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**ART LANDFORMS
A STUDY OF HOW DESIGNERS
ARE USING THE LANDSCAPE**

by

RACHELLE JONES

**Thesis submitted in partial fulfillment
of the requirements for the degree**

of

DEPARTMENT HONORS

in

LANDSCAPE ARCHITECTURE AND ENVIRONMENTAL PLANNING

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Director of Honors Program

(Print Director's name here)

**UTAH STATE UNIVERSITY
Logan, UT**

2006

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses and income. The document provides a detailed list of items that should be tracked, such as inventory levels, accounts payable, and accounts receivable. It also outlines the procedures for recording these transactions, including the use of double-entry bookkeeping to ensure that the books balance.

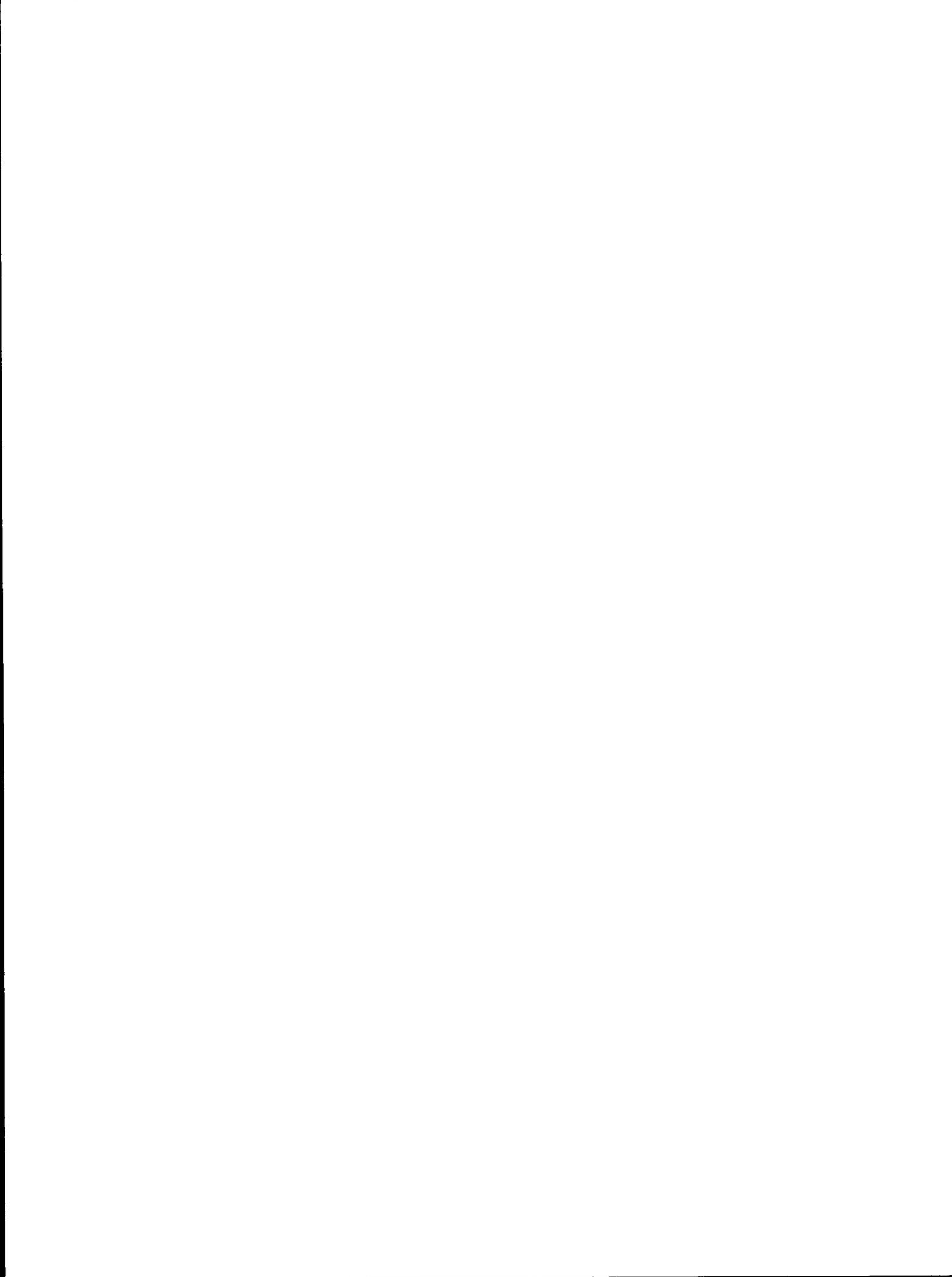
The second part of the document focuses on the analysis of the financial data. It explains how to calculate key financial ratios and metrics, such as the gross profit margin, operating profit margin, and return on investment. These calculations are essential for understanding the company's financial performance and identifying areas for improvement. The document also discusses the importance of comparing the company's performance to industry benchmarks and providing a clear explanation of the reasons for any variances.

The final part of the document covers the preparation of financial statements. It provides a step-by-step guide to creating the income statement, balance sheet, and cash flow statement. It also discusses the importance of auditing the financial statements to ensure their accuracy and reliability. The document concludes with a summary of the key findings and recommendations for the future, emphasizing the need for continued monitoring and reporting of financial performance.



Art Landforms

A Study Of How Designers Are Using The Landscape



Art Landforms

A Study Of How Designers Are Using The Landscape

Senior Honors Thesis

By Rachelle Jones

Faculty Advisor: Caroline Lavoie

4. May. 2006

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The second part of the document focuses on the classification of expenses. It explains how to distinguish between capital expenditures and operating expenses, and how to allocate costs to different departments or projects. This section includes a table with various expense categories and their corresponding accounting treatments. The document also discusses the impact of depreciation and amortization on the financial statements and provides formulas for calculating these values.

The third part of the document addresses the issue of tax compliance. It provides a comprehensive overview of the tax laws that apply to the business, including income tax, sales tax, and property tax. It offers practical advice on how to minimize tax liability through legitimate deductions and credits. The document also includes a checklist of tax-related tasks that should be completed on a regular basis to avoid penalties and interest.

The final part of the document discusses the importance of regular financial reviews. It explains how to analyze the financial statements to identify trends, strengths, and weaknesses. It provides a framework for setting financial goals and monitoring progress towards them. The document also includes a sample budget and a list of key performance indicators (KPIs) that should be tracked to ensure the business is on track to meet its objectives.

By examining the past and present forms of landscape designs, this report will establish a basis to understand one of the core elements of the Landscape Architecture profession. Using the land as a medium for expressing ones art and passions has been used for centuries. Fletcher Steele, Robert Smithson, Alan Sonfist, and George Hargreaves are all designers which have used land as a vital part for the creation of their designs and/or environmental art pieces. They all, in their own way, have been instrumental in how contemporary designers use and understanding of the land has changed and evolved over time. Through the analysis of visual elements of particular projects from each of these designers, this report will compare and contrast each of their approaches to design. It will also look at the philosophical underpinnings that these artists have about using the land and how they manifest in their designs. Although very different from traditional mediums, artists and landscape architects using the land are following the basic principles of design and visual elements that are part of any design. The four designers and the projects we will look at are:

- Spiral Jetty, Robert Smithson; Environmental Artist
- Naumkeag, Fletcher Steele; Landscape Architect
- Time Landscape, Alan Sonfist; Environmental Artist
- 2000 Sydney Olympics Campus, George Hargreaves; Landscape Architect

These four projects show differences and similarities in their uses of the land. In order to make certain judgments about these sites and their designers it is important to also understand more about where the artist's influences emanate from and why they use land as a mediums for their designs.

Robert Smithson; Spiral Jetty, Salt Lake City

In the late 1960's environmental art was becoming popular with many artists and Robert Smithson was among them. Many of these artists would use the land as a medium for expressing their political concerns about the environment or as an alternative to placing pieces of sculpture in the landscape. The Spiral Jetty, designed by Robert Smithson, is set in the Great Salt Lake in Utah. Constructed in the spring of 1970, it displaces 6,650 tons



Figure 1: Spiral Jetty
Source: Robert Smithson: Spiral Jetty

of rock and mud (Roberts 2004:1) from the shoreline and extends it out into the lake.

Smithson's design and placement for the jetty had several influences. The processes of change in the environment over time and notions of the history of the site are among them.

Several earlier works from Smithson dealt with crystal deposition (fragmentation) and would showcase how these crystals would change and move depending on the amount of light they would receive (Roberts 2004:41). This is evident in the Spiral Jetty because of the formations of salt crystals on the rocks of the jetty. The amount of salt in the water as well as the water level effect what the viewer will see upon visiting the jetty. The most important process of change with the jetty is the water level. At certain times of the year the jetty is completely covered by the water and is not visible. During other seasons, the water is low enough that visitors can walk the entire length of the jetty. In order to get the full experience of the Spiral Jetty, a person would need to make several trips out to it at different times of the year.

Robert Smithson; Spiral Jetty, Salt Lake City

Being able to walk the full length of the jetty gives the viewer another experience with change. Walking along the Spiral Jetty, because of its form, forces the viewer to see the entire area. The spiral is constantly changing our perspective yet still returns us to those same initial views. We are able to see all of the features of the surrounding area such as the shoreline, the lake and even the trail traveled on to get to the jetty. Being able to look at a three hundred and sixty degree view of the area, while at the same time experiencing Smithson's art, brings us to the next area of focus for the Spiral Jetty.

The history of the surrounding area intrigued Smithson and was influential not only for his processes of change but also for the creative process that an artist goes through to get to the finished product. In art circles in New York, emphasis was being placed on the final product of the artwork when it was in fact a process of time, emotions and thoughts that the artist had gone through that Smithson felt was most important. Much of an artist's time is spent contemplating the design and meaning for a piece. In order to better understand the artwork we need to realize its history or what goes into creating it. Jennifer Roberts, speaking about Smithson's work states: "His entire career can be understood as a continuing, and constantly renegotiated, engagement with the practice and philosophy of history." (2004:1) Smithson would take into consideration different aspects of historical events from his selected sites and their transformations through time.

The placement for the Spiral Jetty became important for Smithson because of parts of the areas history. Not far from the jetty is the Golden Spike National Historic Site. This is the site where, upon completion of the rail lines from east to west, the two trains met in 1869. Additionally, in the 1930's the area became used for oil extraction. Several remnants of which are still there

Robert Smithson; Spinal Jetty, Salt Lake City

today. Both of these events in time, combined with the addition of Smithson's jetty, relate to elements of its history. By incorporating the jetty, Smithson was adding to that history and becoming part of it. It is not just the finished jetty that is important but the changes of the site during different time periods. Although the visitor may not understand Smithson's reasoning for placing the jetty where he did they are, never the less, being exposed to these different pieces of time.

So far we have looked at the background for Robert Smithson and the relationship for choosing the site for the Spinal Jetty; it is also important to analyze the visual elements of the piece in order to gain a better understanding of its shape and structure, and how it relates to the process of changes. Landform plays an important role in the composition because it is the medium being used to express the concept or the design. The creation of the Spinal Jetty was accomplished by taking sand and rocks from their original placement and moving them into the lake to form the Spiral. The jetty becomes an extension of the original landscape. What changes is the transition from natural formation of the land to a manmade formation of the land. The water level is also transitional to the space because if it is high enough to cover the jetty, then our experience is just that of the natural landscape.

Part of the formation and changes of the land to create art are the shapes used in the piece. As discussed, Smithson uses the form (the line and spiral) of the jetty to give the user different views of the area. These become the strongest visual elements in the Spinal Jetty. The jetty is a line that juts out from shore and curves around to form a spiral. What makes this a line however, and not just a plane is that the length dominates the width (Ching 1996:9). More importantly than looking at just the line of the Jetty is looking at how it interacts with the

shoreline and how the two relate to one another. Upon approaching the Jetty, the visitor can see the shoreline and how the Jetty takes off from it into the water. The connection between the shoreline and the Jetty does not occur at a right angle. It is instead angled so that one side is an acute angle and the other obtuse. This immediately creates a more dynamic composition because it appears as though the line has pulled itself up and away from the shore as if to signify its independence. There is still a connection between the shore and Jetty however, because the Jetty has not pulled completely away from shore. Its composition of the same rock and mud links them together. When looking at images of the Spiral Jetty it is important to see the shoreline as well, so we get a full understanding of its arrangement and how what we see changes as the water levels change.

Another important feature in the line of the Spiral Jetty is the spiral itself. The straight line for the Jetty takes off in one direction; if the line were to continue off in its same direction, the composition of the Jetty would change. It would no longer feel connected to the shore and because it is angled, it would seem unbalanced. The spiral brings the connection back to the



shore line and creates a more balanced composition. Figure 2 shows the direction of the spiral in relation to the line. The spiral curves toward the larger angle instead of the smaller one. This changes the direction of the line which brings our eyes back to the shore and emphasizes, once again, the connection it has with the land. The Spiral Jetty shows itself as an independent element of the site however

Figure 2: Spiral Jetty, aerial view
Source: Robert Smithson: Spiral Jetty

Robert Smithson; Spinal Jetty, Salt Lake City

because it is composed of the same material as the shoreline it still maintains a strong relationship with it. The implied circles as part of the spiral portion of the jetty bring a dynamic quality to the piece.

The changing salinity levels of the lake, affecting the lakes color, also bring changes to the experience the user will have when they visit the jetty. The color of the water changes from shades of blues to having reddish tones (figures 3 &4). Depending on the time of day or season the site is visited will depend on the colors that the viewer will see.



Figure 3: Spiral Jetty, showing blue tones in water
Source: Robert Smithson: Spiral Jetty



Figure 4: Spiral Jetty, showing red tones in water
Source: Robert Smithson: Spiral Jetty

Fletcher Steele; Naumkeag, Massachusetts

The design for Naumkeag came from both Fletcher Steele and Mrs. Joseph Choate, the owner of Naumkeag. The home and surrounding grounds of Naumkeag sit in the Berkshire Mountains in Massachusetts. Work on the site began in the 1920's at a time when modernism was popular with designers.



Figure 5: Naumkeag house and rose garden
Source: <http://www.gardenvisit.com/b/steele.htm>

Steele's work however, was centered on fusing formal styles of the past, such as the straight axis, with more the informal styles of modern designs (Van Valkenburgh 1984:34). Steele was not the first Landscape Architect to work on the Naumkeag house. Nathaniel Barrett, in 1886, designed the first plan for the house and land with long axes extending off the back of each end of the house (Van Valkenburgh 1984:34).

Being a Landscape Architect, Steele was also concerned with how the users would experience each individual space. He admired works from contemporary French designers including Vera, Legrain, and Guevrekian whose gardens "...include the invention of the broken axis as a space-joining device, the manipulation of ground levels to work doubly as spatial boundaries and ground patterns, and reference....(Van Valkenburgh 1984:31)". Understanding how Steele shaped the land to create successions of outdoor rooms is necessary in order to identify the role that artistic elements have in his design. Steele summarizes his view of design as an art form in an article published in 1932 by saying:

It is the province of the [landscape] artist to see further than others into the significance of the world around us, to reveal new aspects of the truth, to take veils away from unseeing eyes. Never more than now have we hungered for revelations. Never have artists worked harder and more diversely to find paths.... Through fine compositions of space the landscape architect, more than any other artist, can reveal new visions and new dimensions (Van Valkenburg 1984:31).

Fletcher Steele; Naumkeag, Massachusetts

Through this statement we can see how Steele felt about the land and the responsibilities associated with being a landscape architect. Landscape architects have the ability to mold the landscape into comfortable spaces and rooms to provide an environment conducive to the “revelations” that Steele describes, whether about nature or life in general, and have the responsibility of providing those environments for others. By looking at Steele’s arrangement for the gardens at Naumkeag we will be able to see how he brings these concepts into his designs.

Landform

In 1886, Nathaniel Barrett created the original design for Naumkeag, which depicted the more traditional formality of design, by incorporating a long axis along the back of the house. He didn’t however, take into account the steep grades that were a part of the site that led into a valley. Reshaping this area, using several methods of stairways and terracing slopes, became Steele’s greatest accomplishment for Naumkeag. Figure 6 shows a plan view of the house and figure 7 indicates a parti showing the flow of the slope. Terracing the sloped lawn to make the grade change more gradual, extending the terrace walls on the south side of the home to create

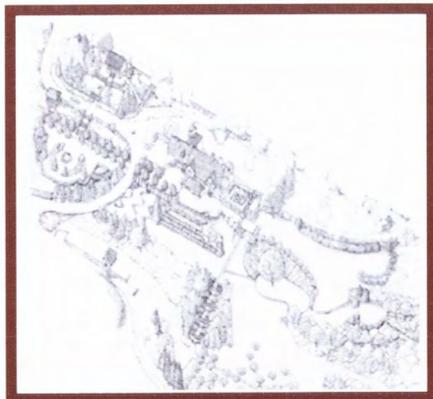


Figure 6: Plan view of Naumkeag
Source: <http://fla.edu/research/Steele/Home.htm>

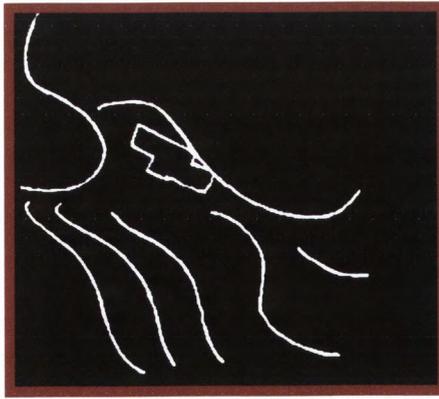


Figure 7: Parti of Naumkeag house and grounds

the afternoon garden, and adding in the Blue Stairs to make getting to the cutting garden easier were all changes that Steele made to deal with the

grade. Figure 8 shows an enlarged plan view with each of these areas labeled. The afternoon garden and the blue steps are perhaps the most recognizable features of Naumkeag, therefore each of these will be discussed individually.

Afternoon Garden

The afternoon garden at Naumkeag is situated on the southwest portion of the house. Inspired by many of the gardens being built in California it is indicative of an "outdoor room" (Van Valkenburg 1984:34). As mentioned, the existing terrace walls were extended to expand the size of the garden. This flat ground plane then becomes the floor for the room. Two sides of the home become walls and tree canopies provide overhead shelter. In the garden itself, Steele then combines formal styles with more modern influences. Trimmed boxwoods, resembling many traditional gardens throughout Europe, are arranged throughout the center portion of the garden with an oval pool at the very center. The outer portion of the garden is surrounded by columns. Unlike traditional doric, ionic, or corinthian columns, the columns in the afternoon garden are thinner with tops resembling modern lights (figure 9). For the area surrounding the hedges, Steele also used more modern tiled rocks which allow groundcover to grow between them.



Figure 8: Plan view of Naumkeag with areas labeled
Source: <http://fla.edu/research/Steele/Home.htm>

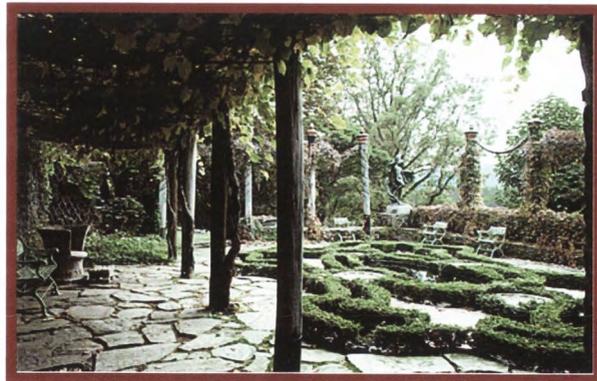


Figure 9: Afternoon Garden
Source: <http://fla.edu/research/Steele/Home.htm>

Fletcher Steele; Naumkeag, Massachusetts

By merging the two styles, Steele creates a space that has the comforts of being indoors while still providing the atmosphere of outdoor gardens. Users can sit in the afternoon garden and feel protected from the elements; yet because only two sides of the garden use the house as walls, they can still look out and enjoy the views of the hillsides with the mountains in the background. Although many of the features throughout the garden are more traditional, Steele balances them with the overall “outdoor room” concept which was popular at the time. The resulting experience for the user is one of relaxation and leisure.

The Blue Steps

In order to provide better access to the cutting garden at the bottom of the hill, Steele created the blue steps. These are a series of terraced stairways which start below the main terrace of the house and lead to the bottom of the steep hill (Van Valkenburg 1984:34). Probably the most notable feature for Naumkeag’s design, the blue steps exemplify Steele’s use of traditional and modern styles. The four stairways are laid out symmetrically. Inlaid vertical semi-circles compose the center platforms with the stairways

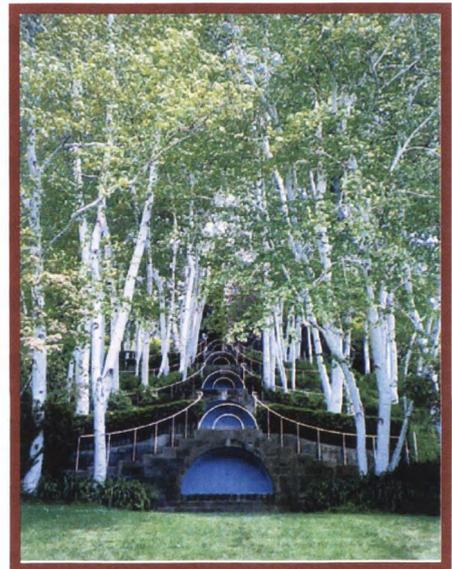
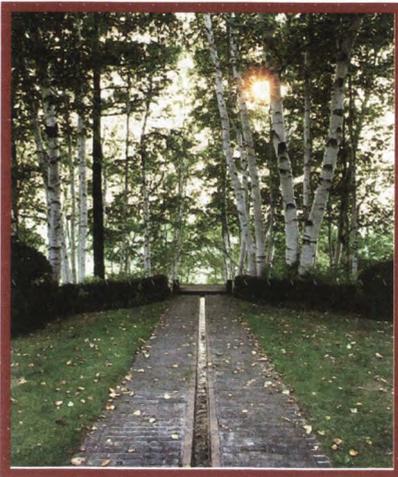


Figure 10: Blue Steps
Source: <http://fla.edu/research/Steele/Home.htm>

fanning off to the sides. Ramps then lead from the platforms to the next set of stairs (Van Valkenburg 1984:34). Layouts such as this are very classical and can be seen in many gardens throughout Europe and show how Steele’s use of the land was very controlled as he directs the user where to go. The railings however, are how Steele incorporates modern styles. They are long semi-circle pipes painted white and follow the lines created from the staircases. In addition to the railings, Steele added another modern touch by painting the concrete steps a

light blue to correlate with the columns in the afternoon garden. Looking up from the valley floor to the top of staircases we can see the very horizontal terracing necessary to mitigate the grade changes. To offset this, as well as to complement the railings, a grove of white birch trees was added extending on each side of the staircase. This not only adds a vertical element to the design, but it also accentuates the symmetry of the stairways. The final major feature of the



blue steps is a small water runnel which brings water from the afternoon garden down the stairs and into the cutting garden below. Figure 11 shows this runnel looking from the afternoon garden to the top of the stairs. Not only is this a classical method of transporting water from one area to another, it also leads you from the afternoon garden and acts as an entrance to the blue steps.

Figure 11: View from top of blue steps, showing water runnel
Source: <http://fla.edu/research/Steele/Home.htm>

In addition to the features previously discussed, the overall atmosphere of the blue steps is enhanced through the colors that Steele integrated into it. The light blue coloring of the steps combined with yellow-green leaves on the birch trees provides a cooling environment. Traversing the blue steps, moving from one side to the other, creates the feel of moving down a formal staircase. The white from the railings and the trunks of the trees add lightness to the otherwise dense grove of trees.

Steele's use of the land at Naumkeag shows how as a landscape architect we can create spaces that bring people outdoors while still allowing for comforts. At the time when Naumkeag was being designed by Steele, much more of the country was being tamed and developed. Steele showed how with outdoor spaces we can see the significance of the world around us.

Alan Sonfist; Time Landscape; New York

Alan Sonfist, as early as the 1960's, has been creating pieces of environmental art for both public and private sectors. Unlike other environmental artists however, Sonfist focuses his art around the relationships that humans have with nature. Humans are a part of nature, just as every creature is, and that, in a time when we are surrounded by steel and concrete, having places to reconnect with nature is important. Many of his pieces also center on the notion of time and the changes a certain landscape goes through. Much of his work includes bringing back natural features that, for one

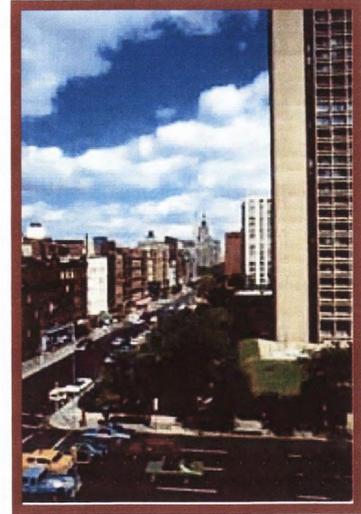


Figure 12: Time Landscape
Source: <http://www.paulrodgers9w.com>

reason or another, are no longer there. One example of this is a design he did for the Albright-Knox Art Gallery in 1978 entitled Rock Monument of Buffalo (Sonfist 1983:144) (figure 13). For this piece he selected rocks from the area, had a geologist verify their historical significance, and placed them in the ground the same way they were found. Placing these rocks in an area where they are no longer found, reminds us of the changes over time. For each piece that Alan Sonfist creates, he takes into account the geologic history of the site, sometimes going back as far as the ice age, in order to bring those pieces of history to the forefront of his designs. Jonathan Carpenter, writing about Sonfist's work, states: "He sees the earth as a whole and the human being's place in it. He sees society as a whole and the artist's place in it. He sees time in its vast scale and the human being's place in it" (Sonfist 1983:148). This statement reflects how Alan Sonfist brings all of the elements of time, nature

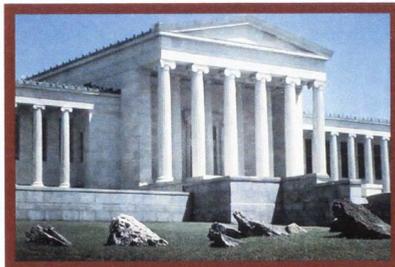


Figure 13: Rock Monument of Buffalo
Source: <http://www.paulrodgers9w.com>

and humans together in his work.

The Time Landscape project for New York held more of a meaning for Sonfist than just wanting to showcase human's

relationship with nature. As a child growing up in the Bronx, Sonfist's only escape from the gangs in the area was a small piece of forest growing along the Bronx River (Grande 2004:166). Spending so much time in this small natural environment enabled Sonfist to develop a love and respect for the calming effects just being in nature can bring. This is evident in the work he produces and particularly in his Time Landscape project for New York City. Sonfist's forest was unfortunately destroyed by fire and Time Landscape reflects his desire to bring a small portion of that back to the city. By creating several areas of natural environment spread throughout New York he was trying to recreate the forest he loved being in as a child.

Alan Sonfist has created several pieces entitled Time Landscape and the one for New York began in 1965 with the idea for the forest however, it did not become a reality until 1978 (Sonfist 1983:151) (figure 12). Each area in the city that Sonfist placed his work had a different natural past and is therefore reflected in the designs. Jonathan Carpenter, in talking about Sonfist's work, describes these different areas for us:

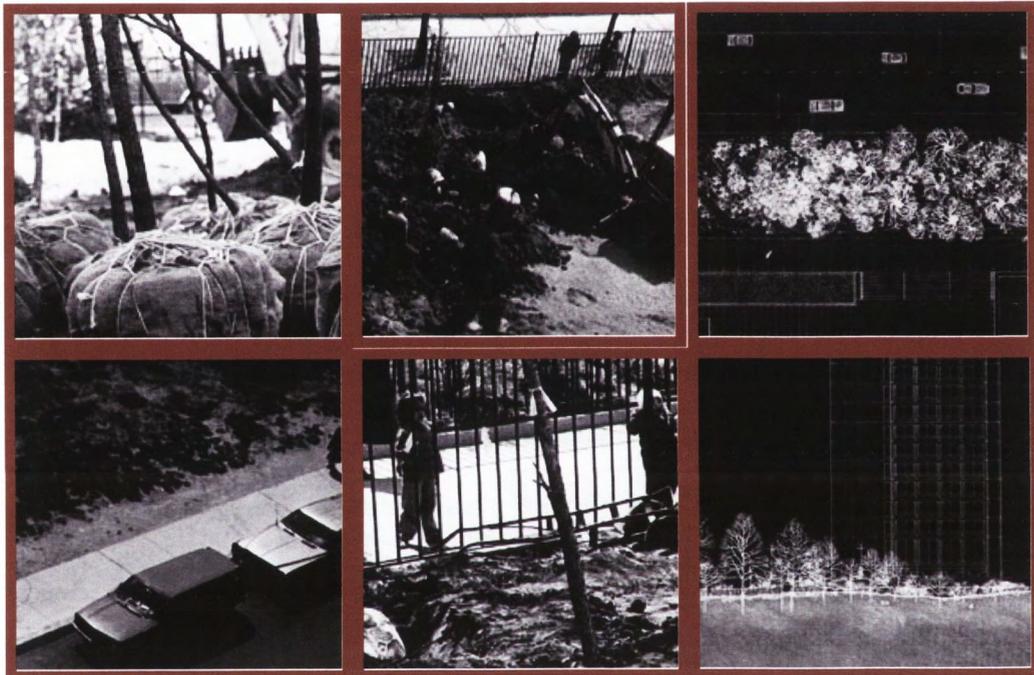
In the Bronx he used the dense verticality of native hemlocks. In Brooklyn his sculptural materials were free-flowing sand and vines and grasses. In Manhattan his materials were the contrast of cedars in a low grass meadow and the sparse mass of a young oak forest. In Wave Hill a 10-acre site will have sculptures constructed of material from a succession of uses of the land over a 300-year period (Sonfist 1983:148).

The different areas dotted throughout New York consist of Sonfist using over 200 plant species native to New York which were selected from a pre-colonial period before the city was covered with steel and concrete (Grande 2004:166).

For this analysis we will focus on the 200' x 40' area near La Guardia Place in Manhattan. What is most important for a discussion of this piece is not how Sonfist reshaped the land to

Alan Sonfist; Time Landscape; New York

create his artwork but is it how he planned to restore these areas back to what they were before the city was developed. This approach gives a portion of the ground back to the natural systems that were once there. Much of Sonfist's work focuses on natural systems and with the series of these landscapes being spread throughout New York, as if nature was reclaiming its rights on the land. This relates back to Sonfist's notion of nature and society being interdependent upon each other. Figures 14-19 indicate images of Time Landscape through construction as well as after its installation.



Figures 14-19: Clockwise from top left, showing various stages of implementation
Source: <http://www.Paulroddgers9w.com>

Because of these different areas for “Time Landscape” being spread throughout the city, Sonfist is also attempting to allow another part of nature to return. By providing areas of natural environment, he is creating spaces conducive to wildlife. Many species of migratory birds are now given areas of refuge. The sounds that these animals bring with them help to refocus the noises from the street and create an environment which allows users a better opportunity to interact and become engaged by this recreated environment.

George Hargreaves; 2000 Olympic Campus, Australia

The design efforts made for the 2000 Sydney, Australia Olympics had many initial problems. The plan for spaces had no real design or organization linking it together. The master plan they had for the Games facilities had no coherency and no design vision (Weirick 1997). The city wanted to showcase areas of artistic expression yet it was also important to for them to show how the area could also be integrated with existing landscape and be environmentally friendly. Unfortunately, because of the lack of a unified design, this was not possible. In an article in Architecture Australia James Weirick describes the underlying problem with creating a space for the Olympics:

For a city that has nowhere left to sprawl and a ring of inner suburbs cut up by flight paths and traffic arteries, the only way to accommodate metropolitan growth is to embark upon large-scale reconstruction of the middle ring suburbs. The Olympics could have provided the catalyst for this spatial, social transformation. Instead, the city is faced with the hurried implementation of bottom drawer plans from decades ago—a set of dubious proposals dominated by a north/south tollway aimed at directing as much traffic as possible through the centre of the city (Weirick 1997).

The original master plan for the campus was designed to have an 'urban' quality. A long Olympic Boulevard was laid out over a hill which, was meant as a gesture to link the plaza with the city. Unfortunately it did not take into account the topography of the hillside and lacked any sort of a beginning or ending point (Weirick 1997). By directing as much traffic as possible through the middle of the city the only thing that the city would accomplish is making it more congested. The Sydney Olympic design should have been centered on public transit; thereby reducing congestion and giving people an easier way to navigate through the city. Because of

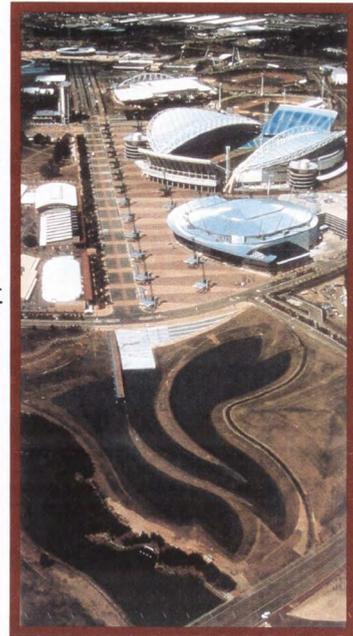


Figure 20: Aerial view of Olympic Plaza
Source: Radical Landscapes: Reinventing Outdoor Space

George Hargreaves; 2000 Olympic Campus, Australia

the lack of cohesion in the original design, the user's experiences of the space would have been full of frustration. In order to make the Games memorable for people, the Olympic committee knew that changes had to be made. The solution to the many problems for the layout of the Olympic campus was to bring in designers that would concentrate on linking the many aspects of the games together into a unified plan while still reducing the congestion that would dominate the original plan.

The first step to creating the solutions for the games was to appoint Chris Johnson as the principal Olympic Co-ordination Authority (OCA) consultant on the public domain, to oversee design quality. Bridget Smyth was then also appointed OCA's Urban Design Manager, to focus on design quality as well (Weirick 1997). Once Johnson and Smyth were appointed to the OCA they set their sights on revising the initial plan for the boulevard. To do this, they brought in Landscape Architect George Hargreaves. Known for his work that incorporates art with the environment, Hargreaves became the obvious choice to make the revisions to the master plan. The Hargreaves team kept the original plan for the boulevard but changed aspects of it to give the users a series of different experiences. They added anchor points on each end of the boulevard; a tree-lined area on the south side and an urban plaza on the north (figure 20). Additionally, at the crest of the hill, Hargreaves added a fountain and an 'Olympic' grove (Weirick 1997). This series of plazas and fountains along the boulevard encourage movement along the space by constantly changing what the viewer sees. Because of the larger scale of the area, Hargreaves shows us his understanding of landform in an urban context by providing series of spaces. By using the hill as a center point of the boulevard, Hargreaves also gives users an opportunity to see an overview or broader look at the spaces. This engages the users by making them a part of the space.

Two of the most important elements incorporated into the design to accomplish this are the built wetlands and the fountains in the Olympic plaza; both located on the northern end of the boulevard. In order to address many of the environmental concerns with several of the new buildings being put into the plaza, Hargreaves added elements which would collect the rain water from the roof tops of the buildings and move them to constructed wetlands. Figure 20 shows an aerial view of the wetlands and their connection with the plaza. As a way to bring the public to the wetlands and make them a part of this area, granite terraces act as a viewing platform (figure 21). People are able to get closer to the wetlands and can see how they filter the water through their ecological processes. It also serves as a display area for the plant and animal life in the wetlands. In the midst of urbanism, people have an opportunity to experience one of nature's greatest systems.



Figure 21: Granite terraces
Source: Radical Landscapes: Reinventing Outdoor Space

A secondary element that showcases environmental systems and enhances the users experiences are the fountains located within the Olympic Plaza. Shown in figures 22-

25, we can see how these fountains

are located among major pathways and in some cases, are directed over the pathways. Varying heights of up to thirty-three feet high (Amidon 2001:151), the fountains serve two major purposes. First, they aerate the water, whose source is the wetlands. Second, because of their location, they interact with users in the plaza. The arcing shape of the fountains is also similar to much of the architecture of the surrounding Olympic buildings. This helps to tie all of the

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elements of the plaza together. Hargreaves wanted to create a variety of different experiences for the users but by incorporating features like the fountains, it reminds people that it is all one place.

Hargreaves work for the 2000 Sydney Olympic Games becomes important because of his ability to blend natural systems, such as wetlands, into an urban environment. He was able to change the original master plan from being one of incoherency to a plan that works for the users without damaging the area's natural ecosystem.



Figure 22: Fountains
Source: Radical Landscapes: Reinventing Outdoor Space



Figure 23: Fountains
Source: Radical Landscapes: Reinventing Outdoor Space



Figure 24: Fountains
Source: Radical Landscapes: Reinventing Outdoor Space



Figure 25: Fountains
Source: Radical Landscapes: Reinventing Outdoor Space

The four projects that we've looked at all show similarities and differences in how the designers approached their designs and the influences that affected them. They all used the land as a medium for expressing their creativity. The physical changes that they made to the land convey many values each has regarding design. Possible interactions between the users and the sites, the surrounding environment and time all play into each piece but it is the different levels at which these elements are incorporated into the designs (whether actual or conceptual) that vary with each project. We will now look at all of the projects and compare and contrast their methods of incorporating these concepts.

How people interact and experience the different areas played an important part in all of the designs discussed. For Robert Smithson and the Spiral Jetty, the experience from one user to the next will change depending upon when they visit the site. Alan Sonfist, in "Time Landscape", wanted the users to experience a small piece of nature in a world where they are surrounded by steel and asphalt. The two studied landscape architects that we looked at, Steele and Hargreaves, wanted to create areas that would give users a series of different experiences. Although their works are much larger than those of Smithson and Sonfist, they still wanted to give something to those interacting with their work. Providing different environments gives the users these different experiences, but through transitional spaces that lead from one space to the next, the site remains one piece. The users experience became important in all of these designs because unlike art forms that use different mediums, they allow the user to become a part of it and the experiences that each one takes away will be different.

Each of the designers also provided different views of the surrounding environment. We can see different levels or scales of intervention in how each of the designs dealt with those views. Sonfist

chose to screen the views outside of his piece in order to preserve the seclusion within it. Steele encompassed the surrounding landscape and by creating areas of outdoor rooms provided different windows in which to see those landscapes. The design from Hargreaves left many views that were even more open than Steele. The scale of his site allowed for larger areas to be viewed and Smithson embraced the entire area surrounding his piece as his design allows the viewers experience to include all of it.

The concept of time and the changes of each of the designer's sites were also discussed in various details. Smithson and Sonfist chose to take approaches that dealt more with a conceptual timeframes with historical references. The Spiral Jetty's placement was influenced by the history of the area and changes it had gone through over time. The constant changing of the jetty's appearance is a reflection of those influences. For "Time Landscape", Sonfist chose plant material which was native to the area and was destroyed by the city's development. Steele centered his design on the merging of two design styles from different historical periods. He incorporated elements from a more formal, classical period such as the symmetry of the blue steps while also adding modern features like pipe railings, a modern material. The notion of time for the Olympics plaza by Hargreaves was different from those of the other designers. The natural processes of the wetlands cleansing and purifying water is a much shorter timeframe. The cleansing is also a continual process therefore the wetlands purpose remains the same no matter how long it is in existence.

Looking at many of the individual design elements of each of these projects and examining how their combinations can affect the whole design has allowed us to see how designers use land as their primary medium of expression. Fletcher Steele, whose work on Naumkeag began in

the 1920's, created spaces of relaxation and enjoyment for others. By creating outdoor rooms he was creating transitional spaces that brought people outdoors while still giving them the sense and security of being indoors. Robert Smithson's and Alan Sonfist's work, during the time when environmental art was becoming popular, used the landscape as a way to express their concerns about the natural environment and about the important of preserving it. The recent work of George Hargreaves is a reflection of all of these. The spaces he creates are spaces that encourage people to get out into the spaces and enjoy them. He also makes us aware of the natural processes of the environment by not only protecting them, but also by bringing us in and making us a part of them.

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Figure 1.....Spiral Jetty, Salt Lake City Utah
Figure 2.....Spiral Jetty, Aerial View
Figure 3.....Spiral Jetty, Showing blue tones in water
Figure 4.....Spiral Jetty, Showing red tones in water
Figure 5.....Naumkeag, Massachusetts; house and rose garden
Figure 6.....Plan View of Naumkeag
Figure 7.....Parti of Naumkeag house and grounds
Figure 8.....Plan View of Naumkeag with areas labeled
Figure 9.....Afternoon Garden, Naumkeag
Figure 10.....Blue Steps, Naumkeag
Figure 11.....View from top of Blue Steps showing water runnel
Figure 12.....Time Landscape, New York City
Figure 13.....Rock Monument of Buffalo
Figure 14.....Time Landscape, Implementation
Figure 15.....Time Landscape, Implementation
Figure 16.....Time Landscape, Implementation
Figure 17.....Time Landscape, Implementation
Figure 18.....Time Landscape, Implementation
Figure 19.....Time Landscape, Implementation
Figure 20.....2000 Olympic Plaza, Australia; Plan View
Figure 21.....Granite Terraces
Figure 22.....Arcing Fountains
Figure 23.....Arcing Fountains
Figure 24.....Arcing Fountains
Figure 25.....Arcing Fountains