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HEALING GARDENS
REDEFINING THE PERSPECTIVE OF ROGER ULRICH THEORY

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ABSTRACT

The term "healing garden" is often attached to the green spaces in hospitals or any other kind of healthcare facilities that aim to improve health outcomes specifically. These spaces provide a place of rest and refuge promoting healing in patients, families, and staff. According to two leaders in this field, Clare Cooper Marcus and Marni Barnes, the healing effect comes from the gardens because they enhance relief symptom, stress reduction and

improvement in overall sense of wellbeing and hopefulness. The serenity and tranquility of the overall natural ambience plays a pivotal role in absorbing the plethora of worldly alarming psychological and physiological issues that are responsible for disturbing and turbulent lifestyle of general inhabitant of urban setting. The healing gardens acts as "OASIS" within the densely populated physical fabric all around. A survey by Ulrich has shown that patients with views of nature have significantly less post-operative stay times, fewer negative comments from care-givers, less medication use and experienced fewer minor post-operative complications than patients with views of a wall.

INTRODUCTION

"Nature is but another name for health..."
Henry David Thoreau

A very basic and common question that can be and is usually asked in spectrum of landscape architecture is that why are some gardens called healing gardens, as about every garden there is, serves the purpose of aesthetics, connection to nature and are generally known to be beneficial to health.

The term "**healing garden**" is often attached to the green spaces in hospitals and/or any other kind of healthcare facilities that aim to improve health outcomes specifically. These spaces provide a place of rest and refuge promoting healing in patients, families, and staff. Any good natural environment can fasten the process of healing effectively, but healing gardens are particularly able to do so because humans are programmed in nature by itself to find nature soothing.

According to two leaders in this field, **Clare Cooper Marcus** and **Marni Barnes**, the healing effect comes from the gardens because they enhance the following:

- Relief Symptoms
- Stress Reduction
- Improvement in overall sense of Wellbeing and Hopefulness

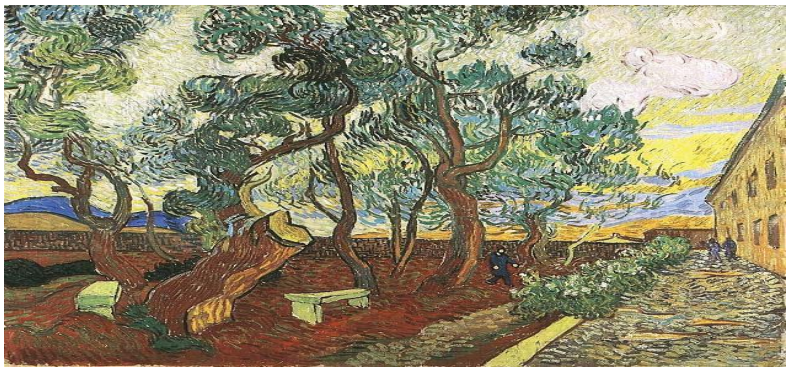

Figure 01: "Garden of Saint Paul Hospital" ~ Vincent Van Gogh
(The artist painted the asylum's garden while he was a patient)

Healing gardens is somewhat variant from other therapeutic landscapes, another term used in healthcare. Therapeutic landscapes or gardens are

designed to meet the specific needs of a certain patient population. While they often engage that population actively and deliberately. Healing gardens, on the other hand, mostly aim towards a more non-active and passive involvement and are designed to provide benefits to a diverse population with different needs.

In addition to the psychological health improvement, reducing patient stress and anxiety has solid physical benefits which is very well demonstrated in a study of patients who underwent gallbladder surgery; half had a view of nature and half had a view of a wall. The half with the nature view tolerated pain better, slept better, reported less stress, and spent less time in a hospital.

Thus, it is no wonder that the Center for Health Design identifies nature as one of the key factors that reduces patient and staff stress and leads to better outcomes and staff satisfaction.

Access to nature promotes health through reduction in stress, depression, myopia, pain, fatigue, aggression, impulsivity, and symptoms of attention deficit hyperactivity disorder (ADHD); and improvement in immune function, bone strength, wound healing, cognition, concentration, emotional resilience, empathy, vitality, relaxation, mood, and satisfaction (Cooper Marcus & Sachs, 2014; Kuo, 2015).

In addition, the Joint Commission for Accreditation of Hospitals (JCAHO) implies that "Patients and visitors should have opportunities to connect with nature through outside spaces, plants, indoor atriums and views from windows."

The positive health effects of spending time in urban green spaces are widely appreciated and accepted, if the purpose of the community is to promote sustainable development. At the heart of the sustainability process is the ability to promote better health for all inhabitants of the city, thus promoting and advertising safe, healthy and sustainable urban habitation process. Research shows that all residents have the right to freely access the urban green space within a radius of 50 meters from their residences.

Studying multiple typologies of garden spaces, the first type is termed as medicinal garden arenas. Simplistically illustrating, a healing garden most often acts like a sanctuary or natural reservoir inhabited by nature and wildlife, circumambulating the aspects and attributes of ECO-System. This is further translated in multiple aspects of cityscape and putting itself as a major stakeholder in the city’s green infrastructure concept. This also includes urban open spaces, green spaces, natural parks and green belts.

The second type is a meditation garden within the peripheral arena of a hospital or any medical facility center. Finally, the third type is privately owned gardens.

A third type is agreed and considered by most healing researchers to be the best type of meditation garden’s healing effect. This is based on the fact that

people are in contact for a long time, Natural; deeper healing results (Hopper, 2007; Vapaa, 2002; and Marcus and Barnes, 1999). The residential or private garden is the pinnacle of the medicinal garden typology. This allows users to derive maximum benefit from their healing properties, because the garden is a personal space that expresses individuality, identity, needs and levels of engagement (Vapaa, 2002).

The purpose of the research is to investigate the private healing gardens as case studies that seek to examine the realities of the 'healing' of such a garden. This also represents a framework that guides landscape design as the process of promoting and creating medicinal gardens considering environmental protection and the concept of healing gardens.

Greenery has the ability to promote active living and public health, thereby tyi ng the value of thenatural environment to a sustainable form of landscape to both the health of the populace and the built environment. The importance of urban greenery for city inhabitants' health has been noted in both Western and Eastern civilizations.

To sort out the attention phenomenology, the brain is capable of are soft fascination connected to,memory region of the brain and directed attention associated with the higher cognitive centres.In a natural setting, the older part of the brain is activated while the higher cognitive centres are at rest, creating a sense of recovery, rest, and healing.It is crucial for open spaces like parks. Public green spaces must be situated close to residential areas.

The number of people visiting gardens would decline and their levels of stress would rise,according to studies, if natural spaces were located more than 50 metres from residential areas.

These results highlight the importance of grafting and reconceptualizing the zonal allocation strategic plans of urban spatial systems and specifically placing a natural area close to the residential quarters. (Stigsdotter, 2005).

It has been observed that "seeing" is the most immediate bodily sense that resp onds to the spatial configuration, while constructing a therapeutic garden. A person merely needs to open their eyes to experience a constantly changing kaleidoscope of light and color, making sight crucial.

Studies and research have demonstrated how color influences human behavior, beliefs, and even connections with others (Vapaa, 2000:64). The human sense of smell plays a significant role in the creation of a therapeutic garden. Researchers have found that the alpha, theta, and delta brainwave patterns that are produced by sweet essences result in complete relaxation. Other scents might increase beta brainwave activity, which would make people feel more awake. If a person doesn't enjoy the scents a garden produces, it will prevent that scent from enhancing alertness by stimulating the neurological system. Thus, it would reduce a garden's ability to advertise its therapeutic properties. This emphasizes how crucial it is to give the garden the right fragrances. Healing gardens must provide a thoughtful balance between the body, mind,

and spirit if they are to represent health promoters (Vapaa, 2002). A healing garden is meant to symbolize the capacity to advance the sustainable status among the three things. By asserting that "the only path to true sustainability is one which promotes the importance of the health of the local environment," Franke (1996) made it abundantly obvious that health is the foundation of the sustainable landscape (Franke,1996: 246). As a result, the Healing Garden can be seen as a sophisticated example of a sustainable landscape whose promotion benefits both people and the environment.

Health research and horticultural therapy programs show a connection between health and the garden (Wells, 1996; Kellert et al., 2008; and Haller et al., 2006). Gardens are seen not only as a source of physical healing, but also as a source of spiritual and spiritual healing. It is also a source of emotional healing (Wells, 1996) for health problems all the time. Health is important because it is what we all strive for and hope to achieve (Kellert et al.,2008). It is a positive state of life that encompasses all aspects of life and environment (Morse et al., 2011). The concept of the healing garden is limited as a requirement for sick people, but important for healthy people
It is also important for sick people. The purpose of this paper is aimed at the most efficient forms of medicinal gardens, identified by researchers as a private home healing garden. In addition, this paper presents a practical framework for the design and implementation of medicinal gardens through case studies and exploratory ideas. The framework was adopted and implemented by Healing garden design project team reporting on their practices regarding experience in designing, planning and creating private medicinal gardens.

Green as a sustainable landscape form having the potential to induce active Living and Public Health; connecting the importance of the natural environment for the built environment and the health of citizens, throughout the globe. Municipalities recognize that greening cities is vital to healthy townscape and inhabitants. The brain allows him to pay two kinds of attention. pay attention to the belonging to higher cognitive centers and associated with monuments is part of the brain. In the natural environment, higher cognitive centers are resting, while old parts of the brain are stimulated, resulting in a feeling of restorative, calming and healing. It is important that public green spaces are close to residential areas. Through the study it is proven that the natural environment which lies outside the residential area with a radius of 50 meters area leads to less and more visits to gardens at stress level. These results demonstrate the importance of localizing the natural environment. The scenario is illustrated for an environment right next to an apartment building (Stigsdotter, 2005).

while designing healing garden, it has been established that "seeing" is the most direct bodily sensational reaction to the garden. Seeing is important because a person only needs to open their eyes. Experience a kaleidoscope of ever-changing light and color. Research proves the impact of color on human thinking, behavior and even health impacts the relationships with Others (Vapaa, 2000:64). The human scene in "Smell" is also very critical in designing a healing garden. Scientists discovered that the essence creates

alpha, theta, and delta brain's wave patterns that lead to the forthcoming next state of acquiring complete relaxation. Other scents can stimulate beta brain's waves and cause: awakening of the human brain. When you don't like the smell of the garden, it builds up the ability to block the action on the nervous system and increases alertness. this limiting the garden's ability to promote its healing powers. This emphasizes the importance of providing the right scent for your garden.

ROGER ULRICH AND THE HEALING GARDENS

In 1984, Ulrich demonstrated that patients whose windows faced a park recovered faster compared with patients whose windows faced a brick wall. Since then, several studies have demonstrated restorative effects of natural compared with urban environments; these effects include increased well-being, decreased negative affect and decreased physiological stress responses. Ulrich suggested that natural environments have restorative effects by inducing positive emotional states, decreased physiological activity and sustained attention. This agrees with Kaplan and Kaplan's theory that nature environments facilitate recovery of directed attention capacity and thereby reducing mental fatigue, and with results showing that positive emotions improve physiological recovery after stress.

In 1993 Ulrich and his colleagues at Uppsala University Hospital in Sweden randomly assigned 160 heart surgery patients in the intensive care unit to one of six conditions: simulated "window views" of a large nature photograph (an open, tree-lined stream or a shadowy forest scene); one of two abstract paintings; a white panel; or a blank wall. Surveys afterward confirmed that patients assigned the water and tree scene were less anxious and needed fewer doses of strong pain medicine than those who looked at the darker forest photograph, abstract art or no pictures at all.

Ulrich has also shown that patients with views of nature have significantly less post-operative stay times, fewer negative comments from care-givers, less medication use and experienced fewer minor post-operative complications than patients with views of a wall (Ulrich, 1984). His studies were so popular that it forms one of the core values of the basics of "Evidence Based Design".
On the same note later, researchers have also found that nursing home residents with physical or visual access to nature have significantly greater caloric intake and exercise than those without (Cohen and Weisman, 1991).

Based on the research by Kaplans and Ulrich, it could be deduced that any garden may have and generally has a healing or soothing impact on humans however, to be defined as such, a healing garden should give a sense of restoration from stress and have other positive influences on patients, visitors and staff/care-givers. These healing landscapes can be located in or outdoors, but to qualify as healing "gardens" they should have real nature such as plants and/or water features (Cooper-Marcus and Barnes, 1999)."

A PRECEDENT: HEALING GARDEN AT MOUNT ZION CLINICAL

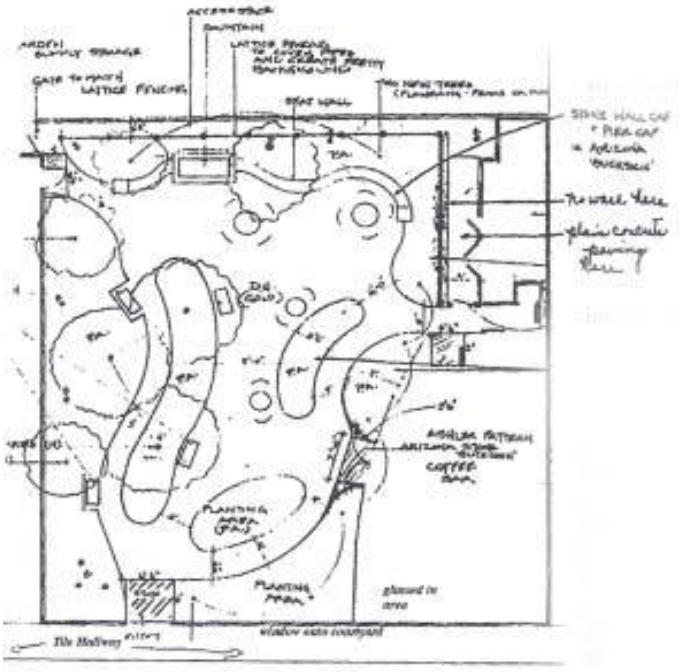

Figure 02: Plan of the Clinical Center courtyard garden

CANCER CENTER, SAN FRANCISCO, CALIFORNIA

The courtyard garden in Mount Zion Clinical Cancer Center is bounded by hospital buildings and a commercial property, thankfully roughly half of the garden still receives direct sunlight at noon. Plants were chosen to provide blooms throughout the year and to provide a variety of green hues. There is a small fountain to screen out noise from a nearby street and many wooden benches, tables and moveable chairs. The garden was once a mostly-hardscaped courtyard, designed by Tommy Church. An artist-patient at the center provided the idea and effort to redesign the space into a more garden-like setting.

During the design process workshops were held where patients and staff provided suggestions on the necessary garden elements. There were also a number of tile-making workshops where patients added their survival stories to tiles with imprints of Asian plant specimens used in cancer treatment (see Figure 03). These tiles made up the wall of the indoor corridor that passes by the garden; the tiles are one element of permanence next to a constantly changing garden. This garden has been quite successful with patients, staff and visitors. It is a green oasis within the hospital complex and gains much of its popularity through the community process that it was created from (Cooper Marcus, 2001).

Figure 03: Involving Users in Design

Figure 04: Access to Privacy

The healing garden portrays the following elements which are basic to the idea of any healing garden as explained in Roger Ulrich's theory.

Sense of Control: Patients/residents must know a garden exists, be able to find it easily and be able to access and use the space in an active or passive way as in this garden. It also has areas for privacy that are shielded from window views as well as open areas (see Figure 06). A variety of types of spaces can aid in allowing users to make choices. Feelings of control can also be enhanced by involving users in the design of the garden (see Figure 03) as well using moveable furniture which helps users alter the layout as per their needs and wishes. (See Figure 05)

Social support: Spatially enclosed settings that allow for socializing are often

Figure 05: Moveable Furniture (Social

Figure 06: Physical Movement and

preferred by users are integrated as part of garden. Designing for small as well as the occasional large group (associated with hospital-initiated programs and large extended family visits) is important. However, all considerations for social support should not deny access to privacy which undermines patient control. (See Figure 4 and 5)

Physical movement and exercise: Mild exercise can be encouraged by designs that allow for patient accessibility and independence and provide features such as walking loops. For children, areas that allow for stress-reducing physical activities and play are included. (See Figure 06)

Access to nature and other positive distractions: Medicinal and edible plant species and those that engage all of the senses are often a good choice for the design's plant palette, as are plants that encourage wildlife. Poisonous, thorny plants, and those plants that encourage large amounts of unwanted insects (i.e., bees) should be avoided, especially in gardens used by children and the psychologically ill (Cooper Marcus and Barnes, 1999).

CONCLUSION

The idea of healing garden as its impacts as explained by Roger Ulrich and many other researchers before and after him has become a living example is many tangible examples like that of healing garden at mount Zion clinical cancer center which not only amplifies this theory but also verifies Ulrich's theory in a substantially simplistic mannerism. Understanding the human psychology and articulating the spatial setting of paraphernalia in conjunction to its required frequency shall be a challenging task for landscape architects, urban design specialists and master planners. Enhancing the existing natural morphological domain of a specific green area and reiterating the spatial conception in such a way that organic developmental significance shall be incorporated. This would create symphony amongst the natural orchestra and psychological mindset instrumentation. This ultimate depth if achieved in synergizing the natural context and user's permeable psychological and mental toolkit shall confer in paradigm shift for conceptualizing "Gardens" that can help catalyze the healing processes.

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