I, Mijin Park, hereby submit this original work as part of the requirements for the degree of Master of Architecture in Architecture.

It is entitled:
Overcoming Social Isolation Through Multi-Sensory Experience

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Overcoming Social Isolation
Through Multi-Sensory Experience

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Abstract

In the United States, the population of homeless people increases every year despite government support. This is mainly due to the shortage of proper supportive housing, public indifference toward homelessness, economic hardships, and the absence of social policy for poor people. Additionally, shelters are stigmatized because they are often associated with “crime, filth, and danger.” Shelters should create an environment mutually beneficial to the homeless and the surrounding community.

This thesis will focus on how the built world improves the well-being of humans and how architecture helps alleviate the isolation of the homeless in our society. Specifically, I will discuss the results of research on homelessness and how that research can be applied in order to suggest appropriate designs for the Homeless Shelter and Community Center in Over-the-Rhine, Cincinnati. As well, I will analyze the environmental psychology and human-environment studies through many appropriate research results. By reviewing documents about the homeless and supportive housing, I will examine the effects of sensory experiences, shelter design and architecture, and space on homelessness and social isolation. This thesis is developed to investigate the impact of space on psychological healing via sensory experiences. It is important to consider how to affect behavior and mental condition through the quality of natural elements. This approach is articulated by critics such as Peter Zumthor, Frank Lloyd Wright, and others, who designed their architecture to heal mental problems through the pleasure of bodily experiences.

The process of the design is presented in my critical essay which covers homelessness, designing supportive housing, and key considerations that can help to ensure their lives in society. I will test the program by designing a homeless shelter and community center integrated into the community that better socializes the homeless within their neighborhood. Also, I would like to demonstrate the possibility of overcoming social isolation by studying humans’ senses as the architectural language. In this thesis, the shelter and community center have architectural, concrete, and practical results which improve the lives of the homeless in Cincinnati.

Acknowledgement

I dedicate this project to my family and Heesung. Thank you for your unconditional love and support. I would also like to express my special appreciation and thanks to my advisor Michael McInturf; you have been a great mentor for me.
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Problem Statement

America is unrivaled in the world when it comes to homeless populations. According to the U.S. Department of Housing and Urban Development, on any given night, an average of 610,042 men, women, and children are homeless in the United States. On a single night in 2013, 109,132 people were chronically homeless. Nearly 85 percent of the homeless population were individuals without families.

Homelessness can be caused by the absence of social policy for poor people, current economic hardships, a shortage of affordable housing, and natural disasters. Veterans with Post Traumatic Stress Disorder frequently return from war to no housing or medical care, while families may experience loss of income which leaves them with no shelter. Homeless individuals, on the other hand, are comprised of those considered to be chronically homeless. Homeless people often suffer from mental and physical illnesses that may need services to help improve. About 30 percent of homeless people often suffer from mental health problems such as drug/alcohol addiction, schizophrenia and severe depression; even with help and support, these people often remain homeless. They need medical treatment, psychological counseling, and supportive educational programs to recover their lives. In the wealth of social detail contained in several Articles surveys, three important characteristics of the homeless are described: (1) extreme poverty and hunger, (2) high degrees of disability coming from poor physical and mental health, and (3) high levels of social isolation, with weak or nonexistent ties to other people.

Architecture is not the first solution that people think of to best help the homeless. However, architecture can perform an important function in providing proper spaces where suffering people can maintain their lives. Architects can help cure the high levels of social isolation and mental illness in homeless populations by providing good facilities for the community. The high level of social isolation and the consequent absence of buffering social ties are common among people who are experiencing homelessness. According to a recent survey, only 60 percent of homeless people maintain even minimal contact with family and friends, while one in three reported no contact with any relatives.

Figure 1.1 Hand Shelter
A public service advertisement to help Homeless people in America

2. Nicole Ng, Reintegrating the Homeless Family, (University of Maryland, Press, 2013), p3.
Social isolation can be both a cause and outcome of mental distress. When a person is isolated, he or she faces increased mental distress, which in turn causes further isolation. This vicious cycle adversely affects many people with severe psychological problems and condemns them to a life of social discrimination and isolation. Almost all homeless people with serious psychiatric disabilities say that the social stigma is inherent in their illness. This stigmatization not only disturbs them from communicating with others but also may prevent them from obtaining care.

Most existing homeless shelters cannot help these people overcome isolation in society. Homeless people usually feel a certain anxiety towards unhealthy environments and cannot co-exist with others in large, uncomfortable dormitories. Currently, there are millions of homeless people who need to stay in supportive facilities that lack the three most rudimentary elements of living—safety, community, and security. It is necessary to consider their mental and physical conditions in order to avoid the worst possible result.

Project Statement

Without a place to stay, people are denied many basic opportunities and necessities of living. It is important to consider the shelter and cultural space of the homeless from a broader perspective. In order to help homeless people with social isolation, we should focus on the impact of architecture on homelessness from a spatial perspective. This thesis aims to discuss how architectural design can help create interconnection between the homeless and others by overcoming social isolation. The design concept will act as a catalyst toward removing the stigma associated with homelessness by providing an eco-friendly and respectable place for those in need. Architecture should create a positive relationship between behaviors, environments, and senses.

Supportive housing should facilitate communication and interaction with others. It should be integrated into the urban context so that people will not be stigmatized and will feel a part of the neighborhood. Since homelessness is a social phenomenon that affects the entire community, the shelter must also reflect the neighborhood. Finally, a community center should connect with other homeless people in the area and give them good opportunities to learn skills and improve their lives. In this shelter and community center, the homeless can stay safe, heal mental illness and physical disorders, learn diverse skills for getting jobs, and enjoy culture. These suggestions will be helpful to homeless people who feel isolated from society, because a permanent place to stay can produce a sense of dignity and create communities. An architect can create a safe space for them and even help restore their confidence.

As stated earlier, this project will propose spaces that heal social isolation for homeless people within the shelter and community center. New spaces for interconnection with others can help to treat their basic mental illnesses beyond current problems. This project proposes spaces that allow all homeless people in the Cincinnati downtown area to come together and experience the shelter and community center as a community hub.

Chapter 2

Context

Context of Cincinnati and Over-the-Rhine

Analysis of Homelessness in Cincinnati
Context of Cincinnati and Over-the-Rhine

History

Cincinnati has a complicated history of population diversity. Cincinnati developed as the hub of trading and commerce for the Northwest area, containing canals and the Ohio River, which was an important route connecting cities in the 18th century. The first flow of immigrants were Germans in the early 18th century, and they mainly settled in the north side of downtown. The Germans named their new neighborhood Over-the-Rhine.

Before the American Civil War, Cincinnati was a path for thousands of freed blacks and runaway slaves escaping the South. These migrants seriously troubled Cincinnati’s native white population, and blacks were forced to live in the worst living environments in the city. To this day, the high crime rate in the Cincinnati downtown area has been attributed to the black population. This is the reason for the current segregated living areas by race.

In the mid-20th-century, housing reform and the construction of I-75 pushed many black people out into Over-the-Rhine. After this movement of poor people, the city’s population declined and affected all industry, businesses, and living conditions in the 1950’s. By the 1990’s, Over-the-Rhine was as notorious for serious poverty, violence, and crime as Los Angeles.

Potential for Change in Over-the-Rhine

By 2000, the population of Over-the-Rhine (OTR) consisted of over 76% blacks. [2000 Census data]. People were afraid that their neighborhood was filled with notorious criminals, which contributed to the racism ingrained in downtown. However, currently, the city has encouraged and supported the urban redevelopment of Over-the-Rhine in order to make it a safe place to live.  

According to Cincinnati census data, the population is shifting once again, this shift is from poor to rich, as the result of focused redevelopment planning in Over-the-Rhine. Recently, this drop in population has been caused by the movement away from urban areas due to public transportation and new social and economic patterns.  

During the last several years, the decrease of population has been caused by a lack of investment in the neighborhood. Over-the-Rhine tends to be poorer and younger than the rest of the city. Between 1990 and 2000, the population under the age of 18 was 35%, compared to the city’s average of 29%. In 2000, Over-the-Rhine’s under-18 population had decreased to 29%, which was generally higher than the city’s average of 24%. 

* See table below for the Population in Over-the-Rhine (OTR) from 1980 to 2010.

Current Homelessness in Cincinnati

12,325 people were homeless in Ohio in 2013, the lowest number recorded in the PIT (Point-in-Time) Count data since 2010. There was roughly a 12% decrease in total homelessness between 2012 and 2013. However, in Cincinnati, the homeless population has increased in recent years.  

According to the US 2010 census report, about 31% of the residents of Cincinnati are operating below the poverty line. In particular, 58% of these people live in Over-the-Rhine. This is a serious social problem that has potential ramifications in the Cincinnati downtown area.

*See the table above for Ohio Continuum of Care (CoC) break down of number of homeless people in Cincinnati/ Hamilton from 2010-2013.
Currently, in Over-the-Rhine, there are several facilities for homeless people, but they are mostly located in Southern Over-the-Rhine. Northern Over-the-Rhine is one of the poorest areas of the neighborhood and does not have proper supportive housing and facilities for homeless people. The homeless shelters and drop-in centers here do not have viable living conditions. The current demand for occupancy by homeless people exceeds the available space. Homeless people need better facilities to treat their physical and mental illnesses in this area.

There are several community service centers and churches that support poor neighborhoods in Over-the-Rhine. Despite their support, there is still not enough space to satisfy the needs of Over the Rhine’s homeless population.

*See the data above for homelessness in Over-the-Rhine, Cincinnati.*
Chapter 3
Precedents

Current Precedents for Homeless
The New Carver Apartments are located near Skid Row, south of Los Angeles' fast-growing downtown. The project’s 97 units provide supportive housing for formerly homeless elderly and disabled residents of downtown in order to support the chronic homeless population. The apartment’s six-story circular form looks like a spiraling shape and has a private courtyard in the building’s center. The courtyard can provide natural lighting and views of each unit in all directions.

The project is a good example of how good social housing design can improve poor people’s lives. Adjacent to kitchens, a dining room, and other living spaces are “medical and social service spaces,” creating an interactive network of communities connected to each unit and to the city as a whole. The apartments not only create a place to live, but they also provide a safe and protective space from which to grow. According to Mike Alvidrez, an executive director of the trust, people can discover “the therapeutic value of good design” in the apartments.

“There’s an optimism about our buildings. They indicate that there’s a solution to a seemingly intractable problem. On the street, the homeless wonder if anybody cares whether they live or die. Michael understands how to integrate architecture with our program and send a message to the larger community.”

Richardson Apartments

Drs. Julian and Raye Richardson Apartments provide 120 supportive studio units for low-income, formerly homeless people, many with mental and physical illnesses, in downtown San Francisco. The five story apartments act as community spaces with street environmental improvements. And the neighborhood-serving commercial programs provide new jobs. There are many on-site services which serve to tackle “social, medical and employment challenges.”

Green spaces in the courtyard and on the roof can create good environments and promote programs for urban gardening, which have been shown to help heal mental illnesses. They can develop the social interaction among residents within beautiful and secure environments. The U-shape housing ensures natural lighting and ventilation through the courtyard.

All of the units provide safe and secure housing, designed specifically to cure mental and physical problems by encouraging social interaction and helping to improve communication among residents. Retail spaces brighten the streetscape along main street beside the building. In a broader perspective, the apartments can help to reduce the number of people experiencing homelessness in society.


Star Apartments

The new Star Apartments contain the six story, 95,000 sf building that provides the supportive housing for formerly homeless people in downtown Los Angeles. Within the building are three spatial zones stacked into one mass: a public health space on the first level, a community and wellness program on the second level, and four terraced floors of supportive residential programs at the top level. The building has an on-site medical clinic, Health and Wellness Center, and the new headquarters of the LA County Department of Health Services’ (DHS).

New York Times architecture critic Nicolai Ouroussoff says “Michael Maltzen may be the only American architect of his stature with significant experience” in supportive housing, and that “the apartment designs are remarkable for their architectural sophistication and their spirit of public service.” The supportive apartments have a therapeutic architecture design and offer yoga classes and a center gardening club in addition to other diverse programs. This project has reflected the idea “how the design can help people get stabilized as a community.” The supportive housing project reflects a recovery of lives as dream in the city.


Chapter 4
Interpretation of Sensory Experience

Sense, Body, and Space

Effects of Awakened Multi-Senses

Architectural Precedents
Figure 4.1 Thermal Baths Vals

The building is a machine able to produce some human reactions predetermined.

Peter Zumthor, Thinking Architecture, 2005

Sense, Body, and Space

Without the senses of seeing, hearing, smell, taste, and touch, people’s lives would be dull and unstimulating. In 450 B.C, the Greek philosopher Protagoras said, “Man is nothing but a bundle of sensations.” He meant that our lives consist of diverse senses and the effects of those senses.

In space, sensory experiences contain innumerable sights, behaviors, sounds, smells, tastes and touch sensations. It is important to focus on how to incorporate these sense stimuli into the built environment. This can create not only better environment designs but healthier lives. Architect Pallasmaa states, “Our bodies and movements are in constant interaction with the environment the world and the self inform and redefine each other constantly.”

Through former architectural precedents, we know architecture can affect people’s lives and emotional spirit. All architectural experiences are directly connected to multi-sensory interactions. For example, the therapeutic design can create good environments and help heal people’s mental problems through multi-sensory activities such as urban gardening, green courtyard, and cultural programs.

Senses, emotions and bodies affect each other in space. These elements can promote positive relationships between people. Using these elements in design can positively influence people who have mental problems such as depression, social isolation, and lack of communication.

Figure 4.2 Ranges of the senses

22. Pallasmaa, The contribution of the five human senses towards the perception of space, p27
The nostrils awaken a forgotten image and fall into a vivid dream. The nose makes the eyes to remember.

Pallasmaa, Juhani; The Eyes of the Skin, 1994

Sound is invisible but has the power to change the space characteristics we occupy.

Schulz-Dornburg, Julia; Art and Architecture – New Affinities, 2000

We feel pleasure and protection when the body discovers it’s resonance in space.

Pallasmaa, Juhani; The Eyes of the Skin, 1994

Architecture has traditionally dealt with the design and construction of static structures in the built environment. The notion of interactive architecture introduces temporal and dynamic concerns through embedding kinetic and interactive behaviors into materials and surfaces.

Ingrid Maria Pohl; Interactive architecture

The sight separates us from the world, while the rest of the senses joins him.

Pallasmaa, Juhani; The Eyes of the Skin, 1994

I think that the buildings always sound. They can sound unemotional too.

Peter Zumthor; Atmospheres, 2006

(...while the tactile space separates the observer from the objects, the visual space separates the objects from each other (...) the perceptual world is guided by the touch, being more immediate and welcoming than the world guided by sight.

Peter Zumthor; Thinking Architecture, 2005
Effects of Awakened Multi-Senses

It is important to consider the effects of multi-sensory experiences on mental and physical states in space. In a recent study, researchers were concerned with how senses can create better environments for rehabilitation. The results revealed that “well-planned architecture, design and sensory stimulation increase user’s ability to recover both physically and mentally.”23 The study has the potential to extend to poor and elderly people who need mental treatments in society.

In other occupational therapy studies, sensory experience approaches have become popular in general mental health treatment because they help individuals recognize their mental problems and begin to heal them via physical sensations of the body. Thus, people engage in experiences that “directly contradict the emotional helplessness and physical paralysis”24 that accompanies stressful environments. Sensory experiences can improve emotions of safety and help mental development and engagement in valuable activities. Through this research, sensory experience has been shown to affect people both physically and mentally within the connected space.

The current project can help homeless people heal their mental illnesses and make a connection with others through sensory experiences in space. In particular, it can overcome their social isolation and depression. This will be accomplished through meaningful design strategies that preserve social harmony and connections between people. The effects of this study can be extended from the rehabilitation of individuals to the greater homeless population.

In the architectural design, the design elements can stimulate the multi-senses and incite people's curiosities around environments through various sensory experiences. The experiences can cure homeless people's mental and physical problems that lack the three elements of living: safety, community, and healing. In particular, it can help overcome social isolation and improve a quality of life with sensory experience.

Ultimately, these design goals will improve homeless people's social isolation as well as the relations between homeless and society. They will act as a catalyst towards removing the stigma associated with homelessness by providing an eco-friendly and respectable place for them to live.

Green spaces stimulate people's senses and involve various architectural design elements such as water garden, green terrace, walking trail, and rooftop canopy and so on. These natural elements have good effects through which they heal people's mental problems and encourage social connection. In the architectural programs, residents can take a rest and enjoy their new activities through a variety of natural components: water, wind, vegetables, color, sound, and texture in the space.
Every major experience of architecture is connected with multi-senses. Steven Holl, American famous architect, says about the sensory experience in architecture.

"Only the actual building allows the eye to roam freely among inventive details; only architecture itself offers the tactile sensation of textured stone surfaces and polished wooden pews, the experience of light changing with movement, the smell and resonant sounds of space, the bodily relations of scale and proportion. All these sensations combine within one complex experience, which becomes articulate and specific. Some may say that the building speaks through the silence of its perceptual phenomena." 25

The Thermal Baths Vals is a spa and hotel within one building which mix multi-senses in Switzerland. The building is known for its atmosphere that creates a relationship with its "topography, the interior spaces, and the narrative." 26 The architecture creates a meaningful space for visitors to experience physically. Within the bath, he created the unique sensory experience through "materiality, lighting, massing, and stimulation of the senses." 27 For instance, the architecture has various experiences such as the reflection of light on the water, the sounds of the bubbling water, the texture of the stone, and the warm temperature of atmosphere. Peter Zumthor states,

"Mountain, stone, water, building with stone, built in the mountains: our attempts to give to this words an architectural interpretation, transfer it's meaning and sensuality guided by our building plan as we were shaping it step by step. How can the implications and the sensuality of the association of these words be interpreted, architecturally?" 28

Architectural Precedents

Thermal Baths Vals/ Peter Zumthor

The Thermal Baths Vals is a spa and hotel within one building which mix multi-senses in Switzerland. The building is known for its atmosphere that creates a relationship with its "topography, the interior spaces, and the narrative." 26 The architecture creates a meaningful space for visitors to experience physically. Within the bath, he created the unique sensory experience through "materiality, lighting, massing, and stimulation of the senses." 27 For instance, the architecture has various experiences such as the reflection of light on the water, the sounds of the bubbling water, the texture of the stone, and the warm temperature of atmosphere. Peter Zumthor states,

"Mountain, stone, water, building with stone, built in the mountains: our attempts to give to this words an architectural interpretation, transfer it’s meaning and sensuality guided by our building plan as we were shaping it step by step. How can the implications and the sensuality of the association of these words be interpreted, architecturally?" 28

Serpentine Gallery Pavilion 2011/ Peter Zumthor

The Serpentine Gallery Pavilion project has a garden within a garden in order to relax and enjoy natural elements for people. Within the building, the large interior courtyard acts as a community space with various plants for visitors. Visitors can have a time to communicate, observe, and talk with other people in the courtyard. The architect focuses on multi-sensory experiences between natural elements and space through the interior green space within the building. When people enter the building from the green lawn, they have sensory experiences through the transition in the green garden. In there, people can feel the different quite atmosphere from outdoors. The landscaper Piet Oudolf says about the concept.

“My work aims to bring nature back into human surroundings and this Pavilion provides the perfect opportunity for people to reflect and relax in a contemplative garden away from the busy metropolis.”

The architect creates the various sensory experiences through flowers, lighting, dark, and shadow within the center courtyard. There are the sounds of birds, the texture of materials, fragrances of flowers, colors in the garden. These attract butterflies and bees, this unexpected meeting with nature create the meditative atmosphere.

The architect emphasized the sensory and spiritual elements of the experience that composite the simple materials and nature in order to handle the scale and the effect of light. On the floor plan, a narrow and dark corridors make the circulation and the rhythmical movement inside between the courtyard and the facade. The composition of movement helps us concentrate on the space itself.

Fallingwater/ Frank Lloyd Wright

Fallingwater is a famous piece of architecture both for its integration with a beautiful nature environment and for its harmony. Architect Frank Lloyd Wright tried to make an interconnection with the exterior and interior space in order to create the surrounding harmony. In particular, it was important to design the private residential space between human and nature. The building is built on top of a waterfall that flows beneath the terrace. This can affect a positive lifestyle with stable mental states within the site and building. Architect Tadao Ando stated, “I think Wright learned the most important aspect of architecture, the treatment of space, from Japanese architecture. When I visited Fallingwater in Pennsylvania, I found that same sensibility of space. But there was the additional sounds of nature that appealed to me.”

Composition of Programs

In this project, the facilities consist of a community center and supportive housing for homeless people who need help mentally and physically as seen in figure 5.2. Understanding the immediate needs and anxieties of homeless people is significant. It is also important to reflect homeless people’s lifestyle and their necessary programs within the space. Parts of the program focus on homeless, providing various community programs and natural spaces with multi-sensory experiences. This program can make greater interaction between the homeless people and others by providing secure and supervised spaces.

The program of the homeless shelter and community center is organized into two categories- the first being community and meeting programs which can be accomplished by providing various activities and classes with sensory experiences. In particular, the community programs can help socialize the alienated homeless people by the surrounding them with a variety of activities in the programs. The second category is a mental recovery program which can be accomplished by providing rehabilitation and treatment service with sensory experiences. The urban garden can enhance people’s mental instabilities by growing vegetables and flowers on the roof.

Ultimately, the aim is to create the shelter and community center for homeless which will help them overcome their social isolation through multi sensory programs and surroundings. It can act as interconnection with homeless and others by treating the psychological illnesses. Figure 5.3 and 5.4 illustrated program composition that proposed programmatic spaces. Each program shows how the spaces influence homeless people, which people will occupy and use.

Green spaces, such as community gardens or even the shade of a large tree, encourage social contact by serving as informal meeting places and sites for group and shared activities.11


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The community center and homeless shelter focus on connection of programs by facilitating people's movement. Figure 5.4 is a program composition diagram on how each program of the community center and shelter will connect to one another. In particular, center courtyard is directly related to public programs and community programs for homeless people with natural elements. The supportive housing for homeless links to diverse exterior spaces such as roof garden, bridges, and green exterior corridors by providing a safe area to stay.
Martial Arts/ Yoga Class

Martial arts and yoga classes are therapeutic programs. Individuals that participate in the sports activities enhance mental states via sensory experiences. This has positive mental health effects, such as the opportunity for enjoyment, social interaction, and self-confidence through the activities. Martial arts therapy offers greater sensory experiences to improve health both physical and psychologically by using each of our senses. In particular, People can learn how to control the relationship between body and mind. When the body is injured or sick, people can heal their illness by exercising these activities.

It is important to engage in these activities in environments that are comprised of multi-senses. The class interiors can utilize natural elements such as nature lighting, wood materials, wood ceiling structure, and green surroundings. The natural elements directly improve people’s mind and unstable emotion in the class. Through the therapeutic exercises, homeless people can heal their mental illness and make social connection with others.

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<tr>
<th>Supportive Housing</th>
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<tbody>
<tr>
<td>Lobby</td>
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<tr>
<td>Two Bedrooms for Family</td>
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<tr>
<td>Studio for Individuals</td>
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<td>4096 – 2560</td>
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<td>Laundry room</td>
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<tr>
<td>Fitness</td>
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<table>
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</tr>
<tr>
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<td></td>
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<tr>
<td>Library (Book Storage)</td>
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<tr>
<td>Computer Room</td>
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<td>Job training room</td>
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<tr>
<td>Kitchen</td>
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<tr>
<td>Bedroom</td>
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<td>8² – 280</td>
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<tr>
<td>Locker &amp; Storage</td>
<td>300</td>
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<tr>
<td>Commercial &amp; Open Studio</td>
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<table>
<thead>
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<td>Electrical</td>
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<tr>
<td>Mechanical</td>
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<td>Security office</td>
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<td></td>
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<tr>
<td>Urban Roof Garden</td>
<td>exterior</td>
<td></td>
</tr>
<tr>
<td>Parking Lot</td>
<td>exterior</td>
<td></td>
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</table>
Urban Rooftop Garden

The urban garden is an important method for awakening the human senses. The urban garden helps treat depression, and mental problems through the human’s senses by cultivating plants on the roof. It is a good place to gather and communicate with the neighborhood. It may be easier for homeless people to overcome their isolation through exposure to nature in space.

Pottery Class

The pottery class is a valuable cultural activity which uses the sensation of hands. Making Pottery affects people’s emotions and spirits by delicate touch with clay. In the class space, people can learn how to use the natural elements by themselves and recognize their sensations that improve mental states while making pottery.

Library

The library acts as important meditative space for homeless people. People can read books by seeing green courtyard. Also, they can sit there deep in contemplation with books. Though the experience of the library, the people can relax and take time for themselves with natural elements such as lighting, sound, and trees.

Courtyard

The green courtyard is located at the center of the building inside. The linear scheme reflects a more illustrative portrayal of the homeless people’s experiences. The linear movement towards the center courtyard helps the people recognize the way to the large community center. In the green courtyard, people can enjoy rest and communicate with others. It becomes an important space that creates the interactive activities through meaningful empty space in building.
Chapter 6
Site Analysis

Meditative Space in Over-the-Rhine

Current Site Analysis

Dining Room

People can gather and communicate in the dining room when they eat their meals. It is important to enjoy the meal time they are spending together by creating interactive space. In particular, the dining room exterior connects with the green healing park and dining space. People are aware of their surroundings and participate in meetings with others in the dining room.

Open Studio

Homeless people can learn various skills to recover their lives, and meet neighborhood citizens through the open studio and commercial program. In the space, homeless people can feel the importance of communication with others by meeting neighborhood citizens. The open studio provides sights, sounds, feelings and stimuli to its inhabitants at the connected vertical green walls.

Figure 5.13 Dining Room
Figure 5.14 Open Studio
Meditative Space in Over-the-Rhine

The current Over-the-Rhine is analyzed to choose the proper site location for the homeless shelter and community center by considering current conditions. A variety of neighborhood factors have a significant role in the determination of the northern Over-the-Rhine as the site location. It is important to consider some factors such as the current land use, neighborhood asset, public transportation, and natural spaces nearby the site.

The Northern Over-the-Rhine is one of the poorest areas of the neighborhood and mainly consists of residential, commercial programs. This district is zoned ‘multi-family residential’, with an area along McMicken Avenue and Vine Street zoned some ‘commercial programs’ that visitors can access to the area. The area is mostly multi-family housing, but there is a lack of community service programs for the neighborhood due to the smaller building scale and a poor financial state. For these reasons, Northern Over-the-Rhine is the obvious choice from the other areas of Over-the-Rhine.

Figure 6.1 Over-the-Rhine Boundary

Figure 6.2 Aerial Map

Figure 6.3 Topographical Map
However, the site has the potential to redevelop for the poor people as a gateway at the intersection of Vine Street and McMicken Avenue. Some notable facilities such as the Rothenberg School, Webster School, and the Asbury Third Methodist Episcopal Church are adjacent to the site. Nearby assets are composed of Grant Playgrounds, Findlay Market, the Recreation Center, and crucial businesses such as Rookwood Pottery, and future Christian Moerlein Brewing Company.

Also, in spite of urban district, the area is a very quiet uncrowded street with a green hill. It can act as a meditative space for homeless people to feel their senses in their surroundings.

An area near the intersection of Vine Street and McMicken Avenue is chosen because of its potential as a community center in the Northern site of Over-the-Rhine as well as its position directly adjacent to the residential area of Northern Over-the-Rhine. The current condition of the site is either vacant or in the process of becoming vacant. Currently, it is used mainly as a large playground and vacant housing. It has strong potential to make a meditative space that stimulate the homeless people’s senses.

The new homeless shelter and community center would catalyze the redevelopment of a gateway at the intersection by providing an inspiration to neighborhood. It can become a vibrant community hub for the poor people in the Over-the-Rhine.
Land Use
This site is located on a boundary of residential districts that are vacant or in the process of becoming so. Currently, the site is used mainly as a large playground and vacant multi-family housing. It has the potential to improve an urban context for the neighborhood through new facilities and incomers into the area.

Neighborhood Asset
Northern Over-the-Rhine is one of the poorest area in Cincinnati and mainly consists of residential, commercial programs. But, most drop inn centers and shelters for homeless are located at the southern Over-the-Rhine. This site is close to Findlay Market & the Food bank. The location is very easy to access by bus and street car because it is near the intersection of Vine Street & McMicken Avenue.
Design Development

The project designs reflect the urban context and the easiest accessible pathway for the homeless people around the site. In the nearby site, almost all of the buildings are small multi-family housing with three and four stories. In Over-the-Rhine, most buildings have been arranged in a row toward the street. It is important to consider the small scale of buildings to design something well matched to the neighborhood’s context by providing secure areas. In the current project, each separated small mass makes a large linear scheme, and the connective spaces between the small masses create beautiful green terraces for homeless people. The natural elements can help heal people’s mental and physical problems through sensory experiences.
Utilizing Multi-Senses in Space

Materials

This homeless shelter and community center include a variety of materials to stimulate people’s senses; there are unique materials such as Miranda wall tiles, color changing glass tiles, exposed concrete with wood pattern, patterned bricks, and Corten by providing sensory experience. People can feel curiosities and interests when they see and touch the materials.

For instance, color changing glass tiles are interesting because people take heat and make it visible when they touch it. The tiles change colors based on body temperature or environment temperature by touching. Miranda wall tiles create a tactile experience by movable polypropylene ‘hairs’ attached to it. The hairs can be moved in different directions to create an intriguing visual pattern, and texture on the wall. Through unique materials, homeless people can stimulate their senses and treat their illnesses both physically and psychologically.

The architectural scheme reflects the urban context through analyzing the neighborhood’s environment.
- The protruding and entering masses are created by the green axis. These become decks for the public to take rest.
- The vertical axis makes the large courtyard and rooftop garden.
- The intersection is created by the horizontal and vertical axis to make plentiful experience.
- The large canopy can be used for various sensory experiences such as growing flowers, resting, meeting, and communicating for homeless people.

Figure 7.3 Scheme development Diagram

Figure 7.4 Sky Line

Figure 7.5 Materials
People can meet and communicate with others by cultivating vegetables and flowers on the urban rooftop garden. In particular, the program can inculcate a sense of responsibility in homeless people through the growing experiences.

**Vertical Green Wall**

The homeless shelter has vertical green walls on the exterior. It can make semi privacy space by obstructing the residents’ views. Also, the climbing Ivy make the beautiful elevation when they grow up. In the corridor, people can communicate with the other residents.

**Courtyard**

The courtyard is located at the center of the community center. The visitors can enjoy rest and communicate with others in the green courtyard. It can heal people’s mental problems and stresses through experiences with the natural element in the building.

**Healing Green Park**

The green healing park includes an exterior dining area, unique benches, vertical green fences for homeless people and for the neighborhood. Homeless people can line on the park space to enter the soup kitchen.
Design Proposal
Homeless Shelter and Community Center

Figure 7.10 Aerial View of Proposed Building
The community center for homeless people is separated in two schemes that provide many cultural programs and classes. On the first floor, there include diverse commercials, open studios, daycare rooms, and a dining room. On the second floor, there are multi-purpose rooms, community rooms, and a library. On the third floor, there are many classes for job training, and a library.

The community center has a simple movement circulation with the courtyard as a center. In particular, the courtyard acts as a community space at the center of the building. All visitors can see other people’s movements and behaviors through the center courtyard. Also, people can learn many skills and treat their mental problems in the community rooms by experience multi-senses. The dining room and kitchen will provide meal and food for the homeless as a soup kitchen. It can be connected exterior dining area by canopy and transparent walls. The spaces provide a sense of community and help overcome social isolation.
The homeless shelter includes residential 68 units and supportive facilities. On the first floor, there are commercials, fitness, community room, and supportive offices for the residential homeless. On the second, third, and fourth floors, the residential area has two style units. One is a studio for individuals, and the other one is a two room plan for families. The rooftop space is the urban green garden, used so residents can cultivate crops and flowers. By growing various vegetables, residents can communicate with others and heal their mental illnesses as they experience multi-senses at the rooftop garden. It can help cure their social isolations through meeting with neighborhood.

In the shelter, the building has a simple movement circulation with the courtyard and bridges. These architectural elements facilitate social interaction within the shelter. Also, the vertical green walls allow for a semi-private space in order to provide a secure living space.
The Homeless shelter has two styles of unit. One is a studio for individuals. The other one is a two room for a family. All units are contemporary styles to ensure a comfortable stay. It is easy to use stylish furnitures and system to stay well. The materials are mainly a woods and glasses, which people feel is a more liveable residential space. In the future, this shelter could be converted into a hotel for visitors in downtown Cincinnati.
The visitor can experience many green architectural elements such as center courtyards, decks, and a rooftop garden within the community center and shelter for the homeless. The building provides a safe and comfortable space through the use of sensory experiences. It can recover people's social isolation with their participation in the various programs.
The homeless shelter has vertical green walls between the residential buildings to make a better, safer, beautiful environment. It can make semi-private space for the homeless residents by climbing ivy at the mesh of net.

The community center is easily identifiable by the unique scheme with many green terraces, decks, and the healing green park. The wood protruding masses make community decks for homeless people. The materials such as patterned wood and bricks can stimulate user’s curiosity through sensory experience.

On the urban rooftop garden, the homeless people can meet and communicate with others by growing vegetables and flowers. In particular, the program provides a sense of responsibility to them through the cultivating experiences.

The green healing park is located in the nearby dining room and waiting area below terrace. Homeless people can line on the exterior space to use the soup kitchen that provides free meal to anyone. The park includes unique benches, an exterior dining area, vertical green fences for homeless people and for the neighborhood.
Conclusion

A homeless person is very isolated from society. Homeless people suffer from a high level of social isolation and the absence of social ties with others. Architecture is not the first solution to help homelessness. However, architecture can provide proper community spaces where suffering people can safely stay. This thesis has focused on how to integrate architecture with homelessness problems and how to help the social isolation of the homeless in our society. In particular, it is necessary to consider that architectural design can create interconnection between the homeless and others by overcoming isolation.

Through the environmental psychology and therapeutic space research results, this thesis has investigated the impacts of space on mental healing via multi-sensory experiences. It is important to consider how to affect mental condition and behavior by sensory surroundings. Architecture creates a positive relationship between behaviors, environments, and senses by reflecting social aspirations. Peter Zumthor states,”(...)while the tactile space separates the observer from the objects, the visual space separates the objects from each other (...) the perceptual world is guided by the touch, being more immediate and welcoming than the world guided by sight.” The architect emphasizes the interconnection between space and the bodily experience.

Based on the research and analysis, the decision was made to work on the homeless shelter and community center in Over-the-Rhine, Cincinnati. The architectural design suggestion is reflective of the homeless people’s needs and anxieties within urban context. The programs are organized into two categories: the first being a community and meeting program: providing various activities and classes with sensory experiences. The second is a mental recovery program: offering rehabilitation and treatment service. It is important to engage in the activities and environments that are comprised of multi-senses in the suggested programs such as Martial art, pottery class, urban garden, and the library. The interiors utilize natural elements such as nature lighting, wood materials, wood ceiling structure, and green surroundings. The natural elements directly improve people’s minds and unstable emotions.

The project design reflects on the urban context and easily accessible space for the homeless population around the site. It is important to consider the small scale of buildings in order to design something well matched to the neighborhood’s environment. Each separated small mass makes a large linear scheme, and the connective spaces between the small masses create beautiful green terraces and in outdoor rest area. The various natural elements in the building help heal people’s mental and physical problems through sensory experiences. The visitor can experience many green architectural elements such as center courtyards, green terraces, vertical green walls, a healing park, and an urban rooftop gardens within the homeless shelter and community center. The community center is identifiable by a unique scheme with many green terraces, decks, and a healing green park. The materials such as patterned wood, Miranda wall tiles, and color changing glass tiles can incite user’s curiosity by offering new stimuli. In the homeless shelter, it is important to make a secure, interactive, and liveable residential space.

This project proposes the spaces that cure social isolation for homeless people within the shelter and community center. New spaces for interconnection with others help to treat their basic mental illnesses. This project creates spaces that allow all homeless people in the Cincinnati downtown area to come together and experience the shelter and community center as a community hub. This can be accomplished through meaningful design strategies that preserve social harmony and connections between people. The effects of this essay have the potential to extend from the rehabilitation of individuals to the rehabilitation of the greater homeless population.

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