.

Gustafson, Kathryn. "Spotlight on Design: Kathryn Gustafson." Spotlight on Design Series. National Building Museum, Washington, D.C. 26 March 2005. Speech. Web. 1 April 2012. <http://www.nbm.org/media/audio/kathryn-gustafson.html>.

“High Line, Section 1.” James Corner Field Operations. n.p, n.d. Web. 5 April 2012. <http://www.fieldoperations.net/>.

Hill, Kristina. “Landscape as a System, City as a Landscape.” Landscape as a System: Contemporary German Landscape Architecture. Ed. Bund Deutscher Landschaftsarchitekten. Basel, Boston. 2009. 26-45. Print.

ICIWaRM: The International Center for Integrated Water Resources Management under the auspices of UNESCO. n.p., n.d. Web. 29 March 2012. <http://www.iciwarm.org/en/>.

“Introduction.” Landschaftspark: Duisburg-Nord. n.p., n.d. Web. 1 April 2012. <http://en.landschaftspark.de/the-parkk/introduction>

Kaplan, Rachel and Stephen. The Experience of Nature: a Psychological Perspective. New York: Cambridge University Press, 1989. Print.

"Landschaftspark Duisburg Nord." Latz +Partner. Latz + Partner, 2007. Web. 1 April 2012. <http://www.latzundpartner.de/projects/detail/17>.

Louv, Richard. "Last Child in the Woods: Saving our Children from Nature-Deficit Disorder." Nature Smart Schools Symposium, University of Georgia. Miller Learning Center, Athens, GA. 24 April 2009. Keynote Address.

Meinig, D.W. "The Beholding Eye: Ten Versions of the Same Scene." The Interpretation of Ordinary Landscapes: Geographical Essays. Ed. D.W. Meinig. New York: Oxford University Press, 1979. 33-48. Print.

Mitchell, Robert. Using Surveys to Value Public Goods: the Contingent Valuation Method. Washington, D.C.: Hopkins University Press, 1989. Print.

Nassauer, Joan. "Culture and Changing Landscape Structure." Landscape Ecology 10.4 (1995): 229-237. Print.

"Parc Matisse, à Lille, gare Lille Europe." Gilles Clement. Licence Art Libre, n.d. Web. 5 April 2012. <http://www.gillesclement.com/cat-banqueimages-matisse-tit-Parc-Matisse-Lillle>.

"People and Society: United States." The World Factbook. Central Intelligence Agency, 12 March 2012. Web. 26 March 2012. <https://www.cia.gov/library/publications/the-world-factbook/fields/2212.html>.

"Plan for The High Line" NYC Parks. City of New York Parks and Recreation. Web. 14 July 2012. <http://www.nycgovparks.org/parks/highline/photos>

Reggio, Godfrey, dir. Koyaanisqatsi: Life Out of Balance. Institute for Regional Education, 1982. DVD.

Ross, Catherine. “Incremental Urbanism: a New Vision for Strip-Commercial Corridors.” Economic Development/Transportation Day, Leadership DeKalb. Decatur, GA. 20 Jan. 2005. Powerpoint Presentation.

Sennett, Richard. The Culture of New Capitalism. New Haven, CT: Yale University Press. 2006. Print.

Shearer, Lee. “UGA Planners Want to Revive Buried Waterways.” The Augusta Chronicle. The Augusta Chronicle, 5 July 2011. Web. 31 March 2012. <http://chronicle.augusta.com/latest-news/2011-07-05/uga-planners-want-revive-buried-waterways>.

Smout Allen. Pamphlet Architecture 28: Augmented Landscapes. New York: Princeton Architectural Press, 2007. Print.

“Teardrop Park.” Michael Van Valkenburgh Associates, Inc. Michael Van Valkenburgh Associates, Inc., n.d. Web. 2 April 2012. <http://www.mvvainc.com/project.php?id=2>.

“Teardrop Park.” Landscape Architecture Foundation. Landscape Architecture Foundation, 2012. Web. 5 April 2012. <http://lafoundation.org/research/landscape-performance-series/case-studies/case-study/391/>.

“The Third Landscape.” Gilles Clement. Licence Art Libre, n.d. Web. 5 April 2012. <http://www.gillesclement.com/art-454-tit-The-Third-Landscape>.

“Time Landscape.” Alan Sonfist. Alan Sonfist, 2012. Web. 5 April 2012. <http://www.alansonfist.com/projects/project.html?time-landscape>.

“Time Landscape – A Taste of Nature.” New York Daily Photo. Brian Dube, 22 April 2006. Web. 1 April 2012. <http://newyorkdailyphoto.blogspot.com/2006/04/time-landscape-taste-of-nature.html>.

University Architects for Facilities Planning, University of Georgia. “Northeast Precinct Master Plan.” Athens, GA: University of Georgia, 2010. JPEG file.

Van Der Ryn, Sim and Stuart Cowan. Ecological Design. Washington, D.C.: Island Press, 1996. Print.

Waldheim, On Landscape, Ecology and other Modifiers to Urbanism. Topos 71: Landscape Urbanism. 2010.

“‘Water Stories’ are a Collection of Personal Histories Involving Water in Athens, Georgia.” Rachel Debuque. Rachel Debuque, 2011. Web. 31 March 2012. <http://racheldebuque.com/index.php?/ongoing-project/water-stories/>.

Weilacher, Udo. Between Landscape Architecture and Land Art. Boston: Birkhaeuser, 1999. Print.

Wilson, E.O. Biophilia. Cambridge, MA: Harvard University Press, 1984. Print.