DISTILLED COMPLEXITY: USING MINIMALISM AS A FRAMEWORK FOR A SUSTAINABLE LANDSCAPE IN MARFA, TEXAS

by

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(Under the Direction of Sarah Georgia Harrison Hall)

ABSTRACT

This thesis responds to the need in the profession of Landscape Architecture for a more holistic definition of sustainability, as one that incorporates the artistic aspects of the field. Adapted from Dr. Laura Musacchio's research, it argues for the inclusion of aesthetics, experience, and ethics in addition to the traditionally recognized pillars of sustainability: equity, economics, and environment. Minimalism is introduced as a guiding tool do so, given its inherent experiential qualities and connection to the landscape. Minimalism is first studied, as it exists within the three distinct design fields of art, architecture, and landscape architecture, before being applied to the redesign of an existing park site in Marfa, Texas. The design is guided by six design principles and eventually critiqued through the same lens. Ultimately, this thesis argues for an equal balance of social function, ecological processes, and aesthetics in the landscape, while proving that minimalism is not simplicity, but rather complexity, distilled.

INDEX WORDS: landscape architecture, minimalism, aesthetics, experience, ethics, sustainable landscape, Marfa, TX, Peter Walker, Andrea Cochran, Dieter Kienast

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DEDICATION

For my Mom and Dad. Thank you for allowing me every opportunity I have ever had.

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TABLE OF CONTENTS

Page

LIST OF FIGURES

Page

LIST OF TABLES

Page

CHAPTER 1

INTRODUCTION

Defining Sustainability in Landscape Architecture

It is commonly understood that sustainability consists of three pillars; environment, economy, and social equity, also referred to as the triple bottom line. Coined by a British businessman in 1994 the term *triple bottom line* has been used to emphasize the role that economics plays in influencing social and environmental action (Wu 2013, 1002). While this perspective of sustainability is relevant, it is not tailored to apply to the field of Landscape Architecture specifically. This thesis argues for a more holistic definition that includes the artistry and experiential qualities that are essential to a good design.

In response to designers' cries that "more attention…be paid to, aesthetic, experiential, and ethical issues" (2009, 997) Laura Musaccchio, a researcher and educator in the field of Landscape Architecture, introduced "aesthetics…experience and ethics (as) the fourth, fifth, and six "Es" of the landscape sustainability"(997). Still including environment, economy, and equity, the three added words enhance the definition of sustainability to relate more coherently with Landscape Architecture. The introduction of these three words allows humans to become more connected to the landscape, generating feelings of "recognition, empathy, love, respect, and care for the environment" (Meyer 2008, 96). If we believe social equity is a guiding force of sustainability, then not only do we have to embrace but also enrich the human connection to the landscape. While it is imperative that landscapes function to meet ecological, social, and economical needs, designed landscapes are more than just that. They are also to be experienced and felt with all the senses, similar to a work of art.

When considering sustainability we must also keep in mind the ever-changing dynamics of a landscape. Given the mutability of nature, a sustainable landscape is one that "embodies

multifunctionality, provides ecosystem services, and is resilient and adaptive"(Musacchio 2009, 1007). A landscape must be able to absorb change in a way that does not alter its ecological and social functionality. If a design were to lose said functions the entire "reason for being" (Olmsted 1882) would then also be lost. For this purpose resiliency, and adaptability become essential components to any sustainable design.

Resilience is frequently defined as "the capacity of [a] system to absorb change and disturbances and still retain its basic structure and function" (Brian Walker, 2006, 113). Systems thinking becomes a key component of both understanding and applying resilience. The landscapes we design are all parts of a larger system; how we treat them can affect other parts of the whole that are not always as evident. Resilience focuses on managing both the "disturbances that you are aware of (specified resilience), and…disturbances that you haven't even thought of (general resilience)" (124). There must be an equal balance of both for lining systems to work effectively.

Jack Ahern, a professor of Landscape Architecture at the University of Massachusetts, Amherst, is an advocate for urban resilience. As more people move into urban environments this becomes crucial. Cities operate as complex systems, vulnerable to a variety of regular and chance disturbances. Ahern proposes five strategies for planners and designers to use when applying urban resilience; "multifunctionality, (bio)diversity, multiscale networks, redundancy and modularization, and adaptive capacity" (2010, 145). The first approach, multifunctionality, is about strategically using fewer resources to do more. Biodiversity broadens our knowledge base and allows for a greater ability to respond to change; the more diverse a system, the greater the ability to sustain its function. Multiscale networks refer to the connectivity of natural systems, typically reduced in an urban environment. By providing stronger connectivity within our landscapes they become less susceptible to malfunction. Ahern uses the terms redundancy and modularization in support of a solution to disturbance. They suggest that there not be only one solution; but instead a variety, so that if one fails, another can take over. The final strategy,

adaptive capacity, requires experimental application with monitoring, encouraging progress in the field. Though well conceived, resilience is still somewhat of an unknown concept and as with any functional design we must continue to monitor these landscapes to truly understand their significance.

Argument

Incorporating resiliency while remaining in agreement with Musachio's and Meyers' plea for more integration between aesthetics and sustainability, this thesis asks*, "Can minimalism, be used as a framework for creating an ecologically sustainable landscape that encompasses aesthetics, experience, and ethics?"* Although important, this thesis will purposefully not explore the economics and equitable aspects of sustainability, as they are typically studied on more of a planning scale.

We may ask, why minimalism? Minimalism in the landscape is very much about the experience. Peter Walker, a Landscape Architect known for his minimalist landscapes, describes the style as a creation of "environments that are serene and uncluttered, yet still expressive and meaningful" (Walker 1997, 20). Minimalism in the landscape, much like minimalist sculpture, must be experienced to be understood. Aesthetic qualities are defined, as demonstrated in minimalist sculpture and architecture, through close attention to scale and proportion. These concepts of aesthetics, and experience will further be examined as they relate to the French philosopher Maurice Merleau-Ponty's (1908-1961) ideas on perception as being a bodily act in chapter three. By incorporating ethics into the "sixth e's" of sustainability Musacchio is hoping to "cultivate care" (2013). It is imperative that we, as humans, continue to generate feelings of stewardship towards the land and the minimalist style is certainly capable of conjuring emotion.

Additionally, I propose that a minimalist landscape can satisfy the environmental or ecological aspects of sustainability, with roots in multifunctionality and adaptability. In an interview with The Cultural Landscape Foundation's founder, Charles Birnbaum (2014), Peter Walker describes his firm's use of the minimalist style saying, "We do it in trying to make fewer

moves and trying to make sure that each thing does three or four things...simplicity with complexity." While visually the design may appear simple or have few parts, there is a multifunctional underlay that can be quite complex. Similarly, this concept aligns with the ideas of the modern movement and the creation of functional and flexible spaces designed for people. The potential for resiliency or adaptability is related to the style's connection to the ancient Japanese philosophical concept of *aware*, "an awareness of the ephemeral beauty of a world in which change is the only constant"(Richie 2007, 71). Ahern's ideas of multifunctionality, redundancy, and modularity are already beginning to relate.

This relationship between aesthetics and ecological function in the landscape has long been a part of the dialect. In the late 80s, just after the Bruntland report was published, there was an early cry for ecologically sensitive aesthetics in the landscape from practitioners (Howett 1987) (Koh 1988) (Olin 1988). Recently, however, the issue has resurfaced indicating that the calls for action from earlier writers have not been properly met (Dee 2010) (Hosey 2012) (E. K. Meyer 2008). This continued dialectic confirms the need to pay more attention to the artistry of form. Natural processes must be maintained, but a designed landscape will not be successful if form is ignored.

Looking to architecture and this same relationship, while a longer history may exist, the subject is still not entirely resolved. 'Eco-minimalism' is a term coined recently by the late British architect, Howard Liddell, in response to his distaste for 'eco-bling,' or what may be recognized as placed ecological systems such as wind turbines and photovoltaic panels (2013). Liddell devoted his career to this theory, insisting that the obvious and most recognizable answer may not always be the most suitable for a site or a building. He defined 'eco-minimalism' not as an aesthetic approach, but rather as one that guides the design process to "question, reduce, order, model and monitor." These ideas are reminiscent of Catherine Dee's idea of 'thrift', an intervention concerned with "economy of means and simplicity…(that) requires careful and

skillful use of material resources" (2010, 32). Both of these novel ideas are centered on truly understanding a site and then reducing the form to its most essential qualities.

Purpose and Significance

The purpose of this thesis is to provide a guiding example of a way in which we can incorporate aesthetics, experience, and ethics into the definition of sustainability, using minimalism as the driving force to do so. The significance of this investigation lies in the strength of minimalism as being a restrained form of expression. Should this research prove to be successful in its attempt to frame a more holistic definition of sustainability in the landscape then other less restrained forms of expression can also be applied.

Research Method

In order to execute this design-research thesis, a series of research methods have been used as outlined in Elen Deming and Simon Swaffields book entitled *Landscape Architecture Research: Inquiry, Strategy, Design* (2011). Descriptive, interpretive, and projective design research strategies have been chosen as the primary methodologies. Both direct observation and secondary description are used to contribute to the understanding of minimalism as it relates to architecture, landscape architecture, and art. Once this basis of knowledge is attained, discourse analysis is applied as a means of generating the guiding principles, for which the projective design will follow. Design is then used as research, exploring a variety of concepts before the final design is proposed. Lastly, design as reflection is applied as a method for analyzing the success of the design as it relates to the research question.

Overview of Chapters

This thesis will first look at minimalism in the landscape with its roots in minimalist sculpture, ancient Japanese garden philosophy, the classical French gardens of Andre Le Notre, and the modern movement within landscape architecture. Without many existing publications on minimalism in the landscape, these influences become imperative to understanding the style. In an attempt to get a feel for the style it will look to three designers who practice it, both in the US

and abroad. From there this thesis will explore minimalism in relation to aesthetics, experience, and ethics as they are best demonstrated in minimalist art and architecture.

After establishing some guiding minimalist principles that most closely relate to environment, aesthetics, experience, and ethics in the landscape, this thesis will attempt to answer the proposed question through an applied design strategy. The chosen site is located in Marfa, Texas, a city of approximately two thousand people with an ever-growing tourist population. The site was chosen because of the city's decades-long relationship with minimalist art and its need for an improved public community space. This thesis will conclude with a design critique that will analyze the success of the design in answering the research question: Can the minimalist style be used as a framework for creating an ecologically sustainable landscape that encompasses aesthetics, experience, and ethics?

CHAPTER 2

MINIMALISM IN THE LANDSCAPE

My first experience with a minimalist landscape was Peter Walker and Michael Arad's *9/11 Memorial* (Figure 2.11) in New York City. The power of this space is undeniable. Though bustling with people and heavily infiltrated with the sounds of New York City traffic and construction, there is a definite quietness and calmness to the site that can only be felt through experience. These feelings are ubiquitous to a minimalist landscape. But a style cannot be defined solely by the emotions it evokes. The following attempts to define minimalism in its distinct relation with Landscape Architecture by looking at three designers who practice the style and their influences that helped shape its development.

Peter Walker

Peter Walker was born in California, where he attended the University of California, Berkeley and currently lives and works today. While studying at Berkeley he worked for two years under Lawrence Halprin before graduating in 1956. From there he went on to Harvard for his masters degree, where he studied under Hideo Sasaki. When Walker graduated in 1957 he was quickly made partner in the firm, Sasaki, Walker and Associates. For nearly thirty years Walker worked with SWA before opening the Office of Peter Walker Martha Schwartz in 1983. Their office closed in 1989 and Walker made his way back to California where he opened what eventually became PWP Landscape Architecture, a firm he is still managing today. Throughout the past fifty-eight years of his career Walker has been involved in education within the field, serving as the Landscape Architecture Department chair at Harvard from 1978-1981 and later at Berkeley from 1997-1999 (Gillette 2014). At eighty-two he is one of our only living connections to an age when the profession of Landscape Architecture became modern.

Since its inception, PWP has designed a variety of landscape and planning projects that range in size from parks and university campuses to corporate headquarters, plazas and gardens. Peter Walker describes his firms' use of the minimalist style, saying it; "represent[s] a revival of the analytic interests of the early modernists that parallel in many respects the spirit of classicism. It is the formal reinvention and the quest for primary purity and human meaning that signify[s] its spiritual strength" (Walker 1997, 19). His works balance the intangible expressive qualities of the classicists and the essential functionalism of modernity. At PWP the site and user needs dictate a design, from there they work to distill the complexity of all of the various parts in order to create a work emits a lasting impression. In a world that is consistently becoming more commercial and distracting, Walker strives to create landscapes that offer refuge and repose.

Andrea Cochran

Andrea Cochran's work undoubtedly preforms a similar function. Having grown up in New Jersey she received her Bachelor of Science in Landscape Architecture from Rutgers University. Graduating in 1976, she immediately went on to the Harvard Graduate School of Design where she studied under Peter Walker, who was then chair of the Landscape Architecture Department. After graduation, Cochran spent some time working for the Spanish architect, Jose Luis Sert, before moving to Greece, where she worked for a year. In 1981 she moved to the Bay Area of California where she lives and practices today. In 1998, after ten years in partnership with a fellow Rutgers graduate, she opened Andrea Cochran Landscape Architecture. A winner of numerous awards and honors, Cochran is quickly becoming one of the most recognized landscape architects of our time.

Today the office of Andrea Cochran Landscape Architecture balances its work evenly between private and commercial projects, ranging from single-family residences to hotels, wineries, affordable housing, schools, institutions, and public parks. Within this volume of work there is a common theme of reduction to a landscape's most essential qualities, with a strong attention to the context of a site and the earth's natural forces. Cochran is constantly seeking to

achieve peace amid contradiction. She uses severe, abstract geometry against the softness of a natural landscape to enhance the soothing experience of being outdoors. Her firm's attention to detail is unparalleled, with material, color, and plant selection playing a serious role in the design process. All of Cochran's work derives from a distinct concept or emotion that influences every decision thereafter, contributing to a controlled but cohesive design.

Dieter Kienast

The Swiss landscape architect, Dieter Kienast, was introduced to landscape architecture at an early age. Born the son of gardeners, he worked in the garden architecture studio of Fred Eicher before receiving any formal training. Around the age of twenty he began studying landscape planning at the University Kassel in Germany. Eager to continue his education, he stayed to complete graduate studies, specializing in plant sociology. After nine years in Germany, Kienast completed his doctorate in 1978. He then returned home to Zurich, where he completed a large volume of work that celebrated "the garden as the last luxury of our day and age"(Treib 2003, 79). Kienast worked both on his own, in partnership with other landscape architects and, also with his wife, an artist, before his untimely death at the age of fifty-three in 1998.

The work that survives Kienast speaks volumes, questioning "the concept of ideal natural beauty" (Weilacher 2007, 92). Kienast believed in the power of a garden to alter the perception of the user. He wanted his audience to experience the landscape in a way that would draw attention to its ever-changing qualities. Less concerned with a finished design object, Kienast embraced natural processes. Marc Treib outlines four themes found in Kienasts work: "ecological grounding, climatic response, spatial structure, and restrained planting" (2003, 82). Through a means of reduction and concentration (Weilacher 89), his designs embody sensuousness without trying to be anything they are not. Kienast believed in honoring the nature and culture of a site, at a time when this was not yet a popular tradition. A self-professed romantic, Kienast's work balances the sensory qualities of art and the more practical matters of process ever so delicately.

Influences of Minimalism in Landscape Architecture

The following section examines four main influences found throughout the exploration of these three designers. Minimalism, coined during the 1960's, was used first in the visual arts (Levy 1997, 8). Referred to as an "art of the objects" by author and art historian, Laura Garrard (2012, 28), it is the most significant of the three designers' influences, with each designer holding a particular regard for individual artists. But all influences are not nearly as contemporary. All of them reference the ancient garden philosophy of the Japanese and the classical French gardens of Le Notre as influences on their practice. Lastly, the fourth influence to be discussed in this section is the modern movement in both American and European landscape architecture and its advancement of functional and livable landscapes. Each of these influences will be examined individually before studying how they relate to specific works by Walker, Cochran, and Kienast. Particular attention will be paid to the influence of minimalist sculpture, as it is not only the most commonly referenced of the four influences but also what sets the style apart from that of other landscape architects in practice today. Additionally, in a few instances, some of the derivatives of minimalist art are examined as they closely relate to the landscape and are also referenced by the designers in study.

Minimalist Sculpture

Andrea Cochran looks toward art as inspiration, "because of its emphasis on feelings and experience" (Myers 2009, 15). She, Walker, and Kienast continuously refer to minimalist artists as a source of inspiration. The minimalist art movement began in the 1960's when a number of artists broke away from the European traditions of the time. Though not always in accordance with one another, or even in favor of the term 'minimalism,' these artists shaped an artistic style where "simplicity is exalted, as is repetition, seriality, process…flatness…volume and space"(Garrard 2012, 31). It was a movement that rejected the self-expressionism and metaphor seen in Abstract Expressionism. Instead this group of artists attempted to remove themselves from the work, allowing the art to speak for itself. It became an art where context mattered

immensely and could not be understood unless the object was directly experienced within space. As the 1960s progressed, different offshoots of Minimalism began to evolve. In California, Robert Irwin, using light as the central focus in a work, pioneered the "Light and Space" movement. Around the same time, artists began manipulating the earth itself, forming what is now known as Land Art. Such achievements not only further blurred the boundaries between "art" and "object," but simultaneously reinvented the more conventional definitions of sculpture.

An avid art collector, Peter Walker was drawn to minimalist art around the time of its inception. He cites Carl Andre, Donald Judd, Christo and Jean-Claude as the artists who have had a particular impact on his own artistic career. In 1997 Walker wrote, "Carl Andre's metal floor pieces began to seem to me powerful metaphors for gardens; all flat ground plane and almost no third dimension, yet completely controlling the character and nature of the 'empty' space above"(21). Another work of Andres, *Secant* (Figure 2.1), placed a long line of rail ties in a large open field, a "gesture which brings alive and makes particular that meadow"(Walker 2013). This minor action alters the viewers perception, for even if one were familiar with that particular landscape it would never again be perceived in the same way. Andre imposes a kind of geometry on the field that makes you not only look at the object but also become deeply aware of the place within which it is contained.

Figure 2.1: Carl Andre, *Secant*, 1977

Andrea Cochran is inspired by minimalist artists who "have thought about their art not as a piece(s) in a museum but as an environment"(Cochran, Funderburg 2012). She is most interested in how these artists "reinterpret our perception of space…edges become diaphanous, the spaces ephemeral"(ASLA interview). Minimalist artist Fred Sandback is one of the artists who accomplishes this, using thinly colored string to imply a flat plane or volume within a gallery space (Figure 2.2). Through the application of minimal structure he creates planes that you can feel as you move around them but cannot physically touch. Robert Irwin does a similar thing using light and space. His, *Scrim Veil* (Figure 2.3) was designed specifically for the fourth floor gallery space of Marcel Breuer's Whitney Museum. Composed of few parts, "a white polyester scrim runs the length of the space, from the trapezoidal window overlooking Madison Avenue to the far wall" (Russeth 2013). Suspended five and a half feet from the floor, it commands the space it occupies and what is experienced becomes dependent on the body's physical relationship to it. The act of movement in and around the work becomes crucial to its comprehension. The singular light source, coming through the window from the outside, plays an important part; furthermore, the gradient of light changes as one moves further from or closer to the window.

Figure 2.2: Fred Sandback *Untitled,* 1974-2013

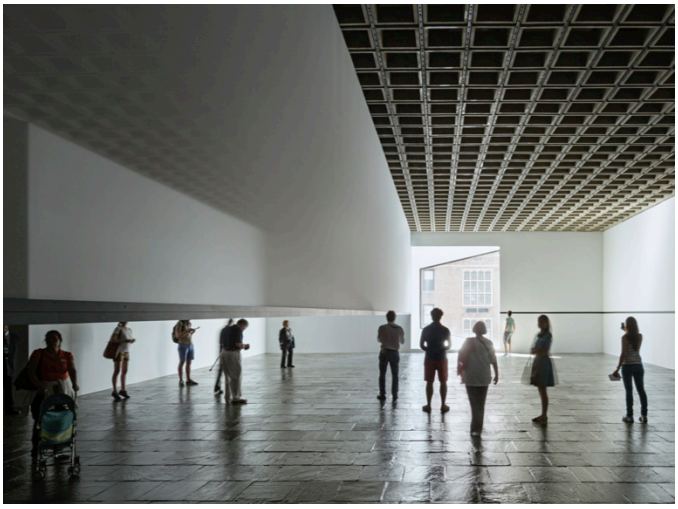

Figure 2.3: Robert Irwin, *Scrim Veil-Black Rectangle-Natural Light,* 1977

Of course, one cannot forget to include Donald Judd when discussing Minimalism. Not only is he considered one of the leading artists of the style and referenced often by all of the landscape architects in this research, but he is also the artist that brought back to life the city of Marfa, Texas, the location of this projective design study. Judd believed quite simply in the intrinsic beauty of a material and his works very clearly celebrate that beauty. Judd was interested in how art was experienced and believed in the dignity of an artwork. In the, Texas, John Yau, a poet and art critic, noted Judd "wanted to change the situation so that art could be experienced under a different notion of time, a slower time. He wanted art to be looked at, to be contemplated, to be thought about"(2008). His *15 Untitled Works in Concrete* (Figures 2.4-5) at the Chinati Foundation in Marfa embody these ideas. Embedded in a carpet of yellow grass, Judd designed fifteen configurations of poured concrete rectangular volumes measuring 2.5 x 2.5 x 5 meters (height x width x length). Arranged in groups of two to six on a linear alignment due North, each unit is vaguely distinct, interacting with the surrounding landscape individually and as a whole. Marianne Stockebrand, a German curator who was Judd's partner the last four years of his life noted, "His ultimate aim was to unite art, architecture, and nature in an embodiment of his own philosophical outlook, which sought to avoid fragmentation and to promote coherence"(2004, 3). Made for that specific landscape and designed to be permanent, the works exist, and grow older with the passage of time. Like the other minimalists discussed, Judd was "against…the division of thought and feeling, mind and body…form and content"(Yau 2008). Ultimately, Judd's work, and that of the other minimalists discussed here, reject rational thought and reason, preferring instead the more subjective and mysterious qualities of experience. Dependent upon the season or time of day, no experience is ever exactly the same.

Figure 2.4-5: Donald Judd, *15 untitled works in concrete*, 1980-1984

Japanese Garden Design and Philosophy

Much as minimalist sculpture is concerned with the physical relationship between the object and the human, ancient Japanese gardens suggest a significant relationship between the human and nature. Every garden is laid out with a distinct purpose. For instance, the Zen Buddhist garden was designed only for viewing from afar, while the promenade garden requires one to walk through it. Though seemingly natural in appearance, every element in an ancient Japanese garden is well thought out with "proportional relationships play(ing) an essential role in the composition"(Slawson 1991, 85). Rock formations, especially, are chosen and placed with great attention to scale and dimension. For example, with the great dry landscape of *Royanji* (Figure 2.6), a garden composed of five groups of rocks set within a walled gravel courtyard, the essence lies within the space between the rocks. As the visitor moves around the perimeter of the garden, the rock "island's" relationships to one another transform. At the root of these precisely designed gardens, however, there is still an intuitive element involved that cannot always be measured. These gardens are not symmetrical; there is an emphasis on a balanced asymmetry that can only be felt.

Figure 2.6: Unknown, *Ryoan-ji*, 1450

As well, there are several aesthetic philosophies that have influenced the garden style in a way that contrasts with the meticulousness involved in their creation. These include such concepts as *wabi*, the "beauty in simplicity"(Richie 2007, 73), *sabi*, "a quality suggesting age, deterioration"(72) and *aware*, which embraces the fleeting beauty in an ever-changing world. These three concepts celebrate the uncontrollability of nature existing within an extremely controlled environment. Another somewhat elusive concept in the Japanese garden is the notion of *fuzei*, "meaning 'atmosphere' or 'mood'"(Slawson 1991, 137) that implies a sensory quality of the landscape. This poetic notion parallels the design process of Cochran who often begins a design focused on a specific emotion.

The Classical French Gardens of Le Notre

The classical order of the French baroque landscape, most commonly associated with Andre Le Notre, is referenced by the landscape architects in this study as an influence in formal expression.

Le Notre's application of the formal elements of parterres, bosquets, allees, etc. is accomplished using a seemingly minimalist palette, consisting mostly of gravel, lawns, shrubbery and water. Using a concise, geometric plan, Le Notre's designs are controlled. He used mathematics and precision to create optical illusions within the landscape. Alan S. Weiss "characterized the overall composition of the garden at Vaux as an anamorphosis"(Brix 2004, 91) in his book *Mirrors of Infinity*. Anamorphism was a style of composition involving the distortion of "a figure, an object or a landscape,...either compressed or extended, so that an enigmatic image results"(Brix 184). The four pools of the lawn parterre at Vaux Le Vicomte (1657) are an excellent example of this skill. When looking out from the chateau, the pools appear to be of equal proportion with equal distance between them when in fact, the pool furthest away is eight times as great as the one closest to the viewer's eye. Another trick Le Notre so skillfully mastered was the ability to create the unexpected. It is often documented that the most impressive element in the gardens of Vaux is the Grand Canal and its grotto, completely hidden until it suddenly appears in front of you. Andre Le Notre's gardens demonstrate a perfect balance of space and perspective. His style was precise and calculated, and the result classically modern.

Peter Walker often refers to the minimalist style as "having many compelling affinities with classicism"(Walker 1997, 20). Walker had a strong reaction to Chantilly (Figure 2.7), one of Le Notre's later works, upon visiting in the 1970's. He wrote, "Chantilly, a great garden of stone, water, space, and light, also represents a superb example of form reduced to its essential perfection"(Walker 20). What is interesting about this statement is the acknowledgment of space and light within a landscape. One of the great ways Le Notre achieved this was through his application of expansive reflecting pools, seen also in the designs of Walker, Cochran and Kienast. Their use invites the larger landscape into the garden in a way that creates energy and intrigue, expanding the dimension of a space.

Figure 2.7: Andre Le Notre, *Chateau de Chantilly*, 1665

The Modern Movement in Landscape Architecture

As history would dictate, the modernists developed their design philosophy in rejection to the formal European Beaux-Arts architectural style popular at the time, which included the French Baroque. In the late 1930s three Harvard landscape architecture students, Garrett Eckbo, Dan Kiley, and James Rose joined forces in revolt, publishing three articles in *Architectural Record* that would ultimately change the course of the profession. These three articles "argued for collaborative, cohesive design and planning, from city garden to natural preserve, stressing the interdependency of such environments"(Imbert 2008). Eckbo, the more vigorous and outspoken of the three, continuously pursued the social visions of modernism throughout his career. In 1950 he published *Landscapes for Living* stressing the relationship between man and nature "without apologizing for the human presence"(Imbert). Thomas Church followed suit with his publication of *Gardens are for People* in 1955. As Cochran stated, these pioneers in American landscape

architecture, "redefined the spatial constructs of modern architecture during a time that considered space over mass a defining quality"(Green 2010).

Dieter Kienast found inspiration in a similar movement happening in Europe around the same time, particularly in the work of the Zurich garden architect, Ernst Cramer. Kienast was intrigued by his "approach, which was more innovative and programmatic"(Weilacher 1999, 142). In 1944 Cramer joined the Zurich branch of the Werkbund, headed by the Bauhaus teacher Johannes Itten, in search of a way to blend society and architecture. He wanted to create an awareness of natural processes without being obvious, creating tension between "naturalism and abstraction"(Weilacher 2001, 12). Rejecting both "decoration for its own sake" and the common practice of mimicking "unspoiled nature"(13), Cramer was in search for a more poetic product that acknowledged man's intervention in the landscape. His abstract approach allowed visitors to immerse themselves within the landscape, heightening awareness and awakening their senses, in a way that had never been done before. In the end, the modern movement, in both Europe and America, recognized and embraced human use within a landscape.

Archetypal Minimalist Landscapes

The following section will examine works by Walker, Cochran, and Kienast, as they best exemplify their influences. This thesis will analyze two designs per designer in an attempt to provide the reader with a visual sense of the minimalist style. Of course, as mentioned previously, a minimalist landscape can never be fully understood through pictures and words. It is only though the experience of place that one may be able to fully realize the content of a design.

Peter Walker and Michael Arad's *9/11 Memorial* (Figure 2.10) in New York City was a commission of monumental significance and criticism. Walker was brought in to the project after Arad, a young New York Architect, had won the competition. He immediately recognized Arad's scheme as being similar to, *North, East, South, West*, a minimalist work of art by Michael Heizer (Figures 2.8-9). Arad had designed for two great voids to exist in the footprints of the

fallen twin towers. Walker was brought in to support this idea but also create a more usable landscape that would surround the voids and function like a park. Covering seven acres of precious open space, the task became threefold; to create a place of commemoration, a place people could use, and a place that was ecologically responsive in water use and energy consumption. A flat plane, used often in Le Notre's work, became crucial to maintaining the dramatic effect of the voids. With the same notion in mind, Walker created a grove of nearly four hundred trees, both to provide shade and to contrast and enhance the emotional impact of the voids. From the edge of the voids one can almost feel the rising height of the once existing skyscrapers. The feeling is intense and can only truly be understood through experience. There is both a serene quality appropriate for a memorial while also functioning as an energetic park space in downtown New York City.

Years earlier and on a smaller scale, Walker designed the *Tanner Fountain*, *Harvard University* (Figures 2.11-14) with the intention of creating a space that would leave a lasting memory. *Tanner Fountain* is both functional and flexible while remaining artful. Sited at a busy pedestrian intersection, Walker organized 159 stones in irregular, concentric circles. Nozzles originate at the center emitting a mist that hovers over the rocks in the spring, summer, and fall seasons. With its convenient location and unique design the fountain attracts a variety of people using it as meeting spot or as a place to stop and sit. When discussing the function of a public space Walker is quoted saying, "A public space should be flexible enough so that people can use it for all sorts of reasons. The goal is to bring enough importance to the space to create a great memory for all who visit"(Krueger, 2012). Walker also embraces the change in a landscape as the Japanese do. Located within the natural environment, the fountain transforms with each season letting fall winds rouse the mist and winter snow gently cover the stones. Without suggesting any particular activity, the fountain effectively invites social human interaction while creating intrigue and invitation year round.

Figure 2.8-2.9: Michael Heizer, *North, East, South, West*, 1967/2002

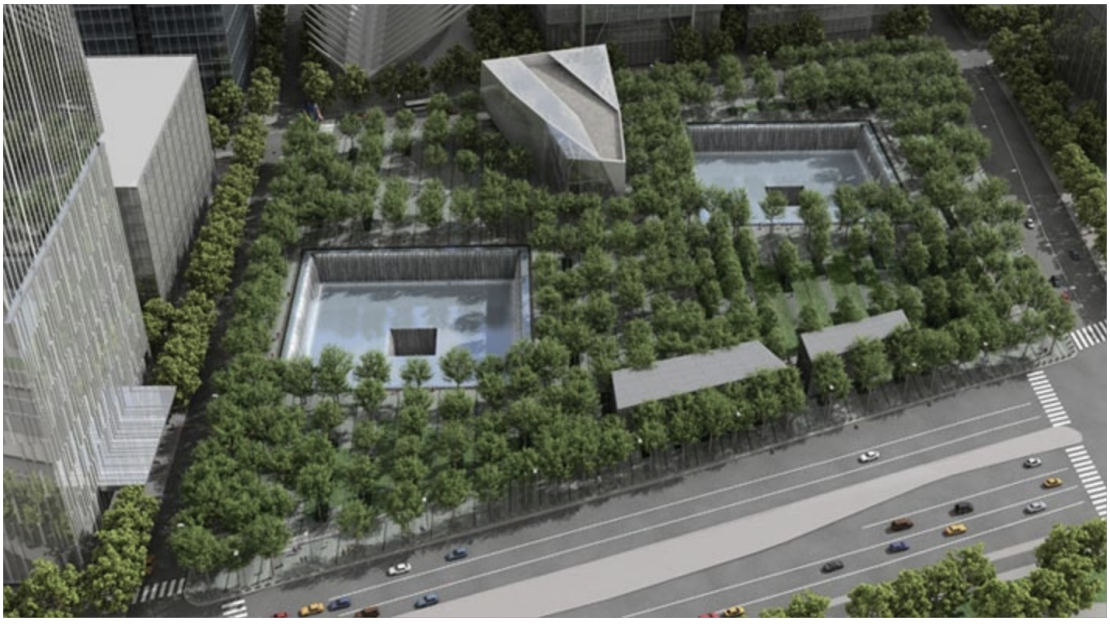

Figure 2.10: Peter Walker and Michael Arad, *National 9/11 Memorial,* Model, 2011

Figure 2.11-13: Peter Walker, *Tanner Fountain, Harvard University*, 1984

One of Andrea Cochran's latest works, *Buhl Community Park* (Figure 2.16) in Pittsburgh, features a sculptural piece evocative of Walker's *Tanner Fountain,* while also seeming to reference Walter De Maria's *The Lightning Field* (Figures 2.14-15) in New Mexico. Built in collaboration with the artist, Ned Kahn, the work consists of sixty-four stainless steel poles arranged vertically in a grid, emitting a spherical mist that floats above the ground. The installation serves as a point of activation within the park while also grounding the triangular axis of the site's design. Located across from the city's Children's Museum and surrounded by an abandoned mall turned into office building, it was important that the park be usable and flexible. When discussing this matter Cochran noted that, "we tried to accommodate a variety of scale and activity so you could have a concert in the park. It's big enough that it could accommodate a tent for an event, but, yet, you would feel comfortable going there to eat your lunch"(*TribLive*, June 21, 2012). Designed for the community in union with an artistic element, the park proves to be dynamic and restful at once.

Cochran often uses contrasting elements in her designs, applying stark geometry against a diaphanous plant palette, or by introducing a hard metal into a rolling landscape. As demonstrated with the *Children's Garden* (Figures 2.17-18) in San Francisco (2002), Cochran uses cor-ten steel, for its strength and slenderness, to deceive the eye, similarly to Le Notre. When viewed from a window overlooking the garden, the design appears as a flat composition of bold diagonal plantings of green, white, and yellow groundcovers. It is only after you immerse yourself within the garden that the true character of the site's ramped terraces are revealed. A favorite material of Cochran's, cor-ten steel, is not only used to replicate the earthy tones of soil, but also for its *sabi*-like character; cor-ten ages in a way that emphasizes the transformative power of the earth's natural elements. She says, "I really like things to have a patina. It changes as it rusts, so it's also expressing the passage of time"(Funderburg 2012). Material selection and color palette maintain a central focus in Cochran's work that, while subtle, ultimately contribute to a more sophisticated and heightened aesthetic experience.


Figure 2.14-15: Walter De Maria, *The Lightning Field,* 1977

Figure 2.16: Andrea Cochran, *Buhl Community Park*, 2012


Figure 2.17-18: Andrea Cochran, *Children's Garden*, 2002

Dieter Kienast did not believe that the quality of a garden was dependent on its size, but rather that it be a place of meaning, no matter how small. Marc Treib writes there is an "ecological understanding (that) underlies many of Kienast(s) gardens although his ideas are not evident to the photographic eye"(2005, 132). His works also celebrate the ephemerality of nature, well demonstrated in his design for a small courtyard for the office of Basler + Partner (Figure 2.19) in Zurich. Located behind the office building and covered in shade, it would seem a space with very little potential for a garden. However, Kienast created a place of transformative beauty that is centered around an irregular cylindrical water basin fed with roof runoff from pipes underground. As the basin overflows, the water seeps into the gravel-covered ground and eventually travels to a narrow rectangular pool expanding the length of the far wall. This same wall acts as a sponge, made of calcareous tufa, and allows for the establishment of moss, lichen, and algae, gradually covering it over time. It is a process that is constantly evolving in a way that celebrates ambiguity. To Kienast, a garden was never finished.

On a larger scale, though no more important, Kienast designed a public park reminiscent of Ernst Cramer's temporary *Poet's Garden* (1959). Realized after his death in 1998, the *Mountain Garden in Graz* (Figure 2.20) shared some of the same spatial qualities demonstrated in the *Poet's Garden*. Sprawling across twelve acres, Kienast designed a series of twenty-six large earth formed pyramids, arranged throughout a series of diagonal bisecting paths and extending up to twenty-six feet in height. The grassy pyramids provided a place where visitors could get lost or seek privacy. Originally designed for a horticulture show, but later intended to remain permanently, this abstraction of open space provided a welcome dreamlike quality. Interest was kept year-round by including fragrance and color in long geometric strips of lavender or scilla, covering the entire plane of a pyramid. Reflections of the pyramids in a large rectangular pool enhance the dramatic effect. From the beginning of his career, Kienast was interested in the dichotomy between architecture and nature, constantly in search of a way for them to exist in a delicate symbiosis.

Figure 2.19: Kienast Vogt Partner, *Courtyard for the Basler + Partner Building in Zurich*, 1996

Figure 2.20: Kienast Vogt Partner, *Mountain Garden in Graz*, 2000

These designs address several of the more traditionally understood aspects of sustainability while also incorporating aesthetics, experience, and ethics as proposed by this thesis. With each design, a restrained material palette is used, consisting mainly of natural materials. These same materials were also chosen for their sensuous qualities, exemplified in the strength of stone and the mutability of cor-ten. A great attention to rainwater is maintained, as seen often within the field today. Just as Kienast collected roof water at the Basler + Partner building, an underground cistern is used for irrigation at the *9/11 Memorial,* and a bioswale filters runoff at the *Buhl Community Park*. Energy is considered when water is introduced, using as minimal amount as possible. A combed fountain effect reduces water usage and energy at the *9/11 Memorial*, a hollowed sphere of mist deceives the eye at *Buhl*, and pressure is used to feed the well in the courtyard at Basler +Partner. These elements are not necessarily intended to be perceived as sustainable, but rather contribute holistically to a more coherent design.

Conclusion

Project models, such as these, help to define the minimalist style as they demonstrate how each designer has interpreted the influences they cite. Given the strong emphasis on experience of place, common to all four influences, it is fair to assume that a minimalist landscape can only be fully realized after being experienced. A strong concept must then guide that experience. Also common to minimalist art, Japanese gardens, and the classical French style is Walker's idea of complexity distilled to its most simple parts. Suffice it to say, do more with less. When considering formal expression, a balanced geometric asymmetry, taken mostly from the Japanese garden and the modern movement, appears to be the most common application. In conclusion, a minimalist landscape is defined by the user needs, inspired by an evocative concept, illustrated with as few pieces as possible, and best expressed using balanced geometric asymmetry. A sustainable minimalist landscape, as defined within this thesis, would include these in conjunction with environmental processes, aesthetics, experience and ethics, to be explored further in the following chapter.

CHAPTER 3

CONSIDERING AESTHETICS, EXPERIENCE, AND ETHICS

This chapter will look at aesthetics, experience, and ethics in their relation to landscape architecture through their application in minimalist sculpture and architecture. Recognizing that there is not yet enough information on the minimalist landscape style to address each of these ideas thoroughly, art and architecture will be used as a bridge to the style. Art and architecture have been chosen for their close relation to landscape architecture, often considered a fusion of the two.

Environment (or ecology) will not be considered in this chapter, though still included in this thesis's definition of sustainability. It is not considered in this chapter as it is not necessarily a new aspect of sustainability in the landscape, but incorporated instead within the *triple bottom line*. While still an extremely vital aspect of sustainability, it is becoming standard practice within the field of landscape architecture and therefore more commonly understood. However, to be clear, this thesis will borrow Musacchio's words for a second time when considering ecology as a science that "embodies multifunctionality, provides ecosystem services, and is resilient and adaptive"(2009, 1007).

Considering Aesthetics and Experience Concurrently

Minimalist art easily eludes people, as it is too often dismissed as simplistic before one has the opportunity to experience a work. Criticized as being anti-expressive or anti-aesthetic this thesis sides with the argument of Susan Best, an art historian, who recognizes the subjective qualities of a minimalist work as being intrinsically aesthetic. Acknowledging the vast subject matter of aesthetic theory, minimalist art relates best with Maurice Merleau-Ponty's theory of phenomenological aesthetics, or the "aesthetics of experience"(Koh 1998, 178). This theory, in fact, has close ties with "the original meaning of the term aesthetic, derived from the Greek

aesthesis, meaning sense perception"(Dee 2010, 23). In response to Merleau-Pontys ideas, Best writes, "we become aware of perception only when there is some ambiguity"(2006, 135). She refers to the American art critic, Rosalind Krauss's, critique of a Robert Morris piece, *Untitled (L-Beams)* (Figure 3.1), as an example of such perception. The work consists of three 8x8x2 foot l-beams arranged in opposing positions within a small space. This relationship deceives the mind into perceiving the three objects as being of unequal proportion. Best writes, "the ideal space of abstracted geometry would render them equivalent but only at the cost of experience"(132). For Merleau-Ponty, experience is not concerned with an "already familiar world" but instead "becomes the condition of possibility"(134). It is usually with a new experience that we can begin to see something in a new light, to appreciate something in a new way. It is the power of the aesthetics of experience.

When considering minimalist architecture this same theory of an aesthetic of experience applies. Rather than a movement defined by chronological dates, minimalist architecture represents a "phenomenon in progress," spanning both decades and continents, yet always in pursuit of "a life more imbued with spirituality, clarity and harmony"(Bertoni 2002, 12). There is a stillness to the style that is accentuated by a strong control of material and a synthesis of the interior and exterior of a building or space. Tadao Ando, the self-taught Japanese architect, used only natural materials for parts of a building that came in contact with a person's hands or feet. His *Church of Light*, (Figure 3.2) in Osaka consists of a large concrete, rectangular volume with an interior floor and pews made of rough scaffolding planks. A cross is cut through the entirety of the far altar wall allowing light to penetrate through the otherwise dark space, calling attention to its brilliance. Ando deliberately used light and material to awaken one's sense of perception saying, "it is essentially through our senses that we become aware of architecture"(Bertoni 2002, 106). This awareness, however, was less subjective than that of minimalist art; as with architecture there is a more purposeful design intent, concentrated on generating feelings of purity and serenity.

Figure 3.1: Robert Morris, *Untitled (L-Beams),* 1965

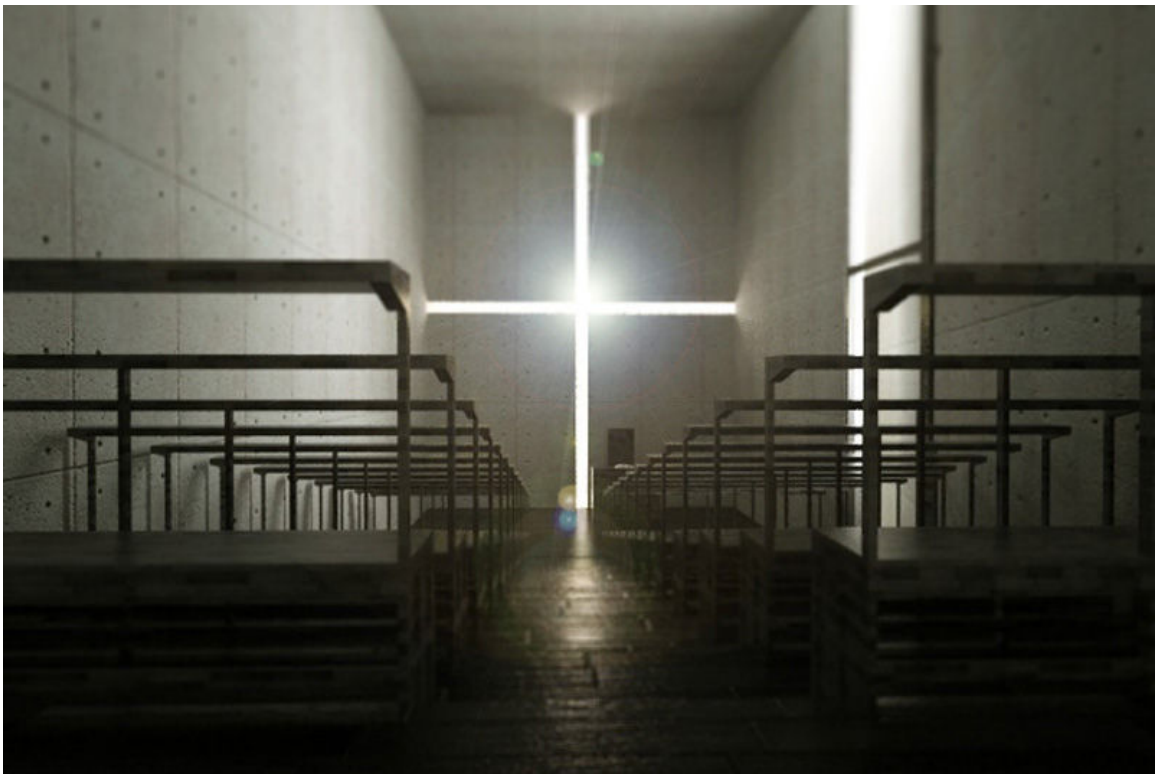

Figure 3.2: Tadao Ando, *Church of Light,* 1988

Considering Ethics

With the introduction of ethics, Musacchio is arguing for places "that inspire people to experience nature"(2009, 997) in a way that might alter their behavior towards it. One of the most interesting and unique aspects of minimalist sculpture is its relationship to nature and the landscape, as demonstrated in the works of Carl Andre, Donald Judd and Walter De Maria. The conceptual German artist, Hans Haacke, approaches this relationship in a singular way with his series of *Condensation Cubes* (Figure 3.3). Instead of placing art within nature, Haacke incorporated nature within art. By introducing a small amount of water, turned vapor, into a Plexiglas cube, he called attention to the natural process of condensation. This evolutionary process itself is slow, dependent on light, temperature, and gravity. The spectator's experience therefore becomes reliant on time. Without being symbolical, these transient works "invite the unpredictability and fundamental impenetrability of the elemental"(Boetzkes 2010, 45). Again, attention is given to the mutability of nature in a way that is unusual, ultimately altering the perception and knowledge of the spectator.

The ethics of minimalist architecture is similarly linked to its aesthetic and experiential qualities, though its pursuit for 'spirituality, clarity and harmony' has roots in an awareness and disapproval of society. It is an attempt to "break free from the viscous circle of an essentially materialistic society"(Bertoni, 56). John Pawson, a British architect known for his strict minimalist style, believes in the power of empty space as it "allows us to see architecture as it is, preventing it from being corrupted, or hidden, by the incidental debris of paraphernalia of everyday life"(Bertoni, 134). His design of his own home in London (Figures 3.4-6) best demonstrates this throughout four floors of minimally interrupted floorplans. After careful consideration, Pawson planned for the kitchen and dining area to exist on the basement level, given its adjacency to the back garden. The kitchen counter is then able to extend through the glass wall and into the garden. Warm cream-colored stone flooring was chosen throughout the entire residence for its ability to blend seamlessly with the exterior as well. A straight flight of

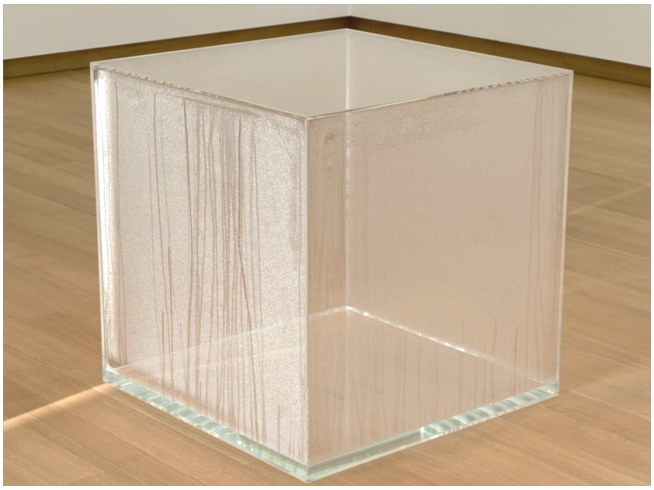

Figure 3.3: Hans Haacke, *Condensation Cube,* 1963

Figure 3.4-5: John Pawson, *Pawson House*, 1997-1999

Figure 3.6: John Pawson, *Pawson House.* 1997-1999

stairs, spanning the length of the flat, connects the living area on the ground level to the three bedrooms upstairs. Pawson worked to create views to the exterior, simultaneously allowing light in whenever possible. A glazed slot at the top of the stairwell allows light to cascade down three floors, while the push of a button opens a window to the sky in the fourth floor bath. These subtleties provide for the "contemplation of slow-moving nature"(Bertoni 2012, 13) in the midst of an increasingly fast paced and over-stimulated world.

Conclusion

It is rather ironic that the minimalist style, of both art and architecture, receives so much criticism for seeming too simple or monotonous. The research presented in this thesis should help contest those claims, providing some insight into the careful and calculated design process behind these works of art and architecture, respectively. Alberto Campo Baeza, a Spanish architect, has a very poetic style of writing about architecture and his work. In reference to a public school he designed in the coastal city of Cadiz, Spain, he wrote: "The strong salty scent and the constant murmur of the waves emphasize the palpable sensations of light and shadow, brightness and darkness, serenity and freshness. Once more there is the attempt to get maximum beauty with minimum elements. MORE WITH LESS"(1992). It is a design process of reduction to the most essential elements, a delicate balance of sensory perceptions that ultimately enhances the work. Its product is then felt through experience just as are the minimalist gardens of Walker, Cochran, and Kienast.

CHAPTER 4

VISUALIZING A FRAMEWORK: DESIGN APPLICATION

Guiding Minimalist Principles for a Sustainable Design

Based on the research presented thus far, this thesis assumes six guiding principles as it moves forward into the applied design strategy. The principles have been adopted from the three minimalist design applications in study: art, architecture, and landscape architecture (referred to under "value association" in table 1). Moving forward, the terms 'minimalist' or 'minimalism' are to be inferred when specifying the value association stemming from a particular design application. Each principle was chosen for its sustainable characteristic(s) in relation to environment, aesthetics, experience, and ethics, as clarified below.

The first design principle, 'evocative concept,' is found in all three disciplines. As seen often in the works of Walker, Cochran, and Kienast, a strong concept is used to generate emotions that ultimately leave a lasting impression on the visitor. It is through such an impression or memory that one can build a deep connection to a place or landscape. Often in landscape architecture the concept has quiet, peaceful qualities, becoming places of "discovery, repose, and privacy"(Walker 1997, 20). This too is seen in architecture, as it "attempts to draw us back to a different way of living and feeling, one that is calmer, more serene, more worthy"(Bertoni 2002, 11). An 'evocative concept' must therefore be driven by a feeling of serenity. What sets this idea apart from other concept driven designs, is that they are not based on metaphor or have any literal interpretation, but rather contribute instead in a more subtle way.

In acceptance of the more intangible qualities of minimalism, 'ambiguity' exists as the second design principle. As seen in landscape architecture and in the words of Dieter Kienast, "having an unequivocal position of one's own has given way to ambivalence, simultaneity, and ambiguity"(Weilacher 2007, 94). Kienast believed that our perception is based on our past

Table 4.1: Minimalist Principles for Projective Design

DESIGN PRINCIPLE	VALUE ASSOCIATION	SUSTAINABLE CHARACTER
1 Evocative concept	Landscape, Architecture, Art	Experience, Ethics
2 Ambiguity	Landscape, Art	Aesthetics, Experience
3 Adaptability	Landscape	Environment
4 Multifunctionality	Landscape	Environment, Experience
5 Balanced geometric asymmetry	Landscape, Art	Aesthetics, Experience
6 Attention to scale, proportion, light, time, and place	Landscape, Architecture, Art	Aesthetics, Experience, Ethics

experiences and what we "know" to be true. As things become altered or distorted it is only then that we begin to notice them. Ambiguity subsequently becomes an extremely powerful tool in generating an awareness of our environment. It is seen in art as well, demonstrated in Morris's *L-Beams* (Figure 3.1), where context played a crucial role. This incorporation of the ambiguous invites an altered consciousness that in turn enriches the connection to a place or landscape.

'Adaptability' is listed as the third design principle for its strong correlation to the mutability of a landscape. Appropriated from Jack Ahern's principles of resilience, considered in the introductory chapter, it infers an acceptance of change within nature. As Walker says, "minimalism continues to imply an approach that rejects any attempt to intellectually, technically,

or industrially overcome the forces of nature"(1997, 19). Rather, they become places in which such change is celebrated as seen with Cochran's application of cor-ten and Kienast's ever-evolving tufa wall. It is in fact a principle that should not be ignored in any landscape, no matter the style. Within the field of landscape architecture change remains constant and must be accommodated in a design. Material selection, function, and maintenance become integral elements in support of adaptability.

Just as the former was borrowed from Ahern's principles of resilience, so too is 'multifunctionality,' the fourth principle in examination. It is both a modernist principle of social and experiential function, as it is one of ecological function. Multifunctionality is seen often in landscape architecture as a "distillation of the complex to achieve the simple"(Levy 1997, 7). In a minimalist landscape every move must meet the needs of at least two or more things. For instance a running fountain can mask the sound of street traffic, while simultaneously providing an element of reflection and impression. Similarly an urban plaza can capture and reuse the rainwater that falls upon it, as well as fulfill its social function. Multifunctionality does not necessarily have to always be apparent, but it must be imbedded within the design intent of every element introduced.

The fifth principle also has some modernist ties and applies more directly to the formal qualities of minimalism. The incorporation of a 'balanced geometric asymmetry' ensures a certain dynamism within a minimalist setting. Cochran writes, "the zigzag, saw-tooth geometry became a reoccurring theme in the projects of Rose, Church, and Eckbo often opposed with a curve or set against a straight line"(2008, 5). Through not necessarily zigzagging or saw-toothed, a careful balance of contrasting geometries is used to define spatial relationships while maintaining intrigue and variety. Asymmetry, as seen in the Japanese landscapes, contributes as well to a dynamic aesthetic experience, as it allows for the spatial relationships to transform as one moves through a landscape.

The final principle in study is the meticulous 'attention (paid) to scale, proportion, light and time.' Related to all three minimalist design applications considered, this is perhaps the most effective principle at conveying the true essence of minimalism. In any landscape the "mutable qualities of light, weather, and season as well as the sensual qualities of scent, humidity, the kinesiological impact of movement and the passage of time, all color our perception and memory of the experience"(Cochran 2008, 2). Constantly changing as one moves through a space, and with every passing hour, an 'attention to scale, proportion, light, and time' can enhance a landscape's 'adaptable' qualities, and a playful 'ambiguity' can be used to heighten our awareness of such things.

Already beginning to relate to each other, these six principles will be considered with every design decision and later, reconsidered in the conclusion. These principles will be used as the basis of measurement in determining the success or failure of the answer to the research question, as applied to the redesign of two existing and adjacent parks in Marfa, Texas.

A Brief Introduction to Marfa

Marfa is an anomaly. Located in the high Chihuahuan desert of West Texas, not quite two hundred miles from the nearest metropolitan area and less then seventy miles from Mexico, it is unexpectedly a place of rich history and culture. Founded in 1883 as a railroad water stop, it remained a small frontier town until the military moved in around 1910. With the establishment of the Marfa Army Air Field and later Fort D.A. Russell, Marfa's population in 1945 was reported at approximately 5,000, remaining to this day the record high. By 1946 both military installations had been closed and the population has steadily decreased. Today the population is just below 2,000, with tourism at an all time high.

Although it may not have been his intention, it is fair to credit Donald Judd with the revitalization of Marfa. In 1971 he fled New York City and arrived in Marfa in search of space for "large permanent installations of [his] work as well as room to install work by other artists"(Stockebrand 2010, 13). As cited previously, he believed in the dignity of art and felt that

only permanence and space for large volumes of work could achieve such a thing. He quickly bought property, acquiring two forgotten airplane hangars, the entire military base consisting of over thirty buildings, a ranch in the foothills outside of town, and several buildings in downtown Marfa. By the time of his death in 1994, Judd had left behind an extensive collection of art that is well preserved today. His work, and that of the other artists he welcomed to Marfa, is now owned and operated by two foundations, the Chinati Foundation, functioning as a museum, and the Judd foundation, responsible for his private properties. People flock to Marfa from all over the world to experience these works in which "art and the surrounding landscape are inextricably linked"(Chinati Foundation). Artists have been moving to Marfa since his arrival in 1971, inspired by his vision of the role of art and museums.

The 2010 US census demographic profile reported a population of 1,981 with nearly seventy percent of Latin ethnicity. Less than a quarter of the entire population is under the age of eighteen, while a third is between the ages of twenty and forty-nine. This leaves about forty percent of the population over the age of fifty. Today, the city of 1.6 square miles has one stoplight and is bisected by a railroad that runs East/West through the center of the city (See Figure 4.1). There are three schools, at least nine dedicated art galleries, with restaurants and commercial spaces opening frequently. Today there are technically three city parks inside the city boundary. Slightly outside of town there is a fourth, with plans for a new art-inspired drive-in theater underway. This thesis proposes a redesign for two of the three city parks, Sunset Park and the Travis E. Self Memorial Park, located adjacent to each other at the city's center (See Figure 4.2).

The Site and its History

Situated along the north side of the rail line, Sunset Park was a gift of the Southern Pacific Railroad and was named after the Sunset Limited passenger line that still runs through town today, now operating under Amtrak. The oldest-named rail line in the country, the Sunset

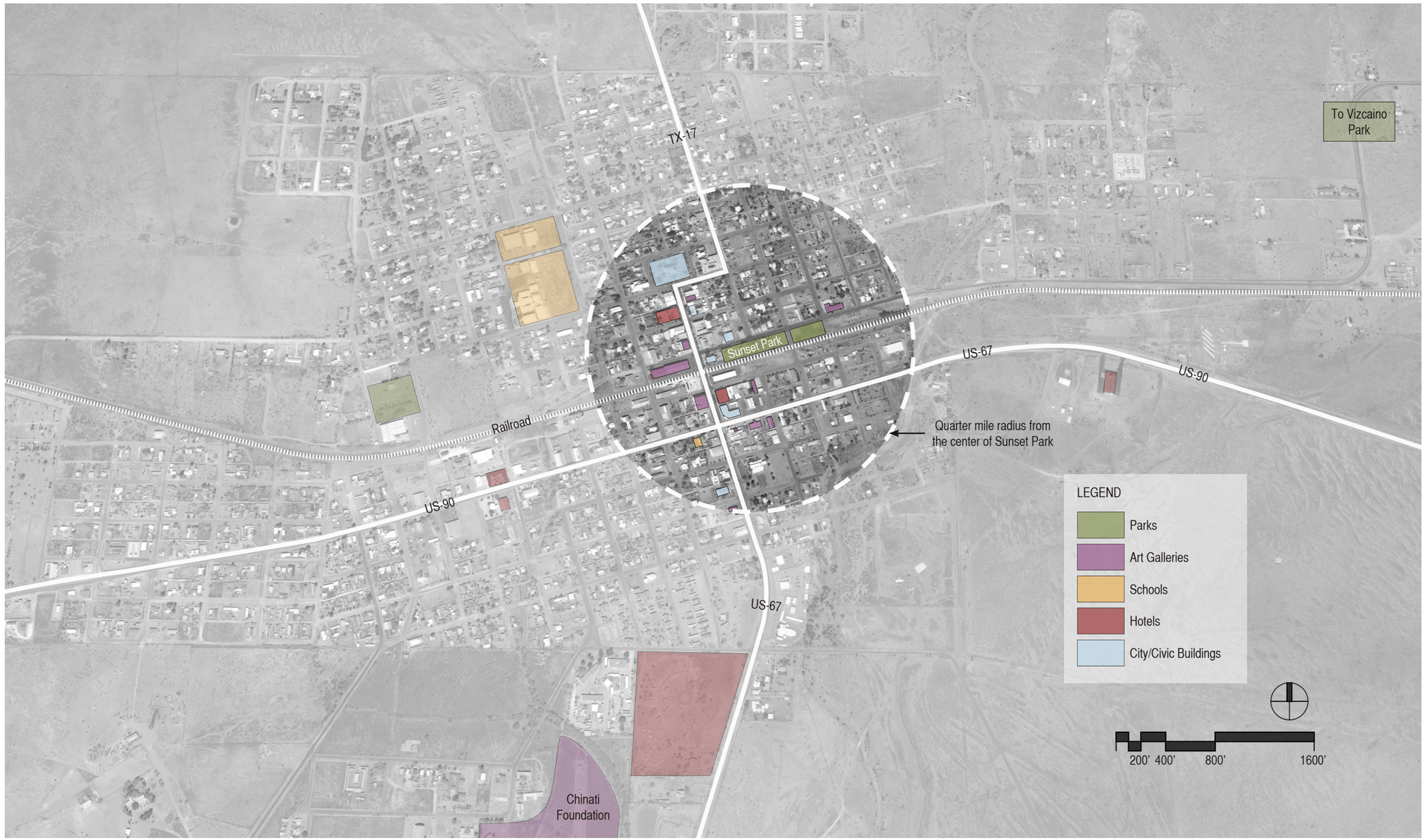

Figure 4.1: Site Context Map

Figure 4.2: Existing Conditions Map

Limited, in operation since 1894, stopped in Marfa, until the 1960's when railroads no longer needed watering stations. Today the train only passes through, stopping in Alpine not quite thirty miles to the east. In the early 1900's the park "was the center of activity on Sunday afternoons. The 6th Calvary Band, augmented by musicians from the 4th Calvary Band, gave concerts"(O'Connor, 2009). In 1913 the Marfa History Club donated a fountain to the park that was later removed when the Post Office was built in 1968. Today the fountain pedestal and bowl is cemented into the concrete outside of the Post Office. There is a bronze plaque nearby, but, placed out of context, it is hardly recognizable as the once treasured fountain.

In 2012 the *Big Bend Sentinel* reported on Tex Toler's, then Marfa Director of Tourism, proposal to restore Sunset Park. Toler had applied for a grant that could have helped rebuild some of the park's original features that have since been lost, the fountain being the first priority. His research also identified two other circular elements whose imprint can still be faintly recognized today. The first was a circular planting bed, situated on a direct axis from the fountain in the center of the park. Second was a circular gazebo, surrounded by a ring of trees on the northern side of the park. Ultimately the grant was not awarded to Marfa and, despite Toler's efforts, the park remains underutilized and uninspiring. The potential, however, exists with a rich history, a current program already recognizable, and several amenities nearby. Today the park runs east nearly two blocks from the parking lot behind the Post Office, offering a large open space with a few benches scattered throughout and two enclosed dog parks, one for smaller and the other for larger dogs. Across North Russell Street, still just north of the rail line, the Travis E. Self Memorial Park begins. In 1984 the park was renamed in memory of a former superintendent of City Utilities and features a picnic area and small playground. Amenities, such as the Marfa public library, Post Office, galleries, retail shops and restaurants, all exist in close proximity. In addition to the already three distinct hotels in town, construction has begun on a fourth, only one block south.

Plans for the new hotel include the land just south of the rail line, running parallel to Sunset Park. This land is currently undeveloped with the exception of the iconic shade structure that sits in the southwest corner of the block. The structure has become a core gathering place for Marfa citizens, sheltering a half dozen picnic tables designed by Donald Judd, the local "Food Shark" truck, and the Saturday farmers market. With plans to develop this land as well, the landowner, Tim Crowley, has donated the structure to the city under the agreement that they pay to dismantle and relocate it. The city then intends to divide the structure in two and use it to shade some land behind the USO visitor's center and to shelter equipment and vehicles across the street, leaving a void in Marfa's public life. Crowley's plans for development include a parking lot, a pool, commercial space, and an event space opening into a central courtyard. Though his intent is to fill the literal and figurative void of the lost gathering space that was the shade structure, the affiliation with the hotel will possibly deter the general public from feeling welcome.

Geography and Climate in Marfa

Given the nature of a landscape design it is important that the climate and geography of this unique place also be studied. Marfa sits approximately two hundred miles west of the Pecos River, in an area defined as the Trans-Pecos region. It is the most rocky and arid portion of the state of Texas. The entire region exists within the Chihuahuan Desert, the largest in North America, spanning across three states and northern Mexico. Marfa's elevation is 4,685 feet above sea level. The soil consists of a deep, well draining clay loam. Typically, Marfa has the coldest climate in Texas. The US Climate Data reports January as the coldest month, with an average low of twenty-four degrees Fahrenheit, and June as the hottest, with an average high of ninety-one degrees Fahrenheit. It receives approximately fifteen inches of rain a year with July, August, and September being the wettest months, accumulating over half of the yearly rain. These statistics will help to determine the plant palette. They also identify a need for shade in the summer months, sun in the winter, and indicate a scarcity of water.

Phase One: Site Inventory and Programmatic Elements

The program for the two existing parks has been defined based on a site inventory that studied the history of the site, the current use, the future needs of the community, and its geographic and climactic elements. The following table (4.2), images (Figures 4.3-8), and map (Figure 4.9) outline the program as examined previously.

Table 4.2: Projective Design Program

	DESIGN ELEMENT	VALUE ASSOCIATION	SIZE (EXISTING)
1	Circular fountain	Historical development of Sunset Park	Unknown, Approximately 30' in diameter
2	Platform for train stop	Historical development of Sunset Park	At least 470 LF, based on length of stop in Alpine
3	Sheltered event/ gathering space	Current use and future community need. Defined by the removal of the shade structure south of rail	50' x 195'
4	Enclosed dog parks	Current use	Large: 16.5k sf Small: 1.5k sf
5	Children's playground and picnic area	Current use	10.5k sf
6	Open lawn area	Current use, multifunctional recreation area	Undefined, will be smaller than existing
7	Cactus garden	Introduced based on unique vegetative zone	Undefined

Figure 4.3: Sunset Park, Historic Fountain, Marfa, Texas, 1913

Figure 4.4: People gathering for lunch beneath the shade structure, 2012

Figure 4.5: Sunset Park, existing condition of open space

Figure 4.6: Sunset Park, existing condition of dog parks

Figure 4.7: Sunset Park, existing condition of dog parks

Figure 4.8: Travis E. Self Memorial Park, existing conditions

Phase Two: Site Analysis

Based on the inventory known thus far, some general observations must be made that will direct the design development. It should first be understood that the shape of the park is linear, oriented along the east/west axis. Excluding North Russell Street, which currently bisects the two parks, the combined length spans approximately 835'. With a thirty-foot buffer from the centerline of the rail, the width of the park is approximately 145'. Currently there is a row of four lampposts with exposed overhead wiring running west through the center of Sunset Park and over the Post Office. Since they are an eyesore and general design obstacle, it will be assumed that their removal and replacement will be required in the following design concepts. Telephone wires exist as well, though their removal is less necessary. See figure 4.9 for their location.

For the purpose of this thesis both parks will hereafter be referred to as Sunset Park. The close proximity of the two negates the need for such division while also interrupting the function of the park. The playground area will still be named in memory of Travis E. Self and the fountain dedicated to the late Marfa historian, Cecilia Thompson, as suggested in Toler's 2012 proposal. Originally placed at the park's entrance, the fountain should also be reintroduced as a focal point within the design. Of course, given the development of the Post Office, this location will have to change. It should be noted that most pedestrian traffic would be coming from west of the park, along Oak Street as it intersects Highland Avenue, a main artery in Marfa. Secondary traffic will come from the streets perpendicular to the park, North Dean and Russell Streets. Coming east on Oak Street or south from North Nevill Street exist as the third and least likely points of entrance. Finally the eastern end of the park, where the Self Memorial Park exists currently, is the least desirable property. Located across from a storage unit facility and less then 250' from the city's power grid, the views are rather unpleasant.

Figure 4.9: Site Inventory Map

Phase Three: Design Concepts

As a means of experimentation the design process will continue by exploring three different design concepts before choosing a final design application to pursue in greater detail. This strategy is as much an exercise in the best arrangement and function of the design, as it is a method for exploring different ideas. In some cases, as with the shade structure, the idea is maintained throughout all three plans, as it mostly replicates what had existed south of the rail. In other instances, as with the fountain, different ideas are explored in a more creative manner, though always maintaining the original circular form. At this stage in development some detail was intentionally left out. Areas such as the dog parks, playground, and cactus garden are essentially included as place markers until the next phase.

Concept One (Figure 4.10)

This concept began with the positioning of the shade structure. The intent of its design is to preserve the same dimensions of the existing one, south of the rail; yet allow for a little more transparency and versatility. The same dimensions are used to maintain both the iconic image of the structure and provide enough space for a variety of different uses. The length, however, is broken up, leaving only the frame and no roof for a third of the structure. Opening up the eastern end would allow the option of sitting under the sun, while also responding to the principles of light and shadow. In this particular concept it is placed in the northeast corner of the original Sunset Park block.

A central entrance to the park is provided at the intersection of Dean and Oak Streets. A pool is placed on this axis and designed as a large, shallow gravel basin that would fill with rain runoff from the surrounding area and roof of the shade structure. The size of it would allow a vast reflection of the sun and sky when full, and serve as a reminder of the ephemerality of nature when the water level recedes. A bridge intersects the pool and also passes through a large framed structure that provides the fountain effect, releasing a combed plane of water into the basin.

Figure 4.10: Design Concept One, Plan

Another walk-though frame is used to signify the park's entrance, while also displaying signage slightly northwest of the pool and fountain. Balancing these two planar elements is a long perforated wall that edges the south side of the playground, cactus garden, and lawn area, placed in that order from west to east. The form of the playground and cactus areas is rectangular, while the lawn is trapezoidal, mirroring the obtuse angle of the path bisecting the pool. The dog parks have been moved to the former Self Memorial Park, where parking has also added for ten cars. As will be seen in all concepts, sidewalks are added along the perimeter of the site with crosswalks introduced at key entrance points. Trees are placed throughout to provide shade and balance within the design.

Critique:

The fountain concept works well in this design as it provides a good reminder of the ephemeral and intermittent frequency of rain in this desert landscape, proving to be an application of ambiguity. The placement of the dog park also seems to work best in this concept. It fits entirely within the space yet still allows room for some parking. Also the necessary fencing required for these two spaces would create an unwanted disconnect between other program elements if blended within the larger Sunset Park block.

Concept Two (Figure 4.11)

The second concept evolved by establishing the main entrance and focal point at the intersection of Oak and Russell Streets. The shade structure is placed east of Russell Street in the former Self Memorial Park space. This maintains the view of the shade structure from the road and also the fountain, which is placed just west of Russell Street at the northeast corner of the block. The fountain is designed to be raised a foot or so from the ground, allowing water to spill effortlessly over the sides onto the surrounding gravel. From there, a trellis meets the lawn, projecting out in a triangular form, angled away from Oak Street. This allows space for a smaller triangular planting bed next to the playground and picnic area. A skewed rectangular cactus garden meets

Figure 4.11: Design Concept Two, Plan

the western edges of the lawn and playground, also providing a buffer between these areas and the dog parks, spanning west and meeting the Post Office parking lot.

Critique:

While the form of this design appears more dynamic than the first, the placement of programmatic elements is off. Though the street visibility of some of the more essential elements is strong, the utility poles and lines existing west of Russell Street get in the way and the shaded gathering space is surrounded by the least desirable views. Also ineffective is the proximity of all of the fenced-in areas. With the two dog parks and playground divided only by the cactus garden, the garden then becomes lost between the two.

Concept Three (Figure 4.12)

The final concept in this initial phase introduces a new train depot and platform to the Sunset Park block. It was left out of the first two for feasibility reasons. With an Amtrak stop in Alpine, less than thirty miles east of Marfa, the need for it could be questionable. However, it could also be a major source of connection and economic growth for the city, for which citizens have already expressed a desire. Currently there is no hospital in Marfa, no college or university, and the nearest major airport is some three hours away in El Paso. Though the city itself is extremely walkable, the car becomes a necessity solely for the purpose of getting to and from Marfa. The already existing rail line running through town could be utilized for both long distance travelers via Amtrak, and perhaps eventually, with some legislative effort, more frequent commuters. Given the history of the park and the smart growth opportunities that a rail stop would bring to Marfa, it is only appropriate that one be included in the design proposal. It also provides a multifunctional aspect by acting as a buffer between the rail line and the park.

The platform then spans the length of the Sunset Park block, beginning behind the Post Office and ending at Russell Street. It would run 670x12 feet and be raised the required four feet from the ground. ADA accessible ramps are placed on both ends with six sets of stairs spaced evenly along the length of the platform, entering into the park. Just north of the eastern end of the

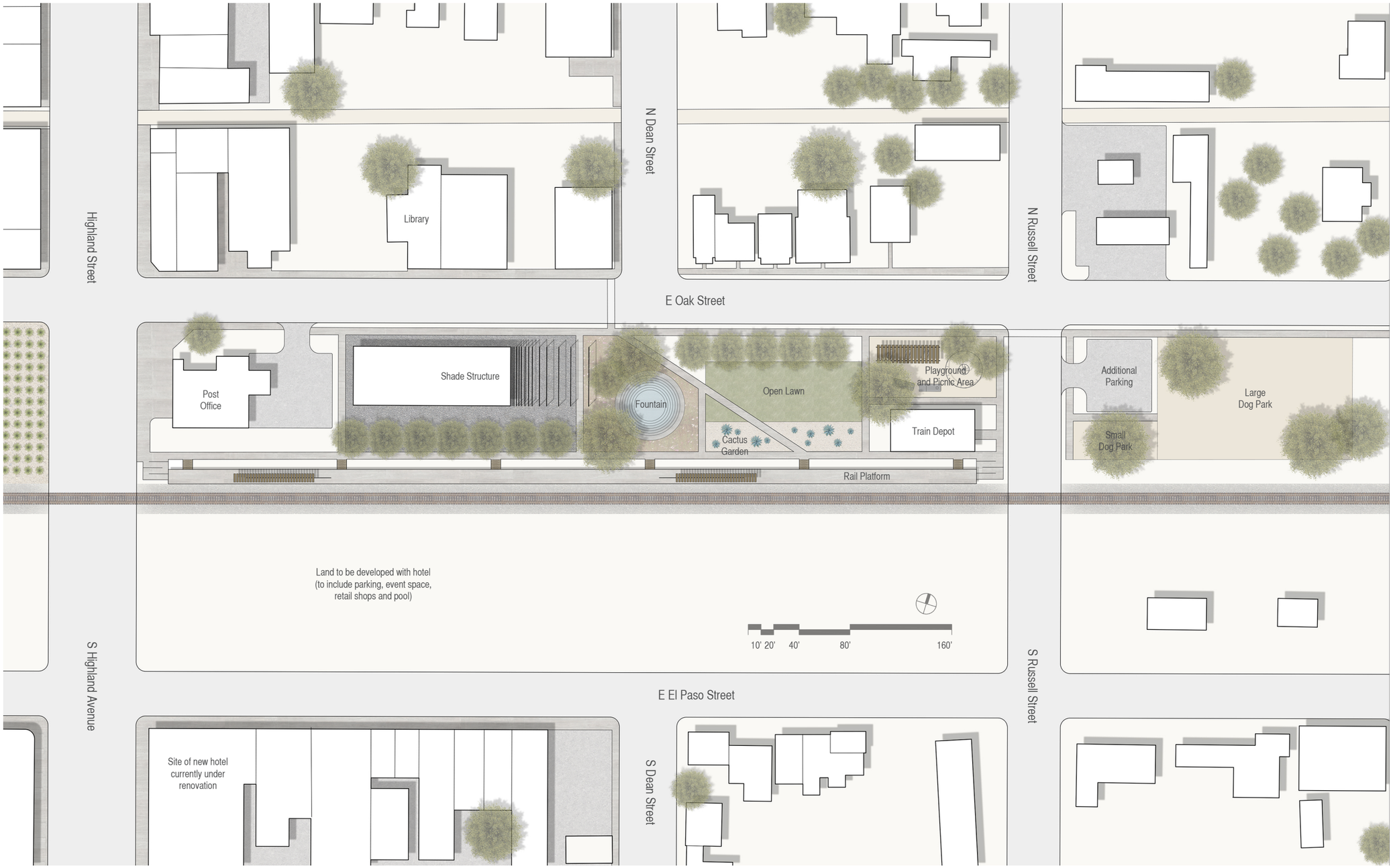

Figure 4.12: Design Concept Three, Plan

platform, space has been reserved for a depot building that would manage ticket sales and information while also providing public restrooms. At 70x35 feet the building footprint is small, though still allowing plenty of room for the said functions without taking away too much of the valuable parkland.

Directly north of the depot there is room for the playground and picnic area, meeting a sidewalk that runs perpendicular to Oak Street. From there a rectilinear lawn area spans westward 130 feet, bordered by a row of trees on the north and the cactus garden on the south. From the intersection of Oak and Dean Streets, an angled sidewalk cuts through the lawn and cactus garden, meeting the second most eastern stairway. As with the first concept the fountain is placed on axis with the intersection. A series of stepped concrete rings are designed to fill with rain runoff, allowing the level of water to change naturally. The open end of the shade structure meets the fountain, extending toward the Post Office parking lot. Lastly the dog park is placed across Russell Street, as designated the more suitable space after an analysis of the previous concept.

Critique:

Of the three concepts presented thus far, the form in this one seems to be the least interesting, perceived to be too rectilinear, without much energy. Given the placement of the train depot and the utility wires at Russell Street, the shade structure is optimally placed in this concept, at the western-most edge of the park. The train depot and platform should also remain, as the design is further explored. Though it may require a fight to have this element reintroduced to Marfa, citizens have been vocal about wanting it for years. Hopefully this design will only help their case, proving there to be enough room to accommodate the infrastructure, while simultaneously welcoming travelers with a public park space.

Phase Four: Final Form (Figures 4.13-16)

From this exploration, the formal expression of the final design is beginning to emerge, borrowing working elements from each concept. This section will then go into greater detail,

specifying materials used and ideas not yet discussed. Beginning with borrowed elements from concept one, the design will retain the entrance features, as they were the strongest in this design. The design will emanate from a central entrance point existing at Oak and Dean Streets and maintain the framed entrance structure. The fountain will also be similar to the design from concept one, with the framed structure offset twelve feet from the entrance frame. A bridge is designed to pass through the frame and over the pool and meet the entrance path at an angle. This angle then divides the land surrounding the pool into two distinct areas. The eastern half frames the lawn, to be planted of native Buffalo grass, Boutelous dactyloides, while the western half is to be planted with a wilder palette of tall grasses and perennials. The shade structure will rise out of the meadow, with a concrete path defining the edge just after the first frame. Fine gravel will then be used as groundcover beneath the shade structure.

An obtuse angular form, most similar to concept two, shapes the lawn with the longest edge angled off Oak Street, defining the western edges of the cactus garden, playground and picnic area. The cactus garden then meets Oak Street in a triangular form. It is designed to be reminiscent of a Japanese rock garden, using a variety of cacti to form the "islands". With one stone path passing through, it is predominantly designed to be enjoyed from the outside, while also providing a buffer between the street and the open lawn area, creating a greater sense of enclosure.

The playground and picnic area meet the western edge of the cactus garden in an irregular form. This allows for the site to cover a larger area though still existing in the same space as seen in concept three, at the northeastern corner of the original Sunset Park block. Rather than dividing the picnic areas, as done currently, this design provides one shade structure for all picnic tables. This allows for more communal events to occur, common at playgrounds, while also saving space and material. The overall existing footprint of this area was reduced; however the open grassy area that was lost is instead incorporated within the adjacent lawn space. The shade structure consists of a simple metal frame with wooden planks placed horizontally

above, mirroring the direction of the frames of the lager shade structure and leaving a quarter inch gap between each plank, allowing a minimal amount of light to penetrate through. Acknowledging the history of Marfa and the establishment of the park, the playground equipment has been designed and inspired by the train. Using a metal framework, equipment has been designed to evoke a locomotive and dining car, with a slide, climbing elements and imaginative areas where children can pretend to be an engineer or passenger. A circular metal frame is also included nearby to provide a structure for swings, with ten saddle seats distributed along the perimeter and a tire swing supported by a second ring in the middle. Using minimal elements in a creative and interesting way enhances the user's experience as one that is distinct and thus memorable.

The train depot from concept three has been reduced to a smaller building that would provide restrooms, storage for maintenance equipment, and offer ticket sales through an attached electronic kiosk. Based on feedback from committee member Buck Johnston the footprint was reduced to half of the originally proposed size covering a 35x35 foot square. Johnston believes that with a larger depot existing in Alpine there is no need for one in Marfa. This also allows for the playground area to expand, a valuable amenity in the community. The platform itself would be made of concrete with wooden stairs, made from reused railroad ties, rising the four feet to meet the train. Two sheltered waiting areas would be located on the platform, placed strategically to align with the framed structures at the entrance and fountain. A similar frame then supports a perforated concrete wall with benches on both sides and a shelter overhead. While the shelter provides shade and protection from rain, the transparency of the wall allows for a dappled sunlight effect to shine through into the park.

Across Russell Street, parking for twelve vehicles has been incorporated off of a one way cut-through that separates the two dog parks. The small dog park then fits in the northwestern corner of the block, screening the parking from immediate view and covering 4,500 square feet. The larger park then sits immediately east of the parking, covering 15,200 square feet. The form

Figure 4.13: Final Design, Plan

of both is rectilinear and kept rather open, with the exception of trees planted throughout. They are not designed to incorporate many added features; but instead to be simply functional, providing enough space for a dog to roam about freely. Picnic tables and benches can be reused from the existing parks to provide places for dog owners to sit and relax. A combination of woodchip mulch and native Buffalo grass are to be used as groundcover.

Environmentally Sustainable Features

The following section analyzes the sustainable properties found within this design as they relate to environment, best expressed through rainwater management, materials, and plant selection. The site would need to be graded slightly to encourage the flow of all on-site runoff to flow into the central pool and fountain. Though the basin is lined with gravel, there would need to be a secondary lining beneath the gravel that would discourage infiltration to a partial extent. This would allow for a longer time period of the reflection that this element would provide. A pressurized pump would be placed at the center of the basin and lowest point, about two feet below the ground elevation. This would circulate water from the basin into the planar fountain element, allowing this feature to be an effect as long as possible. The pump would be controlled by a switch in the maintenance storage facility, so that it could be turned off at night and throughout drier periods. Overflow would be directed to an inlet pipe, existing near the edge of the basin, flowing into a cistern buried beneath the basin. The cistern could then be used for watering the plants and trees.

However, the plant palette of mostly native wildflowers, grasses, cacti, and trees would be selected to require little water. This decision would also support flora/fauna interactions and promote local species biodiversity. Additionally, the palette would be selected to encourage an adaptable development over time. With winds blowing from the West, seeds from the wildflower mix would spread slowly into the lawn area and later into the cactus and playground. Though the lawn would be a little more strictly maintained by mowing, the survivors within the cactus garden and playground would provide a natural element of coherence. This same concept of coherence

is seen throughout the park, demonstrated in both formal expression and material selection. It contributes to the first principle, evocative concept, creating a calming environment.

Critique: Revisiting the Guiding Principles

In order to best understand the minimalism within this design it is necessary that this chapter end where it began, with a review of the application of the defined guiding principles.

1. The first, *evocative concept*, is one of the subtler principles that is difficult to define, especially as it so closely relates to experience. Designed as a place for community engagement, there are also places for quiet reflection, such as the fountain or cactus garden. Within all spaces there was a continued mindfulness of using natural materials combined with the use of repetition of form and material, ultimately contributing to a soothing, serene experience.
2. *Ambiguity* is best demonstrated with the ephemeral fountain that fluctuates and responds to the weather in Marfa. As the water fills the basin and reflects the sky one is easily reminded where the water has come from. Then, as it dries up the absence of water leaves a void in the landscape that instills a similar awareness. The user's experience then becomes dependent on the naturally changing weather systems.
3. The third principle, *adaptability*, is admittedly the weakest represented principle. It is demonstrated with a mostly native plant palette. In specifying plants that are naturally acclimated to the area, little maintenance and water would be required to sustain their existence. Though this is an important role of adaptability, it could have been developed further, in a more innovative and interesting way.
4. *Multifunctionality,* however, is present throughout, as required in a minimalist landscape. The shade structure, serves as a place to host a variety of events and, is also designed to invite sun in, a welcome addition in the colder months. The rail stop platform provides connection to and from Marfa, while also serving as a buffer between the park and the rail. The fountain celebrates the history of the park, absorbs storm water runoff, provides

a place of reflection and exists as a focal point within the park. Together, the cactus garden, playground, and train depot help create a sense of enclosure for the open lawn area, while also achieving each of their own distinct functions. Even the dog parks across the street, planted with a variety of trees, help mask the less desirable view to the east, while simultaneously providing dogs with the space to run free.

5. The form and spatial elements of the park best demonstrate the fifth design principle, *balanced geometric asymmetry*. Circulation defines the form of most of the programmatic elements. Oblique angles are juxtaposed against long linear sidewalks that span the north and south length of the park, creating an irregular design expression. Vertical elements are then balanced asymmetrically over the form. The depot in the southeast corner is offset by the lighter framed structural elements in the center and shade structure in the northwestern corner. The platform then provides a grounding on which the design rests.
6. Vertical elements are also used to best convey the final principle, *attention to scale, proportion, light, and time*. The framed structural elements, though spanning long lengths, take up very little space as they are defined solely by their edges. All shade structures are designed to let some light it, while still providing ample shade. As well, each has its own unique way of doing so. The larger shade structure opens up on the eastern end, the shade structure at the picnic area invites light in through strategically spaced planks overhead, and the shelters on the platform allows light to pass through a semi-transparent wall that supports a closed roof overhead. Decisions such as these help create a design that is deeply connected to the context of its site.

Figure 4.14: Section View, A-A’

Figure 4.15: Section View, B-B’

Figure 4.16: Perspective of Park Entrance at Dean and Oak Streets

CHAPTER 5

CONCLUSION

The concluding chapter attempts to critique the final design's ability to answer the research question, *Can minimalism, be used as a framework for creating an ecologically sustainable landscape that encompasses aesthetics, experience, and ethics?* In this attempt, some ideas will be provided to enhance the design further, should it develop beyond this thesis. It will also reflect upon the research provided, as it led to the applied design strategy, ending with a summary of the major lessons learned.

Design Critique and Future Directions

Time constraints and, subsequently, limited detail have ultimately affected the success of this thesis. However, that does not necessarily imply a failure of answering the research question, but instead indicates that additional work is necessary. It is still believed that minimalism could, in fact, be an excellent tool to frame a sustainable landscape, as defined by this thesis. The research provided to help understand aesthetics, experience and ethics in minimalism supports this well. As seen with sculpture, architecture, and landscape architecture, minimalism's value is intrinsically linked to an awareness of nature. Its cognitive significance is based on experience, with an emphasis on a heightened awakening of the senses. When combined with an attention to ecological processes and social function, there is a definite opportunity for a more holistic sense of sustainability. The process however, is far from simple. Instead it is one that evolves through a distillation of many parts to achieve a space that appears visually simplistic.

Peter Walker writes that minimalism "suggests an artistically successful approach to dealing with two of the most critical environmental problems we currently face: mounting waste and dwindling resources"(1997, 20). This then indicates that the immediate next step would involve sourcing materials, selecting both local and reused materials as possible. It should be

dealt with carefully and could potentially sway decisions already made. This process is also a good opportunity for reconsidering adaptability, which would then require some focus on maintenance. Considering the maintenance of a landscape is essential to protecting the intent of any design. Of course, the lower the maintenance the better, as this ultimately saves time, money and resources.

Given Marfa's growing community of artists and the fact that minimalist design is fundamentally art inspired, there is a missed opportunity within this design to collaborate with a local Marfa artist. The artist chosen should be in agreement of the design aesthetic, as one that is experiential and reflective of the mutability of nature. Perhaps the final work could acknowledge the name of the park, incorporating light in a way that enhances the high desert sunset. However it unravels, the artwork should absolutely be designed for that specific landscape with the intent of remaining there, just as Donald Judd envisioned for his work with the Chinati Foundation.

Finally, there should be one last phase that reevaluates the design, eliminating anything that is superfluous. Minimalism is an act of refinement. If returning to the very first principle, *evocative concept,* it is a style that exudes serenity in the midst of a world that is anything but. Though it may embrace contradiction and ambiguity there is still an ordered discipline to minimalism that must be maintained.

Reflecting on the Process

Consistently reaffirmed throughout this thesis, experience is crucial to understanding minimalism. Though far less aware of minimalism at the time, my first visit to the *9/11 Memorial* is now recognized as a defining moment in the development of my own appreciation for the style. Without knowing what to look for, my subconscious took over, allowing myself to feel the response of the experience. Since then I have become more aware of the role that intuition plays in the design process. Intuition, as defined by Bowers et al. is "a preliminary perception of coherence (pattern, meaning, structure) that is at first not consciously represented, but which nevertheless guides thought and inquiry"(1990, 74). There is a fundamental consistency with

coherence that is also intrinsically linked to minimalism. When discussing Dieter Kienasts *Courtyard for the Basler + Partner Building* (Figure 2.19), Udo Weilacher noted that, "simplicity and reduction do not just mean doing without the unnecessary, but also seeking universality and cultivating common things"(2005, 123). His work, and that of the other minimalists in this study, embodies a strong comprehension of coherence and so too, intuition. Similar to minimalism, intuition has a somewhat esoteric existence that is difficult to rationalize scientifically. It is a process of feeling instinctively.

Being able to visit works by both Walker and Cochran in California, as well as Minimalist sculpture in New York and Marfa, proved to be an incredibly valuable step in writing this thesis. It helped me to better comprehend texts on the subject matter, as I was able to relate what I read to my own experiences. Of course the research itself only opened more doors, relatedly emphasizing the idea that change remains constant in a landscape; and that a second, fifth or fifteenth visit can be just as significant as the first. Such is the ever-powerful notion of time. Though an attention to light and time was included as its own guiding principle in the design application, time is also naturally embedded within the principle of adaptability, now better understood as an important factor within the landscape and one that needs closer attention.

Conclusion

One of the most common arguments found throughout my research is that there absolutely must be an equal balance of process, function, and aesthetics in a landscape. When referring to the role of a landscape architect, Mark Treib writes, "planners and designers who stress ecological factors as the sole basis of landscape architecture have often disregarded the idea of landscape architecture as form, space, and cultural practice. Those who favor social use have often rejected landscape design as an art. And those who have designed from aesthetic concerns alone have often produced landscapes of stillborn human involvement or neglectful of basic site conditions" (2005, 133). This is the same argument that Laura Musacchio was responding to when she proposed aesthetics, experience, and ethics as the fourth, fifth, and sixth e's of sustainability.

However it is achieved, the necessity for a balanced design that incorporates all six aspects of sustainability is indisputable.

While I propose that minimalism can be used as a guiding style to achieve a more comprehensive sense of sustainability, there is also a secondary argument woven throughout this thesis, suggesting that the style is often misunderstood. Though it is commonly critiqued as being so, minimalism is not simplicity. Simplicity implies a lack of effort, creating spaces that are one-dimensional and uninspired. Minimalism, instead, "depends on care, thought, knowledge, and patience"(Pawson, 1996, 9). It is a process of distilled complexity, reducing things to their essentiality, creating a heightened, but quiet, awareness of nature.

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