

Healing Gardens: Creating Places for Restoration, Meditation, and Sanctuary

What are the defining characteristics that make a healing garden?

Keywords: healing gardens, restoration gardens, sanctuary gardens

A thesis
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Abstract

The “healing garden” is an evolving concept that is gaining popularity today. What is a healing garden? Why is one garden called a healing garden and not another? How is a healing garden defined? In what way are gardens healing? This thesis describes the ways in which healing gardens are beneficial in healthcare and residential settings. A set of guidelines for the design of healing gardens is created as a result of research findings as well as three design projects that are illustrated in the document.

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Chapter 1
Introduction

Healing Gardens: Creating Places for Restoration, Meditation, and Sanctuary
What are the defining characteristics that make a healing garden?



“I go to nature to be soothed and healed, and to have my senses put in tune once more”

John Burroughs

(1837-1921)

American naturalist and writer

Introduction

Why Study Healing Gardens?

What determines whether or not a garden is a ‘healing garden?’ The idea that particular gardens are beneficial to human health was the spark that began this investigation to find if there were certain qualities that distinguish a ‘healing garden’ from any other garden type. If there are particular qualities that make up a healing garden, then what are they and could a list of guidelines be created to aide in the design of a healing garden?

In my attempt to visit “healing gardens” I visited landscape arboretums, peace gardens, wildflower gardens, rose gardens, botanical gardens, duPont gardens such as Longwood in PA and the Gibraltar gardens in Wilmington, DE. Also private residential gardens, a Minnesota sculpture garden, and memorial gardens such as the Living AIDS Memorial Garden on the East End of Charleston, WV were visited. Although these gardens were not

labeled as “healing gardens,” each garden in it’s own way provided healing attributes. A discussion of the gardens I visited and their healing attributes will be discussed in a later chapter.



Healing Gardens Today

Definition of a healing garden

The “healing garden” is an evolving concept gaining popularity today. What does the word heal mean in the context of a garden? If we look in the Webster dictionary the word heal is defined as “*vt* to make whole and healthy; to cure; to remedy, repair. - *vi* to grow sound.” Healing is defined as “the act or process by which anything is healed or cured; the power to heal. – *adj.* Tending to cure or heal.” (Webster, 1990, p 257)

According to the Oxford English Dictionary, there are four definitions of the word "heal". As a transitive verb heal is defined as:

1. to make whole or sound in bodily condition.
2. to cure (a disease).
3. to restore from some evil condition (to cure, repair and amend).

A fourth definition of heal as an intransitive verb:

4. to become whole or sound.

The use of the word healing in the case of a ‘healing garden’ encompasses these definitions to a certain extent, but instead of stressing the idea that they can cure a person, the benefits are related more to the alleviation of stress and the abilities of the space to soothe, to calm, to rejuvenate or to restore one’s mental and emotional health. A main role of the space is to provide sanctuary, to allow for meditation or to evoke other qualities desired by the garden user. The World Health Organization defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” (www.who.int/aboutwho/en/definition.html)

What is a healing garden? Why is one garden called a healing garden and not another? How is a healing garden defined? In what way are gardens healing? All of these questions are ones I have explored in this thesis. According to environmental psychologist Roger Ulrich, a garden “should contain prominent amounts of real nature content such as green vegetation, flowers, and water.” (Cooper Marcus and Barnes, pg. 30, 1999) He further states that by labeling a garden as a “healing” garden, “the garden should have therapeutic or beneficial effects on the great majority of its users.” (Cooper Marcus and Barnes, pg. 30, 1999) Ulrich’s definition of a healing garden is rather simple and allows for a variety of forms that the garden may take on as well as the various levels of healing that may be achieved. The idea that a garden should contain elements such as green vegetation, flowering plants and water is open to dispute. Are there not healing gardens lacking these elements? This idea will be explored in a later section.

It is important to point out that the studies of healing gardens that have been done are predominantly associated with hospital and healthcare facilities. A typological study of hospital gardens conducted by Cooper Marcus and Barnes will be highlighted in the next section.

Typology of hospital gardens

In their book, Healing Gardens, Clare Cooper Marcus and Marni Barnes did a typological study of outdoor spaces in hospital settings. The outdoor spaces they defined in their study are: Landscaped Grounds, Landscaped Setback, The Front Porch, Entry Garden, Courtyard, Plaza, Roof Garden, Roof Terrace, Healing Garden, Meditation Garden, Viewing Garden, The Viewing/Walk-in Garden, A Tucked-Away Garden, Borrowed Landscape, Nature Trails and Nature Preserves, and Atrium Garden.

As a part of these typologies they studied some existing healing gardens as a part of healthcare settings and looked at how they were designed as well as whether or not they have been successful. In cases where the gardens have been successful they have pointed out certain elements that should be included as well as elements to avoid.

As a part of my thesis the three garden types that I designed fit most closely into their categories of Healing Garden, Meditation Garden, and Nature Trails and Nature Preserves. The first pilot study is a residential healing/restorative garden. The second pilot study is a small business meditation garden and the final study is a sanctuary garden (similar to the nature preserve type). According to their typology a healing garden is defined as “a category that includes outdoor or indoor garden spaces in hospitals that are specifically designated as healing gardens by the administration and the designer.” (Cooper Marcus and Barnes, pg. 138, 1999) A major advantage of having a healing garden in a healthcare setting is that “users can expect that some thought has been given to creating an environment that is therapeutic.” (Cooper Marcus and Barnes, pg. 138, 1999)

The second garden type, a meditation garden is defined as “a small, very quiet, enclosed space specifically labeled with a plaque as a meditation garden by the administration and/or the designer.” (Cooper Marcus and Barnes, pg. 139, 1999) As mentioned in healing gardens these gardens have advantages and disadvantages in the healthcare setting. Meditation gardens are assets because they provide quiet and contemplative spaces in a hospital setting. The term “meditation” indicates that the space be removed from other distracting activities such as eating, smoking, etc. However, the idea of a meditation garden may not be truly carried out if the design of the space makes

the user of the space self-conscious due to its size or location. Also, by labeling the garden as a meditation garden some potential users of the site might be less likely to use the space if they think it should only be used for meditation or prayer purposes. Again these disadvantages help stress the fact that gardens are very personal spaces. A better location for these types of gardens might be in private homes and alternative healthcare facilities because these places support the use of alternative and complementary therapies. A meditation garden in a residential setting can truly allow the user to benefit the meditative and contemplate aspects of this garden type because it is there own personal space.

The third type of garden, a sanctuary garden, what Cooper Marcus and Barnes label as a nature preserve; generally has “an accessible nature trail or nature/wildlife preserve [which] can provide a welcome outdoor experience, especially for staff on their lunch hour.” (Cooper Marcus and Barnes, pg. 150, 1999) The advantages to having a nature trail or preserve on site are many-fold. On one hand these types of spaces:

- “Can take advantage of the natural landscape surrounding a hospital when it is located in a out-of-town setting.
- A wide variety of species provides interesting views for hospitalized patients
- Can provide an exercise route that may entice staff outdoors during breaks.
- Can provide an educational and community resource.” (Cooper Marcus and Barnes, pg. 150, 1999)

On the other hand the nature trail or preserve “may not be as usable by inpatients as a courtyard or entry porch. Depending on the local climate, [they] may not be usable all year. [This] may raise issues of supervision, especially in secure units.” (Cooper Marcus

and Barnes, pg. 151, 1999) The location of this type of outdoor space can be beneficial to the hospital setting though a wider audience could be reached if the space is also available to those outside the healthcare facilities, such as private residences and places of business. If special attention to detail and design of these spaces in residential and smaller businesses is considered then it can allow all people to gain benefits from being in the space.

Healing garden case studies

Case Study: Healing Garden, Good Samaritan Regional Medical Center, Phoenix, Arizona

In 1996 a healing garden was incorporated into the medical center in Phoenix, Arizona. The garden is a rooftop courtyard “bounded on three sides by two-story buildings, and on the fourth side by a twelve-story tower, with porthole windows, that looms up in one corner of the garden.” (Cooper Marcus and Barnes, pg. 183, 1999) A water feature is the main focus throughout this garden. The water feature symbolizes “The Cycle of Life.” The different phases of life from birth to death are symbolized in various ways by means of quiet pools, as well as flowing streambeds. Throughout the site water is not only audible and visual but also touchable throughout the garden. Seating in the garden varies from movable chairs and tables to a curvilinear seat-wall, allowing for different levels of comfort and positions in sun and shade. Raised beds contain plants that have low water and maintenance requirements. Another major element featured in this garden is art. A tile artist was brought into the project to design colorful tiled columns that actively engage users of the site. The site is handicap accessible and also has capacity for walkers, gurneys, and wagons. A small coffee bar is a part of the garden that provides a social aspect for the garden users.

“The garden-courtyard is well used: by visitors and inpatients who come together to enjoy a coffee or stroll; by visitors waiting for an outpatient who is at an appointment or undergoing a test; by staff, for breaks, lunch, or small group meetings; by physicians and hospital chaplains meeting with family members. A fairly large expanse of flat concrete allows beds to be wheeled out on occasions. Another, less direct form of use, is visual access. Outpatients attending a cardiac care unit can exercise on the StairMasters while looking out onto the garden via floor-to-ceiling glass windows. An intriguing monitoring device secreted in the tree canopies permits telemetry cardiac patients to continue to be monitored in the garden when exercising outdoors.” (Cooper Marcus and Barnes, pg. 184-185, 1999)

The authors who observed this healing garden for the most part praised the design of this space. They did express that a couple elements about the site needed to be reworked. The extensive amounts of concrete not only took away from the garden appeal of the space but it also produced high amounts of glare. The suggestion for decreasing the amount of glare is the use of earth-toned tint to be added to the concrete. Otherwise the garden was mostly successful, providing the sound and touch of water, native plants many of which had medicinal uses and reflected the changing season as well as encouraged wildlife. Seating was varied according to type, material and location in sun or shade. The garden is open twenty-four hours a day which is great in a hot climate like Arizona where many garden users may be more inclined to use it when it is cooler at night and early morning hours. The addition of colorful art engages the garden visitor and the entry and navigation in the garden are straightforward. Patient rooms include

views down onto the healing garden. One of the best things about this garden is the fact that it is strongly supported by the hospital administration.

Case Study: Healing Garden, Oncology Department, Marin General Hospital, Outpatient Medical Building, Greenbrae, California

This healing garden is 15 x 25 feet that affords good views from a restricted waiting area for Oncology Radiation as well as surrounding office windows that look out and down into the garden. Elements in the garden include lush spring and summer plantings, short paths, two seating blocks, stepping stones set in moss, and an “unusual water feature - a grooved stone channeling a small stream down into a hollowed rock – provides a soothing sound. This is a very small, quiet and soothing space that feels ‘filled’ when occupied by one person, but which benefits many who look out at it from the waiting area.” (Cooper Marcus and Barnes, pg. 139, 1999)

Limitations of the current view of healing gardens

Healing Gardens, not a new concept

Healing Gardens are gaining popularity today however the idea of a healing garden is not a new one. “Restorative or healing gardens for the sick have been part of the landscape of healing since medieval times. Such gardens have been parts of hospitals, hospices, rehabilitation centers, and more recently nursing homes for the infirm and elderly.” (Gerlach-Spriggs, Kaufman, and Warner, pg.1, 1998) Gardens are a tamed form of nature. Throughout the ages gardens have been important parts of human life. The great gardens of Egypt were built mostly as an escape from the harsh conditions of the environment. Gardens were a paradise that offered respite from the hot sun. “The idea of a healing garden is both ancient and modern. Long after humans had begun to erect dwellings, local healing places were nearly always found in nature – a healing

spring, a sacred grove, a special rock or cave.” (Cooper Marcus and Barnes, pg. 1 1999)

European monastic or cloister gardens were most likely the first type of healing gardens. “It was the monks who through these times kept the knowledge of the medicinal value of plants alive in the West.” (King pg. 75, 1979) The monks maintained these cloister gardens for growing medicinal plants. In some cases because of their healing qualities these gardens were also used to provide places in which sick patients might dwell. “There was a separate medicinal garden next to the hospital building which was to be planted with sixteen different types of herbs in four beds surrounded by a border.” (King, pg. 76, 1979) Unfortunately with the introduction of plagues, crop failure and heavy migration into the growing cities that occurred during the fourteenth and fifteenth centuries the monasteries became overwhelmed and had to reduce the medical resources they were at one time able to provide. Thus “with the decline of the monasticism itself, the significance of the meditative/restorative garden declined, and open spaces attached to hospitals became accidents of local architectural tradition, if they existed at all.” (Cooper Marcus and Barnes, pg. 11, 1999) It was not until the seventeenth and eighteenth centuries that the inclusion of the outdoor environment become important again in the medical setting when the “dual emergence of scientific medicine and Romanticism fortuitously combined to encourage the reemergence of usable outdoor spaces in hospitals.” (Cooper Marcus and Barnes, pg. 12, 1999) However, in the twentieth century things changed yet again within the healthcare world. Hospital design changed and low-rise pavilion hospitals were replaced with multistory complexes. Loss of garden space as well as “pressure from insurance companies to minimize hospital stays have largely worked against the provision of actual usable gardens in new or refurbished medical

complexes.” (Cooper Marcus and Barnes, pg. 14, 1999) The relationship between nature and health began to dwindle as new technology became available. “The idea that access to nature could assist in healing was all but lost.” (Cooper Marcus and Barnes, pg. 1, 1999) Not until recently (1990’s) has the idea of a healing garden once again been considered in research. Unfortunately “the value of a garden and the role of the psyche in healing are both difficult to quantify or prove.” (Cooper Marcus and Barnes, pg 17, 1999) However, perhaps with the rising interest in alternative or complementary medicine approaches being considered maybe the inclusion of outdoor environments will be brought back into the healthcare setting. Cooper Marcus and Barnes describe a popular trend that developed in the 1990’s and still continues in 2002:

“The 1990s have also seen a major upswing of interest among the American public in taking care of one’s own health. Sales of herbal remedies are booming; exercise and fitness are expanding; increasing numbers of consumers are willing to spend more on organic produce. People experiencing stress are well aware that spending time in nature has a healing effect. (Francis and Cooper Marcus, 1991; Barnes 1994)

Part and parcel of this significant paradigm shift is the burgeoning interest in healing or sanctuary gardens in both residential and healthcare settings.” (Marcus and Barnes, pg. 21, 1999)

Today gardens still offer humans an escape from the chaos of life. For many people gardens are an alternative to taking an expensive vacation as well as being a hobby. Gardens are places in which people can build their own personal paradise. A garden can have a variety of meanings for the person who creates it. Gardens symbolize the cycle of life. For many people looking forward to the gardening season is one of the

ways they get through the winter months. They often spend winter months perusing seed catalogs, preparing orders, and planning their gardens. Gardens can be healing in a variety of ways: “a space to look out at, and a space for passive or quasi-passive activities such as observing, listening, strolling, sitting, exploring, and so on.” (Cooper Marcus and Barnes, pg. 4, 1999) Gardens can be emotionally healing as well as physically healing. Studies have shown that not only are people who work with gardens healthier but those people surrounded by gardens feel better. For example Roger Ulrich’s studies have shown that simply by having a view from a window to a garden or some natural scene patients tend to recover faster from surgery. (Ulrich, 1984)

Healing Gardens in the hospital setting

There may be disadvantages to healing gardens in hospital settings, for example, “Some staff members may not embrace the wholistic approach to medical care and may question the appropriateness of a healing garden. [Also,] users may be confused as to appropriate behaviors in the garden.” (Cooper Marcus and Barnes, pg. 138, 1999) These disadvantages help stress one of the major points of this thesis, that healing gardens are very personal spaces that could also be successfully located in private homes and alternative healthcare facilities that encourage alternative and complementary approaches to healthcare. A residential garden can allow the user to benefit the most from the healing qualities of a garden because it is his/her own personal space. In a healthcare facility the space is used by a larger number of people and so the design of the garden should consider the variety of different user groups of the space, such as staff and caregivers, patients and visitors. One of the difficulties in designing a healing garden in a hospital setting as opposed to a more private residential space is the challenge of creating a healing environment that can emotionally benefit a more diverse user group. In the

residential setting, where the user group is generally smaller and less transient the designer can design a space that will benefit the client according to the client's own personal needs and desires.

Healing gardens outside the hospital setting

When reading about healing gardens, the books and authors most cited are Marni Barnes and Clare Cooper Marcus, authors of Gardens in Healthcare Facilities: Uses, Therapeutic Benefits, and Design and Recommendations and Healing Gardens, Mark Francis author of The Meaning of Gardens, Nancy Gerlach-Spriggs, R. E. Kaufman and S. B. Warner, Jr. authors of Restorative Gardens: The Healing Landscape as well as Romy Rawlings author of Healing Gardens. For the most part the interest here is in designing healing gardens for hospitals and healthcare facilities. Romy Rawlings feels healing gardens should be included in residences and other places as well as healthcare facilities. In her book Healing Gardens, Rawlings points out how “our gardens, no matter their size play a vital supporting role, affording release from the pressures of the outside world and helping to create a sense of personal fulfillment.” (Rawlings, pg. 6 1998)

Cooper Marcus and Barnes in favor of including gardens in healthcare facilities feel: “The time is ripe for a concerted appraisal of outdoor spaces in medical settings and for a consideration of the elements that make up a healing garden.” (Cooper Marcus and Barnes, pg. 24, 1999) They also are aware of the fact that books today are suggesting the benefits of healing gardens or sanctuary gardens and are “urging readers to consider their own gardens as a healing or sanctuary space.” (Cooper Marcus and Barnes, pg. 2, 1999)

This is a very important point that should be stressed. Healing Gardens should not be just for the sick and infirm they should be for the healthy as well, “it is significant that – given the choice- high proportions of stressed (but not necessarily medically ill) people

select natural or designed outdoor settings to find solace, and to evoke a calmer and more balanced mood.” (Cooper Marcus and Barnes, pg. 9, 1999) As a result of considering private residential gardens as places for healing there is potential for designing a space that offers a more personal level of healing.

There is a variety of levels to a healing garden

Healing gardens designed for healthcare facilities should be designed at a different level than those in the residential setting. One of the challenges of designing a healing garden for a hospital or healthcare facility is the fact that the user group of the garden is transient and patients will be moving in and out of the facility. In a residential setting this is not a major issue; the client or user group will most likely take up long-term if not permanent residence. This being the case, the designer will have a better opportunity to work closely with the residential design. Also, designing for a residence as compared to a large facility could present less of a challenge because there will be more of consensus of preferences and ideas in the case of the design for the residence. The hospital setting will require a more general type of healing garden, one that appeals to a broader audience than in the case of a private residence. The level at which the hospital garden should be designed will be different than that of a private residence. This is not to say either garden is better or more successful, however they will require a different approach. The designer of a hospital garden should get input from staff, caregivers, and patients of the facility. By including this large group of people in the design process the designer will get a lot of input. This can be very helpful in carrying out the design but can also present challenges if there are many contrasting ideas and preferences.

Research Design

This thesis project documents the design of three unique healing gardens set outside the hospital setting. Research findings in combination with two pilot studies will aide in the creation of a set of guidelines for designing healing gardens. These guidelines will be discussed in the final chapter of this document.

For the design component of this project the process and results of the two pilot studies will be discussed. From these design studies and the literature researched a series of design guidelines for creating healing gardens will be generated. For the final component of this thesis project a third garden will be designed in accordance with some of these guidelines.

The first pilot study involves the design of a restorative garden for a residential home in Christiansburg. The second pilot study is for a meditation garden to be used by a small healthcare business in downtown Blacksburg, VA. The final design is a sanctuary garden for a rural retreat in Riner, VA. Choosing three different garden types was intentional. It will show that healing gardens are appropriate for a variety of different spaces. Methods, processes, and other important information regarding each study will be discussed with drawings and plans incorporated in the document appendixes to explain the designs more clearly. A review of major research findings will be discussed in the next chapter. This information will point out important issues and concepts associated with the role of healing gardens.

Chapter 2

Review of Major Research Findings/Literature Review

Review of Major Research Findings/Literature Review

Major Issues/Concepts

Biophilia

According to E. O. Wilson, author of many books including Biophilia, humans are naturally attracted to other living organisms; flora and fauna and he has termed this quality “biophilia.” Wilson believes that humans are naturally attracted to the green hues of plants and blues of water as opposed to the grays of concrete and other unnatural materials.

In the fast-paced, high-tech society of today our time spent among nature has dwindled. For instance, many people work in urban settings and make long commutes to and from their office that may or may not have a window. Many corporate offices are a sea of cubicles that offer only views of walls. The idea of biophilia seems to be justified when we consider that many of these same people who work in urban settings choose to take vacations to tropical islands full of palm trees, sand and crystal clear waters or journey to mountains to camp in the woods in hopes of spotting a bear or other wildlife. It is this basic need for a connection with nature that keeps us going.

According to Wilson’s theory of biophilia, humans need or want contact with the natural world. Wilson further states, “to the degree that we come to understand other organisms, we will place a greater value on them, and on ourselves.” (Wilson, pg. 2, 1984) He and others have done significant research that explains why humans need or want contact with nature. In Wilson’s latest book, The Future of Life, he makes the following point: “It is a remarkable fact that while average life expectancy in the leading industrialized countries has risen to nearly eighty years, the contribution of preventive medicine, including the design of healthful and curative environments, has remained far

below potential.” (Wilson, pg. 140-141, 2002) Howard Frumkin, Roger Ulrich and others cite Wilson in their own studies and refer to his theory of biophilia as one of the major supporting theories of the health benefits between nature and human health.

Fauna

Wildlife has always had an impact on humans and vice versa. The human interest in animals is particularly apparent in many recreational activities such as hiking, visiting zoos and wildlife parks and bird watching as well as the great interest in having pets as companions. According to Howard Frumkin, “A wide body of evidence links animals with human health.” (Frumkin, pg 235, 2001) The garden can be a sanctuary for wildlife; “contact with [wildlife] can provide a vital release from our sterile, stressful lives and bring us back in touch with our wider surroundings.” (Rawlings, pg. 20, 1998) When gardening to attract wildlife, no matter which particular group of animals you are interested in attracting “you need to embrace an alternative concept of neatness. To have a supportive, species-rich environment, you have to loosen your grip a little...” (Rawlings, 1998 pg. 20) In Healing Gardens, (1998) Rawlings gives these basic guidelines to consider on how to best provide successful food, habitat and other basic requirements for wildlife as a part of your garden: try not to remove dead flowers from your garden as the end of summer approaches, the seeds from flower heads can provide an important source of food over the winter. Minimizing the amount of mowing you do on your site and leaving patches of longer grass can provide needed shelter for wildlife. Providing a woodpile can be a beneficial habitat for animals over winter. Try to leave some weeds; don’t remove them all, as they “are immensely valuable to all forms of wildlife.” Allow nature to take its course in some areas; you don’t have to cultivate every

inch of your land, this can help attract a variety of wildlife in your garden. Take care in early spring clean-ups not to disturb any over-wintering animals in any of the areas listed above. (Rawlings, pg. 20, 1998)

Flora

Plants have always had a significant impact on society. In Frumkin's article on human health and nature he emphasized the importance of plants in our lives:

"People feel good around plants. In the 1989 National Gardening Survey of more than 2000 randomly selected households, 50.1% of respondents agreed with the statement, "The flowers and plants at theme parks, historic sites, golf courses, and restaurants are important to my enjoyment of visiting there," and 40.0% agreed with the statement, "Being around plants makes me feel calmer and more relaxed." Among residents of retirement communities, 99% indicate the "living within pleasant landscaped grounds" is either essential or important, and 95% indicate that windows facing green, landscaped grounds are either essential or important. Office employees report that plants make them feel calmer and more relaxed, and that an office with plants is a more desirable place to work. In urban settings, gardens and gardening have been linked to social benefits ranging from improved property values to greater conviviality. Psychologist Michael Perlman has written of the psychological power of trees, as evidenced by mythology, dreams, and self reported emotional responses." (Frumkin, pg. 236, 2001)

If you think about any of our holidays or special events in our everyday life, you cannot help but recognize that plants play a major part. Plants, especially flowers are often given to people in times of special holidays, for celebration of the seasons, and especially for events of loss, such as sickness or death. In funeral ceremonies flowers and plants are offered which represent the continuity of life. Plants such as Easter Lily, Poinsettia, Christmas Cactus, or Poppies on Veterans day, pumpkins on Halloween, Christmas trees on Christmas, roses on Valentine's Day, chrysanthemums in autumn and

daffodils sold during cancer fund raising reflect some of the ways humans relate plants to important dates or events in their lives.

The field of horticulture is an excellent example of just how much humans love plants. This field is devoted to the understanding of how and why plants are what they are. The fact that botanists have come up with a system of naming the various types of plants points to their keen interest in the plant community.

One of the most popular recreational activities enjoyed by humans is that of gardening. In the past many gardens were for growing fruits and vegetables to provide food on which the gardeners relied for nourishment. Today the focus of gardening has expanded greatly and the reasons for gardening and types of gardens are as diverse as the people who create them. The number and variety of gardening magazines has greatly increased.

The popularity of gardening has spread greatly to include apartment and city dwellers. Community gardening, which consists of divided plots of gardening space, is gaining interest. I feel this is a wonderful opportunity to bring people back to the earth. I believe there should be more opportunities for city dwellers to be among gardens. Perhaps by allowing city people to maintain gardens they will be more interested in the appearance of their living space and reduce the amount of crime in the area. But also think of the healthier environment that will be available for those people. Not only will the air be cleaner but also they will be able to enjoy fresh, hand grown fruits, vegetables and herbs. In addition, there is the potential for a healthier mindset because of the healing properties of working with and being around plants.

According to Beth Bosk, editor of *The New Settler Interview*, and “a long-time defender of a healthy planet (and local forests specifically)...our spontaneous human attraction to other living entities within the natural world is beneficial to health. [S]he explains: It’s why gall bladder surgery patients sent to a recovery room facing a grove of trees were able to go home sooner than those who went to rooms with a view of a brick wall. Why Michigan prison inmates in cells facing a courtyard had 24% more sick calls than those whose cells allowed them to gaze on farmland.”

(www.marshasinetar.com/model1.html)

Horticultural therapy involves the use of plants as therapy for people in healthcare facilities. Studies have shown that the interaction between plants and people is healing not only physically and mentally but also spiritually. Many healthcare facilities and hospitals interested in providing opportunities for horticultural therapy provide the opportunity for patients to work with plants. It is believed that seeing and taking part in the life cycle of a plant from its very beginnings as a seed to its mature stage is very healing for people. Not only are plants passively healthy for people to enjoy visually but also the activity of gardening is quite satisfying and therapeutic for many.

An interesting study was conducted in a school in Germany where students were observed in classrooms that contained plants and then in rooms where plants were not present. In this study it was found that plants reduced health problems for the students. In the classrooms where plants were present it was noted that the number of health-related complaints from the students was lower; the plants had a positive influence on the students well being. (www.plants-for-people.org/gesundheit/pflanzen_ver.htm)

Therapeutic gardens will not be included in this thesis as they are gardens at another

level. “A ‘therapeutic garden’ is an attempt to improve the medical environment, not from a purely aesthetic standpoint, but rather in pursuit of the treatment of disease.”

(<http://www.asla.org/Members/land/tgpig.html>, from: The Therapeutic Garden: A Collaboration of Professions by Nancy Gerlach-Spriggs, RN, BSLA, MLA, and Anne Wiesen, M.Ed, M.S. from Land Online Jan. 25, 2002)

More research on human health and nature is needed

Howard Frumkin is professor and chair of environmental and occupational health in the School of Public Health of Emory University. His research looks at how exposure to nature can be healthy for humans. Frumkin feels “we need a research agenda directed not only at exposures we suspect to be unhealthy, but also at those we suspect to be healthy, and at outcomes that reflect not only impaired health, but also enhanced health.” (Frumkin, pg. 238, 2001)

Recently Dr. Frumkin emphasized the need to collaborate with other professionals, “If we turn our attention to aspects of the environment that may enhance health, we need to open collaborations with a broad range of professionals, such as landscape architects to help identify the salient features of outdoor ‘exposures’...” (Frumkin, pg. 238, 2001) In his study Frumkin also referred to E.O. Wilson’s theory of biophilia as well as other authors who have echoed this idea, he feels that “this implies that certain kinds of contact with the natural world may benefit health.” (Frumkin, pg. 234, 2001)

John R. Stilgoe praises Howard Frumkin for using Wilson’s biophilia concept in his work as shown in his remark that follows: “Howard Frumkin does a great service to many disciplines beyond medicine by emphasizing the extent to which humans may have

evolved in response to natural systems and the ways such systems promote health.”
(Stilgoe, pg. 243, 2001)

E. O. Wilson himself is aware of the research Frumkin is doing. He has responded to one of Frumkin’s recent papers on Human Health and the Natural Environment:

“Dr. Frumkin reminds us that other animal species are adapted to the environments in which they evolved, in other words fitted by natural selection both physiologically and behaviorally. Instinctive habitat selection is universal, and its analysis has become an important industry, within the growing discipline of behavioral ecology....It should come as no great surprise to find that *Homo sapiens* at least still feels an innate preference for the natural environment that cradled us. Frumkin points to a mass of evidence that such is indeed the case. He argues persuasively for closer attention in preventive medicine of the role of the habitat-seeking instinct by encouraging the union of environmental psychology with medical research” (Wilson, pg 241, 2001)

Human environment preference studies

Information obtained from studies that determine which types of environments the majority of humans prefers are key in the design of successful healing spaces.

Understanding which types of spaces will have a beneficial impact on people, such as providing safety and relief from stress can greatly aide the designer. Researchers Rachel Kaplan, Ph.D. and Stephen Kaplan, Ph.D. at the University of Michigan in Ann Arbor both have their advanced degrees in psychology and are professors in psychology as well as other fields. Rachel is the Samuel T. Dana professor of environment and behavior in the School of Natural Resources and Environment. Rachel Kaplan said in accepting this

position that it honors Sam Dana, an inspiring leader at her School whose work is recognized both nationally and internationally.

(http://www.snre.umich.edu/people/faculty_detail.html?faculty_id=14)

The Kaplans' diverse interests and educational backgrounds have resulted in research that illustrates the need humans have for a direct relationship with nature.

Rachel Kaplan states: "The focus of our research has been precisely on putting people into the equation. More specifically, we have studied the role the natural environment plays in people's well-being."

(http://www.snre.umich.edu/people/faculty_detail.html?faculty_id=14)

The Kaplans' research includes the study of 'restorative environments.' Along with other psychologists the Kaplans' have been researching the impact that nature can have on people's mental functioning, social relationships and even physical and mental health. (www.apa.org/monitor/apr01/greengood.html) They have written books and articles describing what types of environments generally people prefer as well as providing suggestions for designing outdoor spaces while keeping in mind these preferences. In their book, With People in Mind, the Kaplan's speak of restorative environments:

"The importance of nature in restoration cannot be overemphasized. A natural setting can be small, quite large, or anywhere in between. The degree and kind of involvement with the setting can also vary widely, including hiking a nature trail, walking in an urban forest, planting or pruning trees, watching birds or squirrels, or simply viewing nature through a window." (Kaplan, Kaplan, and Ryan pg. 67, 1998)

Views of nature beneficial to human health

Roger S. Ulrich, PhD, director of the Center for Health Systems and Design at Texas A&M University. He has in fact focused on the last statement of the Kaplans' and has further explored how having a view of a landscape from a hospital window or even paintings of landscape and nature scenes can have beneficial effects on patients:

“In his most well-known study, Ulrich investigated the effect that views from windows had on patients recovering from abdominal surgery. He discovered that patients whose hospital rooms overlooked trees had an easier time recovering than those whose rooms overlooked brick walls. Patients able to see nature got out of the hospital faster, had fewer complications and required less pain medication than those forced to stare at a wall.”

(www.apa.org/monitor/apr01/greengood.html)

Attributes of healing gardens from literature

In addition to pointing out the reasons for including healing or restorative gardens at healthcare and other settings; another mission of this thesis is to create a list of design objectives that other landscape architects may apply when designing healing gardens for their clients. Many different sources have been reviewed and it seems necessary to create a list of attributes for healing gardens. This list of basic guidelines could be helpful for getting the designer started on the design process. From this list certain ideas may be appropriate however not all may be necessary in order to achieve a healing design. This list is in no way complete nor is it absolutely necessary to follow unconditionally but rather it is a basis for beginning the design process.

Some basic guidelines for developing a healing garden are as follows:

- *The client should be involved throughout the design process*
- *The garden should stimulate the users' senses*
- *The garden should be easy to comprehend and navigate*
- *The garden should offer contrast which provides relief from stressful environments*
- *Where necessary consider mobility in and around the garden for ease of client use*
- *Allow the garden to be unlocked and inviting*
- *Encourage wildlife (birds, butterflies, small animals, etc.) in the garden*
- *Reinforce the cycle of life through plants which provide seasonal change*
- *Promote reflection and self awareness in the garden*
- *Provide a feeling of relief for garden users*

It is important to determine which of these guidelines are significant for a particular design. Perhaps the number one guideline for creating a healing garden is to involve the client directly in the design process throughout the project. It is especially important that this is done in order for the design to fit the client's needs and desires. In addition to this initial design guideline of direct client and designer collaboration there are several other elements that one may consider when designing a healing garden. In a later section these guidelines will be discussed in greater detail.

What the research has missed

Healing gardens can be healing in a variety of ways

In their book Healing Gardens, Barnes and Cooper Marcus state: "Gardens can be healing and restorative via a number of mechanisms. The most obvious is the aesthetics

of nature, that is, creating a beautiful verdant place that will be a powerful enticement to go outdoors.” (Cooper Marcus and Barnes, pg. 4 1999) Their book deals primarily with healthcare facilities and incorporating healing gardens within those settings. However, some of their design recommendations and reasons for including healing gardens can be considered in residential, business, and other garden types as well.

As mentioned previously, the majority of healing gardens tend to be associated with hospitals and other healthcare facilities. They are gardens designed to be places of retreat, respite, tranquility, etc., for the employees, visitors, and patients of the facility to utilize. I feel this is an excellent pairing, gardens with healthcare facilities, because gardens are healing not only physically but also mentally and emotionally. As Roger Ulrich’s studies have shown, hospital patients’ recovery rates are higher for those who have a view of nature. (1984)

I consider it important to make some distinctions between healing gardens and landscaped gardens. By referring to these spaces as healing gardens I recognize that certain qualities should be present to distinguish gardens designed to be healing versus those that are for other purposes such as covering bare landscape, beautifying an area or growing food for the market. This is not to say that the passive act of just visually experiencing a garden is not healing. In my opening paragraph of this paper I posed the question, why is one garden called a healing garden and not another? It is my opinion that all gardens are in their own way healing. I feel that all gardens, especially residential gardens can be designed as healing gardens. Why shouldn’t your own private garden be a place for personal healing? Who is to say only those in healthcare facilities need healing? I believe we all need healing of some sort whether it is to relieve stress from a

busy day at work or if it is a place to go and sort out one's emotions. For many home gardeners it is the act of gardening itself that is healing. Many find satisfaction through actively taking part in their gardens. Gardens represent the cycle of life and for a gardener to be a part of that growth cycle is quite satisfying and often healing. The fact is that there are not many healing gardens in healthcare facilities. Another important factor in healing garden design raises the question of how can a landscape architect successfully design a healing garden in an environment such as a hospital with such a transient audience with a diversity of nature and garden preferences? Perhaps this is not really possible. If one truly wants to design a healing garden and realizes the importance of the role of the client or user group then it seems more important that the location of a healing garden should be in the residential setting. Healing gardens should reflect their owner. This is not to say that gardens are not an important part of the healthcare setting, but perhaps the idea of a healing garden in a hospital setting is unobtainable.

As landscape architects we should look at the potential restorative powers gardens may have on people whether in the home landscape, business landscape, or traditional healthcare facilities.

Through my study of different garden types I came to the conclusion that there is a potential to expand the definition of a healing garden. It is my belief that healing gardens should not be limited to just hospitals and healthcare facilities. Healing gardens can be designed into a wider variety of spaces where people who are not confined to a hospital or healthcare facility can go and benefit from the healing qualities of these gardens. By including healing gardens in other facilities as well as residential and places of business such as yoga centers, a wider audience can benefit from these gardens.

Outside of healthcare facilities there a variety of gardens that allow for healing however they are not labeled as healing gardens. The definition of a healing garden should include healthcare facility gardens but should not be limited to just that area. Many examples of healing gardens should be included in the study.

For example, one type of a healing garden is a memorial garden created in the memory of a loved one who has passed away. An example of this type of garden includes the AIDS Memorial Garden in Charleston, WV. A local WV columnist for the Gazette notes why she likes memorial gardens: “I’m a big believer in creating life to help us deal with loss and death. That’s why I so admire the AIDS Memorial Garden on Washington Street East in Charleston, which gets prettier every year. And why I’ve created little gardens of my own in memory of my brother and father.” (Schwartz-Barker, 2001) This is an especially relevant idea today with the recent World Trade Center tragedy. One possibility that is being considered is creating a memorial for the site of these horrible events. A landscape architect, Topher Delaney has offered her suggestion for building a forest of trees, a tree for each person who was killed in the tragedy. (Schwartz-Barker, 2001) These living memorials can be ways to honor the dead while celebrating the beauty of life; a reminder of the cyclic nature of life.

For others who were not interested or inclined to design their own garden it was the relationship with their designer that was key in helping them create a place that met their ideals and desires. In a different way the product of this collaboration with the designer can be healing for the client. Although the client may not be directly involved in the design and installation of the garden it is the garden itself that provides a place of healing.

Yet another way to consider how the act of gardening can be beneficial is through environmental restoration that heals damaged landscapes. “When environmental restoration is most successful, it also improves our hearts, and cultivates an enduring relationship with Nature.” (Nilsen, pg.1, 1991) The type of healing that is gained through helping a damaged patch of earth can be just as fulfilling if not more for people who would like to give back to the earth. Those who realize the damaging effects humans continue to have on the earth may find personal healing through repairing the earth:

“Restoration, like any art, seeks a greater understanding of existence, which tends to deepen our appreciation, gratitude, and humility, salubrious states of mind that are less fringe benefits than compelling requisites for further work. Moreover, the art of restoration is finely balanced between mind and body, thought and sweat.” (Nilsen, pg. 3 1991)

For some people an example of a healing space includes symbolic structures designed to fit into the landscape such as the installation of a small chapel in the case of one West Virginia resident. The resident feels now that the structure is in place plantings can be added to make it a more meditative and healing space for visitors. She has asked for assistance in



designing these garden areas around the chapel and to suggest plants that will do well in the various conditions.

Another example of healing gardens are private residential gardens. These gardens are a reflection of the owners, some of whom designed and built the gardens

themselves. For many residents their gardens are a major source of joy for them. In some cases it is the process in designing and building the gardens that is especially significant to the owners. By proffering an active role in the garden's design and build, the gardens have become "healing."

A question that arises in this case is what then is the role of the landscape architect? The role of the landscape architect is going to vary from taking complete control of the design process to one of consultant or supervisor. The landscape architect can aide in carrying out the client's plans through the technical work which can often times been tedious and frustrating for the client. The process for the client can be one that is rewarding and positive while the landscape architect still has an important leadership role throughout the design process. The landscape architect can further help the client in making important choices for material and plant selection as well as reinforce important qualities of a healing environment. The landscape architect can also be a resource for the client and provide ideas which will assure that the design ideas work.

Maya Lin, designer of the Vietnam Veteran's Memorial, the Civil Right's Memorial, and the Elizabeth Evans Baker Peace Chapel at Juniata College in Huntingdon, PA is well known for creating places of healing. Lin's typical media choice for her sculptures is granite. The Vietnam Veteran's Memorial consists of two granite walls which contain the names of all those in the war who died or are still missing. The granite was chosen for many reasons. This simple material is able to provide a variety of qualities to the site. For example, the wall allows people to see themselves reflected back while they are reflecting on the war that has made a significant impact on their past.

Lin uses granite again in the Civil Right's Memorial she designed as a tribute to Martin Luther King Jr. This memorial features a granite table bearing King's famous words "We are not satisfied and we will not be satisfied until justice rolls down like water, and righteousness like a mighty stream." Taking his words, Lin has expressed them further by including water that rolls in sheets across the granite table.

In another of her designs, Lin has used granite stones to form a circular space on the top of a grassy hill. This part of the peace chapel in Juniata College provides a contemplative and reflective space for staff, students and visitors.

Each of these three spaces that Lin has designed are known for their healing qualities. They do not include prominent amounts of vegetation and flowering plants as major features and yet their simplicity has a powerful impact on the visitors to the space.

Each healing garden is unique

What is so unique about healing gardens is the various ways in which they can be interpreted as being healing. This point was made in the previous section. Each garden is unique, each client is unique and various elements can influence the relationship with the client, designer and the site. All those involved in the process bring different ideas, experiences, emotions and understandings to the table so it is necessary that each design be treated individually.

Healing gardens should be based on the user's needs

At some level all gardens are healing, but what are those distinguishing characteristics that allow certain gardens to rise above to the level of a healing garden? According to Colette Parsons, "a healing environment is ultimately a sanctuary that allows for active involvement or passivity." (Francis, Lindsey, and Stone Rice, pg. 305,

1994) A healing garden is one where the designer pays close attention the providing therapeutic qualities in the space.

Working closely with the client is important in designing a successful healing garden. There are a variety of ways to work with the client depending on the level of involvement with which the client is comfortable. For example, personal interviews with the client are key to figuring out exactly what is desired. It is also very important to realize that the design will ultimately be a synthesis of the ideas of both the designer and client.

Chapter 3

Design Exploration of Three Types of Healing Gardens: Restoration, Meditation, Sanctuary

Design Exploration of Three Types of Healing Gardens: Restoration, Meditation, Sanctuary

Research design: Why these 3 sites and garden types were selected

The Designs

The design component of this thesis is composed of three projects. The first two were pilot studies that were part of the learning component of my thesis. Pilot study 1 was a restorative residential garden and pilot study 2 was a small business meditation garden. The information gathered from the pilot studies was used in the final project, a rural retreat sanctuary garden. Each of these garden projects is unique in location, user-group, client preferences, lot size, topography; however the ultimate goal for each is for the most part the same: To create a “healing environment.” The type of healing that is desired may be in different levels and degrees. However, the three clients are looking for a space that will allow them to find sanctuary from the everyday concerns of the world. The methods for successfully designing these spaces are varied and depend upon the client’s personality, objectives, and level of participation. The uniqueness and the beauty of these healing gardens is a challenge for the designer. Each garden is a new beginning, a new discovery. The process of designing these spaces may be frustrating at times but if the designer will take enough time and work closely with the client, the end result will be quite fulfilling for all involved in the design process.

The following sections of this paper will document the processes of the three garden designs that were used in this study. The first two garden designs were pilot studies which were used to prepare for the third design. This larger project reflects size and time spent on the project. Therefore more detail will be covered for the third design project.

The Design Process

In the case of healing gardens it is the design process that is key to a successful space. For the designer the collaboration with the client is of great importance in designing a personal healing space. The designer should work closely with the client and engage him/her in a variety of ways so his/her ideas and preferences can be expressed in a way that is understandable to the designer. There are several of methods to explore. To start, the designer should take time to speak with the client and listen carefully to what suggestions and ideas the client has for the space. The garden space should ultimately reflect these preferences.

How these explorations will give new insights into the ‘defining characteristics’ of healing gardens

Each of the three design studies represents a unique setting and type of healing garden. Through these explorations one of the results of this thesis will be to give new insights into those qualities that define a healing garden. The first two pilot studies, which will be discussed in the following chapter, help to inform the final study. They were instrumental in determining which methods of working with the client are most successful. They were also significant in distinguishing which concepts and elements are common in the design of any healing garden. There is an element of universality in the design of a healing garden. Determining which elements are universal was part of this design study. The concept of universality will be further defined when the design guidelines are discussed in the final chapter.

Chapter 4
Design Studies

Design Studies

Pilot Study 1

A Restorative Garden

There is certainly potential for healing gardens to be included in places outside of healthcare organizations. Three types of healing gardens that were studied for this thesis include Restoration, Meditation, and Sanctuary gardens. The terms for the three gardens reflect the differences. A restorative garden is the focus of this design project.

The word “restore” is defined as “*vt* to bring, put, or give back; to reestablish (eg peace); to reinstate (eg ruler); to repair; to bring back to a known or conjectured former state; to supply (a part) by conjecture; to cure (a person).” (Webster pg. 465) According to Nancy Gerlach-Spriggs, “A restorative garden is intended by its planners to evoke rhythms that energize the body, inform the spirit, and ultimately enhance the recuperative powers inherent in an infirm body or mind. Where recovery is not possible, intimate contact with the cycle and flow of nature may yet calm the spirit.” (Gerlach-Spriggs, Kaufman, and Warner, pg.2 1998)

As stated in previous sections the inclusion of a healing garden is being promoted in the residential setting. The privacy of a residential setting, no matter the size of the space, can allow for the ideal healing garden setting. Of course the key to designing a successful healing garden for a home is to work closely with and directly engage the client throughout the design process. There are a variety of ways to have the client actively participate in the design.

The clients

The clients for whom this garden was designed are a young, working couple who recently moved into their home. They wanted to have a garden space that would help

restore their minds and relieve stress from their busy jobs. The clients were unfamiliar with the design process and were not sure what elements they wanted to include in their garden plan. It was clear from the start that they were unhappy with their current lack of garden space. They were eager to get started on the design process and had very few initial considerations for the garden design. Their main concerns were to reduce the amount of lawn in the back yard and to provide a soothing outdoor space to spend quiet, reflective time in without having to do too much garden work. Their main interest was to enjoy the garden passively.

The site

The first session with the clients involved a site analysis. We walked around the site and pointed out areas of particular importance to the couple. For this particular case the couple was interested in redesigning the front entrance to their house as well as the back of their lot.

For the most part the site featured a large front lawn with a few young trees. The area near the main entry of the house had some diseased foundation plantings and the path to the main door consisted of simple concrete pavers placed in the lawn. The entrance did not provide the welcome that the couple had in mind. Upon approaching the house it was not a clear entry and needed some redesigning. The back of the house was predominately lawn with a few diseased shrubs that lined the house and detached garage. High sun and wind exposure were the major complaints about this area of the yard. The small deck attached at the back of the house



was rarely used for these reasons. The landscape beyond their boundary line affords great views of the nearby pasture and meadows. It was important for the couple to keep this view of the pasture open from parts of their back yard.

The process

Methods used for working with these clients involved an open-ended questionnaire which provided information about their lifestyle as well as landscape preference. Each spouse was given a questionnaire and asked to respond without the aide of the other partner. This was done so that personal information could be obtained from each person. A sample of the questionnaire administered to the clients can be found in Appendix A. Inspirations from reading Julie Moir Messervy's, The Inward Garden, helped formulate some of the questions in the questionnaire. Messervy frequently engages her clients to recall favorite childhood landscapes, fantasy landscapes, and other personal memories when designing an inward garden.

To further distinguish which types of landscapes the couple preferred, time was spent looking through a variety of garden and landscape architecture books, magazines and photos. Also discussed during this session were specific preferences about color, plant material, and overall style for the garden design. Other areas of discussion included potential grade changes, garden structures, and hardscaping materials. Once it became more clear which types of styles and preferences the couple preferred it was time to start designing.

The design

The approach taken for designing the space was a series of design alternatives from which the couple could choose one or take pieces from several and recombine into a

new plan that best fit their liking. A series of seven designs were presented to them and from those designs the couple chose two particular designs, each having some characteristics that they wanted to incorporate into a new plan. A description of the final design chosen by the couple will be discussed next.

The restorative garden designed for this residential home incorporates ideas and preferences suggested by the clients coupled with those of the designer whose background is in landscape architecture and ornamental horticulture. The collaboration

between the designer and design plan that was restorative garden will now

Upon approaching drive up the gently From the parking area the the new footpath that leads to the front door. Another around to the back of the into the beginning of the clients choose to enter the



the clients was key to the final chosen. A journey through the be presented.

the residence the client will serpentine asphalt driveway. client can enter the home from through a small grove of trees option is to follow the footpath house, through an arbor and backyard garden area. If the house from the front door they

enter the front foyer where they may go left into the living room area or right to the bedrooms or straight ahead and into the kitchen and dining area. The dining area has a bay window that looks out over the backyard. From this window the client can see a flowerbed and three columnar eastern red cedars (*Juniperus virginiana*). These three evergreens provide wildlife food and shelter as well as screen the garden pathway that

circulates the garden. The back door leads the clients onto a cut-stone terrace that features a circular planting bed ideal for kitchen herbs and is easily accessible from the kitchen. This cut-stone terrace functions not only as social space for entertaining but may also be a quiet space for sitting alone in the backyard and reading. The terrace also connects the house with the detached garage. The terrace also reduces the amount of lawn maintenance in the backyard. It is bounded on the south side by the back of the house and on the west side by the garage. On the east side of the terrace are steps that lead to a footpath that circulates through the garden.

Heading north from the terrace one finds a wood arbor that is surrounded by a boxwood hedge. This arbor opens out onto an expanse of lawn that carpets shade trees and a meadow that borrows the adjacent pasture. This pasture is not a part of the property; however the view it affords is quite pleasant from the garden. The footpath once again ties in at this point and as one navigates around the path one comes upon a small garden room of eastern red cedars. Within this room is a sitting area and a simple stone basin filled with water that offers a reflective space in the garden.

Plantings are mostly shade trees, evergreens, perennial and shrub beds and a patch of meadow that seems to melt into the neighboring pasture. The sides of the property are loosely screened from nearby neighbors with evergreens. The evergreens help define the space and allow for more privacy and relief from potential nearby distractions. Some lawn was left in the back of the house because the couple enjoys the green carpet it affords the garden.

The clients rarely entertain large groups so the main use of the garden space is for their own private retreat. Maintenance of the garden is moderate because they both

prefer to enjoy the garden as a visual retreat more than as a physical activity. Perennial beds along the east side of the deck and adjacent to the dining room window allow for easy access to flowers to be used in indoor arrangements as well as pleasant views from inside the house and sitting out on the deck. The garden space may be further defined by the inclusion of garden structures like the proposed arbors which divide the garden into various rooms.

Pilot Study 2

A Meditation Garden

For the second design project the focus was on creating a garden for meditation. The word “meditate” is defined as “*vi* to consider thoughtfully (*with on, upon*); to engage in contemplation, esp religious. -*vt* to consider deeply; to intend.” (Webster pg. 338) For this pilot study a small business in downtown Blacksburg, VA was the design site for a small meditation garden.

The client

The clients for this project consisted of three holistic counselors who run this small alternative health facility. The clients requested the garden to feature meditation areas for clients and visitors to use. The clients all work closely with their patients and tend to focus on meditation, contemplation, and mindfulness as a part of their therapeutic approaches. Having an outdoor space that could allow for these types of quiet and personal engagements would benefit this small site.

The site

The Center for Creative Change is located on 205 Washington Street in downtown Blacksburg, VA. This business offers holistic counseling services as well as a

variety of workshops and classes. The counselors at the Center encourage meditative and mindful based therapies. Yoga is one type of therapy practiced at the Center. The basis for this design project was to create a meditation garden to be used by the staff and clients of the Center.

The Center is based in a small residential setting. The old house that has been converted into office and meeting space is bordered on one side by a space that is suitable for a small garden. Access into the Center is from the back of the building. Parking is also located in the back of the building. A drive approaches the house and plantings on the site now are in relatively good condition, but there is no designated outdoor sitting



space at the site. Another concern is the busy main street that the house affronts. Townspeople and others who are entering and leaving the nearby college campus travel this street daily. The noise from the passing cars is distracting for both those in the Center and those who walk outside along the planting beds.

The process

A survey was conducted with the three holistic counselors at the site as well as with a Vinni Yoga class, which consists of a small group that meets Monday mornings. The method of obtaining personal input from the class members and counselors that was used was in the form of an open-ended survey. The survey used is shown in Appendix B. Questions for the survey were based on theories and suggestions from landscape architect and author of Contemplative Gardens, The Inward Garden, and The Magic Land, Julie

Moir Messervy. From this survey important meditative garden and landscape preference data were obtained and incorporated into a series of potential designs. From this series of design alternatives a final design was created that incorporated numerous the ideas offered in the survey.

The design

A concerted effort was made to incorporate elements that stimulate the senses as well as provide a sense of enclosure and intimacy. This was done because the survey indicated these things were

the prospective users. Certain more important than others and consideration when choosing material, colors, garden art and with regard to color, shades of green were especially brighter colors such as orange, encouraged in some areas of be incorporated in the garden associated with water as well as



especially important to senses proved to be this was taken into plant and hardscape sculpture. For example, blue, violet, white and envisioned, but hints of red and pinks were also the garden. Sounds to were predominantly birds and the rustling of

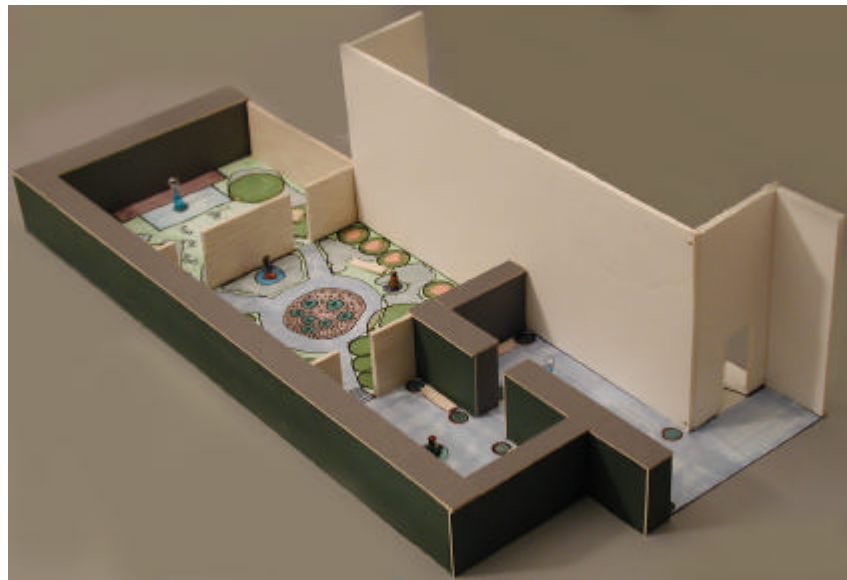
leaves. Plant types suggested for the garden included evergreen and shade trees, tall ornamental grasses, clumping bamboo in containers, and hostas. The plants selected tended to be part of a varied green palette. Some use of flowers was also desired but was less important than foliage. Ultimately the plants chosen for the garden were:

Acer palmatum

Japanese maple (red or copper fall color)

<i>Artemisia 'Alba'</i>	Wormwood (fragrant, yellow flowers)
<i>Carpinus caroliniana</i>	Ironwood (orange, red, yellow fall color)
<i>Cercis canadensis 'Alba'</i>	Eastern Redbud (yellow fall color, white flowers)
<i>Ginkgo biloba</i>	Ginkgo (yellow fall color)
<i>Hosta x 'Guacamole, 'Aphrodite'</i>	Hosta, (purple and white flowers)
<i>Hosta tokudama</i>	Plantain lily (purple flowers)
<i>Juniperus chinensis 'Spartan'</i>	Chinese juniper (evergreen)
<i>Pennisetum alopecuroides 'Hameln'</i>	Chinese fountain grass (pink flowers)
<i>Pervoskia atriplicifolia</i>	Russian sage (fragrant, purple flowers)

The use of sculpture was also highlighted in one survey which was consistent with the intentions of the designers. Other elements that were preferred as indicated by the survey include garden paths, a water feature, sitting areas, a wall to surround the entire garden and screens to divide the garden into rooms, stone, and wood. When asked whether or not to design the garden as one open space or as a series of small garden rooms the preference was for the latter. Another preference as stated



in the survey was to allow for parts of the garden to be sunken to add some relief to the site.

The final design of the mediation garden was intended to create an enclosed series of small garden rooms that encourage contemplation and reflection. Sculpture was carefully chosen to relate to the garden as well as encourage contemplative meditation. For example, as one enters the courtyard one sees an abstract sculpture of the Earth Goddess, Gaia. This particular archetype was selected to highlight the connection between humans and the Earth. A second more life-like Gaia sculpture is found in the second courtyard. This particular Gaia is a piece to be viewed from all angles and is



designed for that purpose. Other sculptures in the garden include the ancient “Green Man” archetype. The Green Man is represented in the garden in two different sculpture pieces. Like Gaia, the Green Man is the male archetype that symbolizes the connection between humans and the plant world. The Green Man is also a reminder of the changing

seasons. (Anderson and Hicks, 1990) Another sculpture chosen for this garden is one done by the earthworks artist, Andy Goldsworthy. This sculpture is a series of stones stacked in a column



with each stone balancing on the next. In the final garden room a water feature was designed as a focal point as well as an element that encourages reflection and provides soothing sounds for garden inhabitants throughout the three main garden rooms.

Final Study

Sanctuary is defined as “a sacred place; a place of worship; the most sacred part of a temple or church; a consecrated place which affords immunity from arrest or violence; the privilege of refuge therein; an animal or plant reserve.” (Webster pg. 482)

Sanctuary gardens may include more qualities and a broader meaning than healing gardens. Ultimately the goal of the design for the garden should be to provide sanctuary; sanctuary for humans and for the diversity of flora and fauna within the garden.

The client, Donna Douglas, and I collaborated on the final design using some of her ideas and personal preferences along with my horticultural expertise and design background. Donna and I worked together closely to understand the site and create a design that was both suitable for the location and met her desires.

A Sanctuary Garden

The client

Donna Douglas, a certified social worker and counselor, has lived on this site for the last 14 yrs. Her original intention was to design the site for co-housing. She and a partner worked on this project together. However, later after a series of events Donna decided to take a personal journey out West to deal with life issues.

A major event while on this journey had a significant impact on Donna's life and a seed was planted. From this seed a sanctuary grew, a healing retreat would become Hawk's Ridge, the totem animal for the site.

Donna realized the opportunity she had was to offer a place where people in need could heal among nature. Donna encourages her clients and retreat seekers to commune in and among nature. She works with children and adults, individuals and groups and

firmly focuses on mindful-based treatment. She explores a range of cultural practices in her therapeutic approaches from yoga to massage and even offers indoor and outdoor spaces for such activities including a traditional sweat lodge. She stresses the importance of conscious breathing.

When first approached about designing a healing garden on her site Donna was very enthusiastic and open to any ideas and suggestions. Throughout the process she maintained this enthusiasm and was a wonderful client to work with and learn from.

The site

Hawk's Ridge Retreat is a 77-acre rural retreat in Floyd County, VA that offers holistic counseling and therapeutic practices with the extra-added advantage of being set on a large rural landscape. The site features steep terrain, open meadows, woods, a beautiful stream and miles of hiking paths.

Structures on the site include Donna's house, the Zendo which features Donna's work space on one level and overnight accommodations on another level, a small cabin, a yurt, and two outhouses.



Hawk's Ridge has many natural healing qualities as it is. The intention for this design was to elaborate on these qualities and further celebrate the beauty of the site.

The process

For this final study the use of questionnaires and surveys was abandoned for a more personal approach. I worked with Donna in a series of interviews held at Hawk's Ridge where we could not only talk about the site but also easily view it and explore it.

We spent a great deal of time talking about her retreat, her clientele, her interests and desires so I could best understand what a healing garden meant to her. The information gathered from these series of interviews was more insightful than the previous survey methods. As a result it is clear this is the standard method recommended for engaging a client throughout the design process.

The design

It became apparent early on in the interviews that for Donna plants, water, structures and art would be a major part of her healing garden. In this case Donna was interested in having gardens that she could actively work in. She agreed that currently the elements of the site were disconnected and that the various parts needed to be reorganized so they would work as a whole.

The basis for the design was a series of garden rooms connected by paths. Garden



rooms were created to contain the various activities provided on the site. The

paths were placed in such a way as to provide a journey of discovery for the visitor to the site. These paths were laid out in such a way that all of the rooms were linked but that also allowed for them to be moments revealed along the journey.

The road leading to the retreat is marked by a gateway that announces the visitor is entering the site. This gateway symbolizes the basic belief of the owner of hawk's ridge: health is a balance of body, mind and spirit as shown in the three circles that form the gateway arch. The entry to the site is reworked in such a way that the road into the retreat offers not only beautiful rural views but also personal interest as reflected in the series of sculptures to be created by Donna and posted at the edge of the road.



The drive leads to a parking area designated outside the garden wall beyond which lies the start to a secret garden that can be discovered by those who venture through the garden gate, this design was inspired by Donna's trip to a particular Chinese garden. Within this parking area are two noted spots of interest. First, when the existing Walden cottage was moved to another site a small basin was left in the ground from a composting toilet. This basin served as the foundation where a small fountain was created. This fountain is in line with the garden gate and can be enjoyed in both entering and leaving the site. A second special spot located in the parking area is an overlook platform that offers a spectacular mountain view of the property. This overlook will gives visitors a glimpse of what Hawk's Ridge's walking trails have to offer. Another special part of this parking area is the private entry drive allowing Donna easy access to her



house. This drive can be gated off or left open for deliveries and other times when direct vehicle access is necessary.

The garden beyond the garden gate is the entry marked by a large sculpture located in front of the two buildings. This sculpture is to be designed by Donna; I have only offered a suggestion. This sculpture should relate to her ideals and the mission of the retreat and shall be referenced to in other areas of the site.



The House:

The garden proposed for this front area is predominantly groundcover and trees to reduce mowing and maintenance in this area. A small herb garden has been relocated next to the house for easy access to herbs. Surrounding the Zendo is the existing patch of jasmine which has blooms that offer delightful scents to visitors sitting on the brick patio

adjacent to the garden. A small fountain designed by Donna has been incorporated into the small gravel walk that leads from the patio to the patchwork garden. This fountain will not only delight those gathered



at the patio but also for those seated on the deck attached to the house above the fountain.

This fountain is flanked to the right by a massing of *Panicum* sp. grasses as well as the existing sumac and willow trees.

On the other side of the house is the newly constructed greenhouse and soon there will be a hot tub located under the house deck. For this side of the house the intent was to provide a more private area for the owner

since she will be the primary user of the greenhouse and hot tub located near her residence. In order to create this room

various shrubs were located in islands around the side yard. These shrubs include

white flowering fothequilla, lavender flowering butterfly bush, peach azaleas, blueberries and a triad of eastern red cedars. These shrubs not only offer pleasing views of texture and color year round but also provide food and habitat for wildlife. The second island of shrubs is flanked by the patchwork garden which leads around to the back of the house.

This garden will be discussed later.

The Zendo

The two-level Zendo doubles as Donna's counseling space as well as an overnight retreat for groups visiting Hawk's Ridge Retreat. The attached deck that wraps around it enlarges this small building. In the front garden of the Zendo there is a mixture of more shade tolerant plantings such as hosta and

foamflower. A small rustic gazebo is located to the edge of the property near some shade trees. The other side of the Zendo is an open lawn which serves as a play area for children visiting the retreat.

A tree swing and sandbox are provided in this area. A mowed trail leads from the lawn



into the woods of the site. This trail loops into other trails and brings the adventurer to the Laurel Branch Creek below. Directly behind the Zendo is a small boxwood labyrinth which is intended for use by all visitors. This small garden can offer a fun activity for children as well as a reflective walk for adult visitors. Centrally located in the labyrinth is an interactive fountain. It is a simple concrete basin on a pedestal with three metal circles that chime when they strike each other. This simple event can be produced by the wind or by human hand.

The Patchwork Garden

The patchwork garden was designed as an experimental and experiential garden for its users. Experimental because it allows Donna to test out a variety of wildflowers, such as purple coneflower (*Echinacea purpurea*), black-eyed Susan (*Rudbeckia fulgida*), Russian sage (*Pervoskia atriplicifolia*), yarrow (*Achillea spp.*), switch grass (*Panicum virgatum*) grasses, and small flowering shrubs such as dwarf fothergilla (*Fothergilla gardenii*) as well as her art pieces. Experiential because the loose structure of the garden and variety of plantings allows for a great mixture of color, texture, and scent to be enjoyed by anyone stepping from stone to stone along a meandering path in the garden. This garden also offers a bench situated for spectacular views of the garden as well as the adjacent meadow. One path through the garden leads the user to the existing sweatlodge while another joins up with the large mowed main path through the rest of the site.



The Meadow

The meadow is what links all of the garden rooms together. The meadow also provides habitat and food for wildlife on the site. The swaying grasses and flowers of the meadow also reference a garden that is not visible from this view. The meadow

symbolizes water; the grasses sway to the movement of the water. The ultimate goal of this journey is to the creek that runs in the valley of this mountain. Hints of the creek are reflected in this meadow. The paths that are mowed in the meadow are curved to resemble the serpentine flow of the creek. Smaller footpaths



sway to the movement of the this journey is to the creek that mountain. Hints of the creek The paths that are mowed in the resemble the serpentine flow of veer off from and feed into the

main path. These smaller footpaths allow for discovery and exploration of the site. All spaces are linked and the paths lead the user to the various rooms. A bluebird house trail is also located in the meadow across from the patchwork garden.

The Sweatlodge

The existing sweatlodge is located in the meadow. This location is ideal because it allows for unblocked views of the surrounding gardens and woods. A small herb garden was proposed adjacent to the sweatlodge. Herbs for use in ceremonial practices such as sage for incense can be grown in this garden and will be easy to access when this space is in use.



The Yurt

The existing yurt is a 24 ft diameter wood structure housed on a platform. Directly beneath the yurt is soon to be Donna's ceramic studio and a root cellar is next to that space. The yurt is generally used for group gatherings such as yoga and mediation retreats. The yurt is another type of ceremonial space and was intentionally located farther away from the more active spaces like the house and zendo. The proposal for this area was to create a garden room for the yurt that would have distinct entrances to the site and partially conceal the area from direct view so as to create a feel of mystery and privacy. A simple trellis with attached benches is adjacent to the yurt. The trellis will be covered with morning glory vines to create a more private sitting area as well as offer relief from the sun. A small perennial garden surrounds this small area. A larger perennial garden of flowers such as daylily and panicum grasses spans and screens the yurt platform and foundation. Shade trees were located near the yurt so as to reduce sun exposure and offer interest. The Trident Maple is the tree chosen for this purpose, it's bark and fall colors are two of its lovely qualities.



Walden Cottage

Across from the yurt is the newly located guest cottage. This two-person cabin is ideal for a weekend getaway. The cottage is located in a proposed forest of blackgum, downy serviceberry and trident maple trees. These spectacular trees offer spring flowers and showy back as well as vivid red, orange and yellow fall color. In addition downy serviceberry and blackgum provide food and habitat for wildlife. This quaint wooded retreat is ideal for those who would like a stress-free getaway among nature with scenic views and links to hiking trails.



Threshold

This particular part of the journey suggests that there is something special to be seen. Hemlock trees on either side of the proposed gateway flank this first threshold. Boulders line the immediate area leading to the gateway and conjure up thoughts of a streambed. Once through the gateway one will begin to hear the sounds of water, suggesting that if one follows this trail they will discover a creek or waterway. A sitting area is proposed a little farther down at a bend in the trail. From this point sounds of a waterfall can be heard and enjoyed by people who stop for a rest. If one continues down this trail they will be led to a second threshold that will announce that one is entering a new space, a woodland stream garden.



Teahouse Journey

Once visitors have passed through the second gateway they will discover a woodland garden full of ferns and shrubs and trees. A rock wall adorns a small structure nestled in the woods off to the side of the trail. In front an open meadow is revealed. This meadow is a space for activities such as yoga, tai chi and meditation. The small structure nestled behind the meadow can be accessed via a stone path. It will be discovered that this structure is a teahouse complete with a small stove for sharing a tea ceremony. A circular window allows views from the teahouse to the surrounding meadow and woodland stream.



Woodland Stream Garden

A woodland garden surrounds the stream. Various plantings of water loving plants like Japanese primroses, cardinal flower, and cinnamon fern adorn the streamside. This woodland garden is mostly contained within this streamside surrounding the meadow. Further on along the stream the impact of man is less evident other than some a bridge and a bench placed along the trail occasionally.



Trails

Woodland trails are lightly marked and easy to follow for a refreshing hike through Hawk's Ridge. Deep woods of rhododendrons and trees create this woodland garden.

Bridge to Waterfall

A rustic bridge is proposed to gain access more easily for visitors to journey to the waterfall. This bridge was proposed because at certain peak times the stream is not crossable without walking in the stream. For those who would prefer not to get wet they can use this bridge.



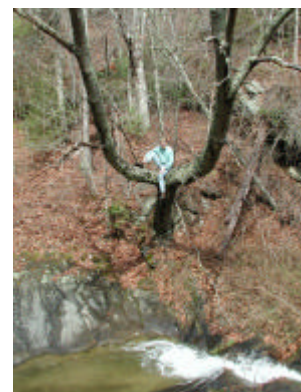
Waterfall

The climax to this journey is the small-scale natural waterfall that is found once one crosses over the stream. There is a wonderful Y shaped tree hanging out over the



water level is high the white noise produced by the waterfall is so intense that one can become immersed in the beauty of the water and the surrounding trees.

waterfall that offers a great perch from which to view the waterfall. This is a favorite spot of visitors to Hawk's Ridge. At certain times when the



Chapter 5

Conclusions

Conclusions

What was learned from different interview styles/outcomes

As mentioned in the final study the recommended method of engaging the client throughout the design process should involve several opportunities for the client to verbalize garden preferences, desires and needs for the designer to consider. Setting up a series of interviews with the client will encourage these opportunities. The best way to determine what the client desires for the garden is to be direct. It is up to the designer to take that information and design a space that fits those needs and desires. The design should not just provide the desired qualities and elements but also relate to the client on a variety of levels. The designer's job is to create a space that not only fulfills the client's requests but goes beyond what the client expects. The various tools and knowledge that the landscape architect has can help describe the design and create a unique space for the client.

Suggested Design Guidelines

From the two pilot studies as well as the literature researched for this thesis a series of basic guidelines were created to help designers of healing gardens through the process of designing a healing space for their clients. These guidelines highlight the qualities of healing spaces that were frequently an important part of the pilot study designs, also the recommendations in current research and literature on healing gardens are important to consider. The most important guideline for healing gardens is noted below:

The client should be involved throughout the design process

The idea of participatory design is not a new one in garden design. But when designing a healing garden one should work closely with the client so that the design will

ultimately fulfill his/her personal needs. A healing garden could not serve its intended purpose if it did not achieve the desired effect(s) the client wanted. Involving the direct participation of the client(s) with design process is one of the most important guidelines to follow when considering a healing garden. After all, the healing garden will ultimately be used and experienced by the client and should therefore reflect his/her needs and desires. One should involve the client by means of personal interviews, written surveys and questionnaires, the client should take part in establishing ideas and in other ways that engage them and allow them to express ideas. By working with the client, the designer will obtain answers to the appropriate questions that indicate the healing needs of the client. Working with the accumulated results the designer may create a garden plan that meets the client's specific needs.

The garden should stimulate the users senses

“Gardens should be stimulating environments – both mentally and physically – and can be designed to provide a rich sensory experience. Sight tends to dominate, but sometimes all you need to do is close your eyes and wait for the other senses to wake up and provide an unexpected new appreciation of the garden you never knew you had!”
(Rawlings, pg. 12, 1998)

One particular quality of healing gardens is that they are designed to stimulate some or all of the senses in such a way that is beneficial to those experiencing the garden. There are five senses that can be stimulated within the garden setting. All or some of these senses may be chosen as a focus in the design; smell, touch, taste, hearing, and vision.

Sight

“Sight is the most immediate of all the physical senses. We do not have to do anything other than open our eyes to experience an ever-changing kaleidoscope of light and color, which has a profound effect upon our wellbeing...Decades of research show that color influences our thoughts, our actions, our health, and even our relationships with others.” (Rawlings, pg. 65, 1998)

The use of color can be a great element to use in the garden. The meanings and healing abilities vary for each color. For example: “Orange is primarily the color of joy; exposure to it promotes a feeling of wellbeing by providing a release from the everyday worries of life.” While, “Blue is an ideal color for places or healing, since it encourages relaxation and tranquility (Rawlings, pgs. 78 and 84, 1998) According to Rawlings, “There is no ‘best’ color for healing, and the choice should be an entirely personal one.” (Rawlings, pg.72, 1998)

Smell

Perhaps the best way to explain this sense is through a passage written by Diane Ackerman:

“Nothing is more memorable than a smell. One scent can be unexpected, momentary, and fleeting, yet conjure up a childhood summer beside a lake in the Pocono’s, when wild blueberry bushes teemed with succulent fruit and the opposite sex was as mysterious as space travel; another, hours of passion on a moonlit beach in Florida, while night-blooming cereus drenched the air with thick curds of perfume and huge sphinx moths visited the cereus in a loud purr of wings; a third, a family dinner of pot roast, noodle pudding, and sweet potatoes, during a myrtle-mad August in a Midwestern town, when both of one’s parents

were alive. Smells detonate softly in our memory like poignant land mines, hidden under the weedy mass of many years and experiences. Hit a tripwire of smell, and memories explode all at once. A complex vision leaps out of the undergrowth.” (Ackerman, pg. 5, 1990)

Fragrances can be the basis for a garden design. All of us know of certain smells that have particular meaning to us. The practice of aromatherapy is gaining popularity today:

“Scientists have discovered that ‘sweet’ essences such as mimosa or chamomile produce alpha, theta, and delta brainwave patterns, implying a state of relaxation or even sleep. Other fragrances, such as rosemary, induce beta brainwaves; these are more rapid patterns and denote a state of alertness. A few oils, for instance lavender and geranium, have a balancing effect; they either invigorate or sedate according to the needs of the individual. Interestingly, it appears that these reactions do not occur if an aroma is disliked; this appears to block any effect upon the nervous system. Perceptions of ‘pleasant’ and ‘unpleasant’ are, of course, highly subjective and memories of a scent will affect an individual’s reaction. This might help to explain why two people respond so differently to the same essence(s).” (Rawlings, pg. 128, 1998)

The designer should ask the client what sorts of smells conjure up pleasant memories and include those scents where possible in the design.

A fragrant herb garden might be the perfect idea for someone who loves the variety of smells that can be provided. Plants that allow the garden user to caress and touch with their hands and/or feet can fill the air with delightful scents. “We can amble

along and touch aromatic plants, calling them into life as they are needed.” (Adams, pg. 44, 2002)

Taste

A third sense, taste, is closely related to the sense of smell. “Smell contributes grandly to taste...We often smell something before we taste it, and that’s enough to make us salivate.” (Ackerman, pg. 141, 1990) Like the sense of smell, taste can also be explored in the garden. By including fragrant and edible plants, garden users can experience yet another level of sensory stimulation. If taste is going to be encouraged in the garden, the designer should only include edible plants. Do not specify any plants that are toxic to humans. Many herbs can be eaten as well as a variety of fruits and vegetables. An edible garden can be a wonderful addition to a residence. “For many, a garden is not complete unless it contains a few plants that grown for the sole purpose of being eaten. One of the greatest joys of gardening is sending your taste buds into raptures over the flavor of ‘real’ fruit or vegetables.” (Rawlings, pg. 36, 1998)

Touch

“In texture alone, plants offer an enormous variety of sensory experience, yet this is, to date, a much under exploited facet of gardening.” (Rawlings, pg. 12, 1998) When designing a garden that stimulates the users sense of touch consider interesting tree bark types that engage the user and invite them to explore the texture with their fingers. For example, trees with peeling barks like Paperbark maple (*Acer griseum*) and Snakebark maple (*A. capillipes*) offer not only attractive plantings but also very interesting bark that encourages garden users to explore them more intimately. Other examples of tactilely inviting plants are the soft leaves of lamb’s ears (*Stachys byzantina*) or male catkins of

pussy willow (*Salix sp.*). (Rawlings, 1998) A variety of flowers also offer a diversity of textures, such as satiny petals of cosmos, dangling puffs of bleeding heart (*Dicentra spectabilis*), or dry blooms of everlasting flowers such as statice (*Limonium sinuatum*). Even once the flowers are done blooming and begin to dry into seeds sensory stimulation is further provided by means of touch. Certain seedpods when touched explode, distributing the seed to other places in the garden to come up the following season. “Some seeds even cover themselves in silky hairs and are remarkably soft to the touch; these include *Pulsatilla vulgaris* and many varieties of clematis.” (Rawlings, pg. 13, 1998)

Hearing

Sound can be a very important sense to consider throughout the garden. “There are...times when we wish sound to preoccupy us enough to drive out conscious thought. What could be more soothing than sitting on a balcony and hearing the ocean rhythmically caressing the shore?” (Ackerman, pg. 182, 1990) Water is a wonderful element to incorporate into the garden because of the different levels of sound that it can provide. Heavy water rushing out of a fountain can offer enough white noise to drown out other distracting sounds, such as traffic. Slow dripping fountains can lend a gentle rhythm in a more sedate, contemplative garden.

“Wherever possible, gardens should provide a refuge from the noise pollution and disturbances of everyday life. Living with the daily stress of unwelcome noise, we often forget about the value of sound in our gardens, only becoming aware if noise when it is intrusive, such as next door’s radio or lawnmower. However, we

can design the more pleasing aspects of sound into the garden to introduce an extra dimension and generate a positive mood.” (Rawlings, pg. 13, 1998)

There are other ways to incorporate sound in the garden. “In order to please all the senses, instruments such as wind chimes or bells have their place in the garden.” (Rawlings, pg. 63, 1998) Different plants can also create sound in the garden. Many grasses and bamboos are a great addition to a garden not only for their sound but also for their beauty when seen blowing in the wind. “The hum of bees and other insects on a warm day can be almost hypnotic, although you sometimes need to be quite still to tune into this most gentle of sounds. Birdsong is also a delight...” (Rawlings, pg. 13, 1998)

Particular attention to plant selection can again attract a variety of insects and birds to your garden. For example, some plants to include for attracting butterflies include, butterfly weed (*Asclepias tuberosa*) and butterfly bush (*Buddleia davidii*).

No matter which sense your client would like to stimulate in their garden there is a variety of elements to include that can fulfill these desires. Plant material, garden art, water, wildlife, natural elements like wind and rain can all play an important part in a sensory-filled garden.

The garden should be easy to comprehend and navigate

Ideally, one should know the boundaries, the entrance and exit to the garden. A good idea would be to allow for glimpses into the garden from outside it. The garden should create a welcoming feeling, create a desire in those outside of it to want to explore and enter it. Another way to provide for easy access in the garden is to take care in thinking about how one will maneuver throughout the space. When designing the space allow for discovery, a sense of mystery but not so much that it is uninviting or difficult

for people to understand. The designer might try to consider elevation changes, giving the space interest.

The garden should offer contrast which provides relief from stressful environments

It is important when creating a healing garden to think about how the user of the space will feel. The designer should consider what is calming, soothing for the client. Getting to know how a client spends a typical day away from home can be helpful in creating a functional garden. By noting things that cause the client stress and anxiety the designer can provide elements that provide feelings of calmness, self-awareness, and escape from the everyday worries of life when possible.

When landscape architects design healing spaces they should realize the importance of symbolism in design and how interpretation of symbols can vary greatly from designer to user of the space. An instructive example of this point follows in the passage below:

“One striking example of the symbolic meanings that may be contained within an environment came to light as the result of an oversight on the part of a design team while creating a new cancer treatment center. This situation involved the unfortunate installation of a number of monolithic travertine slabs set at a tilting angle. These stone slabs rise from the floor to diagonally traverse the overhead space of a lower-level radiation waiting room and penetrate the glass building wall above. They continue, extending beyond the wall, up, out and over the adjacent plaza in a way that the medical staff and city planner who reviewed the plans during the city’s approval process perceived as resembling giant tilting gravestones. In reality, these are engineered, structural wall supports that are

rectilinear in form and made from travertine tiles; from the interior, the physical cues are observed to be physically threatening – they look as though they could easily fall down in an earthquake – and from the exterior plaza, they are perceived as an emotionally threatening reminder of a bleak future.” (Cooper Marcus and Banes, pg. 89-90, 1999)

As stated in the first guideline it is imperative to involve the client throughout the design process. Listen to the client and the needs of the design. If there are reservations about a certain elements, whether it is a piece of abstract art or a support wall like the one in the scenario mentioned above, the design should be reevaluated.

Where necessary consider mobility in and around the garden for ease of client use

This principle simply means that care must be taken in consideration of how the user is able to maneuver within the space. Again one must consider the client’s abilities, strengths and limitations when designing the garden to fit the clients desires. Special consideration for material types, grade changes, path widths and materials must be carefully thought out when designing for clients with limited mobility.

Allow the garden to be unlocked and inviting

The garden should be easy to access and inviting. Ideally keeping the garden unlocked is desired. This would be ideal in most cases. An open garden is a welcoming space.

Encourage wildlife (birds, butterflies, small animals, etc.) in the garden

There are many reasons why one should encourage wildlife when designing a healing garden. The theory of biophilia was mentioned earlier in this paper. The innate attraction that humans have to other living things is quite apparent. Common types of

wildlife that are typically encouraged in the garden are birds and insects, but many others can seek shelter, food and habitat for survival in your garden. By planting particular types of trees, shrubs and flowers all of these needs can be met.

For some people the garden must have a “purpose” in the natural world i.e. attract butterflies, hummingbirds, birds and other wildlife either because it provides food, cover or other habitat requirements. In Rawlings book Healing Gardens (1998), she encourages wildlife gardening and gives two reasons why she feels it is important to include wildlife in the garden:

“There are at least two good reasons to encourage wildlife in your garden. First, many insects, birds, and mammals are very efficient pest controllers and, if you adopt an organic approach, will assist in the war against unwanted guests. Second, an important aspect of gardening is the enjoyment of fauna as well as flora in your garden. Who hasn’t delighted at the sight of a *Buddleia* smothered in butterflies, a blue tit dangling from the catkins of a birch, or an unexpected clump of frog spawn in a tiny urban pond? If your garden is filled with bees, butterflies, birds, and other visiting animals, you can be sure that the environment is beneficial and supportive of you as well as them.” (pg. 20)

Reinforce the cycle of life through plants which provide seasonal change

One way to maintain a healing space is to use healthy plant material and take care in regular upkeep and maintenance. Try different types of plants, find out what works and use it. Consider the soil type, the amount of sunlight, the climate, and drainage when choosing plant material in addition to plant qualities like texture, color, fragrance, etc. A healthy plant is key to a successful garden.

Promote reflection and self awareness in the garden

One way to encourage mental or emotional relief from stress, anxiety, or other feelings is to allow the user to have spaces that encourage reflection. Quiet spaces often help fulfill this need, but also white noise and often times a water element can aide the client as well. Work closely with the client to discover ways that are comfortable for them. Another important consideration for the garden is to allow the user to be aware of themselves. Care should be taken in consideration of what types of things encourage reflection, contemplation and even mediation for the client if desired.

Provide a feeling of relief for garden users

The garden should be a welcoming escape and relief from the outside world. When one enters the garden ideally they should feel that they have left behind their worries and have discovered a new place to explore. Work with the client to understand what types of places feel like an escape for them. Consider their favorite vacation places and even fantasy spaces that they would like to make real.

For other people to feel relief from stress they choose to be actively involved in it and not just passively experiencing it. Some users need to be able to touch plants to feel different textures and pick leaves or flowers to crush them to release their fragrance. In addition, in some cases the user might enjoy taking a “hands on” approach in creating the garden. They may capture the garden’s healing qualities by perusing garden catalogs or visiting nurseries to select the plants to be purchased, take part in designing the layout, work on preparing the site and actually planting the plants themselves.

Reconsidering the defining characteristics of healing gardens

At some level all gardens are healing, but what are the distinguishing characteristics that allow certain gardens to function as a healing garden? According to

Colette Parsons, “a healing environment is ultimately a sanctuary that allows for active involvement or passivity.” (Francis, Lindsey, and Stone Rice, pg. 305, 1994) A healing garden is one where the designer pays close attention to the needs and likes of the user(s) or client(s) and is able to provide therapeutic qualities in the space that addresses them. The level at which the garden will function as a healing garden will vary according to its location. A hospital healing garden will be more broadly based and less personal than a private residence but they can each be places for healing if certain universal qualities are incorporated in the designs. All humans respond to certain parts of the natural world that provide healing qualities to them. Some of these include the cycle of life, enclosure and security and relief from stress. The healing garden can provide all of these elements in a variety of ways.

Each site is unique, each client is an individual and various elements can influence the relationship with the client, the designer and the site. All those involved in creating a healing garden bring different ideas, experiences, emotions and understandings to the design process so it is necessary that each one be treated independently. Healing gardens are so individual because many different elements can be incorporated into the design which will provide healing qualities to the space.

Although each garden design will be individual there are some universal qualities that should be incorporated into all healing gardens. As mentioned in the paragraph above there are certain qualities and elements in nature to which most humans respond to regardless of cultural background, religious beliefs, or place of origin. To what do we all respond? The cycle of life is one aspect of nature that impacts everyone. It may be expressed in a variety of ways such as the changing of the seasons. Many herbaceous

plants require only one season to complete their life cycle while others such as trees take several seasons to change from a young seedling to a mature tree.

We all respond to the changes in the vegetation on the landscape over time whether it be days or years. We are all moved by birth and death that we see in nature whether it be the growth of spring bulbs or the dying of plants in the fall. We see these things occurring over and over during the changing of the seasons and recognize the cycle of life that is present in the landscape. Many of us prepare for the dark, cold days of winter as trees lose their leaves and herbaceous vegetation dies resulting in grays and browns that dominate the winter landscape. When spring comes we are greeted with the various hues of green. The rains that are common during this season help create a lush variety of greens. New life begins, baby animals, insects, plants all begin to emerge, bird songs are heard. As time goes by summer is upon us and the plants respond to the sunlight and warmth by blooming. All of these things in nature help us deal with the circle of life and death of loved ones. These are just a few examples of common human experiences.

The garden is the perfect place to celebrate the cycle of life and observe changes in vegetation and weather as the seasons pass. In the garden there is always something to anticipate such as the color of autumn leaves, snow laden tree branches in winter, new leaves, flowering bulbs and bird songs in spring or the fragrant summer evenings.

Another thing we all need is to feel safe and secure. A garden can contain spaces and elements that offer enclosure as well as sanctuary. Providing elements that address these needs should be a part of all healing gardens.

The feeling of escape and relief from stress is also a universal desire. We all need a space of our own that allows us to feel removed from the outside world. Along with the idea of providing safety and enclosure the garden should be an oasis, a place that relieves stress and helps balance our mind, body and spirit. We all need an escape at certain times in our lives and the garden can provide this sense of escape.

The cycle of life, enclosure, and escape are just three examples of elements that are universal; that all humans respond to. These three examples can help inform the design of all healing gardens and still allow for variety and uniqueness within each design. These universal qualities are especially important when designing a healing garden for a large and diverse user group such as in the healthcare setting. They should be a part of all healing gardens.

A successful healing garden should include all of the qualities mentioned above and more. The garden should relate to the client at the most personal level that is achievable. The ability to achieve this personal level will be deeper in the case of a private residence while in the hospital setting these qualities will be provided at a universal level.

In summary, the main points of this thesis are: healing gardens can be healing in a variety of ways, each healing garden is unique, healing gardens should be based on the user's needs. Each of these main points was illustrated in the three design studies. Each of the three designs was unique. The level of healing that was associated with the three designs was varied because the designs were based on each clients needs. The first pilot study involved a residential setting and a young working couple in need of a restorative garden space where they could unwind and escape the worries of everyday life. The

second pilot study featured an alternative health center in a residential setting which needed an outdoor meditative space for the staff and visitors to use for moments of private contemplation and reflection. The final study consisted of a residence and business combined in a large rural setting. The needs for this study not only involved the client who resided there but also the various visitors and patients who came to the site for her professional services. The client desired a garden where she and her visitors could find healing among nature. Each of these three designs were unique, yet they all fulfilled the ideas and preferences for their respective clients. Fulfilling the needs and desires of the client should be the focus of the designer. Healing gardens are not just for the ill; they are for all people, this type of garden celebrates the “Human Condition.”

Appendix A
Pilot Study 1 Questionnaire

Healing Garden Questionnaire

What is a healing garden?

I am designing a healing garden for you and it is my position that the client for whom it is designed should define what a healing garden is to them. I feel that healing gardens are personal spaces that need to fit the clients lifestyle and to do this successfully the client must be involved in the design process. The client can provide vital information that the designer can use as a basis for the garden design. What one person finds healing may be different from someone else. It is my belief that the designer must work with the client(s) to help put the emotional and physical needs of the client(s) into the design. For that reason I have designed this questionnaire as an important tool in creating a healing garden that meets the desires of my client(s). Please answer the following questions as truthfully and thoroughly as possible.

Questions:

- Describe your typical weekend spent at home.
- Describe what you do on a typical evening after work.
- How do you relax?
- How do you typically feel when you return home from work?
- Do you enjoy being outdoors?
- What types of vacations do you enjoy, what are the landscapes like?
- What are some significant spaces to you (childhood home, grandma's house, etc.)
- Are there any particular scents or fragrances you find calming, soothing, healing?
- What do you see the main function of your garden being? Explain.
- Do you intend to be a part of your garden physically or passively? Explain.
- What colors are important for you to have in your garden? Explain.

Appendix B

Pilot Study 2 Survey

Meditation Garden Survey

1. Briefly describe your favorite childhood daydreaming places.
2. Which types of landscapes or landforms do you tend to prefer? Please circle.

Water: ocean, lake, river, stream, creek, etc.

Other_____

Mountain; Peak and Valley

Forrest; Woods

Meadow; Wildflower meadow

3. What features in the garden would you include to invoke feelings of contemplation? Please circle.

Paths

Plants

Water

Wall or screen

Other_____

4. In your opinion how important are the following qualities for a meditation garden? (Very important - somewhat important - not very important.)

Light:

Smell:

Color:

Plants:

Sound:

5. In your opinion, would having the garden raised, sunken, or level with the rest of the site be more contemplative or meditative? Please circle.

Raised

Level

Sunken

6. How often would you visit the meditation garden if one were built as a part of the Center for Creative Change? Please circle.

Daily
Weekly
Monthly
Never

7. In your mind, what would be the general size of this garden?
8. Describe a garden you have been to or one in your mind that invokes meditation or contemplation. From this garden what features or qualities would you choose to incorporate in this meditation garden?
9. Which colors would you include in the meditation garden? Please circle below.

Reds	Blues
Oranges	Violets
Yellows	Greens
Pinks	Whites

10. Which would you prefer, an open garden or a more enclosed garden?
Which would you prefer, a large garden or a series of small garden rooms?

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VITA

Chapter 2 Annalisa Gartman Vapaa MLA – Master’s of Landscape Architecture

- Skilled landscape designer with extensive botanical knowledge. Fascinated with the concept and practice of maintaining and recreating native landscapes. Thesis work in Healing Gardens and how to design them in concert with the particular needs of the customer.

EDUCATION

College of the Atlantic

Bar Harbor, ME

- Major study: Human Ecology

Fall 1993 – Spring 1994

University of Delaware

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- Degree: BSAG (with honors)
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- Internship: Summer 1997, North Creek Nurseries, Landenburg, PA
- Awarded 1996 Undergraduate Teaching Assistantship for Botany 1 and 2

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- Degree: Master’s of Landscape Architecture
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Work

TerraSalis Garden Center

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Experience

- Propagated new life
- Potted nursery stock
- Maintained nursery stock
- Sales representative
- Cashier
-

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COMPUTER

SKILLS

- AutoCAD
- Adobe Acrobat
- Adobe Photoshop
- MS Word
- MS PowerPoint
- MS Excel

INTERESTS AND

Lectures Attended

ACTIVITIES

- Sara Stein, author of Noah's Garden
- Leslie Sauer, Native Plant Seminar speaker
- Ian McHarg, Landscape Architect speaker
- Sim Van der Ryn, Ecological Design
- How to Build a Dry Stone Garden Wall demonstration

Organizations

- Member of ASLA (American Society of Landscape Architects)
- Member of ASLA-VT (Virginia Tech chapter of ASLA)