FINDING THE ART PART IN LANDSCAPE ARCHITECTURE:

A LOOK AT PAINTING INFLUENCES OF COLOR IN THE GARDEN

by

ELIZABETH ANNE ARNETT

(Under the Direction of David Spooner)

ABSTRACT

Beginning in the nineteenth century, color plays an important role in the development of garden design. Gardens began to incorporate contrasting and complementary hues, thus instilling new artistic principles which gave rise to the beginning of color theory in the landscape. Its significance can be best appreciated while understanding the painting movements which influenced the gardens of four case studies. The history of color theory will be addressed in the thesis, as well as the garden designs of Gertrude Jekyll, Roberto Burle Marx, and the partnership of Wolfgang Oehme and James van Sweden. The thesis concludes with an analysis of five criteria which show the similarities and differences between the usage of color found in the four case studies' designs.

INDEX WORDS: color theory
Impressionism
Baroque
Cubism
Abstract
Gertrude Jekyll
Roberto Burle Marx
Wolfgang Oehme
James Van Sweden

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DEDICATION

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May the legacy of the friends of dark bark live forever! I'm grateful for each of my classmates and so thankful we had each other to lean on throughout our three years in Athens.

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CHAPTER ONE: INTRODUCTION

Landscape architecture, as defined by the American Society of Landscape Architects' website, is "the art and science of analysis, planning design, management, preservation and rehabilitation of the land" (http://www.asla.org/nonmembers/What_is_Asla.cfm). It is a profession encompassing a broad definition where certain individuals can find their specific niche, whether it focuses more on the artistic side of design form and color palette or the scientific aspects from ecology and environmental health.

This thesis addresses the merit of art in the definition of landscape architecture and specifically, discusses the relationship of painting and usage of color found in the works of four landscape designers and architects, two of whom have practiced together for several decades: Gertrude Jekyll, Roberto Burle Marx, and the Wolfgang Oehme & James van Sweden partnership. The importance of this study is to add to the knowledge of color theory and design to the profession as it typically is a subject not taught in the University of Georgia's master of landscape architecture program and is an area to explore and learn from those who excelled in it. While much is known on color, little is actually taught within the major with typically only a lecture on the subject as it relates to planting design and the other elements of design: line, form, shape, pattern, and texture. It is critical to understand the principles of color when designing gardens and parks because it is a living form of art, and aesthetic appeal draws an

audience to a space and promotes them to utilize it as a respite from the indoors. Another value in designing with color is applying the rules of color perception in regard to “tricking” the eye into believing a space feels larger or smaller just on the choice of utilizing a recessive color, like blues and greens, or an advancing one, like yellows and reds. The correlation between the influence of painting and color choices is of interest and the reason for this research.

To clearly understand the principles of color, chapter two is devoted to the history of color theory which examines the contributions of Isaac Newton, Johann Wolfgang von Goethe, Michel Eugene Chevreul, and Johannes Itten. These men helped revolutionize the ideas of color and subsequently aided artists in mastering the use of color. From there, the influence of painting eras such as the Baroque, Impressionist, Abstract, and Cubist movements are applied to the individual case studies which are analyzed by their use of color. The life and accomplishments of Gertrude Jekyll is the subject for chapter three, and her color palette is analyzed through her main work, Munstead Wood. Chapter four addresses the designs of Roberto Burle Marx and his interest in Picasso and other Cubist artists. The partnership of Wolfgang Oehme and James van Sweden encompasses the fifth chapter, providing a look at current trends in the use of color and an analysis of which painters inspired their garden designs. The conclusion chapter ties all of the designers together by their one common thread: influences of painting as a medium to express color in their garden designs. The significance of this correlation is it provides a way to analyze the four designers through a method of comparing and contrasting their use of color by five criteria:

seasonal interest, color spread scale, color theme garden, simultaneous contrast, and complementary color. A graph is provided at the conclusion to visually express the case studies' interrelation between color theory, art inspirations, and the aforementioned categories.

Color: it is the way in which we, as human beings, see the world and our surroundings. If the sun did not exist, our vision would be filled with darkness and the earth would be a colorless entity. Light, by its very nature, affects us and by light creating color it becomes something we experience on a daily basis. Our eyes have the capability of seeing millions of colors by the simple fact that rays of light reflect off of any object to produce a color. Essentially, color affects our emotions because of the human reaction to color. As designers, this is important to consider as we create spaces for others to use.

For decades humans have used color as a powerful means of expression as a way to communicate and declare a style. Color can set the stage and provide a puissant influence to the design of any outdoor setting. Warm and cool hues or tranquil and bold shades can evoke different moods and ambiances. Themes can be developed, history can be echoed, connections can be made, memories can be recalled, cultures can express themselves, and trends can be dictated all by the specific use of color (Bleicher xv). To fabricate the best designs in regard to color that appear as if they were a painting, a body of knowledge for its effects is essential. Painters have the ability to combine colors together to move the eye across a canvas, and for a garden to be this appealing,

the designer must know how to master color selections as well for the design to read as a whole.

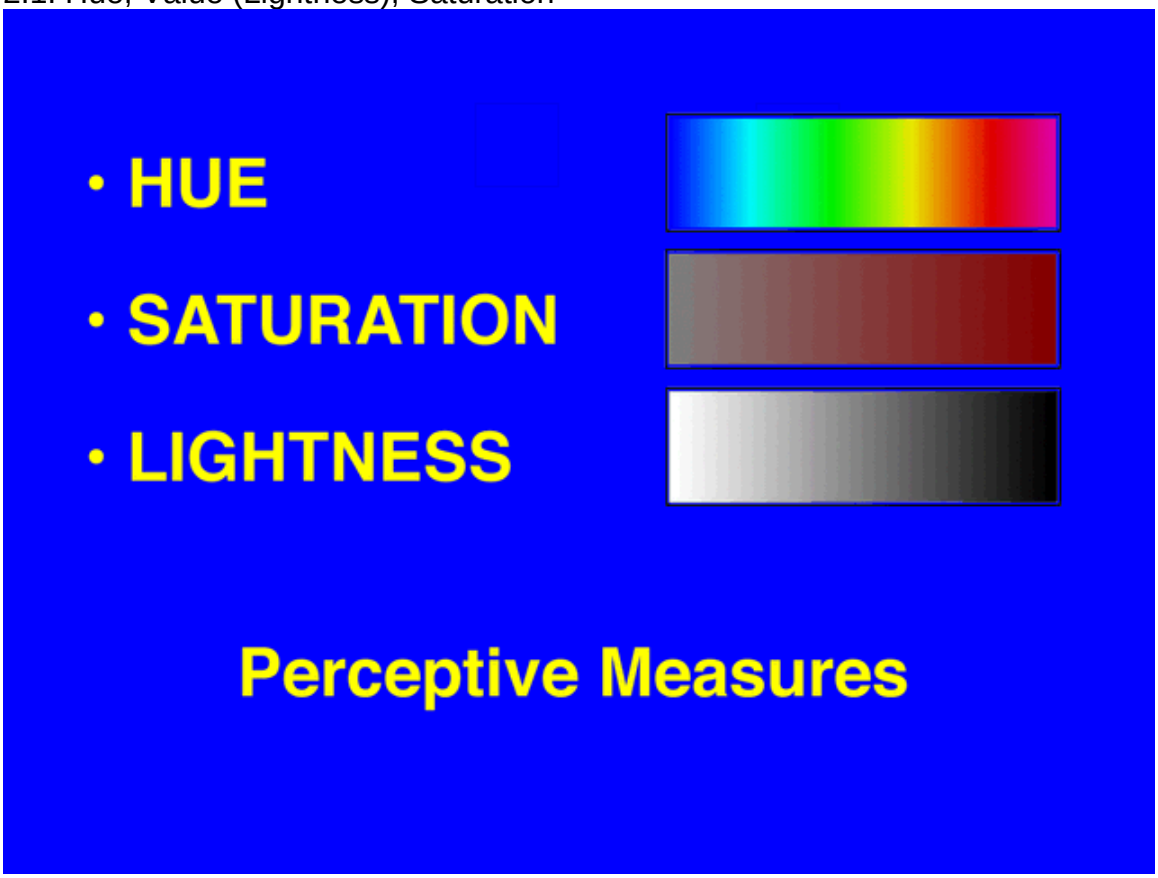
For landscape architects and designers, color is important as it is one of the six elements to design. Line, form, shape, pattern, and texture are the other considerations of design, with texture being the element most closely related to color. This holds true because if a texture is shiner, the hue will appear lighter in color next to a texture that is rougher. Light is the cause of this because the shiner texture will reflect more light, giving it a different value than the rougher texture (Bleicher, 2). Texture and color is applicable to the art form of painting, and the reason why the designers were drawn to the periods that they were, Impressionism being more of a blurred texture and Cubism pulling from the entity of abstractness where texture isn't as important as form because the subject must appear in varied objects. Each of the art periods are addressed in the subsequent chapters as a means to provide the reasons why the designers chose the color palettes that they did.

CHAPTER TWO: HISTORY OF COLOR THEORY

Three words describe how to define color: hue, saturation, and value. Hue, simply put, is the name of the color or the way in which one color is discerned from another. In the most basic of terms, hue is categorized in the spectrum of red, orange, yellow, green, blue, and violet. Therefore, each color can either be one hue or a proportion of two hues, and they have varying levels of intensity, or saturation. White, gray, and black contain an absence of color, and scientists define them as “achromatic” (Mahnke 26). The strength, intensity, or chroma of a color is its saturation. This characteristic can be seen as how much the color differs from the pure color and its grey intensity. By mixing grey or a color’s compliment, the saturation is affected. The third way to define a color is through its lightness or value. Simply put, it is the way to address a dark color from a light one by quantifying the amount of light reflecting from the object (Mahnke 27). So, by adding white, the value is lightened and conversely, by adding black, the value is darkened (Bleicher 56). *See figure 2.1*

To truly understand these various definitions of color, it is important to look at the history behind the subject of color theory. For centuries, scientists and artists alike have studied color to interpret the best ways colors can be mixed as well as presented together. While there have been many individuals who have experimented and written on color, this thesis addresses four of the most well known color theorists: Sir Isaac Newton, Johann Wolfgang von Goethe, Michel

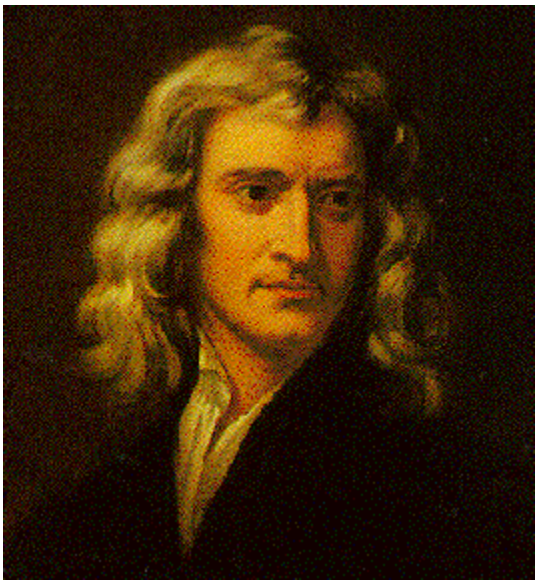
2.1: Hue, Value (Lightness), Saturation



Eugene Chevreul, and Johannes Itten, for it was these four men who laid the groundwork for subsequent scientists and artists to better understand the subject of color theory.

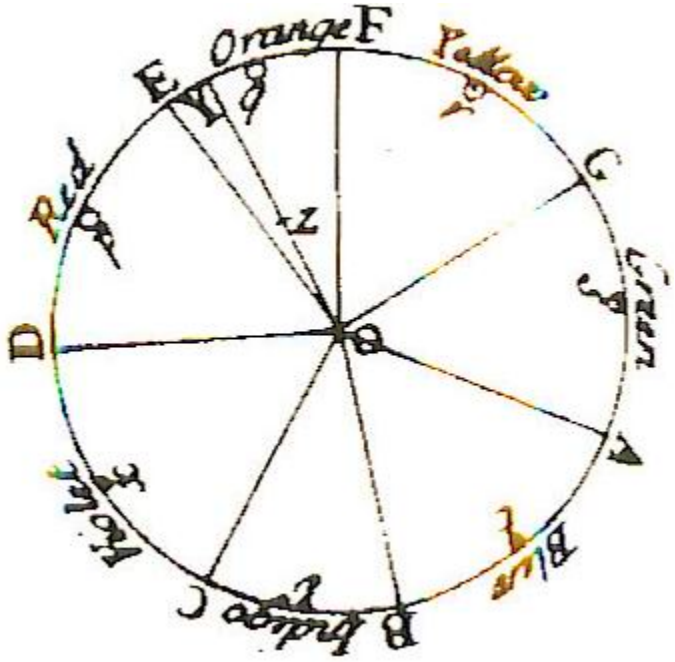
Sir Isaac Newton is considered by some as one of the greatest genius in the history of science who has ever lived. *See figure 2.2* From England originally, he grew into a man interested in a number of disciplines: physics, mathematics, astronomy, alchemy, and natural philosophy. Contributing to the subject of light, he wrote and published Opticks in 1704 (Bleicher 20). It was through his interest in optics that he first invented the reflecting telescope and saw the spectrum of colors through a series of exact and refined experiments. *See figure 2.3* He was able to define the phenomena of color through measurable mathematical patterns. He is attributed as the first person to devise a color wheel in 1676. *See figure 2.4* During the seventeenth century, he discovered red, orange, yellow, green, blue, indigo, and violet beams of color by dividing white sunlight through a glass prism. Simply put, the prism merely fans out what the light already possess: seven colors arranged in the same order of the rainbow. This transition of colors was defined by Newton's ability to join the two ends of the color spectrum together. The thought during Newton's time was that color was defined through lightness *and* darkness and that the prisms made the light become colored. However; Newton denounced this and showed light being refracted, proving that color is produced by white light shining through a prism. (Bleicher 4-6).

2.2: Sir Isaac Newton



2.3: Newton's Telescope

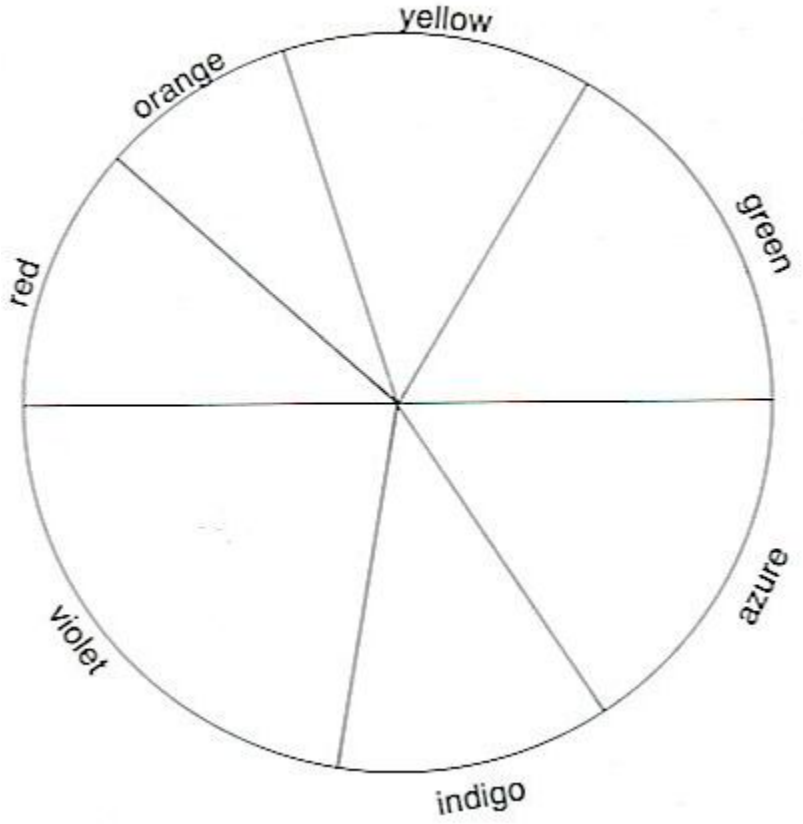
2.4: Newton's Color Wheel



During his experiment, he discerned a progression of varying colors and was able to name the seven colors which were organized in the exact order as the ones seen in the natural wonder of the rainbow. Most of the color theorists had varying ideas on where each of the colors should be placed on the color wheel and which color followed each other in succession. They also disagreed on the actual number of fundamental colors. In Newton's color wheel, each of the seven pie shaped divisions are unequal, which is the representation of the number of different colors the eye can see within the same hue (DeGrandis 29). *See figure 2.5* He was the first person to use the geometry of a circle to arrange color which is an organizational tool which is still in use to this day (Bleicher 20). Newton believed there to be an analogy between the seven notes of the musical scale and the seven colors because of the notion that sound may educe color and vise versa. In the brain, the sight and auditory areas are tightly connected and therefore; it holds true that a specific color might evoke the memory of a low or high pitched sound (De Grandis 84). Some individuals believe this correlation between the seven colors and the seven notes of the musical octave to be one of the mistakes made in his book, Opticks (Gage 15). Indigo and violet are hard hues to differentiate, and it is thought that either Newton could see more colors than other individuals, or he wanted there to be a seventh color to be able to associate it with the seven musical notes (Bleicher 6).

The science and art of color were typically categorized as two totally different subjects during Newton's age; however, to blend the knowledge behind both provides an interesting facet between the two (Gage 11). Newton's

2.5: Newton's Color Wheel



contributions are important to artists because their fascination with color could be defined by one factor: light. His color wheel arranged the primary colors of red, yellow, and blue opposite of their complementary colors: green, violet, and orange. Most individuals interested in color believe that this arrangement of primaries next to their complement to be a sound enhancement of each other because of their optical contrast. The principle of contrast is an absolute exercise used in art and design, one that is seen so frequently in the elements of nature. It was through Newton's work that the subject of color's complements began and was later practiced by artists and designers alike (Gage 15).

During the century after Newton's contributions, Johann Wolfgang Goethe, a German polymath interested in color, studied the human reaction to color and the psychology behind color theory. *See figure 2.6* His interests included poetry and color theory. While accomplished in a copious amount of life successes, Goethe believed his work on color to be his best and wrote and subsequently published Theory of Colours to share his ideas in 1810 (Bleicher 21-23).

For those who studied color theory after Newton, there were two schools of thought, and Goethe had a polemical view of Newton's experiments which possibly stemmed from his background as a poet rather than a scientist (Bleicher 21). The main difference between Newton and Goethe's theory on color is that Newton's goal was to define color and the properties of light through a mathematical explanation, whereas Goethe studied human color perception in various situations (Agoston 1). Goethe believed color is seen through lightness *and* darkness, as opposed to Newton's thought that color can only be seen

2.6: Johannes Wolfgang Goethe

through light. In Goethe's definition, color existed through the transition of brightness to darkness.

From Goethe's interest in psychology, he determined how people respond to each color and how the brain interprets color; subsequently, he created a color wheel based on his research. Goethe's color circle consisted of two equilateral triangles placed upside down from each other, and tinted the vertices with the primary and secondary colors (De Grandis 29). All of the colors were categorized into two categories: the plus and the minus side. *See figure 2.7* Liveliness and stimulation, he concluded, are created by those colors on the plus side: red, orange, and yellow, whereas green, blue, and violet belong to the minus side because they produce feelings of relaxation (Bleicher 23).

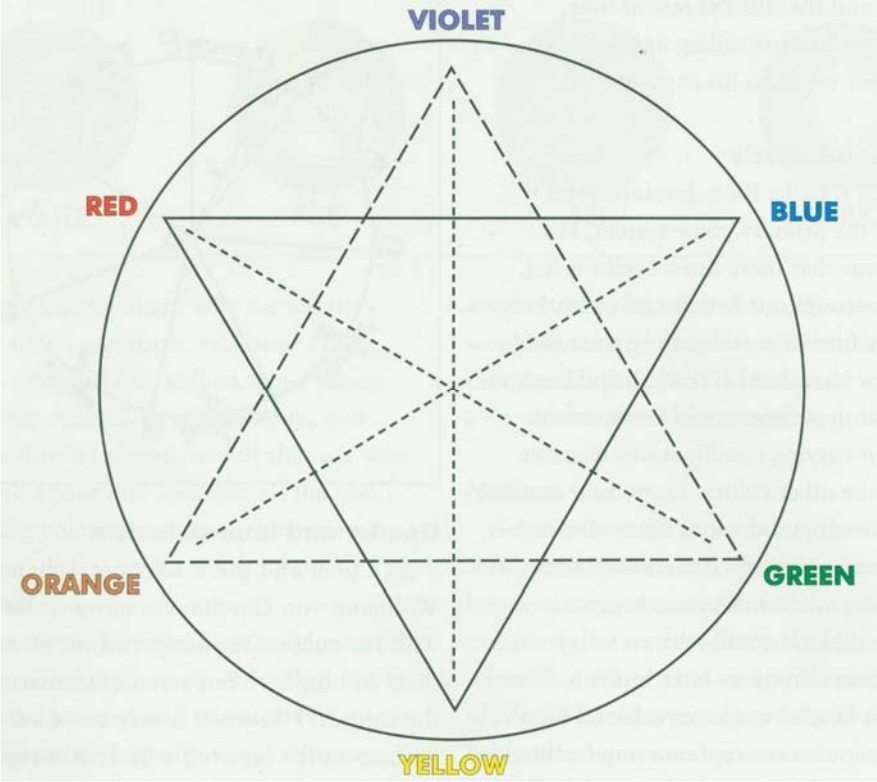
In Theory of Colours, Goethe wrote,

> When the eye sees a color it is immediately excited, and it is its nature, spontaneously and of necessity, at once to produce another, which with the original colour comprehends the whole chromatic scale. A single colour excites, by a specific sensation, the tendency to universality… In this resides the fundamental law of all harmony of colors... (Goethe, "Theory of Colors" 317)

He believed that color was more of the role of the eye interpreting a hue rather than the function of light (Bleicher 23).

Not only did he discuss how the brain interprets single colors, but he spoke of analogous colors, those which are next to each other on the color wheel such as red and red-orange, orange and yellow-orange, etc. A poignant impression is not left with these combinations but rather a stronger composition is achieved by placing contrasting colors together (Goethe, "Goethe's Color

2.7: Goethe's Color Wheel

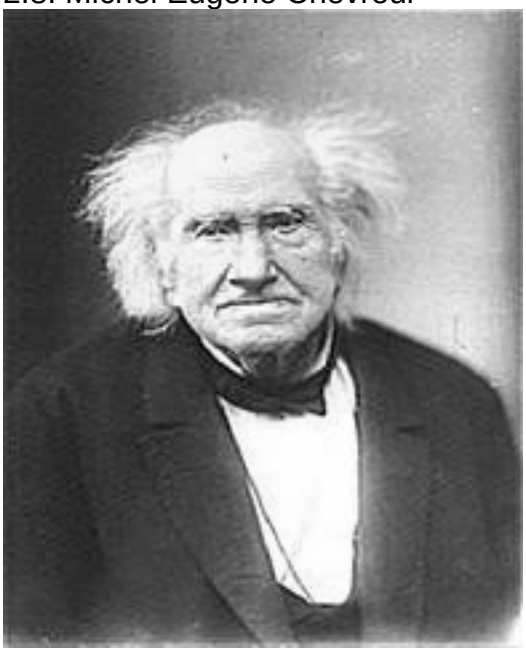


Theory" 3). While Newton may not have known that his color wheel was the start of the theory of contrasts, Goethe believed that a successful arrangement of color began with composing contrasting colors together.

Shortly after Goethe was born, another influential person to the study of color theory arose, Michel Eugene Chevreul, in France. *See figure 2.8* He was trained as a chemist at a Parisian dye house and became interested in dyes of colors as they related to optics. In 1824, he went to the Gobelin tapestry factory where he became director and worked on discovering why the quality of dyes was below standard. It was here that he began to study the contrast of colors and subsequently published On the Law of Simultaneous Contrast of Colours in 1838. He was able to discover that color perception changes by placing one strand of yarn next to another of different color, in particular blacks next to blues (Gage 196). Today, this idea is called simultaneous contrast. He believed that colors were harmonious when paired in one of two ways: analogous or contrasting. Therefore, those colors placed next to each other that were close on the color wheel or those that were opposite on the color wheel work well together (Hobhouse 325).

His theoretical writing influenced artists from painting movements in the nineteenth century such as Impressionism because it taught them about the effect of light and the importance of contrast (Bleicher 23). When formulating his color wheel, Chevreul placed the complement of each color across from it because he believed that after the eye had looked at one color for a brief time, it was ready to view its complement (Hobhouse 325). The color wheel Chevreul

2.8: Michel Eugene Chevreul



used was very similar to that of Johannes Itten who based the categorization of color into primary and secondary colors (Brown 42). *See figure 2.9*

When studying color theory today, most scientists and artists follow the theory developed by Johannes Itten, a Swiss color and art expert. *See figure 2.10* He was born in Südern-Linden in 1888 and became interested in color and painting at an early age. In his mid twenties, he was taught by Adolph Holzel, a color theorist in Stuttgart, Germany, who taught him about the past leaders who devoted their lives to the subject of color: Goethe, Schopenhauer, Runge of Germany, and Chevreul of France. Then, he studied at the Ecole des Beaux-Arts in Geneva for a period before becoming disinterested in what was being taught there. Itten wanted to be an elementary school teacher and subsequently opened a school in Vienna where he taught students to use color as a means of expression. With time, he developed into a painter, writer, teacher, and color theorist (Itten 6).

It was in 1919 that Itten decided to combine forces with Walter Gropius and other avant-garde artists at the Bauhaus (School of Applied Arts), taking fourteen of his students with him to Weimar. Here he became an expert on teaching form and color and oversaw the basic course taught at the Bauhaus. During his three year tenure at the Bauhaus, he published a book entitled The Art of Color which explains his color wheel that consisted of twelve colors (Itten 6). Itten evolved his color wheel into a twelve pointed color star and believed yellow to be the brightest color and the one nearest to white light. Therefore; he situated yellow at the top of the color wheel and subsequently created color

2.9: Chevreul's Color Wheel

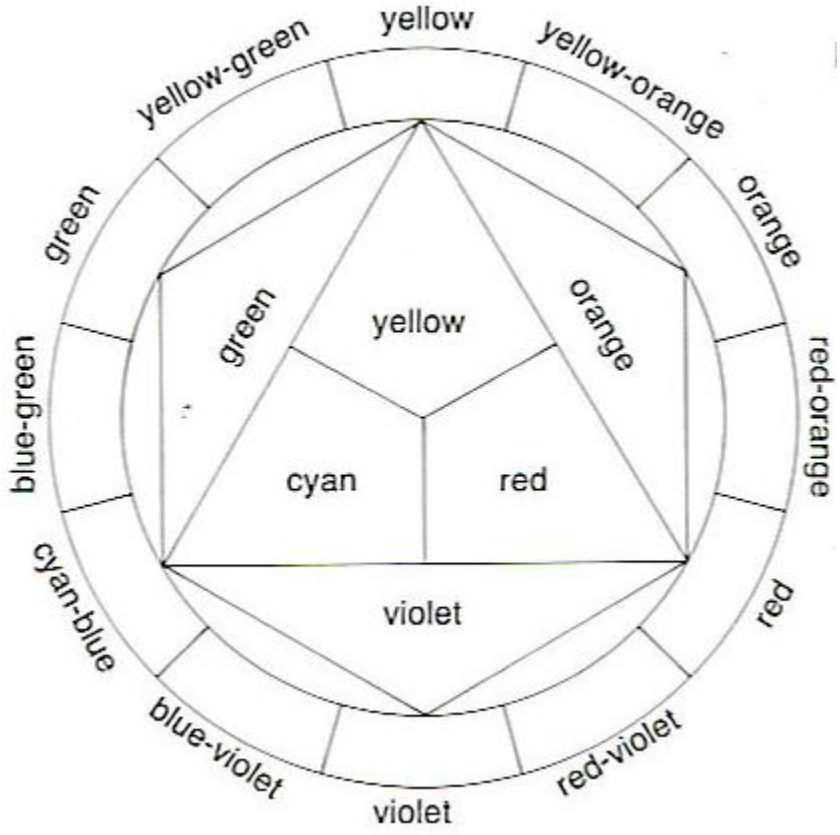
2.10: Johannes Itten

chords (De Grandis 27). *See figure 2.11* His color star is significant because it shows each of the twelve colors advancing from the center to the end points of the star in gradations of white towards black. This gives a better understanding of each color's value or its lightness or darkness, as well as shows how each color interacts with the hue next to it on the color star. *See figure 2.12*

Primary colors included red, yellow, and blue. Itten categorized them as such because by using these three colors one can create most other colors. Green, orange, and violet were termed secondary colors because they were made by mixing two primary colors together. The tertiary colors are those which are in between each primary and secondary color. For example, red-orange or orange-yellow, would be considered tertiary colors. His belief on the entire purpose of color theory was to create a harmonious color combination, or an aesthetic arrangement to design a pleasing masterpiece (Bleicher 57). He stated, "Colors are forces, radiant energies that affect us positively or negatively, whether we are aware of it or not" *(*Itten 12). He believed that color, including lightness and darkness, could have dominion on a person's mood or state of mind. Like Goethe, Itten was interested in color psychology and how a particular intrinsic aspect of a color could affect how a person felt and their state of mood.

In conclusion, there have been several theorists who have laid the foundation to our knowledge of color and how we define it. Through the infrastructure of the color wheel, we have a better understanding of how the hues relate to each other. Newton, Goethe, Chevreul, and Itten each provided a theory, either one of objectivity or subjectivity. This thesis addresses the use of

2.11: Itten's Color Wheel



2.12: Itten's Color Star

color in landscape. Four landscape architects are analyzed and compared: Miss Gertrude Jekyll, Robert Burle Marx, and the duo Wolfgang Oehme and James Van Sweden. Answered in the thesis is the question of color influences and why these designers chose the colors they did. Did they have a sense of color theory? What painting movements influenced them? Were they guided by cultural heritage? Or were they merely swayed by their personal inclination to pick the color patterns they did? Being able to analyze these elements which influence the designers gives us a tool in more effectively comprehending their use of color in the garden. For landscape architects, this research provides insights into better understanding how colors relate to each other once placed in the design. The powerful use of color can, at times, tell more than any words can express.

CHAPTER THREE: COLOR AND GERTRUDE JEKYLL

Agnes Jekyll, sister-in-law to Miss Gertrude Jekyll, wrote in the introduction of Gertrude Jekyll: A Memoir:

> It has been said recently and with truth, that no one except the Creator has done more to beautify the face of England than did Miss Jekyll, and the list of gardens in all parts of the land made or improved by her, alone or in collaboration with Edwin Lutyens, form an astonishing record, inspiring numbers of admirers to try to emulate her in such measure as their means and opportunity afforded. (Jekyll, F. 12)

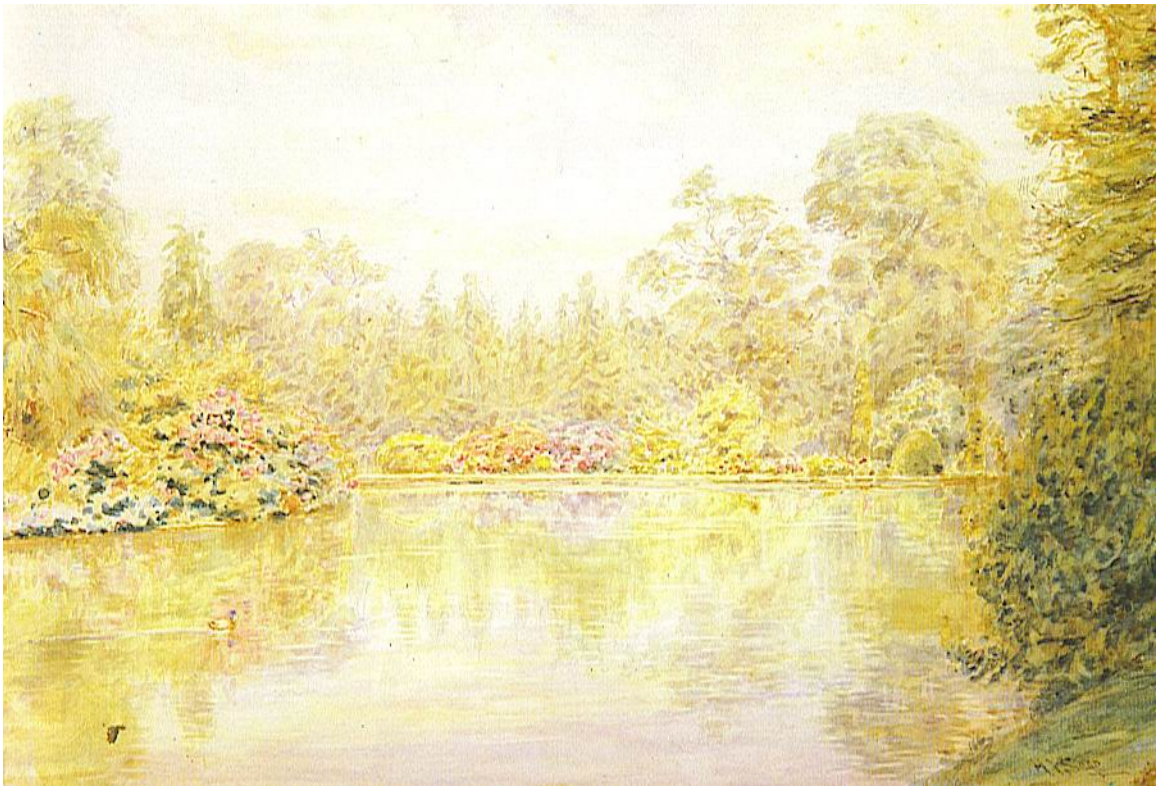
Gertrude Jekyll learned the merit of successful color design and created an Impressionist-like watercolor scene within her perennial, naturalized shrub, and wildflower borders. She became legendary for her use of color in the gardens she designed during the late nineteenth and early twentieth century, creating a living form of artwork which was made to look natural. Her reputation and legacy has been attributed to her lasting contribution to garden literature in the vast collection she wrote. Through some dozen published books and multiple notes and articles she wrote in journals such as *Guardian Newspaper* and *The Garden*, Jekyll became well known in the garden design field (Rogers 381). She inspirited the English cottage garden with her perennial borders developing a new era of gardening style apart from that of the formal, geometric schemes of the Victorian period (McCormick 70). Her inspiration derived from her background in art as defended in Tunnard's book, "…in the eighteenth

century, landscape gardeners learned from the Italian masters, and, in the late nineteenth century, garden colour planners from the Impressionists" (Tunnard 96).

Miss Jekyll's interest in gardening began at an early age, at four and a half years, when her parents and five siblings settled just outside of Guildford in Surrey at the neo-classical style mansion called the Bramley House in 1848. *See figure 3.1* Jekyll wrote, "The old home, not very far from where I live now, had biggish spaces of garden and shrubbery and two ponds-one large mill-pond covering some acres; and three streams, so that I was always watching the ways of water" (Jekyll, F. 25). *See figure 3.2* It was here that as a child Jekyll developed her knowledge of plants and for years did not know the names of her favorites except for what she had called them in her own mind. She wrote that there was an Andromeda (Japanese pieris) that she adored yet was unaware of its name, so she nicknamed it the Snowdrop Tree. *See figure 3.3* Then, when she turned nine years old, her governess began to teach her botany with the use of Rev. C.A. Johns' Flowers of the Field as a textbook, becoming one of the three books she referenced throughout her life. The other contribution to Jekyll's interest in gardening was when at the Bramley House property, she and her sister, Carry, were provided the opportunity to learn more about plants by receiving two long areas of ground which were next to each other where they started their first gardens (Jekyll, F. 23-29). At a mid-point in her career, she met Edwin Lutyens, the British architect from the Arts and Crafts movement, who also solidified her interest towards gardening (Hill 55).

3.1: Bramley House

3.2: Bramley Park



3.3: Jekyll as a child

At age eighteen, Jekyll's parents afforded her the opportunity to study at the Henry Cole's South Kensington School of Art for two years and through her classes began to understand the principles of color theory as they relate to drawing and painting. *See figure 3.4* It was here, too, that she learned planting design. For Jekyll, art came natural to her because her mother was both an artist and musician (Massingham 25). Surrounding herself with artists and artist-craftsmen, it is understandable how she became a diverse artist who enjoyed painting and drawing, stencil-art, needlecrafts such as embroidery and tapestry, wood work and metal work, and photography. Unfortunately she suffered from myopia, or nearsightedness, in her middle age which led her to focus her interests and obsessions solely to gardening (Jekyll, "Colour" 6).

Her perfection in gardening was influenced by the writings of Chevreul which she read during the early 1860s. Not only was Chevreul's color theory significant to Jekyll's color style, but to her favorite Impressionist painters as well such as Delacroix, Pissarro, Monet, and Cezanne (Brown, "Golden" 42). Darley writes, "She combined the colour notions of Chevreul, above all, the crucial role of white as the colour of light, with her sophisticated painter's eye and plantswoman's knowledge" (Darley 20). By analyzing Chevreul's theory, Jekyll ultimately relayed her interpretation of color theory in her famous book, Colour in the Flower Garden in 1908. Similar to Chevreul's discovery of yarn that colors placed next to each other may be perceived differently, Jekyll formulated the same thought that each color will be affected by those encircling it (Tankard 16).

3.4: Jekyll as a young adult

She believed gardens to be, “painterly visual art, not simply a plant collection” (Van Valkenburgh 17).

J.M.W. Turner, another Impressionist artist, also made a profound impact on Jekyll’s use of color in the garden. She was devout in her studies of art and worked thoroughly in replicating famous paintings and primarily enjoyed painting those of Turner from those that were hung at the National Gallery (Bisgrove 10). To further her knowledge, she went to art shows and talks as well as visited with artists in London (Brown, “Golden” 22). Around the age of thirty, Jekyll met the painter known as “England’s Lost Impressionist”, Hercules Brabazon Brabazon, who made a huge impression on her by giving her painting lessons during the 1870s. *See figures 3.5 & 3.6* Specifically, Brabazon’s use of light in his watercolor paintings was the application Jekyll learned and subsequently practiced in the garden (Brown, “Golden” 23). She thanked Brabby, as he was affectionately known, in the following words, “…I owe, with deepest thankfulness, a precious memory of forty years of helpful and sympathetic guidance and encouragement in the observation and study of colour beauty” (Massingham 126). Michael Van Valkenburgh, a contemporary landscape architect, compares Jekyll’s tie to her artistic talent and Impressionist movement through this accolade, “Seurat’s painted frames are as close to Jekyll’s work as can be achieved in another medium” (Van Valkenburgh 17).

Even when Jekyll wrote, she described her gardening passion through art and specifically through painting, as if the garden was a picture. She wrote,

> Should it not be remembered that in setting a garden we are painting a picture- a picture of hundreds of feet or yards instead of so many inches, painted with living

3.5: “Taj Mahal” by Hercules Brabazon Brabazon

3.6: “A Study at the Chalet Blumenthal” by Hercules Brabazon Brabazon

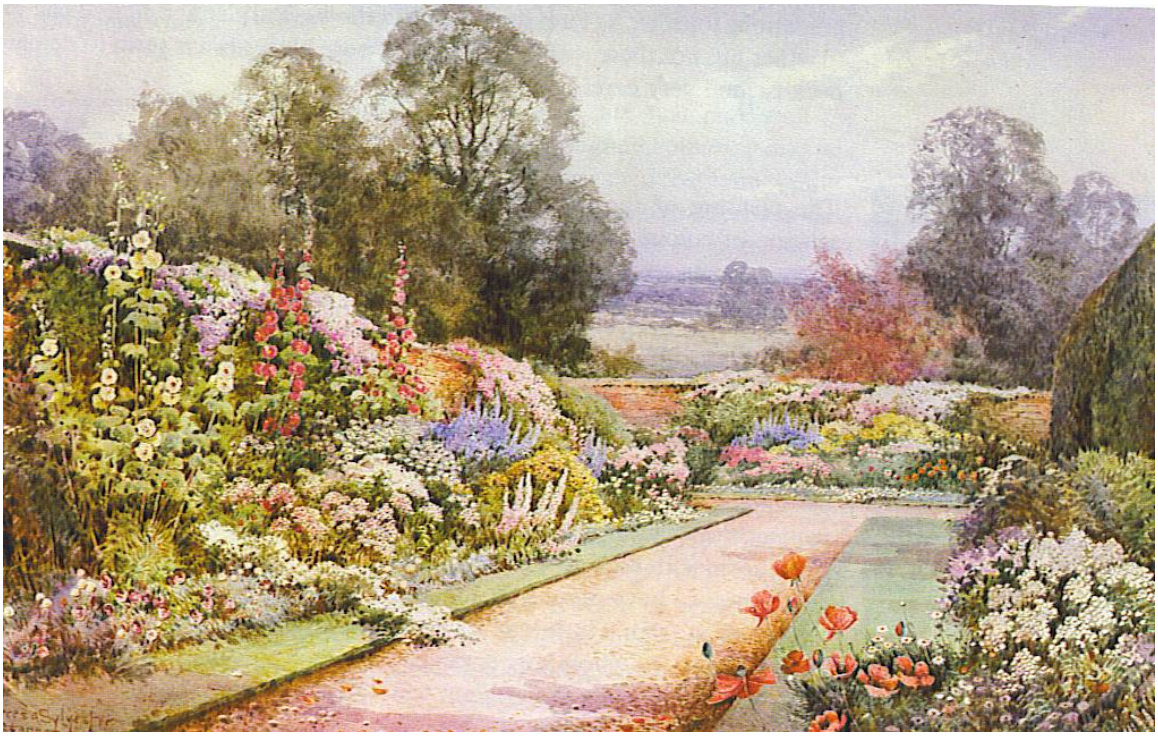
> flowers and seen by open daylight- so that to paint it rightly is a debt we owe to the beauty of the flowers and to the light of the sun; that the colours should be placed with careful forethought and deliberation, as a painter employs them on his picture, and not dropped down in lifeless dabs, as he has them on his palette? (Tunnard 56-57)

Lambert describes Jekyll as the first, "horticultural Impressionist, and rightly so, for she was trained as an artist and used color to define light and shade the way a painter uses pigment" (Lambert 144). *See figure 3.7 & 3.8* It was through her appreciation of Impressionistic art that she developed into a landscape designer coined as one of the first who looked at color and texture as the main element to tie a garden together compositionally. Hill argues her awareness of Jekyll's interest in art in the following words:

> When biographers debate the reason for her decision to become a gardener rather than a painter it seems odd that they should give so little weight to the possibility that she simply realized where her talents lay and summed them up in her own coinage of 'artist-gardener'. (Hill 56)

There is an interesting correlation between Jekyll's use of color and light to the Impressionist's artwork she studied. Both Turner and Monet are thought to have suffered from symptoms similar to myopia, the same condition with which Jekyll was afflicted during the middle part of her life. This factor to their eyesight made detail work hard because everything was blurry; therefore, the Impressionistic style focuses on specifically the subjects color and light rather than precise detail work (Brown, "Golden" 25). One could assume that this is possibly one of the reason's Jekyll was drawn towards the Impressionist style. To defend this point, Brown writes of Jekyll's myopia to better understand her planting style,

3.7: “Herbaceous Borders” by Theresa Sylvester Stannard



3.8: “The Pergola, Great Tangley” by George S. Elgood

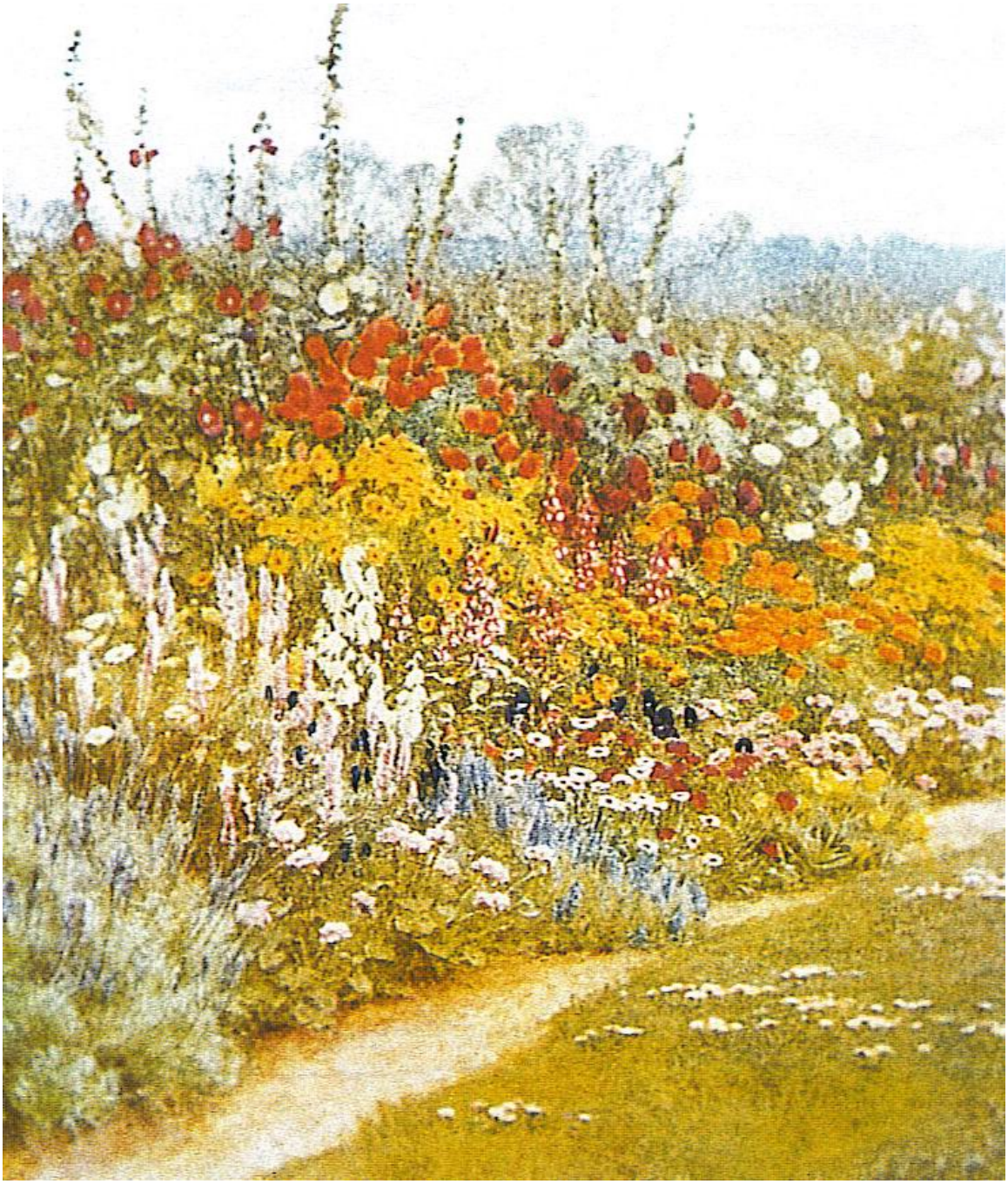
"…because much of the distance was a hazy blur, her perception of sweeps of colour, of the habits of light, was uncluttered by details, and therefore the more devastatingly accurate and impressive" (Brown, "Golden" 25). Through her poor vision, she was blessed with an observant eye and saw things that many people with perfect vision overlooked like expanses of color (Jekyll, "Essential" 10).

For almost forty years she practiced garden design and created more than 350 gardens with various color border schemes including her own 15 acre garden estate at Munstead Wood in Godalming, England where she lived from 1888 until 1914. *See figure 3.9* It was here that Jekyll's approach to garden design dramatically changed the style of subsequent gardens through the prototype of the herbaceous flower border (Brown, "English" 7). Seasonal color was an important theme in Jekyll's garden patterns as she strived to create a garden of interest during the various times of year (Rogers 380-1). Through her background in art, her plants were like the pigments an artist would use. She knew how to place plants and shrubs to produce the most effective design by contrast or harmony. *See figure 3.10* She wrote, "For colour, in gardening as in painting,…means the arrangement of colour with the deliberate intention of producing beautiful pictorial effect, whether by means of harmony or of contrast" (Tinley ix).

Jekyll believed the way to achieve a flower border with a champion color scheme was to reserve specific borders to each season of the year with each area being colorful for one to three months. This was thought to be so because she did not care for bare spots on the ground with perennials not blooming yet

3.9: Munstead Wood in Godalming, England

3.10: “Munstead Wood” by Helen Allingham

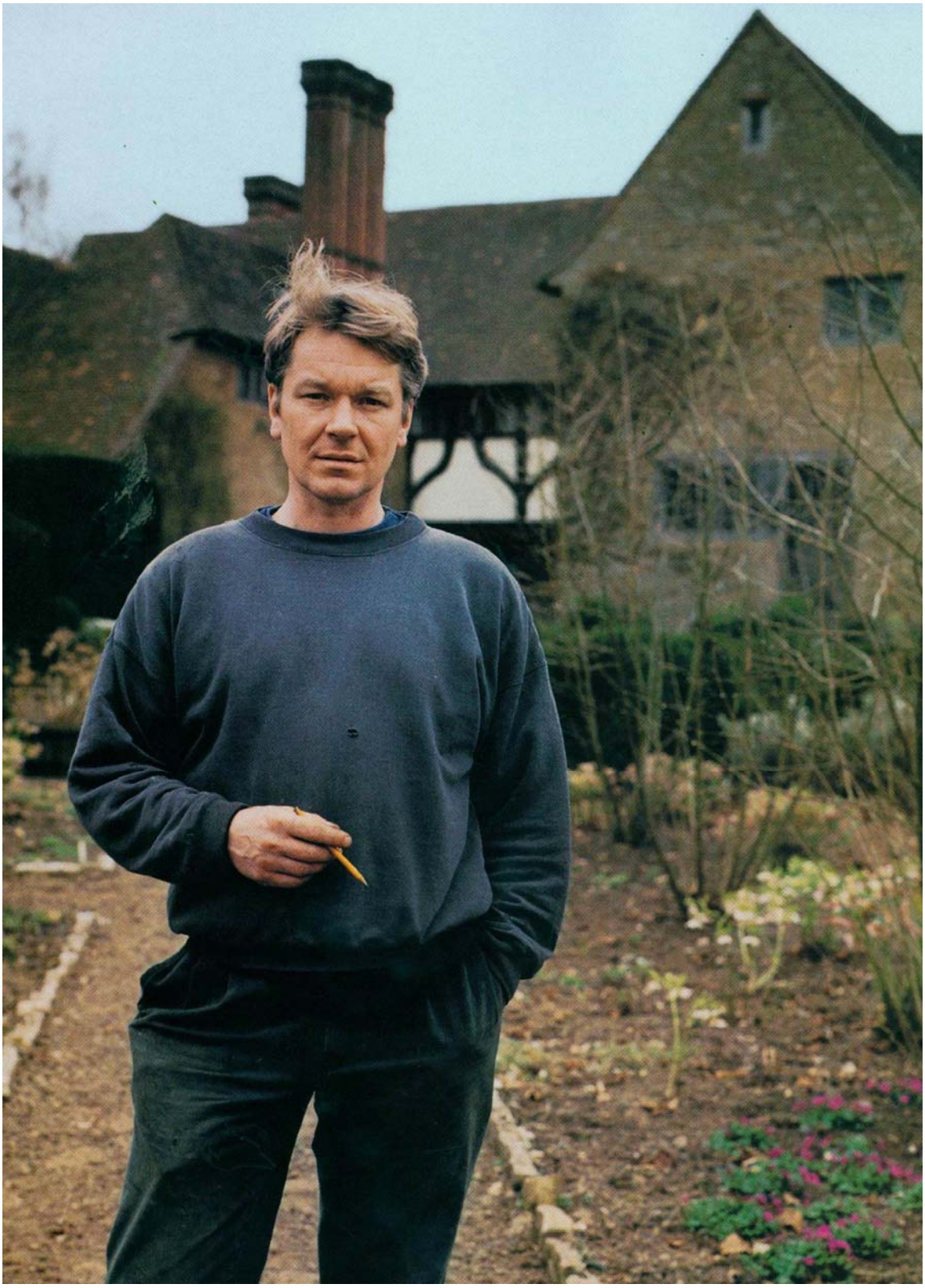


surrounded by plants that were (Jekyll, “Colour” 8). Therefore, Jekyll was conscious of choosing plants for a certain border that bloom at the exact same time of year.

Munstead Wood was recently restored in the early 1990’s by Stephen King, a head gardener, painter, and photographer. *See figure 3.11* Subsequent owners of the estate had destroyed many of the once abundant color borders and pathways by replanting a sea of lawn. Questions arise when restoring a cultural landscape because authenticity is important. Will they plant the same plants? If so, can they find them? Can they plant the same colors? Today, this can be a big problem because many of the same plants are not available and may not even exist anymore. What is critical in restoring a cultural landscape is documentation of its former glory through written word and/or photography. Fortunately, for King’s task at Munstead Wood, Jekyll had written copious amounts on the details of her design (King 56).

First, the pathways were rediscovered in the same angles where they once lay. The former flower beds began to take shape after the turf was cut back and removed. *See figure 3.12* After completing this, the house began to sit with purpose again, where views from the doors and windows had meaning to the focal points in the garden which could once again be seen. King carefully interpreted Miss Jekyll’s own sketches and images to accurately recreate her color borders of daffodils, tulips, wallflowers, arabis, aubretia, and peonies (King 58). *See figure 3.13*

3.11: Stephen King



3.12: Lawn at Munstead Wood

3.13: Plan of Munstead Wood by Jekyll

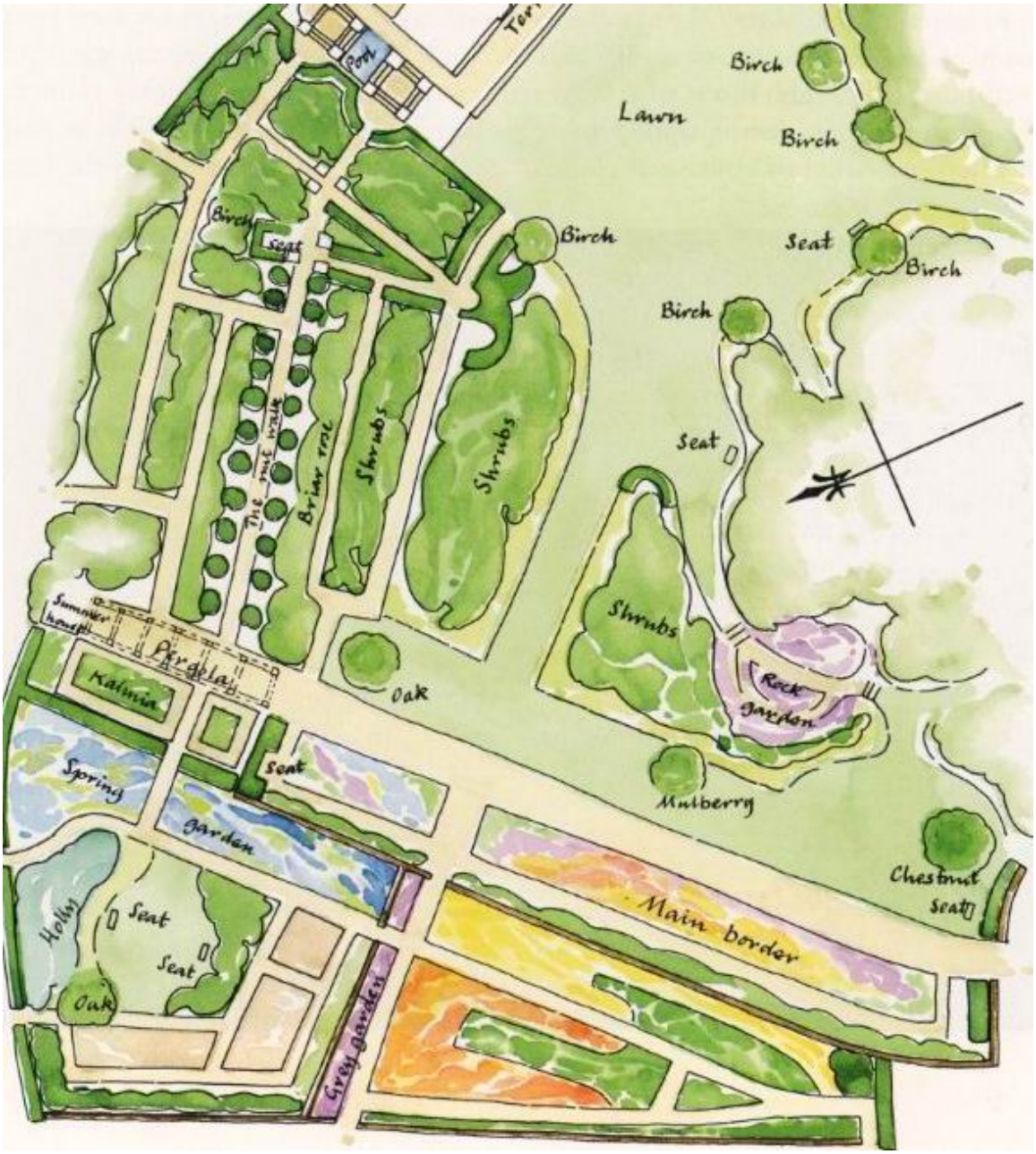
The largest project King wanted to restore was the 14 foot wide by 180 foot long Main Flower Border which was completely documented in Miss Jekyll's legendary book, Colour in the Flower Garden. *See figure 3.14 & 3.15* In this book, she sets an archetype for the herbaceous flower border where gradations of color changes down a linear allee (Van Valkenburgh 18). He maintained the integrity of the garden by planting the warm colors in the middle and faded out to cool colors along the periphery (King 63). In her book, Jekyll speaks of the "natural law" of complementary colors and harmonious colors and created a literal color spectrum in her herbaceous flower border at Munstead Wood. *See figures 3.16 & 3.17* She wrote,

> Looked at from a little way forward…the whole border can be seen as one picture, the cool colouring at the ends enhancing the brilliant warmth of the middle. Then, passing along the wide path next to the border, the value of the colour arrangements is still more strongly felt. (Jekyll, "Colour" 15?)

Therefore, she took into consideration the notions of the past color theorists, Newton, Goethe, Chevreul, and Itten, that colors are maximized by placing them next to their complement. *See figure 3.8 again* She describes the main hardy flower border at Munstead Wood in the following words:

> Standing for a few moments before the end most regions of grey and blue, and saturating the eye to its utmost capacity with these colours, it passes with extraordinary avidity to the succeeding yellows. These intermingle in a pleasant harmony with the reds and scarlets, blood-reds and clarets, and then lead again to yellows. Now the eye has again become saturated, this time with the rich colouring, and has therefore, by the law of complementary colour, acquired a strong appetite for the greys and purples. These therefore assume an

3.14: Watercolor of Munstead Wood



3.15: Black and White Image of Main Flower Border at Munstead Wood

3.16: “Main Flower Border” by Helen Allingham

3.17: Main Flower Border restored

> appearance of brilliancy that they would not have had without the preparation provided by their recently received complementary colour. (Jekyll, “Colour” 70)

To validate her claim of the laws of complementary colors, Jekyll urges her readers to perform this experiment. She asks them to stare at the bloom of a brilliant orange African Marigold which has dull green leaves for thirty seconds. Then, they are to stare at the leaves which should look to be bright blue, the complementary color of orange. Over and over Jekyll suggests that colors are more telling if correctly placed by its complementary color (Jekyll, “Colour” 70-71).

At the turn of the century, “gardens of a special colouring” had become popular. By this, Jekyll meant gardens that contained one dominant color. She emphasized if one was to create a “Blue Garden” or a “Grey Garden” or a “Gold Garden” that it should still posses a bit of variety to offset the prevalent color (McGuire 39). *See figure 3.18 & 3.19* She believed that what needed to be accented should be done in a germane manner (McGuire 36). By understanding Chevreul’s notions of analogous colors, Jekyll preferred creating the monochromatic flower borders by using a pale shade and deliberately adding brighter shades of the same hue to emphasize a contrast (Hobhouse 325). To support that belief, Davey writes,

> Gertrude Jekyll (1843-1932) evolved an elaborate theory and practice of organizing borders in which it was important ‘to keep the flowers in rather large masses of colour. No one who has ever done it, or seen it done, will go back to the old haphazard sprinkle of colouring without any thought of arrangement, such as is usually seen in a mixed border. (Davey 36)

3.18: Massing of Blue Flowers

3.19: Massing of Pink Flowers

As Morgan's article, "Color Theory," states in Garden Design magazine, Jekyll knew how to manipulate colors to her advantage in creating spaces to appear larger or smaller than they really are. She used the warm colors of red, orange, and yellow to make a large area look smaller because of their advancing nature. The eye is naturally drawn to their bold characteristics. Conversely, a small space is made to look larger by placing cool colors of green, blue, and violet. These colors recede and therefore, pull the eye away making the area seem bigger. Tunnard stated,

> What Gertrude Jekyll did accomplish was a careful and accurate estimate of colour effects through observation and experiment. Hers was not the eye to overlook gradations of tone in plant foliage, for instance, or the intensification of tonal value in flowers of pure colours when placed in close proximity to white. (Tunnard 110)

As designers, it is important to understand how color affects space in the garden, and Jekyll was a master of this.

The legacy of Gertude Jekyll is undeniable. She revolutionized garden design by drawing away from the formal Victorian era and helped initiate the reformation of the herbaceous floral border of the Arts and Crafts movement. When she died in 1934, Edwin Lutyens designed her gravestone which read, "Artist, Gardener, Craftswoman" (Massingham 175). The importance lies in the sequence of this description. The accomplishment of artist is listed first as if to say that gardener and craftswoman are contingent upon the establishment of an art background. She trained as a painter, and that thumbprint left a mark in her

development as a gardener ever since. In appreciation of Miss Jekyll, the term "horticultural Impressionist" is absolute:

> Clever and witty in conversation, active and energetic in mind and body, and possessed of artistic talents of no common order, she would have at all times shone conspicuously bright amongst the other ladies. The variety of her accomplishments, however, is far more extensive; there is hardly any useful handicraft the mysteries of which she has not mastered- carving, modeling, housepainting, carpentry, smith's work, repousse work, gilding, wood-inlaying, embroidery, gardening and all manner of herb and culture…Her artistic taste is very great. (Massingham 38-39)

CHAPTER FOUR: ROBERTO BURLE MARX

In his home country of Brazil, Roberto Burle Marx defined the neoteric style of modern gardening which ensued during the rise of a new architectural movement that came to fruition beginning in the middle of the twentieth century. Brazilian gardens previously consisted primarily of European plants, and the buildings were a conglomeration of different architectural styles. Burle Marx and noted modern architects who began a style which became unique to their homeland and coined it by utilizing the abundant flora of the tropical climate (Sicre 6). Considered the father of modernism in landscape architecture, Burle Marx's style consisted of native Brazilian flora, colorful and avant-garde hard scapes, mural walls, and the element of water (Vaccarino 15). Adams writes of Burle Marx, "Brazilian painter, muralist, sculptor, architect, and set designer-decided at the beginning of his career that his true calling was the shaping of the natural topography into a work of art. It is on his terms, as an artist, that this effort has been made" (Adams 7). *See figure 4.1*

Like Gertrude Jekyll, Burle Marx is considered a landscape artist and also possessed the talent of painting which aided him as he designed the color palette of gardens and parks. *See figures 4.2-4.4* His enthusiasm of horticulture began by growing plants in a small area of his parent's yard in the Leme section of Rio de Janeiro. Like Jekyll, his interest in organizing nature started through the exposure his parents afforded him to "play" in the garden. Through this

4.1: Roberto Burle Marx

4.2: Acrylic on Canvas, 1968

4.3: Acrylic on Canvas, 1985

4.4: Painting in Burle Marx's studio, 1977

predisposition and being an esthete, Burle Marx flourished in the career of landscape architecture and artisan skills. Not only was he a painter, but he also provided character to the walls and walkways of Brazilian cities with his tile and fresco murals which decorated the buildings and paths. *See figure 4.5* Another talent encompassed stage set design and the creation of costumes and jewelry for plays and ballets. All of these interests and abilities coalesced into a rewarding profession which encompassed nearly 3,000 landscape projects in 20 nations that started with his upbringing in a cosmopolitan and cultured family (Sicre 6).

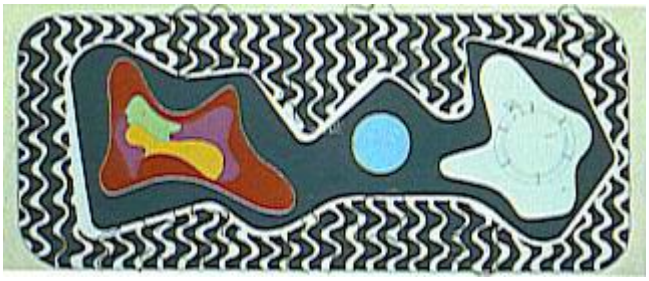
Born in Sao Paulo on August 4, 1909, Burle Marx was exposed to two cultures: German and Brazilian with his father being from Germany and his mother from a Northeastern state of Brazil, Pernambuco. With his European affiliation, he became a world-class raconteur, learning to fluently speak German, Italian, French, Spanish and English as well as his native tongue, Portguese, and began to appreciate diverse cultures because of his exposure to several worldviews (Adams 10). He went to Berlin when he turned nineteen to study art disciplines from music to painting from 1928 to 1929, and it was here that he was exposed to the paintings of Pablo Picasso, Paul Klee, Henri Matisse, and Wassily Kandinsky. Not only did he study these artists, but he exposed himself to the theories of the Renaissance painters as well (Vaccarino 27). Hence, he was tied to the aforementioned color theorists as the Renaissance masters were influenced by them. These studies in art spurred him into the desire to create his own style of bold colors and curvilinear forms, all inspired by the Cubist

4.5: Murals, tiles, 1950

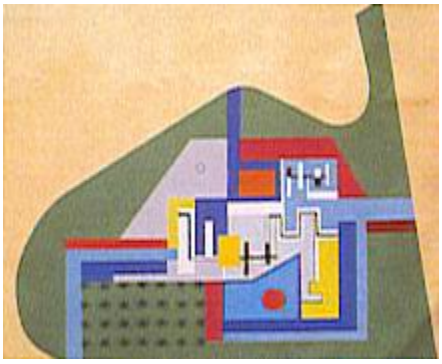
movement. *See figures 4.6-4.10* An architect friend said this of him, “He has a body of work with color, balance, a language of its own. From a kilometer away, you know it’s Burle Marx. The abstraction was heavily influenced by his experience with vegetal forms” (Michaels 105). Wanting to study more, he entered the School of Fine Arts in Rio de Janeiro a year later in 1930 where he learned the fine art of painting, architecture, and landscape design (Sicre 9).

Not only was Burle Marx exposed to various disciplines at the arts school, but he also fostered an appreciation of music through the influence of his mother. She cultivated her six children by taking them to opera at the Municipal Theater of Rio de Janeiro. He came to enjoy both nineteenth-century and contemporary music throughout his lifetime. Music was never far from his mind, and he contemplated being a baritone singer before entering the field of landscape architecture (Vaccarino 26). Like Newton, Burle Marx believed there was a correlation between music and color (Vaccarino 27). Burle Marx said, “I want to stress that nature is a symphony where the elements are intimately related; size, form, colour, movement, perfume and so on” (Montero 43). As previously stated, there are seven notes in the musical chord, and by adjusting the notes, a composition can be made of their combination. Likewise, each of the seven colors in Newton’s color wheel, when placed next to each other can create a compelling masterpiece, either on canvas or in the garden. Burle Marx stated his awareness of the similarities found in music and color that Newton originally discovered: “I can think of music or poetry to produce a painting” (Vaccarino 27).

4.6: Abstract Plan, 1952



4.7: Abstract Plan, 1953



4.8: Abstract Plan, 1988

4.9: Curvilinear Forms

4.10: Curvilinear Forms

While in Berlin pursuing his academics in art, he frequented the Dahlem Botanical Garden in Germany to learn more about botany. It was here that he discovered the unusual specimens of Brazilian tropical vegetation, plants that were not commonly used in his homeland because of the European gardeners introducing their foreign flora (Montero 17). *See figure 4.11* It was typical for many of the landowners to be of European descent, and they wanted to reproduce the gardens found in their homelands. Burle Marx became very interested in the roughly 50,000 native species found in Brazil and decided that by using these unappreciated plants, it would enliven a national identity as well as provide a sound ecological approach (Montero 22). He had an "intention to move away from Romantic European models, allowing gardens to evolve on a par with humanity" (Montero 22). What he noticed most about these plants was their bold colors and varied textural forms, elements that he later successfully incorporated in the gardens he designed (Montero 17). *See figure 4.12* Before this, he also learned about plants through the classes he took at the Botanical Gardens of Rio (Vaccarino 27). Through painting, he was able to use his plants as his subjects, which in turn developed his ability to create a painterly feel within the landscape (Sicre 9). Motta defends this point in his biography,

> Burle Marx never fails to transfer to the canvas his experiences as a landscape designer. But, on the other hand, he gives back to the landscape his experience as a painter. He is able to conceive men and buildings among the meandering lines of his drawings as he is able to convey to people the joys and pleasures of a garden. (Motta 234)

4.11: Vargem Grande “Garden of Volumes”: local vegetation

4.12: Martin Residence: local vegetation

It was by the encouragement of Lucio Costa, a modernist architect who was a neighbor to the Marxes in Leme, who actuated Burle Marx into the field of landscape architecture (Sicre 9). The other person who deepened his knowledge of plants was the famous botanist, Henrique Lahmeyer de Mello Barreto, who at the time was in charge of Rio's zoological garden and subsequently became Burle Marx's mentor (Adams 11).

Throughout his life, he amassed a large compilation of nearly 3,500 plant specimens, many of which he collected on visits to the Brazilian jungles, and subsequently donated to the Brazilian government along with his country property. It was during these trips where Burle Marx discovered more than forty tropical plants, many of which where named after him. These journeys into his native land helped him to derive his design process for it was there that he was able to experience the bountifulness of this part of the world's vegetation (Vaccarino 8). The use of native Brazilian flora became his stamp in the modernist gardens he designed which aided in creating a cultural pride and national identity (Vaccarino 11). Since he knew he wanted to specify local flora in his designs and the fact that these species were not available in nurseries to buy, Burle Marx and his brother, Siegfried, bought an estate in 1949, Santo Antonio da Bica, which consisted of ninety acres of land as a plot to grow his assortment of plants in greenhouses, seed beds, and propagators and to study their color and texture characteristics (Montero 24).

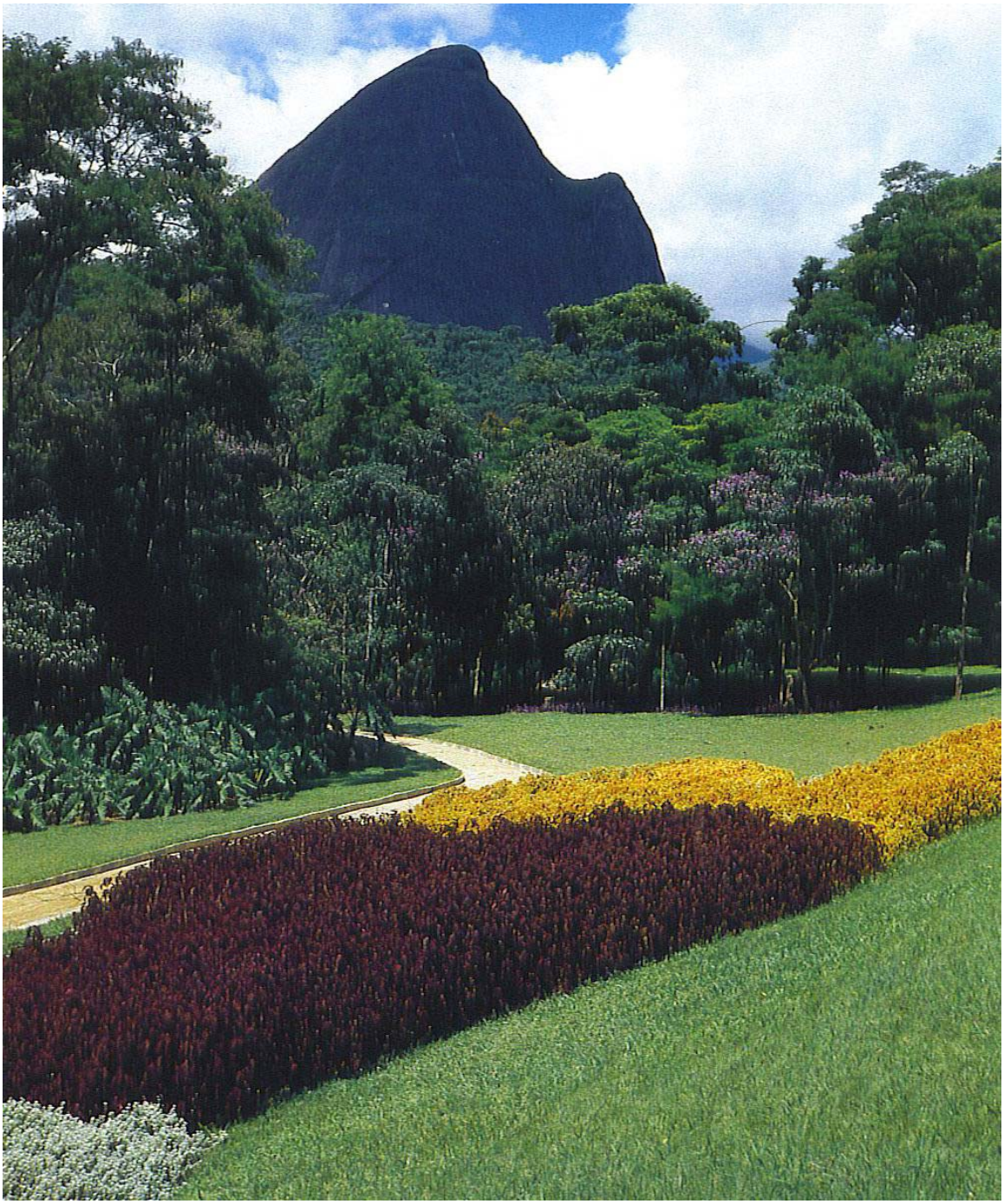
Like the ease Jekyll possessed translating color from canvas to garden, Burle Marx created grand public spaces and gardens with unique color schemes

done with a painterly talent, always with the goal to create a work of art. Burle Marx used color to allow the spatial relationship to change in regard to depth, either bringing something to the foreground or shifting it to the background (Berrizbeitia 64). As known in color theory, yellows advance and blues recede, providing spatial perspective. He stated, “The value of a plant in a composition, like the value of color in a painting, is always relative. The plant’s value is for its contrast or its harmony with other plants, which is the relationship” (Berrizbeitia 64).

Burle Marx believed light to be very important in creating color within the garden, for it is an ever-changing variable element. In describing his eye for detail, Motta chronicled him as follows, “Burle Marx studies these floral inventories with the sensitivity of the artist who follows every nuance of colouring brought about by sunlight on the leaves, on the transparency of the flowers, on the volume of the fruits, the masses of flowers and mountains” (Motta 231). Through his training as an artist, Burle Marx successfully achieved color schemes that flowed as if he were painting in the landscape, the gradation of color within each species planned perfectly for the size of the designed space (Motta 233). *See images 4.13 & 4.14* In his biography by Montero, she describes the source of his inspirations as this:

> Prompted by the exuberant formal and chromatic power of his work, some writers describe Burle Marx’s gardens as paintings. The English landscaper Gertrude Jekyll evoked a similar reaction from critics, who called her gardens ‘living pictures’. There are also those who see gardens in Burle Marx’s paintings. Both his art and his gardens reflect the vivid contrasting colours of his country’s

4.13: Monteiro Garden, 1990



4.14: Monteiro Garden: color swatches

> flowers, leaves, bird plumage and butterflies, as well as the sinewy, voluptuous shapes of Brazilian bodies, the bare hills polished by time, and the coast sculpted by the sea (Montero 37).

Burle Marx's first garden design, the Schwartz residence in Cocacabana, was awarded him by his mentor, Lucio Costa, because of his use of bold colors within his own garden. Unfortunately the garden is no longer present, but Burle Marx describes his early career as this, "I was doing experiments, planting white caladiums beside coleuses of violet and brown foliage" (Vaccarino 28). Coelho Frota characterizes his use of color from his first creations to his last ones as this,

> Polymorphous, polyhedral, complex, and contradictory, and yet harmonious is how these early creations by Roberto Burle Marx seem today. From their plastic/musical/botanical beginnings in 1930s Brazil, these landscape innovations would continue to grow and change as Burle Marx's artistic expression shifted under various artistic and cultural influences. (Vaccarino 28)

These artistic inspirations can be seen from a bird's eye perspective in the free form of a Burle Marx's garden design, sometimes compared to a Joan Miro painting or Jean Arp sculpture, both of whom rejected conventional art methods and sought to create Cubist modes of abstraction (Sicre 20). In Vaccarino's book, she compares Miro's *Dog Barking at the Moon* to that of Burle Marx's curvilinear formed planting beds at the Marambaia garden. *See figures 4.15-4.17* The curved forms of the moon and dog are reminiscent in the shapes within the garden. From Miro's influence, he incorporated curved bedding lines and used pure colors to form a "puzzlelike" masterpiece (Vaccarino 47). To further define Burle Marx's style, Adam writes:

4.15: Fazenda Marambaia, gouache of original garden plan, 1948

4.16: “Dog Barking at Moon” by Joan Miro

4.17: Monteiro Plan

> The sensual, painterly line Burle Marx developed and clarified in his garden designs of the 1940s and 1950s, with their interlocking forms of planting beds, walks, pools, and screen walls, reveals his affinity for abstract art of the time. Images by Arp, Calder, Leger, Miro, and Picasso are hinted at and then transformed in the dynamics of his compositions. (Adams 21)

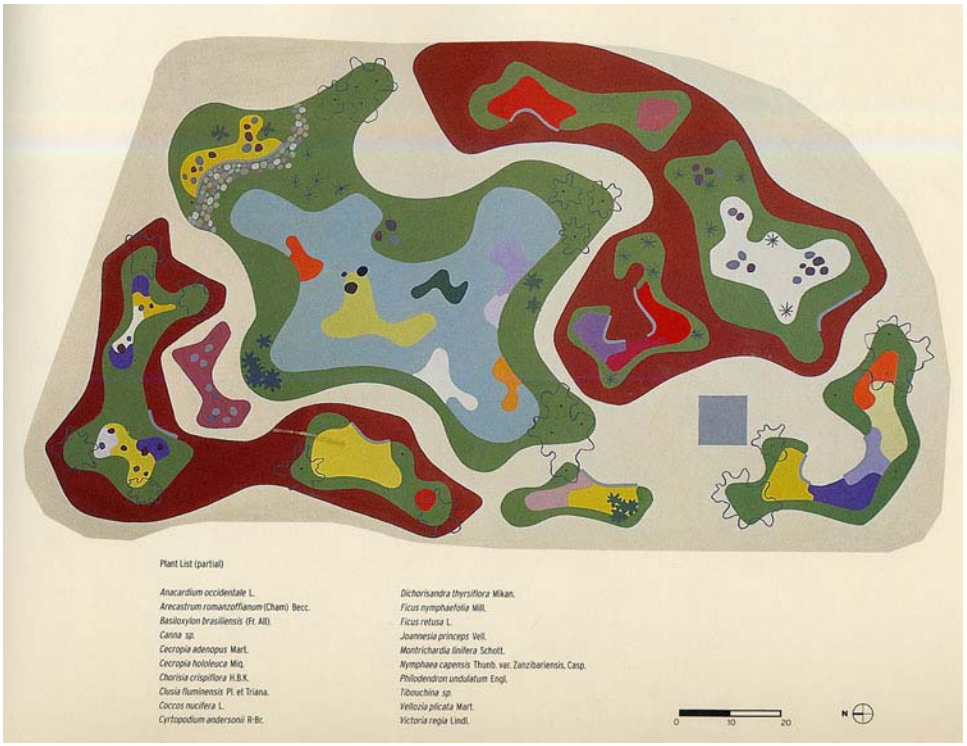
Burle Marx's design philosophy defined space through varying textures and colors, thus creating a piece of art which became one with nature (Adams 22). The exclusion of the 'right angle' and inclusion of curvilinear forms emulated the lines found in nature, and this shape infused by color became characteristic of his works (Montero 40). *See figure 4.17*

Burle Marx's bold use of color helped move Brazil into a modernist appreciation. *See figure 4.18* He contrasted reds, blues, yellows, and oranges in his artwork and gardens which previously had not been done in Brazil. One of the possible reasons Burle Marx was drawn towards the European abstract paintings was that he found similarities in their use of pure primary colors and that of the Brazilian flora and fauna, the bright flower colors, the colorful tropical birds, and amphibians. These hues were also familiar to him in seeing the colors of the "body paints" of the native Brazilians (Vaccarino 47). It was said that Burle Marx "used plants as if they were pigments and the ground like a canvas" (Montero 40).

While Burle Marx was influenced by the modernist painting movements and their use of color, he was knowledgeable of the different color theories that Newton, Goethe, Chevreul, and Itten produced with Itten's The Art of Color being part of his library collection. Since Chevreul first clarified how contrasting colors

4.17: Monteiro Plan

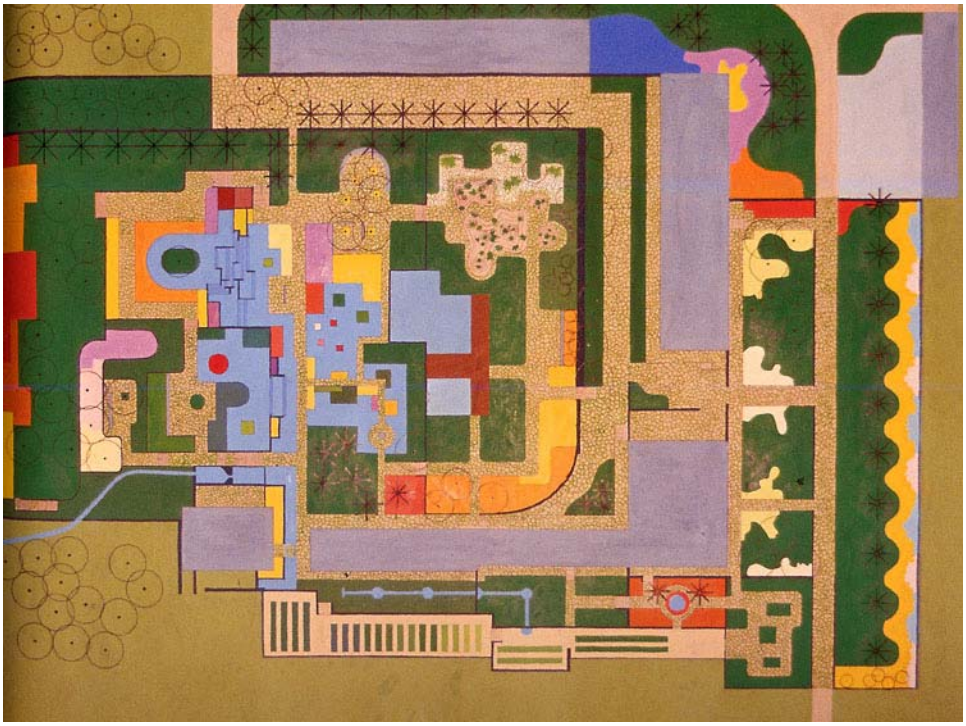
4.18: Parca Senador Salgado Filho Plan



work well in proximity to one another, it is understandable why his theory supported the groundwork for the twentieth-century painting movements to which Burle Marx was drawn, and of which he became a master. His use of simultaneous contrast can best be seen in the Marambaia garden. Brazil possesses a topographic range of fertile mountains and lush forests, and Burle Marx "borrowed" from that scenery as a backdrop to many of his garden creations. Behind the Marambaia garden is a large forest, and Burle Marx contrasted the dark hues of it and the blue sky against the display of flowering trees and perennial flowers from yellow *Senna* and violet *Tibouchina* trees to purple rhododendrons and yellow *Tabebuia* flowers to yellow-green *Coleus blumei* and reddish-marroon *Iresinee herbstii* groundcovers (Vaccarino 48). Another garden where Burle Marx designed with simultaneous contrasts in mind was the Vargem Grande. *See figures 4.19 & 4.20* The palette chosen was opposing the two complements of blues and oranges, one of the basic principles in color theory (Vaccarino 51).

The properties of the contrasting and intense colors of these gardens distinguish it as a cubist landscape. Simultaneous contrast is a characteristic of Cubist artwork and is a principle that influenced Burle Marx's work. Vaccarino defines it as occurring, "when two hues are seen next to each other: the dominant hue creates an afterimage (complementary color) in the eye that washes over onto the smaller area of the other hue, affecting its overall color or intensity" (Vaccarino 49). The ever-changing intensity of the sunlight made the

4.19: Vargem Grande Fazenda Plan



4.20: Water Lilies at Vargem Grande Fazenda

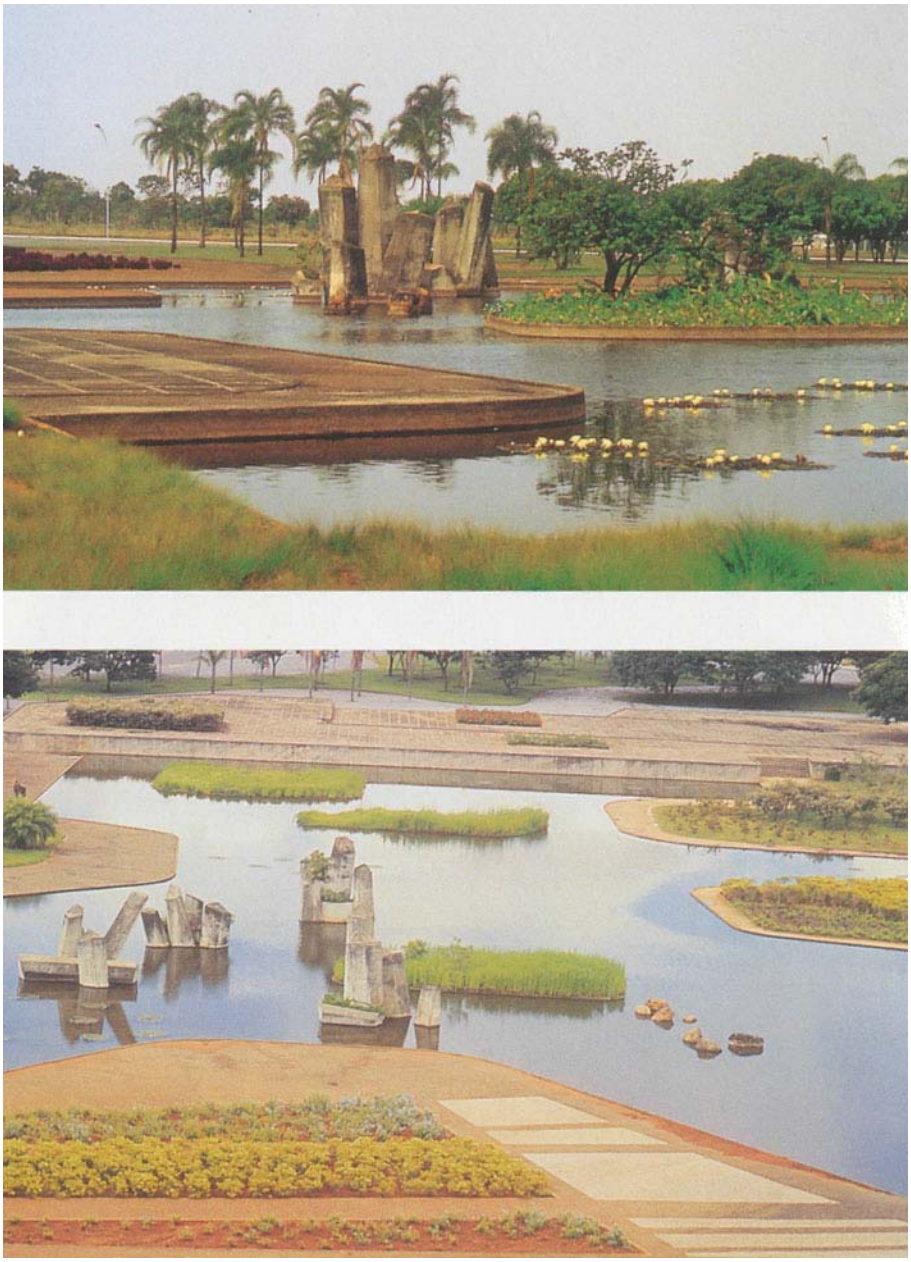
selected color palettes a challenge for Burle Marx, and a technique that he acquired during his career as a landscape architect (Vaccarino 49).

Another example of the use of contrasting colors is seen in the garden at the Ministry of the Army in Brasilia, a ceremonial place for military occasions. This design differs from his typical curvilinear form in that it has a geometrical element where there are strict linear flower beds. In the beds, is brightly colored vegetation with contrasting hues. Portuguese stone and granite slabs are the materials used on the pavement and gigantic crystal shaped concrete sculptures emerge from the lake's surface, symbolizing the vast minerals found in Goias, the state of which Brasilia is a part (Montero 124). *See figures 4.21-4.23*

Not only was Burle Marx successful in composing native vegetation in a colorful manner, but he expressed his boldness in the design of colorful hard scapes as well, as seen in the tile mosaic of the Copacabana Promenade sidewalk paving in Rio. Here, off-white, black, and Venetian red pieces of mosaic stone meander along the beachfront providing an abstract pattern and organic use of color (Vaccarino 17). The design is best seen from above, in the buildings that parallel the beach, to get a sense of the movement and rhythm of the pattern. Stretching nearly two and a half miles is a black and white parabolic wave patterned sidewalk which provides segue from the diagonal parking along to road to the beachfront (Montero 76). *See figures 4.24 & 4.25* Another example of his use of colored pavement is at the Largo da Carioca, an area of Rio where several gardens converge. Again, the pattern is intended to be seen

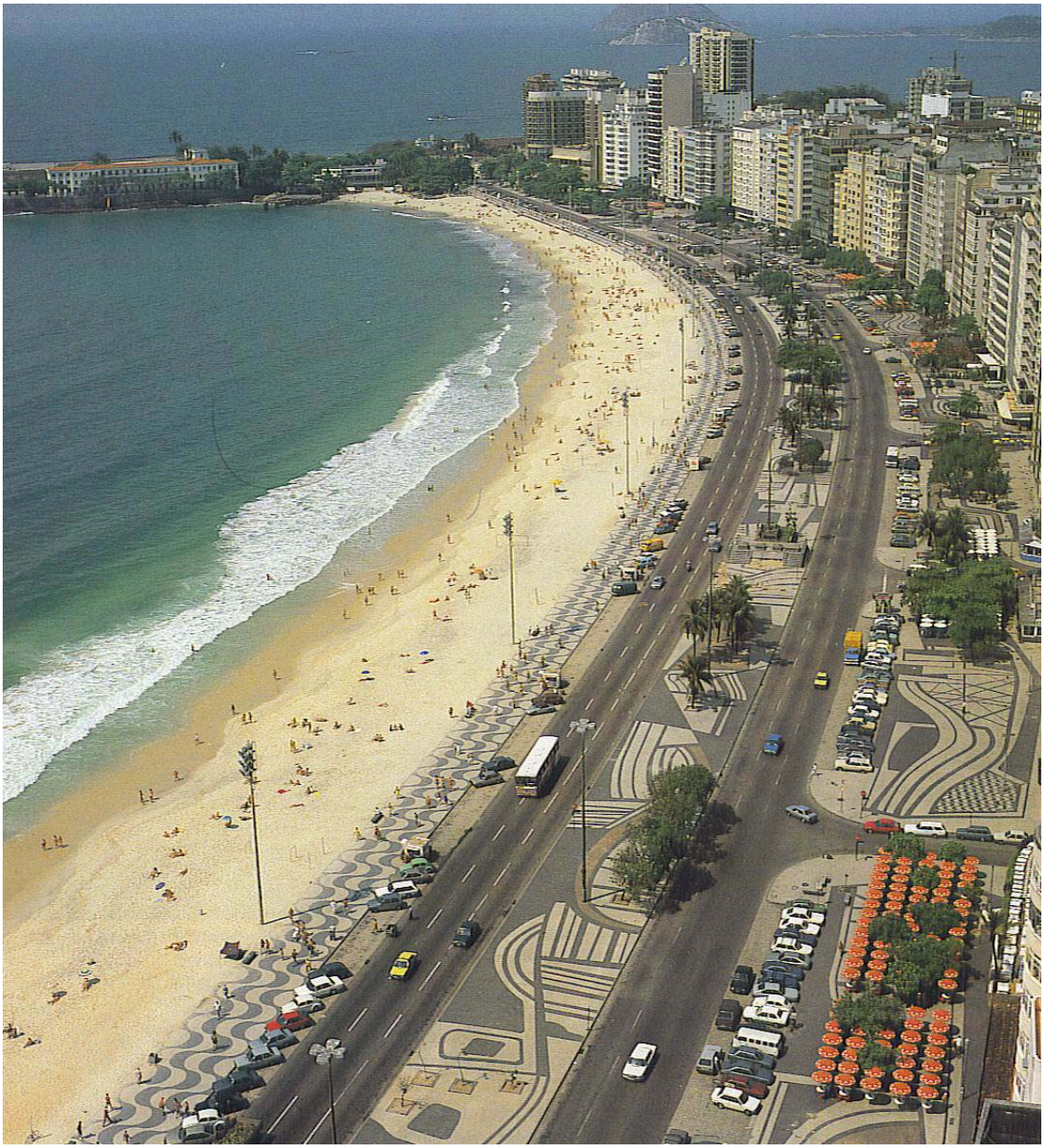
4.21: Ministry of the Army Plan

4.22: Ministry of the Army, Sculptures Emerging from Lake



4.23: Ministry of Education, Contrasting Color Flower Beds

4.24: Cocacabana Promenade

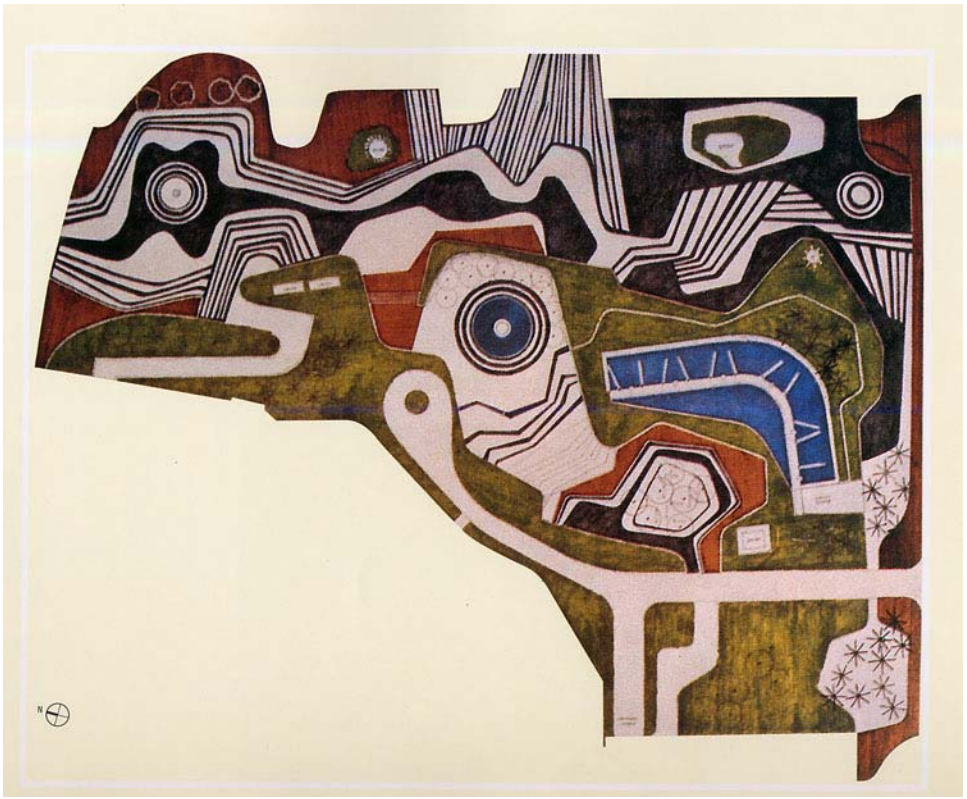


4.25: Cocacabana mosaic tiles

from the buildings above it. It is an enormous abstract picture consisting of red, white, and black Portuguese stone (Montero 94). *See figures 4.26 & 4.27*

It is interesting to study the works of Burle Marx knowing that he was a painter at heart and seeing how that influenced his color palette in the landscape. Hartlage writes, “What becomes immediately apparent is that Burle Marx was a painter working in landscape” (Hartlage 56). He figuratively said it himself, “I paint my gardens” (Eliovson 41). His strength was his presentation of plant texture and color in his gardens which was acquired by his acumen in painting and color theory (Thompson 21). His legacy is profound and left Brazil with a new style of gardening celebrating the use of native flora. One of his apprentices said, “I often thought of him as Brazil’s Olmsted because he was writing the script of what landscape architecture would be about in that country” (Thompson 21). He was a colorful man who has bequeathed much to the field of landscape architecture in the most creative of ways, and can inspirit future generations to the coalescence of art, design, and plant diversity (Hartlage 60).

4.26: Largo da Carioca plan



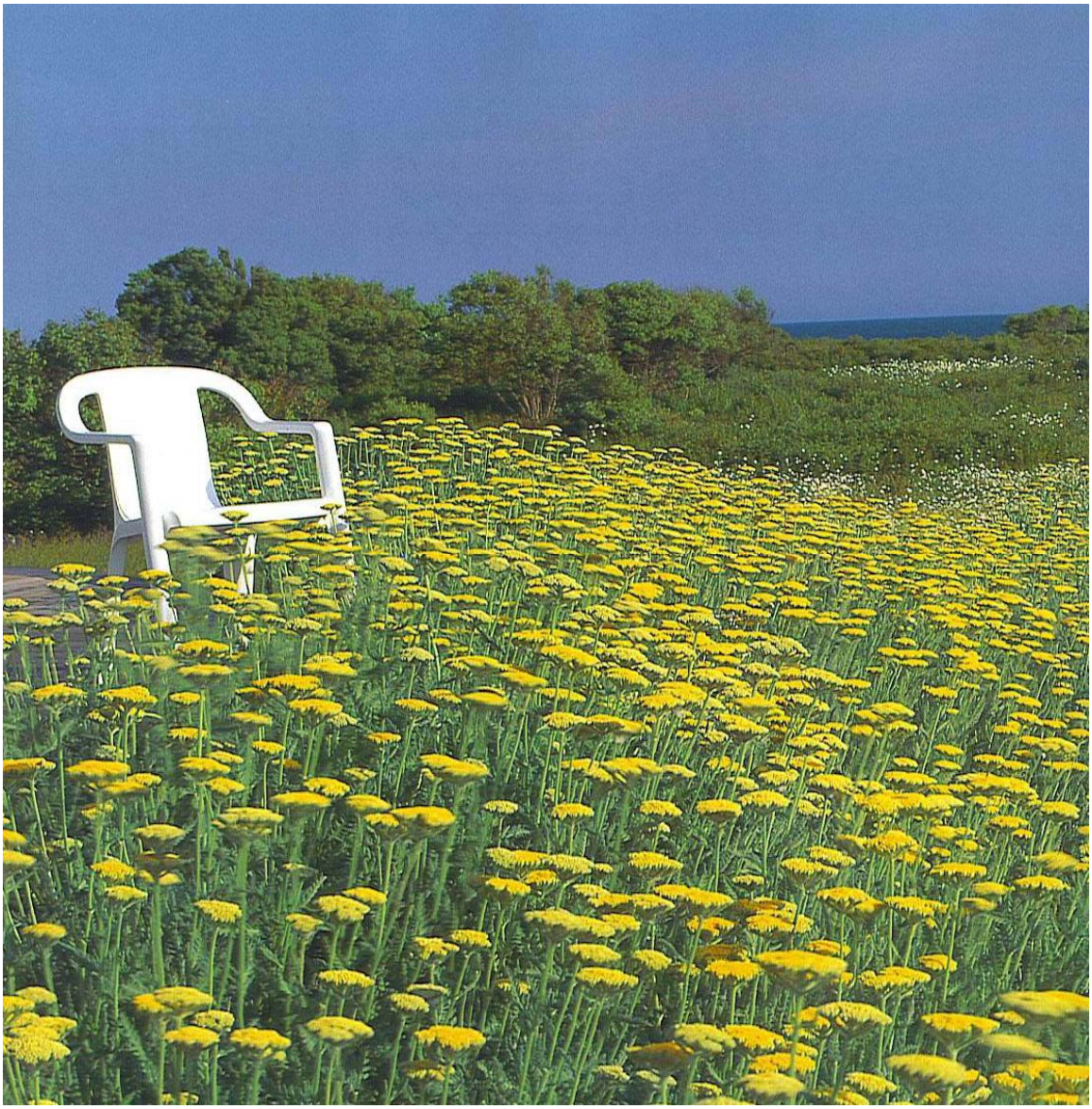
4.27: Largo da Carioca paving patterns

CHAPTER FIVE: WOLFGANG OEHME & JAMES VAN SWEDEN

In America over the last several decades, the style of gardening and the aesthetic of a front yard planted with grass has changed into what is called the "New American Garden", a revolutionary strategy originated by the partnership of Wolfgang Oehme and James Van Sweden of creating gardens filled with masses of wild flowers, perennials, and ornamental grasses, eschewing the traditional lawn (Naito 4). They take advantage of the seasons to design gardens with an explosion of color and texture through their abundant use of masses of a homogenous species, and through this characteristic, Simonds refers to them as "artists" (Oehme, van Sweden 12). Their style is unique in that instead of installing a mere ten to fifty plants of a given species, they prefer to specify more like hundreds or thousands of a plant (van Sweden, "Nature" 17). *See figures 5.1- 5.5.* The duo pair well together to create these memorable gardens because Oehme is a horticultural enthusiast who "paints with plants" (Oehme, van Sweden 20) whereas van Sweden is knowledgeable in architecture and urban design, and with their acumen, they are able to design from the smallest courtyard garden to the largest urban park (Naito 6).

Their partnership began in 1975, and today their practice has grown into one of the most well known landscape architecture and urban planning firms in Washington, D.C. and beyond. *See figure 5.6* Oehme studied at the University of Berlin and earned his landscape architecture degree in 1954. He was born in

5.1: Achillea filipendulina ‘Coronation Gold’



5.2: Rudbeckia fulgida ‘Goldsturm’

5.3: Salvia x superba ‘Mainacht’

5.4: Massed Perennials

5.5: Aster x frikartii ‘Moench’, Sedum x telephium ‘Autumn Joy’

5.6: Wolfgang (left) with van Sweden (right) in 1975

Chemnitz, Germany in 1930 and grew to enjoy learning about plants despite the gloomy landscape of Germany after the war. His style of massing perennials together grows from his influences as a young adult in Germany. Thompson wrote,

> "A turning point" is how Wolfgang Oehme, FASLA, remembers his first glimpse of the meadow-like Planten un Blomen gardens in Hamburg. In drab postwar Germany, it was 'really exciting to see masses of plants right downtown.' More startling for the young Oehme, familiar with the tight exhibitry of botanic gardens, were the flowing drifts of massed perennials- 'like a painting'- by landscape architect Karl Plomin (Thompson 49).

Three years after he graduated, he immigrated to the United States and secured a job apprenticing under a landscape architect from Baltimore, Bruce Baetjer. A few years later, he went to work at the Baltimore County Department of Recreation and Parks to design gardens there as well as for private gardens on his own time.

Like Oehme, van Sweden studied landscape architecture as well. However; he initially acquired a liberal arts background at Wheaton College in Wheaton, Illinois and an architectural background at the University of Michigan (Naito 9). During his time spent at Wheaton College, he took many art classes and enjoyed painting. One class in particular impacted van Sweden heavily, "Art Appreciation". He said, it "brought out the artist in me and showed architecture's relation to all other arts" (Oehme, van Sweden 31). Van Sweden was raised in Grand Rapids, Michigan and while at the University there he found landscape architecture to be fascinating. In 1960, he earned his Bachelor of Architecture

and then began to study landscape architecture there as well as at the University at Delft, the Netherlands. Four years later, he left Amsterdam to be a partner at the urban design and landscape architecture firm, Marcou, O'Leary, and Associates, in Washington, D.C (Naito 9). Oehme and van Sweden became acquainted in 1964 and through an eleven year friendship eventually formed their partnership which has spanned projects in more than twenty states, Germany, and Canada (Naito 10).

The strength of their practice is maintained by Oehme's love and knowledge of plants combined with van Sweden's ability to conceive the bones of the garden or the architectural hardscapes such as the patios, pools, and walkways. *See figures 5.7-5.11* Together they create works of art that they deem "bold" and "romantic". The main component of an Oehme/Van Sweden, OvS, garden is a persistent show of floral color set against various ornamental grasses to provide texture. To achieve this, some of their commonly used sweeps of plants include *Panicum virgatum* (red switch grass) *See figures 5.12-5.14* or *Miscanthus sinensis purpurascens* (purple silver grass). *See figures 5.15-5.16* To provide color, they insert lush swaths of perennial borders with *Rudbeckia fulgida 'Goldsturm'* (black-eyed Susan), *Sedum 'Ruby Glow'* (stonecrop) or *'Autumn Joy'* (live-forever), or *Coreopsis verticillata 'Moonbeam'* (threadleaf coreopsis). *See figure 5.17* Similar to Jekyll, a garden created by OvS strives to provide seasonal interest where the change in color can be appreciated from lush flowers in spring and autumn to bare stalks of grasses and branches of trees

5.7: Draper Garden

5.8: Littlefield Garden, Washington, D.C.

5.9: Littlefield Garden, Washington, D.C.

5.10: Sheffield Garden, Washington, D.C.

5.11: Rosenberg Garden, Long Island, N.Y.

5.12: Panicum virgatum

5.13: Panicum virgatum behind mound of Pennisetum alopecuroides

5.14: Panicum virgatum in back raised planter

5.15: Miscanthus sinensis purpurascens

5.16: Miscanthus sinensis purpurascens with Sedum x telephium ‘Autumn Joy’

5.17: Coreopsis verticillata ‘Moonbeam’

and shrubs in the winter (Naito 10). *See figure 5.18 & 5.19* During the design phase, van Sweden says,

> I like to think of it as a tapestry of plants. What we want to achieve are beautiful built elements overlaid by alluring plants. We hope that during most of the year all of the hard edges are softened and that stone is cooled down by these wonderful, green, soft textures. When we do the design of the planting, we're always thinking in terms of color, of course. Colors, we find, go together quite easily. Almost all of the plants we use are compatible, color-wise. We're interested also in great contrasts and textures. We love big-scale plants, big leaves, in contrast to the softness of the grasses. Then the gardens change dramatically with each season. (Naito 78)

In terms of the plants used by OvS that are harmonious, one look at their plant list in Bold Romantic Gardens, and one can tell that their colors blend well together. One of their signature ornamental grasses is *Pennisetum alopecuroides* (fountain grass). *See figures 5.20 & 5.21* Others such as *Achnatherum brachytricha* (silver spike grass) and *Helictotrichon sempervirens* (blue oat grass) provide great variations in texture. To emphasize color, OvS tend to blend purples and yellows together through the use of several perennials, a tie to the use of a complementary color scheme. Some of these yellow examples are *Achillea filipendulina* (fern-leaf yarrow) *see figure 5.22* and *Hemerocallis liliaceae* (daylily). *See figure 5.23* Purple is accented by plantings of *Salvia x superba* (purple sage) *see figure 5.24* and *Aster x frikartii* "Moench" (Michaelmas daisy) (Oehme, van Sweden 272-287). *See figure 5.25*

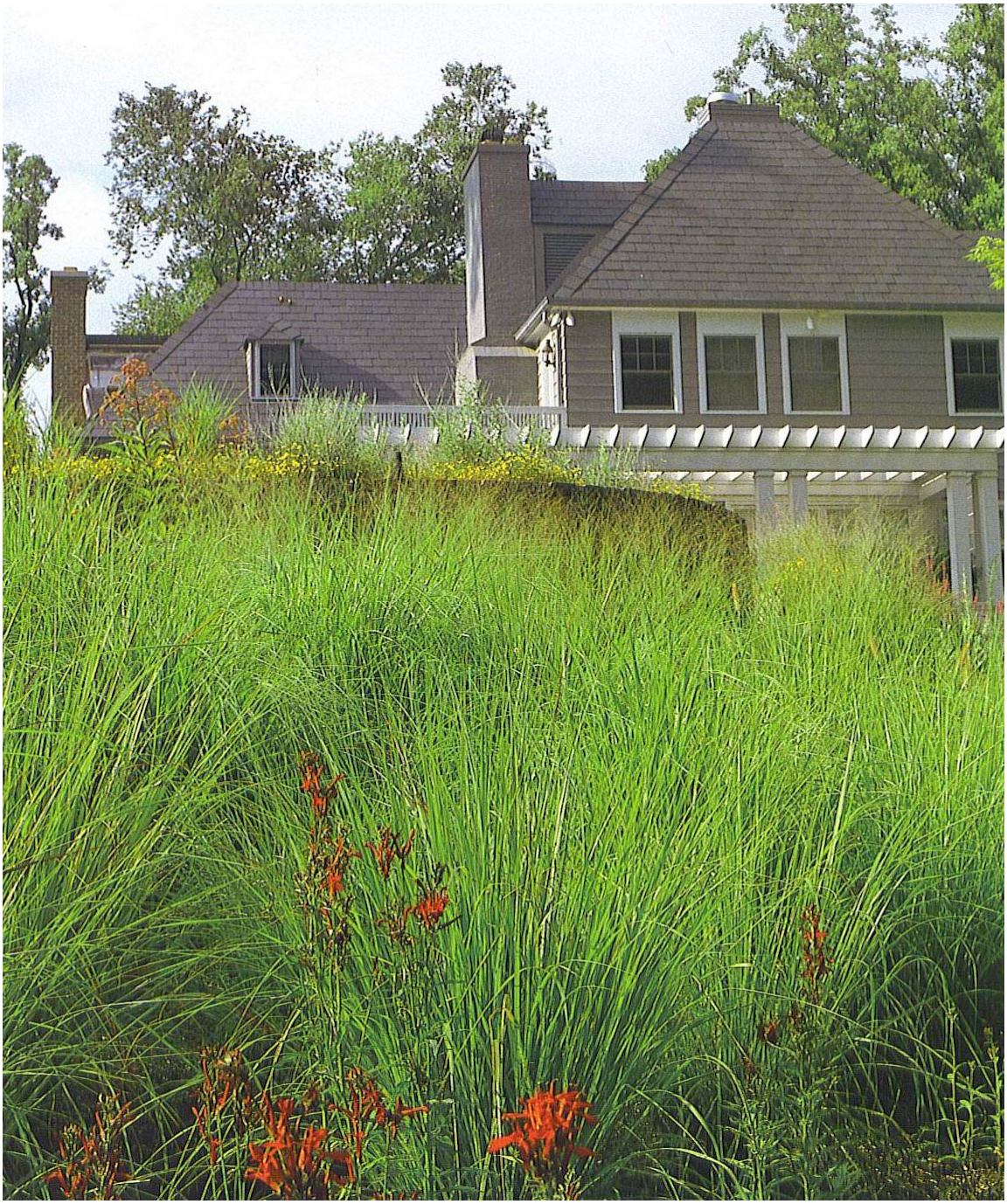
Like Jekyll and Burle Marx, van Sweden pulls his inspiration from art and specifically painting. He looks at Roberto Burle Marx as a "real renaissance

5.18: Mid-winter Image

5.19: Mid-winter Image

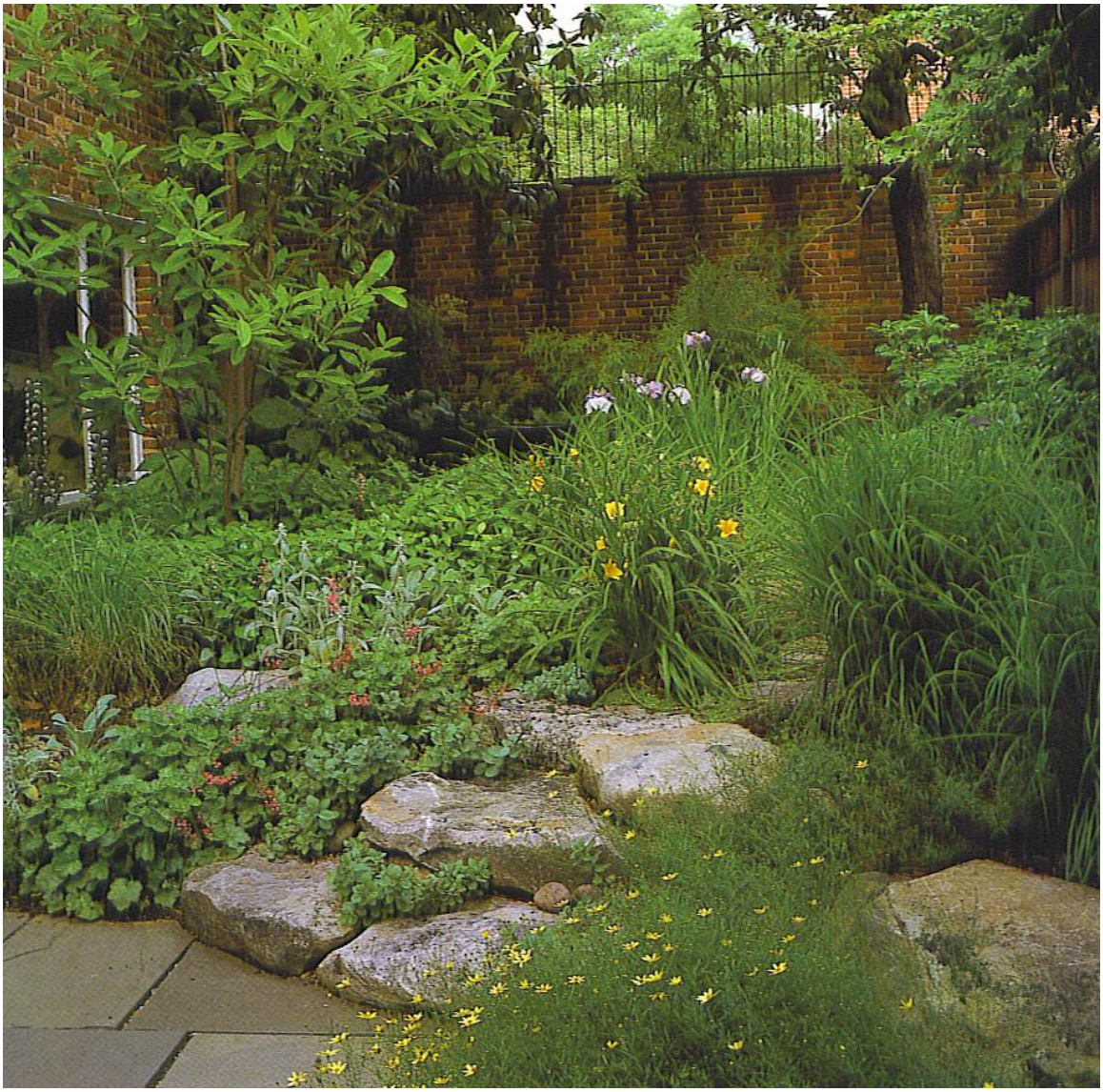
5.20: Pennisetum alopecuroides

5.21: Pennisetum alopecuroides



5.22: Achillea filipendulina

5.23: Hemerocallis liliaceae ‘Stella d’Oro’



5.24: Salvia x superba ‘Mainacht’

5.25: Aster x frikartii ‘Moench’

man" and believes he possessed what a good landscape architect should encompass. Van Sweden said they "must have an interest in the arts as the profession is fed by arts, not lead by it" (Young 16). While a painter himself during his youth, he still believes in the importance of learning color theory through art. Hobhouse says of him,

> Although van Sweden is primarily a landscape architect who works with nature, massing plants in great scrolls to create abstract paintings, his art disguises the basic disciplines and careful manipulation that go into providing the essential framework that forms the bones on which he imposes his pictures (van Sweden, "Architecture" ix).

During college, he learned from the paintings of Jan Vermeer *see figure 5.26* and Willem de Kooning *see figure 5.27* and used them as examples to replicate his own canvases (van Sweden, "Architecture" xix). Van Sweden says,

> I think it's very important to look at art…I'm constantly looking at art, especially Dutch paintings of gardens. I think Dutch paintings of the seventeenth and eighteenth centuries are indispensable to my understanding of the hardscape, the architecture, of the garden. Their beautiful use of paving and the wonderful feeling of courtyards in Delft painted by Pieter deHooch, for instance, provide great inspiration. Just look at that beautiful mixing of materials—marble, granite, and brick. You can find these lessons in the paintings of Holland. Of course, that's my ancestry! (Naito 80) *see figures 5.28 & 5.29*

While the Baroque Dutch masters inspired him on how to manipulate light, color, and texture in hardscapes from their canvases of courtyards and terraces, abstract art taught him how to mass color together (van Sweden, "Architecture" 14). He finds the paintings of these Dutch artists to be of equal appeal, Jan Schoonhoven, Karel Appel, *see figure 5.30* and Anton Heyboer through their

5.26: “A Lady at Virginals with a Gentleman” by Johannes Vermeer

5.27: “Door to the River” by Willem de Kooning

5.28: “A Woman Preparing Bread and Butter for a Boy” by Pieter de Hooch

5.29: “A Dutch Courtyard” by Pieter de Hooch

5.30: “From the Beginning” by Karel Appel

deliverance of excitement or stillness (van Sweden, “Architecture” 15). He is drawn towards the paintings of Helen Frankenthaler, Hans Hoffman, and Frank Stella all of whom use large patches of color that merge into one another Frankenthaler and Stella are American artists of the Abstract Expressionist movement who blur colors together (Naito 80). *See figure 5.31* Oehme and Van Sweden correlate this to the garden by allowing their planting designs to blend from color to color in huge proportions of massed plantings.

While painting inspires the work of OvS, a working knowledge of color theory is essential to their designs as well. As stated in chapter two, Chevreul expressed how simultaneous contrast of colors worked to better the knowledge of color theory. This idea is one of the elements of OvS’s planting design. They write, “Simultaneous effects are a contrasting mix of color, form and texture among plants that share the same time and space” (Oehme, vanSweden 262). An example of this is seen in the Rosenberg Garden where the pointed, coarse *Yucca filamentosa* is planted in the middle of a swath of chunky, ball-shaped perennial *Sedum x telephium* ‘Autumn Joy’ (Oehme, vanSweden 263). *See figure 5.32* The contrast of the red against the green is a pleasing combination and one that blends texture and color together harmoniously in the garden. The Rosenbergs insisted that their garden be a “work of art”, and OvS successfully achieved this goal by the color palettes and varying textures they included in their planting design. *See figures 5.33-36*

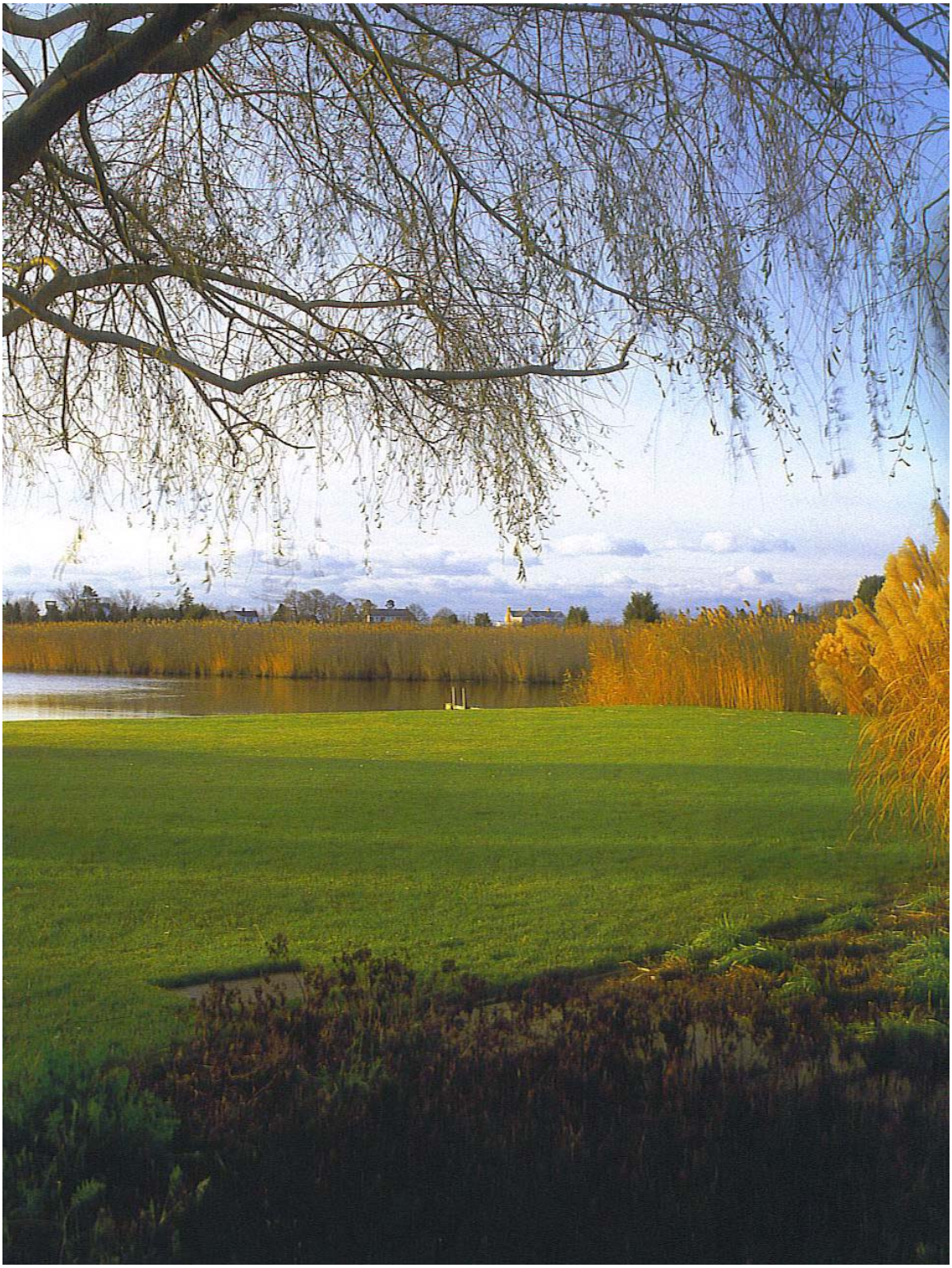
The Rosenberg Garden became one of the impetuses for the design of the Nelson A. Rockefeller Park. Since the site lies along the banks of the

5.31: “Nature Abhors a Vacuum” by Helen Frankenthaler

5.32: Rosenberg Garden, Long Island, N.Y.

5.33: Rosenberg Garden, Long Island, N.Y.

5.34: Rosenberg Garden, Long Island, N.Y.



5.35: Rosenberg Garden, Long Island, N.Y.

5.36: Rosenberg Garden, Long Island, N.Y.

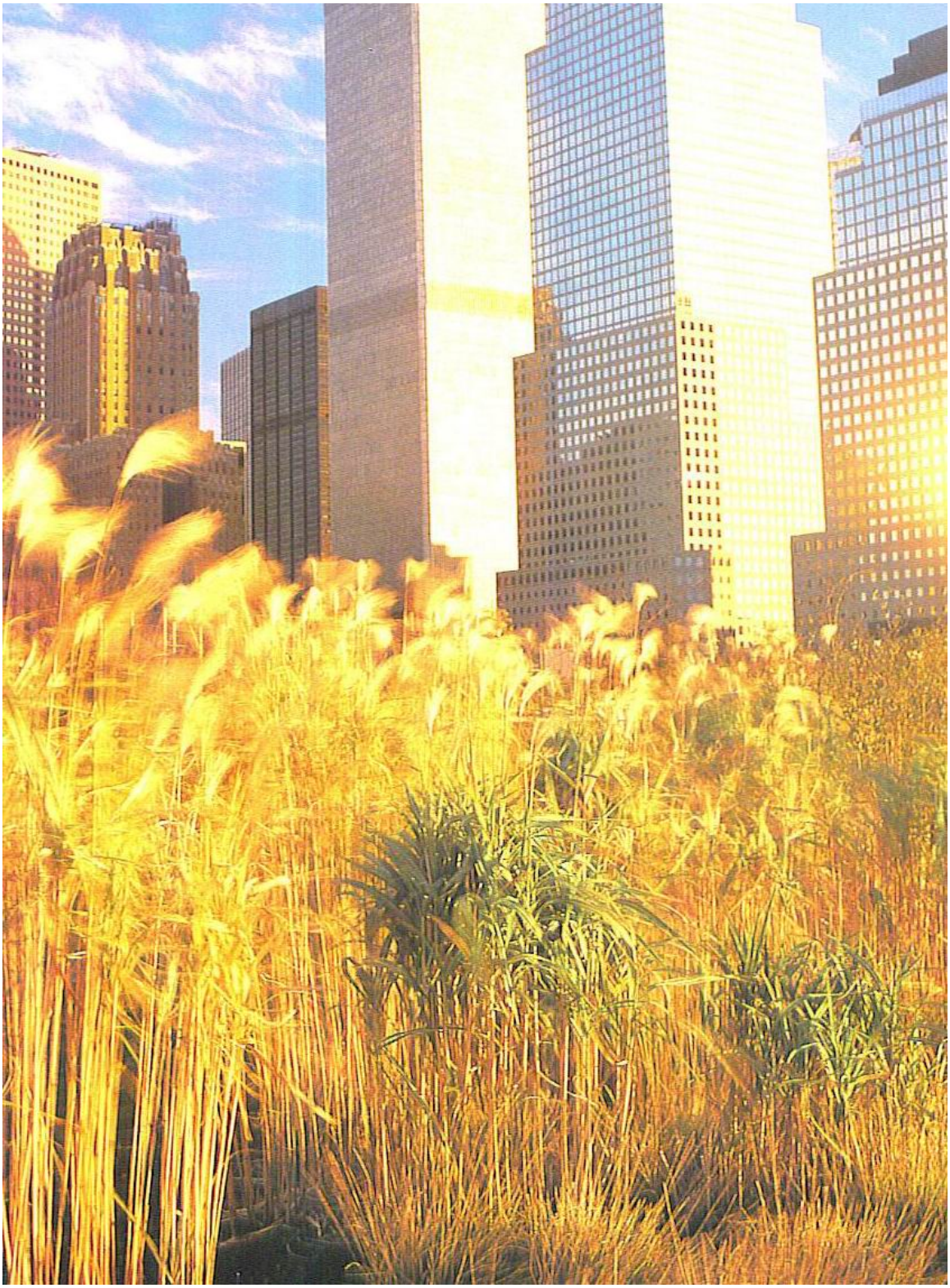
Hudson River, the clients wanted to emulate the beach-like feel that the Rosenberg Garden had actualized along Long Island's Mecox Bay (Van Sweden, "Nature" 123). While the plants used in both projects stimulated a waterfront feel, the inspiration for the planting design stemmed from a painting by Frank Stella called *Riallaro* (Van Sweden, "Nature" 124). *See figures 5.37-39* Amanda Burton, the client, encouraged OvS "to create a planting design with painterly qualities" (Van Sweden, "Nature" 124). Like the painting, the ornamental grasses provide movement and remind the viewer of the constant rhythm of the ocean. Once again, art provided the groundwork to successfully implement color and texture into the garden.

While Stella enlivened the planting design in the Nelson A. Rockefeller Park, Impressionist master Claude Monet's artwork inspired OvS to utilize water in the park (Van Sweden, "Water" 19). Similarities between Monet's, *The Japanese Footbridge*, and the great, elaborate lily pool at the park can be seen. *See figure 5.40-42* Large groups of lilies are the composition of both the painted and living artworks. The water possesses a reflective quality in both, creating a serene environment for the viewer to pause and contemplate.

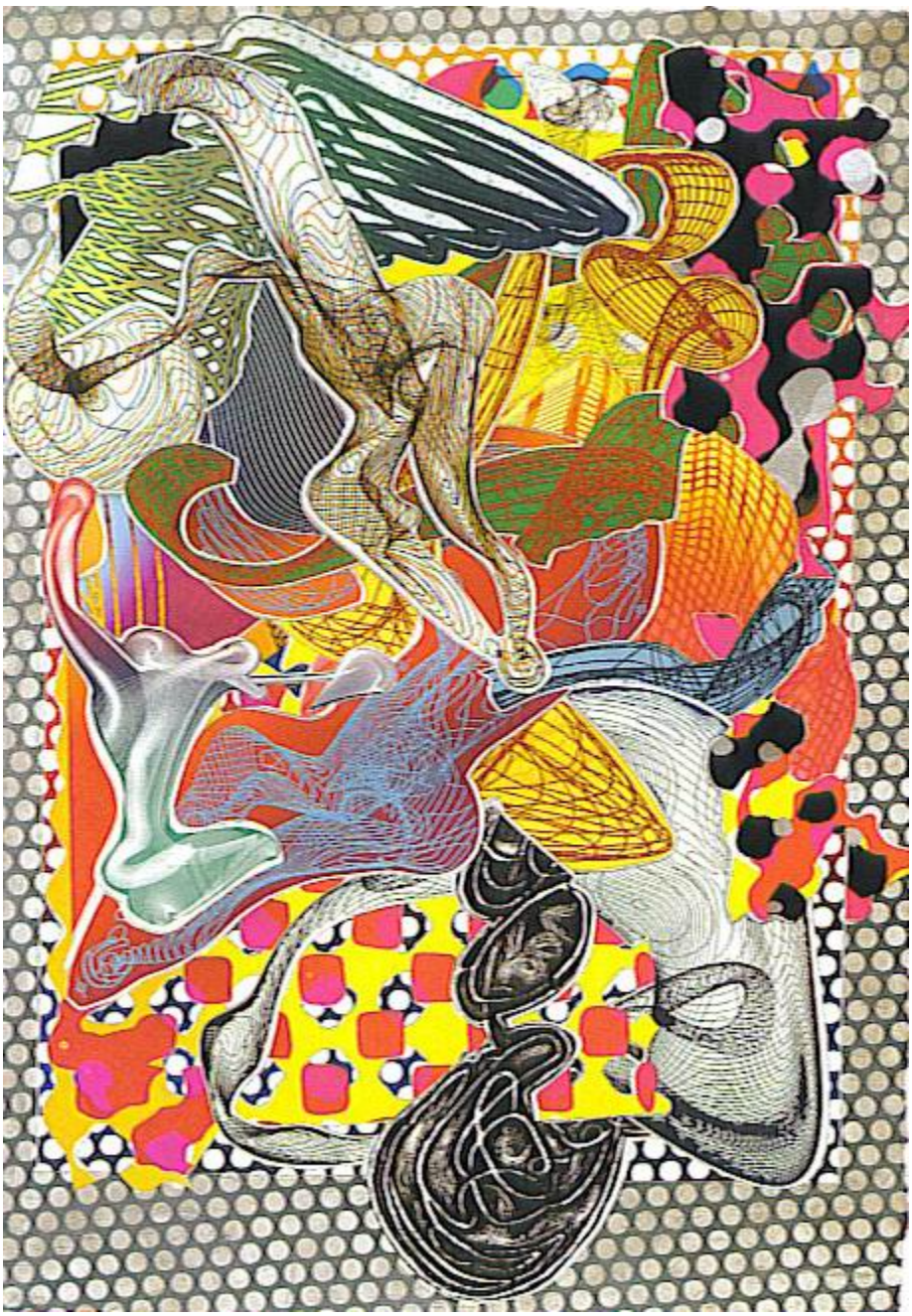
Another example of a painting inspiring a garden for the OvS team can be scrutinized in the Jerald J. Littlefield garden in Washington, D.C. In this garden, the typical suburban lawn was supplanted by tulips, sedums, daffodils, and other flowering perennials. *See figure 5.43* The same concept can be seen in Georges Braque's *The House Behind the Trees* in that the Parisian suburban house has no grass planted in the front yard (Van Sweden, "Nature" 89). *See figure 5.44*

5.37: Seaside Plantings at Nelson A. Rockefeller Park, New York, N.Y.

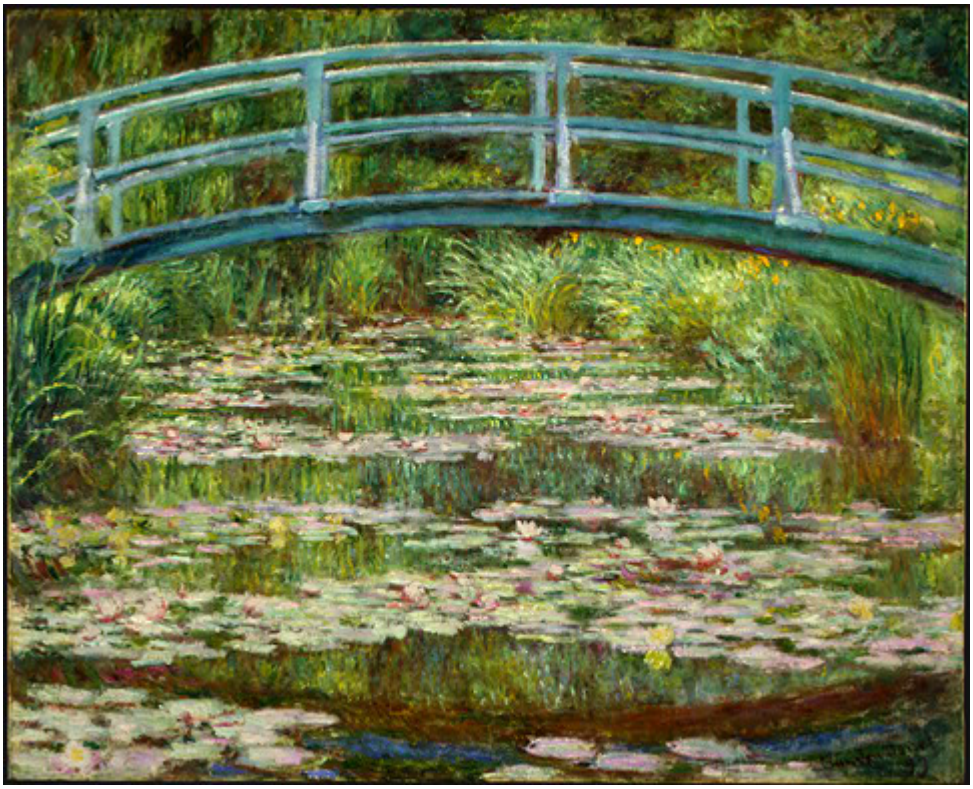
5.38: Nelson A. Rockefeller Park, New York, N.Y.



5.39: “Riallaro” by Frank Stella



5.40: “The Japanese Footbridge” by Claude Monet



5.41: Lily Pond at Nelson A. Rockefeller Park, New York, N.Y.

5.42: Lily Pond at Nelson A. Rockefeller Park, New York, N.Y.

5.43: Littlefield Garden, Washington, D.C.

5.44: “The House Behind the Trees” by Georges Braque

Both the painting and the Littlefield's front yard have sweeps of color that move the eye across to achieve a harmonious combination.

Not all of the OvS gardens are inspired by paintings, but certainly many look as if they were, which can be seen in the Sorg garden they designed, a property situated along Maryland's Chesapeake Bay. Here the outcome was a meadow which separated the tame from the wild. Characteristic to their work, seasonal interest was planted to showcase color transferring throughout the year. The summer season brings color from native choices such as goldenrods and asters. Then, the fall creates a scene of yellow and gold vegetation, and finally, the winter leaves its trace of white. The spring is once again repeated after all of it is mowed and the growth regenerates. Kessler believes it to be a work of art as defended by his statement,

> Behind a house along Maryland's Eastern Shore, a man-made meadow planted with native grasses and trees blend in completely with its surroundings. A carpet of blooming mountain mint, like a color swatch, creates a transition between the cultivated meadow and the natural vegetation beyond. Think of it as painting-with plants (Kessler 191).

In conclusion, the partnership of Oehme and van Sweden has enhanced the style of the American garden by bringing color in massing of a handful of plantings rather than various species. Inspirations stemmed from many artistic movements from the Baroque, Impressionist, and Abstract. OvS applied the lessons of light, color, and texture found in their painting studies to their garden designs and hence, have provided enthusiasts with a trend to emulate in the "New American Garden". The elements inherent to painting correlate well into

the design strategies of gardens, providing a better knowledge of how color works in both (Van Sweden, “Architecture” 15).

CHAPTER SIX: CONCLUSION

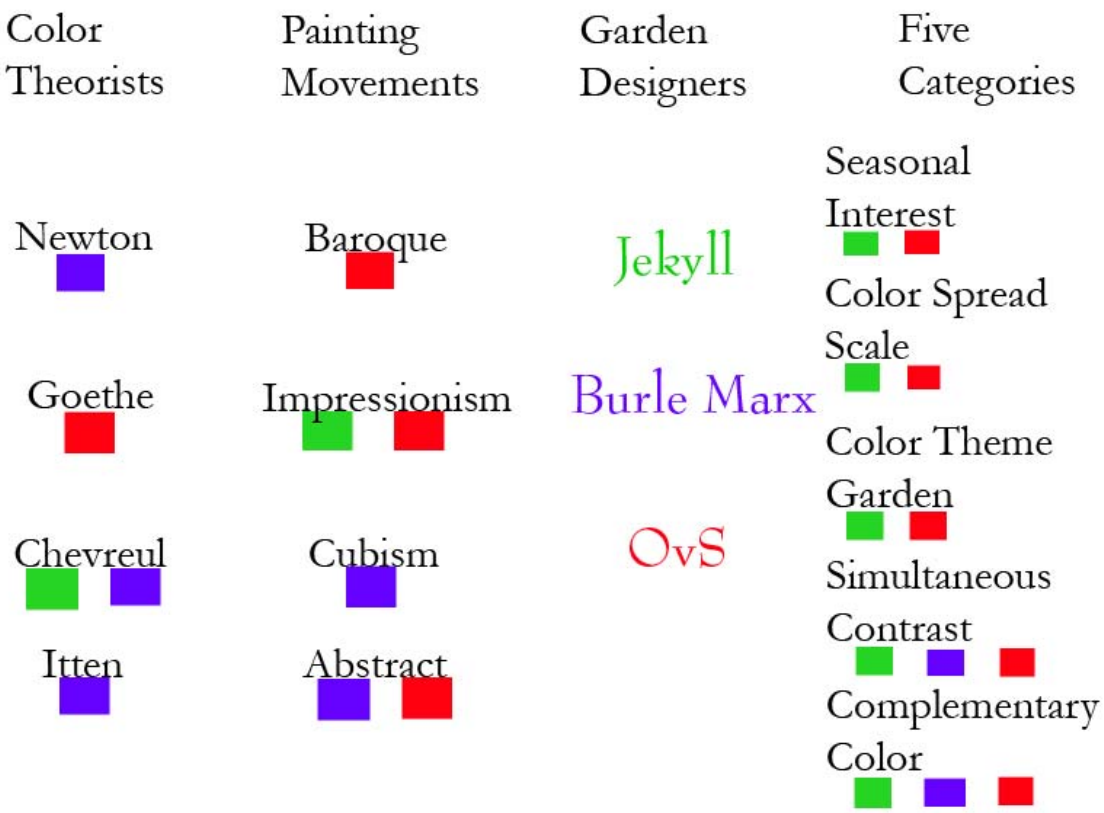
Any masterpiece is best comprehended when the basis of its creation is realized, thus the reason for studying color theory through painting as a means to enjoy color in the garden. An understanding of the 'parts' makes for a better understanding of the 'whole'. For example, a poem, sculpture, architectural construction, work of music or literature, fine cuisine and bottle of wine, or even a piece of furniture is most appreciated when the body of knowledge which formed the given sample is comprehended by the one experiencing it. Therefore; the foundation of the accomplishment is paramount in heightening the audience's interest and aesthetic sense or admiration (van Sweden, "Architecture" 15). Hence, the reason for beginning this thesis with the groundwork of color theory to explain the various art movements which then better explain the landscape architect's style as influenced by painting. Both gardens and painting contend with light, color, and texture and have apparent parallels when addressing these elements (van Sweden, "Architecture" 14). The case studies described in this thesis all utilize the features of light, color, and texture in some similar and disparate ways, and this chapter will address five categories which compare and contrast the use of color by the landscape architects. However; first, it is important to reiterate how the color theorists played a role in the painting movements because their discoveries aided painters in their acumen of how colors relate to each other.

Each of the landscape designers addressed in this thesis possesses a working knowledge of color theory, and some of the theorists made more of an impact than others. While Newton discovered the scientific aspects of color through refracting white light into a spectrum of colors, Goethe wrote about the perceptions of color and the human reaction to it. Of the four landscape designers mentioned, Burle Marx ties with Newton in that they both adhered to the notion of music and color being related because of the number seven. Within the seven notes of the musical chord and the seven colors of Newton's wheel, any combination of these can create a profound work (Vaccarino 27). During the research conducted for this thesis, it was discovered that Goethe impacted Oehme through his literature and poetry but not necessarily his writings on color. It was Chevreul and Itten who made lasting impressions on the various painting movements from Impressionism to Cubism. Chevreul introduced the notion of simultaneous contrast and Itten discussed color harmony. Jekyll read the writings of Chevreul during the early 1860s which impacted her color style, and evidence of simultaneous contrast can be seen in the gardens of Burle Marx and OvS. While Burle Marx is the concrete example of having knowledge of Itten, for he had a copy of Itten's The Art of Color in his library, Jekyll and the Oehme van Sweden partnership must know of Itten's ideas on harmonious color combinations. Of all of the color theorists addressed, Chevreul and Itten appear to have added more to the body of knowledge of color as it relates to garden design than their predecessors because of their contributions of simultaneous contrast and color harmony.

Chronologically, color theory influenced the painting movements, and then certain works of art inspired the garden designers to express color as a medium by which to “paint with plants”. Impressionism led the choices in Jekyll’s garden themes. Characteristic of the style is a blurred appearance where precise detail work is avoided. In Jekyll’s gardens, sweeps of color are seen where colors blend together, creating an Impressionist-like scene. Burle Marx was attracted to the Cubist and Abstract movements which used combinations of pure primary colors. Brazilian flora consists of many bold primary colors, and is possibly why Burle Marx wanted to recreate cubist and abstract characteristics within his garden designs because of the availability of the vibrant local plants. The Oehme van Sweden partnership is influenced by several painting movements. Similar to Jekyll, Impressionist characteristics can be seen in their gardens by the sweeps of color. Like Burle Marx, many of the colors in an OvS design are bold and massive as seen in the Abstract movement. They also studied the Baroque art which possessed the details of hardscapes, showing them how to manipulate the textures with the garden design of terraces and courtyards.

From this research, the finding that was discovered is a way in which to compare and contrast the case studies. The ‘movement’ from color theorists to painting eras to landscape designers to the analysis is seen through the visual aid in Table 6.1 on the next page. *See Table 6.1* The following five categories provide the theme throughout the designers’ usage of color: seasonal interest, color spread scale, color theme garden, simultaneous contrast, and complementary color. The first one is seasonal interest which is a goal of many

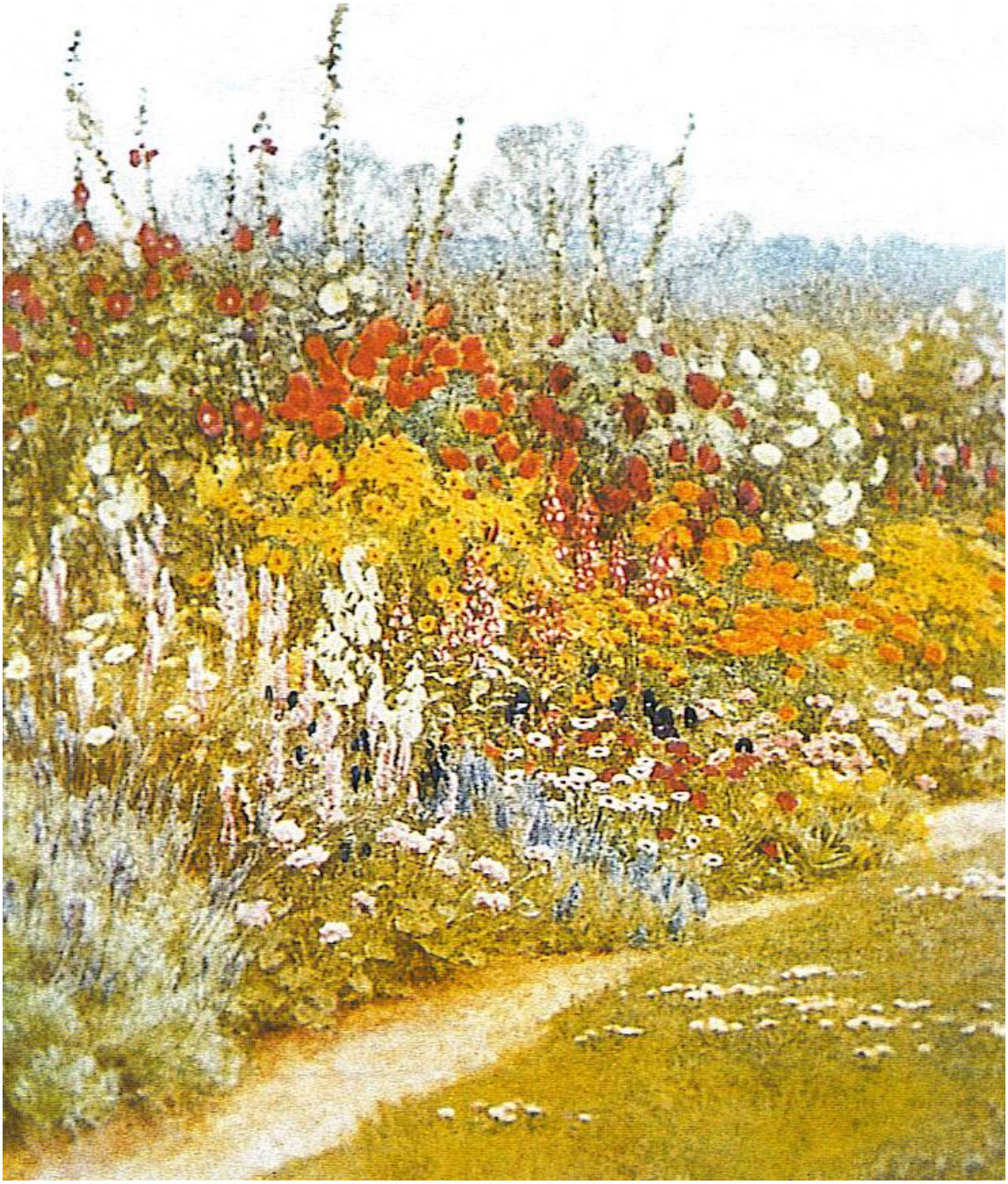
Table 6.1


Color Theorists
Painting Movements
Garden Designers
Five Categories
Newton
Baroque
Jekyll
Seasonal Interest
Color Spread
Scale
Goethe
Impressionism
Burle Marx
Color Theme
Garden
Chevreul
Cubism
OvS
Simultaneous Contrast
Itten
Abstract
Complementary Color

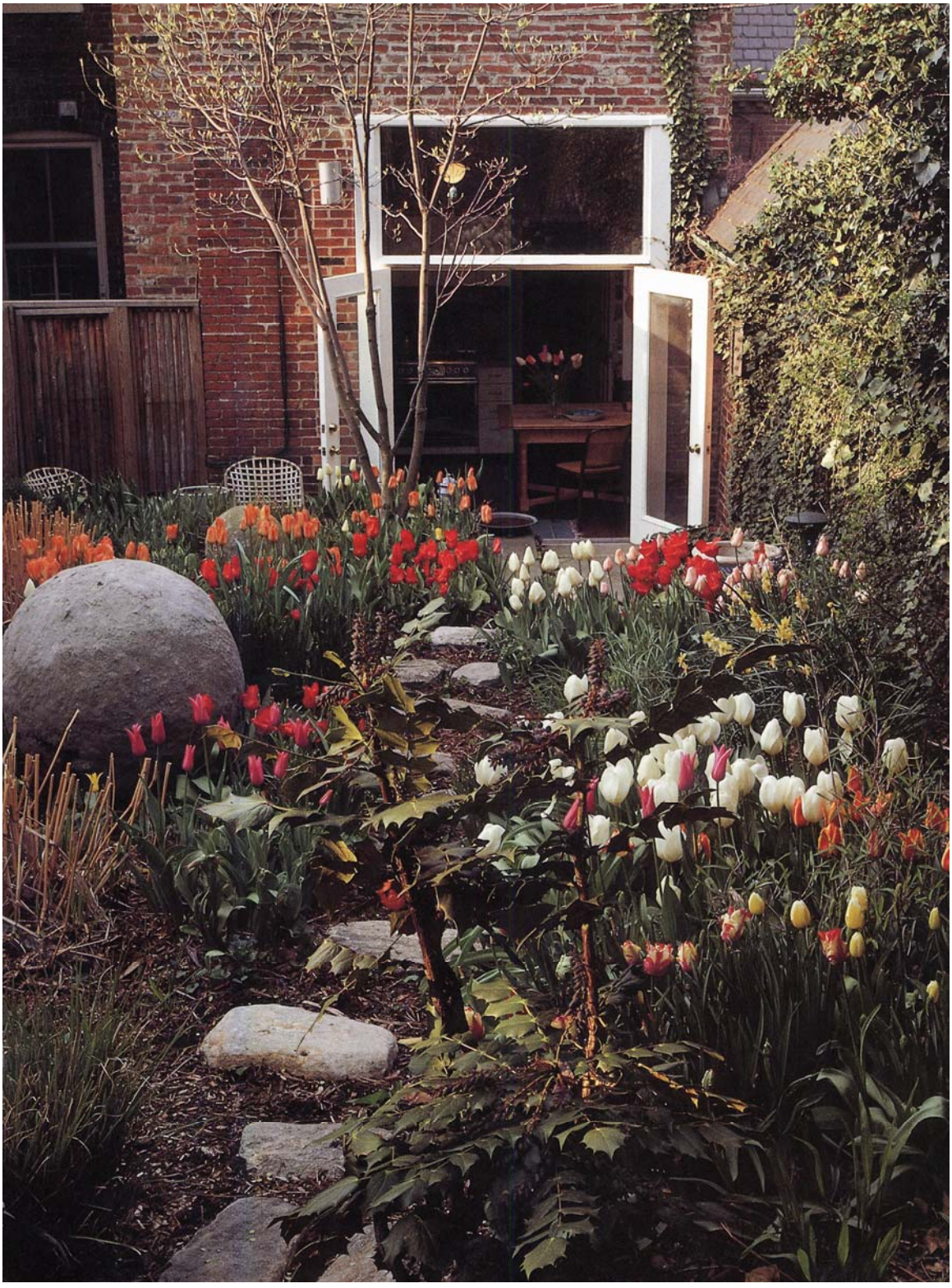
of the Jekyll and OvS gardens. Both design teams desire the constant vegetal color throughout the year to provide interest at any given time. OvS also seeks to create winter attraction by planting grasses which leave interesting skeletons for the colder months of the year. Van Sweden writes, “We choose plants that change dramatically in color and form with each season” (van Sweden, “Nature” 27). However; Burle Marx’s gardens are different in that through the climate, seasonal interest is eschewed based on the fact that the plants don’t go through the changes that an area with a strong seasonal swing. Therefore, seasonal interest isn’t applicable when analyzing a Burle Marx design, whereas Jekyll and OvS gladly seek to bring color changes throughout the year into their plans. *See figures 6.1-6.4.*

The second way to evaluate the case study’s gardens is through the color spread scale. This category is defined as the amount of color within a specific area to create the ‘bursts’ of color. Jekyll and OvS differ tremendously in that Jekyll was concerned with specifying small amounts of varying plants to distribute color throughout the garden. In other words, Jekyll’s approach was to segregate the color spread whereas an OvS design integrates the color within huge sweeps of plants. This point is illustrated in figures 6.5 and 6.6. In Jekyll’s design, it is evident that she uses different plant materials, creating a large or diverse color spread. *See figure 6.5* Figure 6.6 shows how OvS massed color together by designing with large quantities of a homogenous species, sometimes designating thousands of the same plant in a given area to provide a huge punch

6.1:Jekyll’s Seasonal Interest

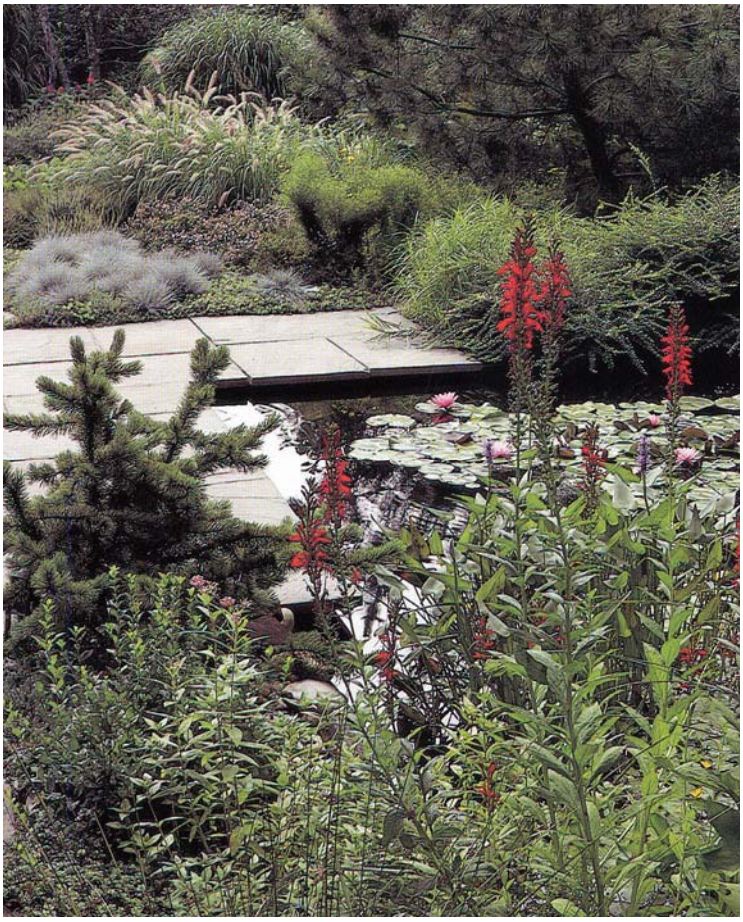


6.2: OvS' Seasonal Interest



6.3: OvS' Seasonal Interest

6.4: OvS' Seasonal Interest



6.5: Jekyll's Large Color Spread Scale

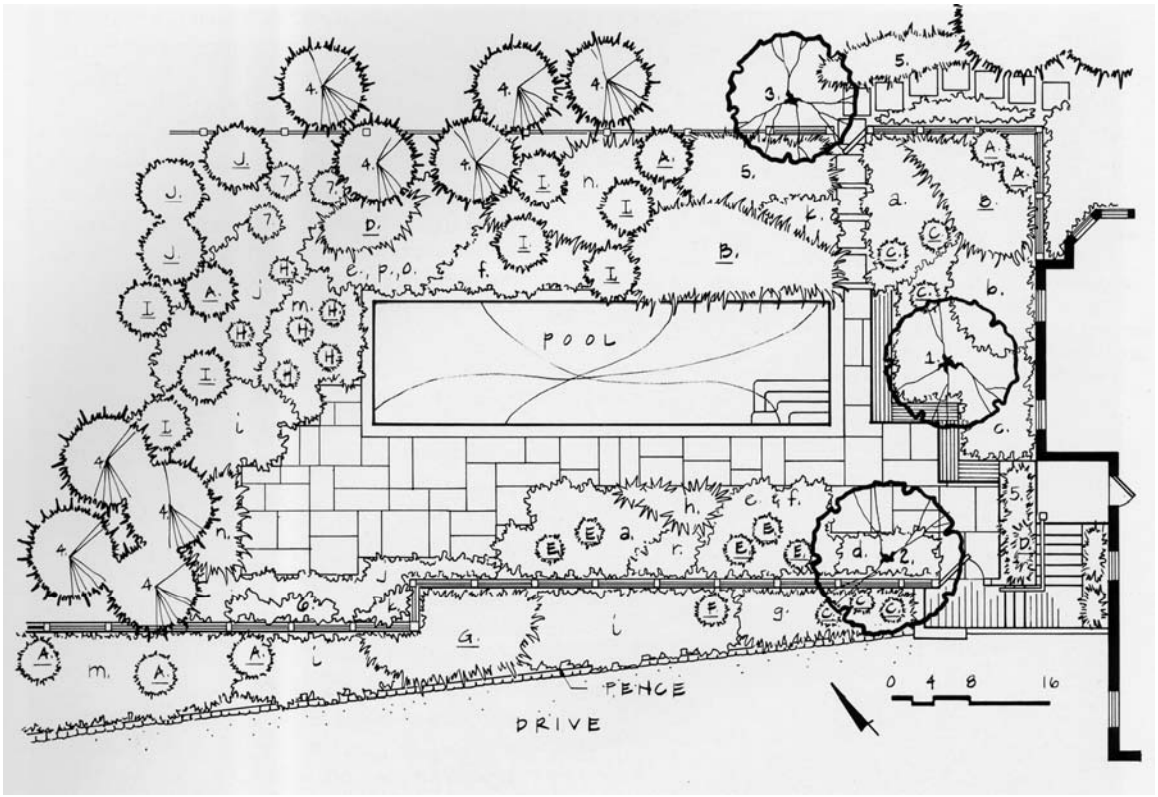
of color. *See figure 6.6* To reiterate this point, Griswold describes OvS's mass plantings in the following words:

> Threes and fives, fives and sevens- the old plant-by-numbers formulas just don't look, well, plentiful enough anymore…Suddenly, I want huge groupings, vast sweeps to lead and calm my eye. Perhaps my current taste for the clean simplicity of modernism and minimalism is moving outdoors. Or maybe I'm just getting lazy: Less variety means less work. Either way, this shift seems to mark my final release from the spell of the Gertrude Jekyll embroidery so popular in the 80's (Griswold 74).

Van Sweden says, "Use restraint in your choices! This is the hardest thing!" (Griswold 77). He also explains, "We use the same kind of plants but on a much bigger scale than they would ever use in any garden in Europe…That's what makes it American: the scale. Also that it's very mysterious, romantic, natural, and bold…You have to be daring" (Oppenheimer Dean 74). Therefore, it is large quantities to produce large amounts of color in an OvS garden. Burle Marx apportioned color in more of an OvS manner than a Jekyll design. While he may not have specified close to a thousand of the same plant, he certainly didn't disperse varying plants like Jekyll. To defend this point, Rogers says, "There were spiky bird-of-paradise plants and other plants- agaves, dracaenas, and palms- laid out as sculptural accents or single masses of color" (Rogers 445). *See figure 6.7*

Assessing the color themes of the given case studies is a third way by which to categorize their work. During Jekyll's era, gardens with a prevalent color were popular; therefore she designed plenty of "Blue Gardens" or "Grey Gardens" or "Gold Gardens". *See figure 6.8* However; this style was not

6.6: OvS' Small Color Spread Scale



6.7: Burle Marx's Single Mass of Color

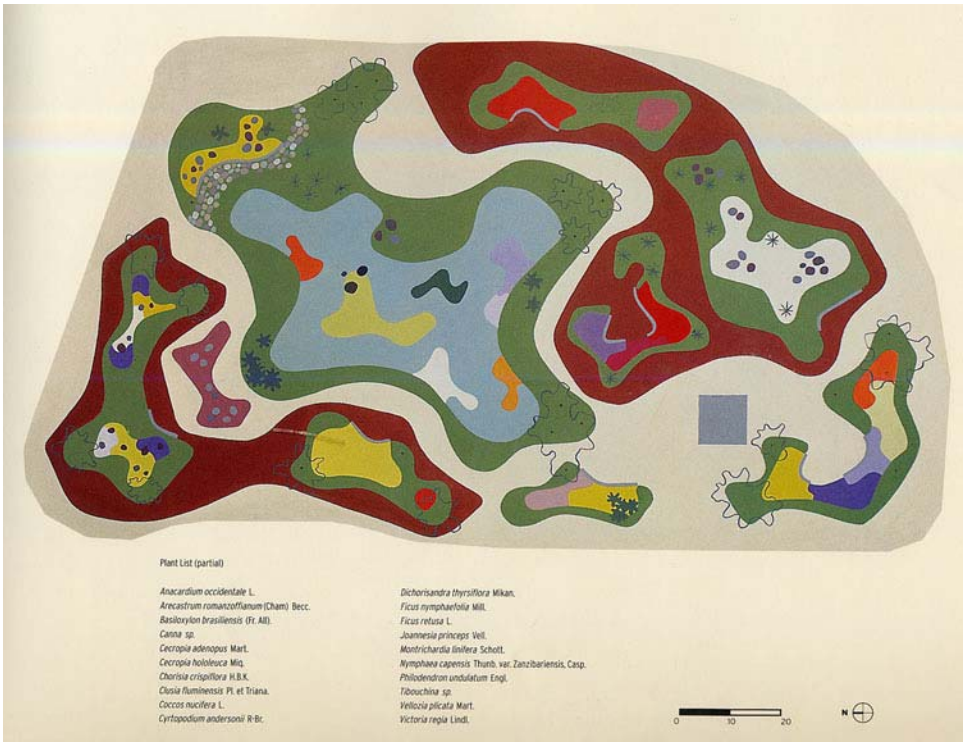
6.8: Jekyll's Blue Garden

predominate during Burle Marx's lifetime. Contrarily, he designed with many primary colors, reflecting his interest in Abstract art. *See figure 6.9* Rogers writes of his style, "he confidently deployed luxuriant, vividly colored tropical plants"…where "texture and color played important roles" (Rogers 444-5). OvS's work has combinations of color choices that appear with purples and yellows emerging most. *See figure 6.10*

Simultaneous contrast is a characteristic of all of the case study's gardens. As defined by Chevreul and previously stated, this is the interaction of two colors whereby the viewer's perception of the given color is changed when they are placed next to each other. When complementary colors are blended, simultaneous contrast becomes more forceful, and therefore, became a practice of painters from the aforementioned various art movements. From the painting influence, simultaneous contrast with an emphasis on complementary colors became an important element in the gardens of Jekyll, Burle Marx, and Oehme van Sweden and therefore, combinations of red with green, orange with blue, and yellow with purple are prevalent.

In conclusion, Gertrude Jekyll, Roberto Burle Marx, and the Wolfgang Oehme and James van Sweden partnership all possessed unique approaches to applying color in the garden, and the common thread that links them all together is they each appreciated painting and therefore correlated what they learned into the garden to maximize the appeal of color as a unifying element within the designs. Much can be learned and assimilated from their gardens both in America and abroad, and hence the reason for this study in color. The intention

6.9: Burle Marx's Use of Primary Colors



6.10: OvS' Color Theme Garden

of the five criteria was a tool by which to analyze the designer's garden rather than an evaluation benchmark. Therefore; being a part of just two of the criteria can be just as successful as having all five, as seen in the Burle Marx case study.

Future research directions can utilize the model of looking at other painting movements or even other media such as sculpture or music to then analyze usage of color through the five categories which were discovered as a common theme amongst the case studies' gardens. Another avenue to explore in color as it relates to the garden is the psychological reaction to color in the outdoors. Much has been written in color psychology in regard to interior space but hardly any has been studied for the exterior places. Now that this thesis has addressed the 'art part' of color in the garden, there is plenty more to discover other facets of color within Mother Nature!

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APPENDIX A
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2.5 Theory and Use of Color p. 28
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